Volume 71 | Supplement 4 | 2025

ACTA MARISIENSIS
SERIA MEDICA

OFFICIAL PUBLICATION OF THE
GEORGE EMIL PALADE UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE, AND TECHNOLOGY OF TARGU MURES

INTERNATIONAL CONGRESS FOR STUDENTS, YOUNG DOCTORS AND PHARMACISTS MARISIENSIS

Targu Mures, Romania
21-25 May 2025

BOOK OF ABSTRACTS

ISSN: 2668-7755 • Online ISSN: 2668-7763 • www.actamedicamarisiensis.ro

UNIVERSITY PRESS
19 95
TARGU-MURES

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Acta Marisiensis - Seria Medica (ISSN 2668-7755) is the official publication of the George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures, being published by University Press, Targu Mures.

The journal publishes high-quality articles on various subjects related to research and medical practice from the all the medical and pharmaceutical fields, ranging from basic to clinical research and corresponding to different article types such as: reviews, original articles, case reports, case series, letter to editor or brief reports. The journal also publishes short information or editorial notes in relation to different aspects of the medical and academic life.

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Acta Marisiensis - Seria Medica is indexed in the following international databases:
· SCOPUS
· DOAJ
· EBSCO Discovery Service (since 01 July 2010, first indexed number - no.4/2010)
· National Library of Medicine
·Sciendo
·Baidu Scholar
· Celdes
· Google Scholar
· J-Gate
· Publons

DTP and Website Management
Editura Prisma

This journal is printed on environmentally-friendly ECF (elemental chlorine free) woodfree paper.

International Congress for Students, Young Doctors and Pharmacists MARISIENSIS

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BASIC MEDICAL SCIENCES

EXPLORING AWARENESS AND ATTITUDES TOWARD BODY DONATION FOR ANATOMY EDUCATION AMONG INTERNATIONAL MEDICAL STUDENTS IN ROMANIA.

Shivangi Agarwal[1], Apisara Suchonwanich, Darya Leelangamwong[1], Atiti Chantanang, Thitikorn Nuamek, Thitikorn Nuamek[2]

[1]UMFST Tîrgu Mureş

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Background: Cadavers are considered an essential component of anatomy education; however, the rate of body donations for medical education has continued to decline and resulted in the shortages of cadavers. Some medical schools have to rely on unclaimed bodies, source cadavers from other countries, or shift to using technology-based anatomical tools[1, 2]. **Objective:** This study aims to assess medical students' awareness and attitudes toward body donation for anatomy education using an online questionnaire. **Material and methods:** This cross-sectional questionnaire-based study involved third-year medical students from the English section at George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureș (n=116). Demographic information such as age, ethnicity, and religion as well as attitudes toward body donation were anonymously collected from consenting individuals using a 20-item questionnaire in March 2025. **Results :** Fifty-three (46%) out of 116 students returned the completed questionnaire. Mean age was 23 [IQR 21, 24] and 60% (32/53) were female. Among responders, 38% (20/53) identified as white, 36% (19/53) as Asian, 15% (8/53) as Arab, and 8% (4/53) as black, Caribbean or African. 42% (22/53) identified as Muslims and 32% (17/53) were Christian, while 15% (8/53) reported having no religion. Of the 53 responders, 51 (96%) found cadavers essential for their anatomy learning. While 83% (44/53) were aware of body donation for educational purposes prior to medical school, 60% (32/53) were unaware of the registration process in their country of origin. When asked if they would be willing to donate their body, 42% (22/53) were unsure and 40% (21/53) indicated they would be unwilling to donate. Reasons for these views included concerns about how their body would be used (38%), preference for traditional burial or cremation (32%), discomfort with the idea (30%), insufficient information to decide (28%), and religious objections (20%). All four (8%) responders who expressed their willingness to donate were motivated by a desire to contribute to medical education. **Conclusions:** Although most students regarded cadavers as essential for their anatomy learning, the majority expressed uncertainty or unwillingness to body donation for educational purposes. This stemmed from various factors, including a lack of information and awareness about the registration process. These findings underscore the need to promote body donation and increase awareness about the importance of body donation. Further studies involving larger sample could provide deeper insights into barriers to body donation across different demographic groups.

Keywords: Cadaver,, Body Donation,, Medical Education,, Anatomy.

SELENIUM, VITAMIN D AND DIET: COMPLEMENTORY THERAPEUTIC APPROACH FOR HASHIMOTO’S THYROIDITIS, A LITERATURE REVIEW.

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Background: Hashimoto's thyroiditis HT is a prevalent autoimmune disease characterized by chronic inflammatory condition affecting the thyroid gland. Today it is considered the most common autoimmune endocrine disorder, causing hypothyroidism. The early onset of HT is characterized mainly by significantly increased antithyroglobulin antibody (TGAb) and antithyroid peroxidase anti- body (TPOAb). Currently, follow-up is the main approach utilized for HT patients with normal thyroid function. **Objective:** The literature review explores complementary therapeutic approaches such as supplementation with selenium, vitamin D and dietary modification resulting in reduced levels of antibodies and better progression of Hashimoto's thyroiditis. **Material and methods:** An English literature search was conducted on ScienceDirect-Elsevier, Spring Link Journals, and Wiley Journals. The selected articles were published between 2020 and 2025 and presented the KEYWORDS 'Hashimoto's thyroiditis', 'Selenium' 'Vitamin D', and 'Diet'. A total of 24 articles were examined within this work only 20 were chosen for inclusion in the study. **Results :** Selenium supplementation effectively reduced thyroid peroxidase antibodies at 3, 6, and 12 months and thyroglobulin antibodies at 12 months in levothyroxine treated patients and dose of 200 µg selenomethionine were effective in significant reduced in patients. A Randomized controlled trial (RCT) with 70 patients and an exploratory cohort study with 45 patients) with HT were investigated with dietary

fiber DF supplements, the antithyroid peroxidase antibody (TPOAb), antithyroglobulin antibody (TGAb), and IL-10 levels decreased, and the thyrotropin (TSH) level increased. Study demonstrated that increase the serum 25(OH)D levels and produce changes in (TPOAb) titres. But no significant association was found between serum vitamin D supplementation and the levels of (TGAb), TSH, FT3 and FT4, suggesting that vitamin D is not associated with the function of the thyroid in patients with HT. **Conclusions:** Selenium, dietary fiber supplementation in Hashimoto's thyroiditis is associated with reduced production of antibodies, but vitamin D is not significantly associated with the function of the thyroid in patients with HT. Additional studies might be necessary to determine the exact functional impact of vitamin D treatment on HT patients. The review highlights the contribution of complementary therapeutic approach for Hashimoto's thyroiditis, furthermore research in this area is necessary for its addition with current follow up approach.

Keywords: Hashimoto's thyroiditis HT,, Selenium,, Vitamin D,, Dietary fiber DF.

THE IMPORTANCE OF CADAVERS IN MODERN ANATOMY EDUCATION: MEDICAL STUDENTS' PERSPECTIVES

Darya Leelangamwong[1], Apisara Suchonwanich, Shivangi Agarwal[1], Atiti Chantanang, Thitikorn Nuamek, Thitikorn Nuamek[2]

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Background: Cadaveric dissection is a traditional way of teaching anatomy, allowing medical students to gain firsthand experience of the human body's structure and function. As modern anatomy education increasingly utilises various alternative methods, such as plastination and digital simulations [1], the importance of cadavers in anatomy education comes into question. **Objective:** To assess the importance of cadavers in modern anatomy education from medical students' perspectives using online questionnaires. **Material and methods:** In March 2025, an online questionnaire was distributed to third-year medical students in the English section of George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureș (n=116). The questionnaire consisted of 20 items designed to assess students' experience with cadavers in anatomy classes and their views on the importance of cadaver usage in anatomy learning. The minimum sample size of 53 was calculated using the formula recommended by WW Daniel [2] with a 95% confidence level and a 10% margin of error. **Results :** Of 116 surveyed students, 53 (46%) completed the questionnaire. Among 53 responders, 50 (94%) reported they had studied body parts from pre-dissected cadavers, while 9 (17%) had the opportunity to dissect cadavers themselves. Forty-two (79%) reported working with cadavers in most and nearly all classes, and 32 (60%) expressed a desire for more exposure to cadavers. Forty (76%) reported no further experience with cadavers outside regular anatomy classes, while seven (13%) and five (9%) had additional time with cadavers outside regular classes and attended a dissection workshop respectively. Alternative methods students used to learn anatomy included digital learning platforms (89%), physical anatomical models (64%), plastinated specimens (40%), and virtual reality tools (25%). Fifty-one (96%) students found cadavers important for anatomy learning, with 44 (83%) reporting that the absence of cadavers would negatively impact their learning, and 41 (77%) cadaver-based learning is more effective than alternative methods. **Conclusions:** Students consider cadavers important and more effective for anatomy learning than alternative methods. However, they reported limited opportunities for cadaveric dissection and expressed a desire for increased exposure. Future efforts will focus on enhancing students' experiences in anatomy education and conducting further studies to examine the implications of limited cadaver exposure on anatomy learning.

Keywords: Cadaver, Anatomy, Medical Education, Medical Students

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UNLOCKING NEW FRONTIERS IN SEVERE ASTHMA MANAGEMENT: THE POTENTIAL AND CHALLENGES OF BRONCHIAL THERMOPLASTY

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Background: Asthma is a chronic inflammatory airway disease characterized by reversible airflow obstruction and bronchial hyperresponsiveness. The characteristic manifestation is episodic wheezing, cough, and shortness of breath provoked by allergens, respiratory infections, and environmental exposures. Bronchial thermoplasty (BT) is

a new non-pharmacologic treatment used in the management of severe asthma that is inadequately controlled on medications. **Objective:** The aim of this study is to explore novel treatment options for patients with refractory asthma that is not well controlled with conventional medication, with the ultimate goal of a better quality of life. It also examines the new therapy's potential in terms of exacerbation reduction, lung function improvement, and systemic corticosteroid reduction, offering a novel therapeutic approach in the treatment of this refractory disease. **Material and methods:** A narrative review of the literature was conducted using the PubMed database, with the search term "thermoplasty in bronchial asthma." Relevant peer-reviewed articles and clinical trials were selected to provide a qualitative synthesis of current evidence regarding the efficacy, safety, and mechanisms of bronchial thermoplasty in severe asthma cases. **Results :** Several studies report that bronchial thermoplasty can reduce asthma exacerbations and healthcare utilization in selected patients. For example, one trial showed that patients undergoing BT had fewer mild exacerbations after withdrawal of long-acting beta agonists, compared to those who did not receive the intervention. However, findings on quality of life are mixed. While some data suggest improvement, others found no significant change or even temporary deterioration in comparison to sham procedures. Adverse events such as transient hypoxemia, bronchospasm, pneumonia, and increased exacerbations have also been reported. Post-treatment imaging frequently shows peribronchial consolidations, atelectasis, or partial bronchial occlusions. **Conclusions:** Bronchial thermoplasty (BT) is an innovative treatment for patients with severe asthma which directly targets airway smooth muscle. Many trials revelead encouraging results in terms of safety and effectiveness, yet the exact mechanism of action behind the treatment still remains unclear. Further research is needed to identify the ideal asthma patients who would benefit most from bronchial thermoplasty.

Keywords: asthma, bronchial thermoplasty, corticosteroids, smooth muscle

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MATERNAL SMOKING AND ITS IMPACT ON INFANT BRONCHIOLITIS

Andreea Georgiana Ristea[1], Antonia Maria Rîmbeț[1], Ioana Sandu[1], Lorena-Elena Meliț[1]

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Background: Bronchiolitis is an acute inflammation of the small airways, accompanied by obstruction due to bronchiolar edema, which leads to impaired expiratory airflow. This pathology occurs in children under 2 years of age probably due to the immaturity of the immune system and narrower airways and the main pathogenic factor is Respiratory Syncytial Virus. Prolonged exposure of an infant to tobacco smoke significantly increases the risk of developing respiratory diseases. **Objective:** The aim of this study was to assess the role of passive smoking in the occurrence, frequency and progression of bronchiolitis in infants. **Material and methods:** We conducted an observational, retrospective study in which we analyzed the medical record of 103 pediatric patients diagnosed with Bronchiolitis under the age of 12 months hospitalized in the Pediatric Department of County Clinical Hospital Târgu Mureș between 01/2023-12/2024. For each patient we evaluated demographic parameters, the probable risk factors (including exposure to smoking, type of feeding, birth weight and mode of delivery, symptoms, complication, comorbidities and treatment. The statistical analysis was performed using IBM SPSS v26 applying Chi-Square test, with a significance level set at p <0,05. **Results :** In our study a predominance of male patients (55,9%) and patients from rural areas (66,7%) was observed. In 46,1% of the cases, the mother was a smoker, while the father was a smoker in 63,7% of cases, and in 36,3% of cases, the mother smoked during pregnancy. Many hospitalizations occurred in January (19,6%), February (19,6%) and March (22,5%). Among the patients included in the study, 52.9% were breastfed, 11.8% were breastfed and supplemented with formula, and 35.5% were formula-fed. Vaginal delivery occurred in 71% of cases, while the cesarean section was performed in 29% of patients. The most common complications were acute respiratory failure (33,3%), acute dehydration syndrome (19%) and bronchopneumonia (7,8%). The frequent comorbidities observed in children with a smoking mother are recurrent respiratory infections and atopic dermatitis (p=0,009). Mothers who smoked during pregnancy have a higher prevalence of children with a birth weight between 2000 and 2500 grams (p=0,011). **Conclusions:** We can conclude that the high prevalence of smoking among mothers correlates with adverse health outcomes in children, including lower birth weight and increased incidence of respiratory infections. These findings highlight the significant impact of parental smoking on pediatric health, stressing the importance of focused efforts to reduce smoking, especially during pregnancy and in households with young children.

Keywords: bronchiolitis, smoking, infant

RADIOMIC ANALYSIS OF GLIOBLASTOMA USING MAGNETIC RESONANCE IMAGING

Cezar Dan[1], Attila Kövecsi, Runcan Andreea Ioana, Andrei Cora, Maria Iftime[1], Ioana Halmaciu[1], Andrei Manea[1]

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Background: Radiomics is an advanced method for analyzing imaging investigations and extracting quantitative data that provide objective information about tumor characteristics. The incidence of brain tumors is increasing in Romania, estimated at 11.1 cases per 100.000 inhabitants, with a mortality rate of 9.3 per 100.000 inhabitants, according to Global Cancer Statistics. Conventional Magnetic Resonance Imaging (MRI) often fails to capture its full biological complexity, and radiomics methods can highlight "hidden" features from those studies. **Objective:** Our objective was to identify radiomic features that can differentiate tumor compartments and the isocitrate dehydrogenase (IDH) mutant type in glioblastoma, using MRI images and radiomic features. **Material and methods:** Our study is a retrospective one, analyzing patients from the Emergency Clinical County Hospital of Târgu Mureș hospitalized between 2020-2024, with histologically confirmed glioblastoma, that also had MRI scans done in our hospital. We used the T1 post-contrast and FLAIR MRI sequences for segmenting three regions, the contrast-enhancing rim, necrotic core, and peritumoral edema using a 3D Slicer. Afterward, radiomic features were extracted using PyRadiomics extension and analyzed. Principal component analysis (PCA) and Analysis of variance (ANOVA) analysis were used to assess variation between the regions, while the Mann-Whitney U test was applied to compare the IDH mutant vs. wild type. The results are preliminary and include only 20 patients from 2021, 5 of which had an IDH mutation. **Results :** Over 150 radiomic features were extracted per region. PCA showed partial separation between regions, especially between the contrast-enhancing rim and necrosis. Significant differences ($p < 0.05$) were found in features such as RunLengthNonUniformityNormalized, RunPercentage, and ZonePercentage. Although edematous and necrotic regions appeared similar in basic texture, they differed significantly in shape and entropy metrics, including Coarseness ($p = 0.0003$) and LeastAxisLength ($p = 0.0013$). Comparing the IDH tumors revealed significant differences in several radiomic features. IDH mutant tumors have increased Sphericity ($p = 0.006$), lower SurfaceArea ($p = 0.021$), and altered texture-related features such as HighGrayLevelRunEmphasis, Kurtosis, and Autocorrelation (all $p < 0.02$), suggesting differences in intensity distribution and structural complexity. **Conclusions:** The findings suggest that spatial and molecular tumour heterogeneity can be reflected in the MRI-based radiomic signature which can serve as potential imaging biomarkers for non-invasive classification and computational decision-support systems. Radiomic analysis can be used to quantify imaging differences between tumor compartments and molecular subtypes in glioblastoma.

Keywords: Radiomics, Glioblastoma, IDH mutant, Magnetic Resonance Imaging

THE IMPLICATIONS OF VACCINATION IN THE ETIOLOGY OF FUNCTIONAL GASTROINTESTINAL DISORDERS IN CHILDREN

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Background: Vaccination is one of the most effective methods of preventing infectious diseases, preventing between 3.5 and 5 million pediatric deaths annually. While the benefits of vaccination are indisputable, there are concerns about its potential side effects. In particular, functional gastrointestinal disorders (FGIDs) in children have occasionally been reported following vaccination; however, the causal relationship remains incompletely elucidated. **Objective:** The purpose of this study was to analyze the possible association between vaccination and the occurrence of functional gastrointestinal disorders (FGIDs) in children, based on parent-reported data, and to identify potential risk factors involved. **Material and methods:** We performed a prospective study on a group of 67 participants, parents/guardians of children hospitalized in the Pediatrics II Clinic of County Clinical Hospital from Târgu Mureș, between February and March 2025. The data were collected using a questionnaire consisting of 31 questions regarding the child's vaccination history, the presence of functional gastrointestinal disorders (FGIDs), and relevant demographic and medical factors. The statistical analysis was performed using IBM SPSS Statistics 2, applying the Chi-Square test (statistical significance was considered for $p < 0.05$). **Results :** Of the 67 participants included in the study, 12 (17.9%) reported functional gastrointestinal symptoms post-vaccination. The most common manifestations were diarrhea (10 cases, 83.3%), colic (4 cases, 33.3%), regurgitation (3 cases, 25%), vomiting (2 cases, 16.7%), and constipation (1 case, 8.3%). In 5 cases (41.7%), the symptoms were

associated with the administration of vaccines from the national mandatory schedule, with the most frequently involved being the MMR vaccine (reported in 3 cases, 25%) and the pneumococcal vaccine (in 2 cases, 16.7%). Among the optional vaccines, Rotarix was associated with gastrointestinal disorders: 7 of the 12 children with post-vaccination adverse reactions (58.3%) had received this vaccine. When compared to the total number of children vaccinated with Rotarix (22 participants), 31.8% developed gastrointestinal symptoms. A statistically significant association was identified between the Rotarix vaccine and the appearance of FGID ($\chi^2 = 67.000$, $df = 1$, $p < 0.001$), suggesting that the oral administration route may play an important role in triggering these symptoms. **Conclusions:** The relationship between vaccination and the etiology of FGIDs is complex and not fully understood, but the observed side effects are usually mild and transient. Despite these temporary reactions, the benefits of vaccination far outweigh the risks, and vaccination remains an essential measure for preventing infectious diseases.

Keywords: Pediatric Vaccination, Functional Gastrointestinal Disorders, Side effects, Oral administration

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EPIDEMIOLOGICAL PERSPECTIVES ON PRIMARY AND METASTATIC PULMONARY TUMORS IN A SINGLE-CENTER RETROSPECTIVE OBSERVATIONAL STUDY

Maria Iftime[1], Cezar Dan[1], Paul Ioan Dan[1], Tibor Mezei[1], Diana Burlacu[1]

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Background: The presentation and management of patients suffering from lung tumors can significantly vary in clinical practice. Whether the lesion is primary or metastatic, it is considered an oncological challenge. A deeper understanding of the epidemiological information of the tumoral lesions of the lung could add valuable information regarding the aspects of diagnosis and treatment. **Objective:** This study aimed to examine and compare primary and metastatic lung tumors over a retrospectively five-year period, focusing on the demographics and histopathological aspects of each case. **Material and methods:** A retrospective observational study was conducted. We included all the patients diagnosed with either primary or metastatic lung tumoral lesion who were registered in the Surgical Department of Targu-Mures Emergency Clinical Hospital between 2019 and 2024. Our data base included demographic data and histopathological results. **Results :** Of a total of 95 cases that met the inclusion criteria, 85 (89.47%) were primary tumors and 10 (10.53%) were diagnosed as metastatic lesions. Male patients accounted for 67.37% of all cases while female patients represented 32.63% of both primary and metastatic lung tumors. Patients aged over 60 years old were the most affected group of patients in our cohort (73.7%) with 90% of them with a metastatic disorder and 71.8% of them with a primary lung tumor diagnosis. In terms of anatomical distribution, the right upper lobe (RUL) was the most commonly affected site in primary lung tumors (32.1%). Metastatic tumors most frequently involved the right lower lobe (RLL), (20% of metastatic cases). Our data analysis showed that patients diagnosed with gastrointestinal primary tumors had the highest percentage of lung metastases (50%), followed by breast tumors (20%). Of the primary lung tumors we analyzed, 95.3% were epithelial and 4.7% were of mesenchymal type. Adenocarcinoma was the most frequent epithelial subtype (58.0%), followed by squamous cell carcinoma (19.8%), small cell carcinoma (7.4%) and neuroendocrine tumors (7.4%). The most common origins of pulmonary metastases shared the same histopathological subtype: adenocarcinoma. **Conclusions:** Our data analysis showed a higher percentage of primary lung tumors when compared to metastatic ones, with most cases showing epithelial histology. The increased proportion of elderly male patients and the clear subtyping observed could prove useful in day-to-day clinical decision-making.

Keywords: lung tumors, metastases, epidemiology, histopathology

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THE ANTIMICROBIAL EFFECT OF HONEY

Diana Suruceanu[1], Cristina- Nicoleta Ciurea[1]

[1]UMFST Tîrgu Mureş

Background: Honey has been acknowledged since ancient times for its antimicrobial effects and ability to promote wound healing. The therapeutic benefits of honey are attributed to its diverse bioactive properties, including antibacterial, antioxidant, antitumor, anti-inflammatory, and antiviral activities. **Objective:** The study aims to assess the antimicrobial activity of Romanian polyfloral honey against clinically relevant bacteria. **Material and methods:** The experiment analyzed the antibacterial efficacy of four polyfloral honey samples, "Apicola Costache" (honey labeled with the letter A), "Apidava" (honey labeled with the letter B), "Albina Carpatină" (honey labeled with

the letter C), and "Apimela" (honey labeled with D letter). The source is obtained from local producers, against Staphylococcus aureus ATTC 29213, Pseudomonas aeruginosa ATCC 27853, Klebsiella pneumoniae ATCC 13883, and Enterococcus faecalis ATCC 29212. Briefly, 5 g of each type of honey was diluted in 10 ml of sterile water. The MIC (minimum inhibitory concentration) of each type of honey was assessed by the microdilution method. The plates were incubated for 24 hours. Positive and negative controls were used. The experiment was conducted in triplicate. **Results :** Honey C proved the highest antibacterial activity, inhibiting the growth of S. aureus at a concentration of 8.33% and Gram-negative bacteria (K. pneumoniae and P. aeruginosa) at 16.66%. Honey D demonstrated a similar effect against Gram-negative bacteria but failed to suppress S. aureus growth at the same concentration. In the case of E. faecalis, none of the tested samples showed significant inhibitory activity (CMI > 16.66%). **Conclusions:** The obtained results confirm the antimicrobial effect of polyfloral honey against relevant pathogenic agents. The specific chemical composition of each variety directly influences antibacterial efficacy. Additional studies are required to clinically validate these findings and identify the bioactive compounds responsible for their antibacterial effects.

Keywords: polyfloral honey, antimicrobial activity, minimum inhibitory concentration (MIC)

BACTERIOPHAGE THERAPY: A NEW HOPE FOR INTRA-ARTICULAR AND PERIPROSTHETIC INFECTIONS.

Stan Theodor[1], Lazar Tudor Gheorghe[1], Robert Traicu[1], Anca Cighir[1]

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Background: Bacteriophages are viruses that infect and replicate exclusively inside the bacterial cells. This can either kill or severely disrupt bacterial activity. Periprosthetic and intra-articular joint infections (PJIs) pose a significant challenge as they are associated with biofilm formation, which protects bacterial colonies from the immune system of the host, therefore reducing the effect of antibiotics. Consequentially, the surgical approach is regarded as the definitive way to cure such infections. Approximately 63% of all PJIs are caused by Staphylococcus aureus, which is regarded as the most aggressive pathogen in PJIs. **Objective:** Since the current treatment protocol is limited to the use of antibiotics and revision surgeries, our aim is to present new alternatives in the treatment of PJIs and suggest novel ways of improving the management of such infections. **Material and methods:** We conducted a thorough search of the PubMed database using the keywords "bacteriophage therapy" and "intraarticular infections".Six studies were included in the final analysis, that were published in English, and were released in the last 5 years. At last, only studies that included human subjects were included. **Results :** Before starting bacteriophage therapy (BT), all studies and case reports had one thing in common: Despite following the standard therapeutic protocol, rehabilitation has reached a full stop. So, Bacteriophage Therapy proved to be a last resort option for these patients, many of them evading an amputation. To drive the point further, most of them suffered from pre-existing conditions such as hyperlipidemia, hypertension, lymphedema, or diabetes. Our findings also indicate that the best results were obtained when bacteriophages were used concomitantly with large spectrum antibiotics for at least 6 weeks, delivered by intra-articular and intra-venous injections. In addition, literature generally supports the use of a combination between multiple bacteriophages (bacteriophage cocktail), therefore expanding their spectrum of action and decreasing phage resistance during treatment. The safety aspect of phage therapy also looks promising: only 20% of the treated patients have seen a rise in their hepatic transaminases, but the values returned to normal after the phage therapy stopped. Treatment response has also been durable since many of the studied patients report no reinfections after 1 to 2 years post therapy. **Conclusions:** To wrap things around, this presentation highlights the safety and effectiveness of bacteriophage therapy as a promising alternative for the future of intra-articular and periprosthetic joint infections.

Keywords: bacteriophage, therapy, intraarticular, infections

THE ERASMUS+ EXPERIENCE: CHALLENGES AND MENTAL HEALTH IMPACT ON MEDICAL STUDENTS

Paul Frigură[1], Butas Antoniu[1], Bugnariu Sergiu Vasile[1], Septimiu-Toader Voidăzan[1]

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Background: Established by the European Union in 1987, the ERASMUS program provides students with the opportunity to undertake a part of their undergraduate studies in a foreign country. However, the decision to

engage in such international mobility can present significant challenges for students. These include overcoming linguistic obstacles, adapting to a new cultural environment, and adjusting to a different medical education system. **Objective:** In light of multiple reasons that may influence the mental health of medical students , the aim of this paper is to examine the main factors underlying the deterioration of mental health among Erasmus+ students, based on the host country in which the mobility was undertaken. **Material and methods:** The data for this study were collected between February and March 2025 through an online survey intended only for 5th and 6th year medical students who had completed an Erasmus+ SMS mobility. The questionnaire was shared via social media platforms to assemble information about the overall experience, highlighting mental health outcomes associated with Erasmus+ mobility. Statistic analysis was performed using Fisher's test and Mann-Whitney U test. **Results :** The study revealed that 70 out of 81 students (86.2%) experienced symptoms of emotional distress. By examining the relationship between the reasons for undertaking Erasmus+ mobility and the chosen host country, it was found that students aiming to improve their practical skills were less likely to choose Italy (p=0.022, OR=0.26) and more likely to choose France (p=0.001, OR=23). Similarly, students motivated by the prospect of enhancing their employment opportunities upon graduation tended to prefer Turkey (p=0.013, OR=0.26) or France (p=0.013, OR=5.04). Students who reported language barriers with professors had an 11-fold higher risk of anxiety or stress during mobility (p=0.029, OR=11.38); those with difficulties communicating with patients had a 13.7-fold higher risk (p=0.014, OR=13.7); and students facing issues with subject recognition had a 13-fold higher risk (p=0.015, OR=12.89). Elevated levels of anxiety due to exam difficulty were reported in Italy and Hungary (p<0.001), while lower levels were observed in Turkey (p<0.001). Anxiety and stress related to administrative hurdles were more frequently reported in Italy (p=0.048). Regarding the impact of lectures and clinical internships, a higher risk of anxiety was observed in France (p=0.043), and a lower risk in Turkey (p=0.043). **Conclusions:** Based on our findings, the mental health of Erasmus+ students depends on the host country they chose, with the main contributing factors being language barriers, exam dificulty, and administrative problems.

Keywords: Mental Health, language barriers, Erasmus+ medical student

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CYTOLOGY-HISTOLOGY CORRELATIONS TO EVALUATE THE ‘FOLLICULAR NEOPLASIA’ DIAGNOSTIC CATEGORY OF THE BETHESDA SYSTEM FOR REPORTING THYROID CYTOPATHOLOGY

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Background: The Bethesda System for Reporting Thyroid Cytopathology (BSRTC) is a standardised reporting nomenclature and classification system in thyroid fine-needle aspiration (FNA) cytology. The 'follicular neoplasia' category has an indeterminate nature, encompassing both benign and malignant lesions. Using the cytology-histology correlation method to assess diagnostic accuracy is a valuable tool and helps refine classification criteria. **Objective:** The aim of this study is to analyse the diagnostic accuracy of the follicular neoplasia diagnostic category by comparing cytology and histology reports. **Material and methods:** Cytology and histology reports were retrospectively analysed from a cohort between 2012 and 2024. In this period 4379 FNAs were performed with samples obtained from 3887 (88.7%) women and 492 (11.2%) men. Patient inclusion criteria were a cytological diagnosis of 'follicular neoplasia' and subsequent surgery with histopathology report available. **Results :** Inclusion criteria were met in 70 patients. The gender distribution was the following for the studied group: 59 (84.3%) female and 11 (15.7%) male. In this group of patients, the average age was 49.9 years. Histological reports yielded benign tumours in 29 (41.4%) of cases, malignancy in 22 (31.4%) and non-neoplastic lesions in 18 (25.7%) of the cases. A risk of malignancy of 31.4% was calculated. **Conclusions:** Cyto-histological correlation is a useful tool to 'tame' the 'follicular neoplasia' category, which continues to pose a diagnostic challenge both cytologically and histologically.

Keywords: thyroid, follicular neoplasia, cytology-histology correlation method, cytology

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FUNGAL CONTAMINATION IN IQOS CIGARETTES

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Background: Fungal contamination is proven not only in herbs, cereals and other dry foods but also in regular

cigarettes. Due to their hepatotoxicity, they have been linked to acute poisonings, immunodeficiencies and hepatic cancer. **Objective:** To assess the contamination of IQOS cigarettes with filamentous fungi. **Material and methods:** The experiment setup included six packs of cigarettes bought from three cities: Brasov, Sibiu and Targu Mureș, two different flavours each (menthol, alias "turquoise", and "bronze"). Immediately after unsealing, 10 grams of tobacco from each cigarette were aseptically removed, weighted, and inoculated on Savoured culture media. The plates were incubated at 25°C for a total seven days and checked regularly for fungal growth. Filamentous fungi were identified based on colony morphology and microscopy (with lactophenol blue). The experiment was conducted in triplicate and the results were expressed by percentages. **Results :** Of the agars, 27.7% (5 out of 18) were positive for fungi. All packs presented one positive sample, except for one which was completely negative (83.3% vs. 16.67%). From the total number of positive samples, 80% (4 out of 5) had Acremonium spp. and 20% (1 out of 5) were positive for Penicillium spp. Contamination was proven in samples bought from Brasov and Targu Mures (for both flavours), while only one flavour from the samples bought from Sibiu (turquoise) was contaminated. **Conclusions:** Some IQOS cigarettes are contaminated with filamentous fungi, regardless of flavour. Further research is needed to assess the health effects.

Keywords: Microbiology, Fungal contamination, Iqos

LIFE - SAVING EDUCATION: FIRST AID IN SCHOOLS - A NATIONAL PRIORITY, AN INVESTMENT IN FUTURE AND A SAFER SOCIETY

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Background: Romanian primary and secondary school students receive limited education on providing first aid for individuals in emergency situations. The current curriculum does not include learning the basics of first aid skills and is not a compulsory requirement. **Objective:** The aim of this study was the education on providing first aid of primary and secondary school students from Mureș County, including the assessment of the efficacy of this activity based on electronic feed-back questionnaires completed voluntarily by the participants. The educational activity was voluntary. **Material and methods:** The educational activity was supported by the Inspectorate of Emergency Situations "HOREA" of Mureș County and the Emergency Care Unit of Mureș County Clinical Emergency Hospital. The voluntary educational courses were held at 4 rural and 17 urban schools in Mureș County, including 3014 students, in the 2023-2024 academic year. During the lectures, participants gained both theoretical and practical knowledge about basic life-saving interventions, handling emergency situations, and the importance of providing quick and effective assistance. Special emphasis was placed on recognizing clinical death, the operation of the 112-emergency helpline, identifying the symptoms of heart attack and stroke, managing acute airway obstruction as well as learning to use an AED. The acquired knowledge was assessed using an anonymous questionnaire containing scenario-based questions, accessed locally through a QR code. This provided an opportunity for an objective evaluation of the participants' understanding. **Results :** The questionnaire was completed by 843 participants (52.43% male, 47.57% female). The results of the questionnaires completed by middle school students (n = 317) and high school students (n = 526) were separately assessed. Among middle school students, the proportion of correct answers ranged from 82% to 100% for each question separately, while for high school students, the percentage of relevant responses varied between 72% and 98.85%. Regarding the necessity of calling the 112-emergency number, 93.37% of middle school students answered correctly, compared to 89.55% of high school students. When asked about the duration of chest compressions, 87% of middle school students and 72% of high school students provided the correct response. **Conclusions:** Greater emphasis should be placed on promoting first aid education and actively engaging students in rural schools. Secondary school students achieved outstanding results in acquiring first aid knowledge, demonstrating dedication and responsibility in their learning. The ages of 12-15 appear to be ideal for this type of education, as students at this stage are open and enthusiastic about acquiring new knowledge.

Keywords: First Aid, Education, Safety, Future

MONITORING AEROMICROFLORA TO PREVENT NOSOCOMIAL INFECTION IN CRITICAL HOSPITAL WARDS USING SPIN AIR V2 TECHNOLOGY

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Background: In Romanian hospitals, air monitoring is implemented, offering insight for targeted infection control measures. Nosocomial infections contribute to increased morbidity and mortality, particularly among patients in intensive care or undergoing surgery. **Objective:** Broader adoption of such measures is essential for aligning with international standards. Effective air quality monitoring enables prompt and targeted preventive interventions. It is also important to assess aeromicroflora separately during the spring/summer and autumn/winter seasons, as microbial concentrations can vary depending on environmental conditions. Moreover, in the event of nosocomial infection outbreaks, immediate air quality assessment is crucial for identifying and mitigating potential contamination sources. **Material and methods:** This study assessed airborne microbial contamination in surgery rooms at the Gynaecology and Paediatric Surgery and Orthopaedics Clinics of the County Emergency Clinical Hospital of Târgu Mureș. Samples were collected from January to December 2024 to account for seasonal variations. Air sampling used the Spin Air v2 (IUL, Barcelona, Spain) device via an aspiration method. Each sample consisted of 100 L of air, filtered within one minute and inoculated on blood agar. Plates were incubated for 24 hours at 37°C, then interpreted by a microbiologist. Samples exceeding 300 colony-forming units (CFU) per m^3 were labelled "inappropriate" due to high microbial load. Statistical analysis was performed using JASP (v.0.19.3), applying Wilcoxon signed-rank and chi-squared tests, with a significance threshold of $p<0.05$. **Results :** A total of 41 sampling processes were performed (n=41). 20 samples were collected from the surgical rooms of the Gynaecology Clinic and 21 samples from the Clinic of Paediatric Surgery and Orthopaedics. A total of 15 samples were inappropriate, 9 of them belonged to the Gynaecology Clinic. The air quality of the two Clinics did not differ significantly ($p=0.173$), and the frequency of inappropriate air quality did not show statistically significant differences when comparing the two Clinics ($p=0.215$). Although no significant difference was found between the Clinics, the high proportion of inappropriate samples suggests a need for better air quality control. Variability across sampling points indicates that factors like ventilation and surgical activity may influence contamination levels. **Conclusions:** The study highlights a notable proportion of surgical rooms exhibiting poor air quality. High microbial loads were present in multiple samples. Continuous air quality monitoring is recommended to support timely, targeted interventions aimed at reducing nosocomial infection risks.This research was supported by the George Emil Palade University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș, Research Grant number 837/1/23.01.2025.

Keywords: Aeromicroflora, Nosocomial Infection, Airborne Pathogens, Monitoring

GAMIFICATION IN BASIC LIFE SUPPORT TRAINING

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Background: Basic Life Support (BLS) training is essential for improving survival outcomes in cases of cardiac arrest. Effective training must support both theoretical understanding and hands-on skill development. However, traditional methods - mainly lectures and standard simulations - often lack engagement, which can limit learning and retention. Gamification, the use of game-like elements such as real-time feedback and competition in non-game contexts, offers a promising alternative. By increasing interactivity and motivation, gamified approaches may enhance both the learning experience and practical performance in resuscitation training. **Objective:** The objective of this study is to compare the effectiveness of gamification using the QCPR app compared to traditional training methods for Basic Life Support, among students preparing to become volunteers at UPU-SMURD Targu Mureș. **Material and methods:** The study involved students from the General Medicine, Dentistry, and General Nursing programs at the University of Medicine, Pharmacy, Science, and Technology "George Emil Palade" in Targu Mureș. Participants were enrolled in a preparatory course organized by the Emergency Medicine Student Organization for future UPU-SMURD volunteers. Initially, 210 students completed a questionnaire assessing their knowledge of BLS. Following a theoretical course covering Basic Life Support, Trauma and Airway Management, students undertook a written examination. A total of 59 students who passed the exam were included in the

practical training phase. Participants were randomized into two groups: one trained using a traditional mannequin and the other used the QCPR app, which offers real-time feedback on resuscitation metrics. Upon completion of the practical session, 45 students completed a post-training questionnaire evaluating perceived realism of the mannequins and self-reported confidence in performing resuscitation techniques. **Results :** Preliminary data suggest that the group using the QCPR app demonstrated superior performance in terms of chest compressions quality, rhythm accuracy, and appropriate compression depth, however, these differences were not statistically significant. Furthermore, these students reported a higher level of confidence in their ability to perform resuscitation effectively. **Conclusions:** The integration of gamification through tools such as the QCPR app significantly enhances both skill acquisition and learner engagement in Basic Life Support training. The incorporation of such technology-driven, interactive methods may contribute to more effective preparation of healthcare students, ultimately improving the quality of emergency interventions in clinical practice.

Keywords: Gamification, Basic Life Support, QCPR, Medical Training

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THE ALTERATION OF INTESTINAL MICROBIOME INDUCED BY ALCOHOL AND SUBSTANCE USE AND ITS IMPACT ON THE SEVERITY OF PSYCHIATRIC DISORDERS

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Background: Intestinal microbiome has a serious impact on a human's mental health through different mechanisms, including, but not limited to, the hypothalamic-pituitary-adrenal axis. The integrity alteration of the intestinal microbiome may lead to severe psychiatric disorders such as anxiety, schizophrenia and psychosis. Alcohol and substance use seem to lead to dysbiosis, which may drive the individual towards reward-seeking and alcohol-seeking behaviors, creating a temporary vicious circle. **Objective:** The aim of our study is to research the correlation between intestinal dysbiosis induced by alcohol and substance use and its association with psychiatric disorders. **Material and methods:** The research was accomplished by doing a thorough literature search on PubMed using the keywords "psychosis", "alcohol" and "intestinal microbiome". The articles that were included consisted of literature reviews, systematic reviews, as well as in vitro and in vivo studies published over a period of 7 years. A total of six articles were finally selected based on the search criteria. **Results :** Several studies have shown that chronic alcohol and substance use can lead to significant alterations of the intestinal microbiota, characterized by a decrease in beneficial bacterial populations such as Lactobacillus spp., Enterococcus spp., and Bifidobacteria (mainly from the Firmicutes and Actinobacteria phyla), along with an increase in bacteria from the Bacteroidota phylum, collected from human subjects fecal samples. The pre-existing dysbiosis may aggravate through absence of polyphenols, leading to more severe types of anxiety, depression and alcohol craving. Furthermore, it has been demonstrated that dysbiosis could be associated with the presence of proinflammatory bacterial components, such as lipopolysaccharides and peptidoglycans, into the systemic circulation that ultimately leads to the precipitation of neuroinflammation and brain dysfunction. The exact mechanism is still not fully understood. **Conclusions:** Long-term alcohol consumption and substance use may lead to dysbiosis which can significantly increase the risk of developing different psychiatric disorders.

Keywords: alcohol, dysbiosis, psychiatric disorders, psychiatric disorders

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FEEDING THE APOE PARADOX: THE ROLE OF GENOTYPE-SPECIFIC NUTRITION IN CARDIOVASCULAR AND NEURODEGENERATIVE DISEASES

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Background: APOE (Apolipoprotein E) is a key gene involved in lipid metabolism, that presents itself in three primary allelic variants: E2, E3 and E4. The polymorphism modulates cardiovascular (CVD) and neurodegenerative disease (ND) risk as well as one's nutritional response. Understanding the interaction of APOE polymorphisms with diet may have an important implication in disease management and prevention. **Objective:** This review assesses how the relationship between ApoE polymorphism and nutrition influences the development and progression of CVDs and NDs. **Material and methods:** A thorough review was conducted across articles from 2015-2024 focusing on ApoE isoforms and nutritional genomics in the context of CVDs and NDs. Particular emphasis was placed on cohort studies, randomized controlled studies, and systematic reviews involving humans

and animal models. **Results :** Three major alleles resulting from the combination of two single nucleotide polymorphisms - rs7412 (C526CT) and rs429358 (T388C) - leading to 6 possible genotypes determine the synthesis of the different ApoE isoforms associated with different disease risk and nutritional response, in a dose-dependent manner. APOE4 carriers show increased sensitivity to dietary fat composition. Diets high in saturated fat and low in fiber exacerbate lipid profiles elevating LDL cholesterol, and result in worsening cardiovascular markers and accelerated decline of cognitive function. In contrast, they manifest an increased beneficial response to a Mediterranean-style diet, rich in omega-3 fatty acids and polyphenols known to associate with cardio- and neuroprotective effects. Prebiotic fibers such as inulin, alongside soy, plant sterols and ketogenic formulations also exert genotype-specific effects on gut-brain signaling, blood pressure, and lipid metabolism. While the effect of APOE3 remains neutral or moderately responsive to diet, APOE2 carriers may benefit of a high fat, low carb diet. Interestingly, sex, age and body-weight may modulate these nutritional responses. For instance, male APOE4 carriers show significant triglyceride reductions with omega-3 supplementation, though cognitive improvements vary. In APOE2 carriers, soy affects blood pressure, while APOE4 may alter gut microbiota composition, blood-brain barrier integrity and hippocampal glucose transporter expression. Despite their cardiometabolic advantages, some dietary strategies, such as omega-3 supplementation or high-fat ketogenic diets, do not always translate to cognitive protection, and might even worsen neurodegeneration. **Conclusions:** The ApoE paradox brings to light the importance of nutrigenetic and nutrigenomic research, and a genotype-specific nutritional intervention in CVD and ND management. Integrating ApoE genotype, sex and age in personalized nutrition optimization may contribute to a more efficient chronic disease prevention

Keywords: APOE polymorphism, Nutrigenomics, Cardiovascular diseases, Neurodegenerative diseases

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GENOTYPE-PHENOTYPE CORRELATIONS IN PATIENTS WITH WILLIAMS-BEUREN SYNDROME

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Background: Williams-Beuren syndrome (WBS) is a rare, contiguous gene deletion syndrome, considered a multisystemic neurodevelopmental disorder. It is caused by a microdeletion on chromosome 7q11.23 involving approximately 28 genes, which is 1.55 to 1.84 Mb in size and can be detected by molecular cytogenetic techniques. The size of the deletion determines extensive heterogeneity in the phenotype, with pathognomonic features involving craniofacial dysmorphism with "elphic facies", cardiovascular anomalies, neurosensorial deafness, developmental delay, and characteristic social behavior. The most common cardiovascular abnormalities, supravalvular aortic or peripheral pulmonary artery stenosis, septal defects, and coarctation of the aorta, are primarily caused by deletion within the *ELN* gene, associated with elastin arteriopathy. Development delays, particularly in perceptual and motor functions, are mainly caused by deletions compromising the *CLIP2, GTF2I, NCF1*, and *LIMK1* genes. **Objective:** This study aims to investigate the possible correlations between the genotype and phenotype of WBS patients investigated by the Multiplex ligation-dependent probe amplification (MLPA) technique. **Material and methods:** For this retrospective study dated from 2016 to 2024, 10 pediatric patients with WBS-specific phenotypes were referred for genetic evaluation and testing using the MLPA technique. **Results :** All patients, all below the age of 12 at the time of the initial evaluation, presented deletions of the *ELN* gene, which is responsible for cardiovascular abnormalities. Seven out of 10 patients were diagnosed with aortic or pulmonary stenosis. Most patients with deletions that compromise the *CLIP2* or *LIMK1* genes linked to neurodevelopmental functions show some psychomotor, verbal, or intellectual impairment or characteristic social behaviours such as over-sociability. Other genes responsible for WBS found in our patients are *FKBP6, FZD9, TBL2, STX1A,* and *RFC2*. Nine out of 10 patients presented craniofacial dysmorphism with microcephaly, a long and smooth philtrum with full lips, a wide mouth with small, spaced teeth, and a depressed nasal bridge with upturned nares. Hypercalcemia or borderline elevated serum calcium levels were observed in four of the patients. Half the patients exhibited short stature, poor weight gain, or evidence of intrauterine growth restriction. **Conclusions:** Our study highlights the complexity of the WBS phenotypes with multisystem abnormalities in correlation with genotypes displaying deletions of the 7q11.23 region and involving specific genes (*ELN, CLIP2, LIMK1*), confirmed by MLPA testing. ACKNOWLEDGEMENTS: The genetic testing was supported by the National Health Program of Women and Children PN.VI.2.3.

Keywords: Williams-Beuren syndrome, 7q11.23 microdeletion, ELN gene, MLPA

ANTIMICROBIAL ACTIVITY OF ARSENIC AND WOLFRAM POLYOXOMETALATES

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Background: Medicine confronts itself with one of the biggest problems of the present and the future in means of treating microbial infections which have an ascending tendency of persistence, aggressiveness and resistance manifested by the pathogenic agent, such as MRSA(Methicillin-resistant Staphylococcus aureus). Prophylaxis and informing the population on effects caused by misuse of antibiotics for longer periods of time and wrong medical situations are the most practiced strategies used to avoid such difficult cases. Although, research of new treating methods remains an important step to win this race. **Objective:** The research's objective bases on finding new possible substances with low toxicity and antimicrobial effect, which could be used to decontaminate equipment or materials exposed to Methicillin-resistant Staphylococcus aureus, such as laboratories, or in biological war, and even biological residues. **Material and methods:** For this research it was looked for antimicrobial effects of 6 types of substances with As^{+3} and W^{+6}, representing unsaturated polyoxometalates, on 19 MRSA clinical isolates, using microdilutions on plates with 96 godets. Each substance occupied a predetermined position on A1-F1 column, with concentrations between 512 - 0,0625 µg/mL w/v, for both As^{+3} and W^{+6}. The minimum inhibitory concentrations were read after a 24h incubation at 37˚C. **Results :** First 3 As^{+3} substances with an initial concentration of 512 µg/mL had an antimicrobial intensified effect compared to 4-6 substances, which had a W^{+6} concentration of 512 µg/mL, W^{+6} increasing the As^{+3} effects on 10 isolates(52.63%), with a MIC between 2-16 µg/mL. On the other hand, the 4th substance had no effect on any clinical isolate. The As^{+3} added enriched the effects of the 5th and 6th polyoxometalates on 9 isolates(47.36%), but with a higher MIC between 8-256 µg/mL. **Conclusions:** MRSA clinical isolates are inhibited by As^{+3} and W^{+6} substances, the element with antimicrobial effects being As^{+3}, but W^{+6} could be an intensifier for As^{+3}, although its effects vary depending on the MRSA clinical isolates. In the end, new ways could be achieved for biohazard control.

Keywords: MRSA, MIC, Antimicrobial effect, Arsenic

GENETIC ANALYSIS OF COPY NUMBER VARIATIONS IN PATIENTS WITH INTELLECTUAL DISABILITY OR GLOBAL DEVELOPMENTAL DELAY

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Background: Genetic factors are responsible for around 40% of cases with intellectual disability (ID) and global developmental delay (GDD). Genetic testing, through optimized and highly sensitive molecular techniques, such as Multiplex Ligation-dependent Probe Amplification (MLPA), can identify Copy Number Variations (CNVs) involved in the pathogenesis of ID/GDD and provide valuable insight for patient management, especially genetic counselling. **Objective:** Our study aims to determine the frequency of CNVs and the genotype-phenotype correlation in paediatric patients with ID/GDD with or without congenital anomalies. **Material and methods:** Our study is a retrospective study, involving 208 patients referred to the Medical Genetics Department of the Emergency County Hospital of Targu Mures between 2015 and 2024 for genetic evaluation and testing. CNVs were detected by MLPA technique using specific kits for microdeletion and microduplication syndromes associated with ID/GDD. Statistical analyses were done using Excel and GraphPad applications. **Results :** Out of 208 patients (81 females and 127 males), averaging 10.13 years old, 22 patients (10.58%) were positive for CNVs (mostly microdeletions) involving the chromosomes 1p, 4p, 15q, 16p, 17p, 17q and 22q. Regarding clinical characteristics of patients with CNVs, moderate ID/GDD (14/22-63.64%) was more frequently encountered, language impairment was observed in 8 patients (36.36%), behavioral problems in 9 patients (40.91%), and most common congenital anomalies were cardiac defects (10/22-45.45%) and of the limbs (11/22-50%). The presence of CNVs was not significantly correlated to the analyzed clinical characteristics, except for cardiac and skeletal anomalies (p-value < 0.05). **Conclusions:** MLPA is a fast and cost-effective technique that can be used as a first-rate test in patients with ID/GDD. It is recommended to confirm the MLPA tests results by using another molecular genetic technique or a follow-up kit. ACKNOWLEDGEMENTS: This study was supported by the internal grant of the GE Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mures (contract no. 615/6/17.01.2019); and the National Health Program of Women and Children PN.VI.2.3 .

Keywords: Intellectual disability, Global developmental delay, CNV, MLPA

EVALUATION OF ANTIMICROBIAL EFFICACY OF COMMONLY USED TOOTHPASTES IN ROMANIA AGAINST ORAL PATHOGENS

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Background: The human oral cavity is known to be at high risk of infection due to frequent exposure to viruses, bacteria or fungi. Despite the fact that the oral cavity contains a microbiome which consists of various harmless microorganisms, there are other infectious pathogens that can lead to an imbalance in microbial flora causing disease and further complications. **Objective:** The aim of the study was to investigate 5 of the most used toothpastes in Romania, in order to assess their antimicrobial activity on pathogens that can be found in the oral cavity in various situations **Material and methods:** An 0.5 McFarland inoculum was prepared in saline solution for: Staphylococcus aureus ATCC 29213, Klebsiella pneumoniae ATCC 13883, Escherichia coli ATCC 25922, Pseudomonas aeruginosa ATCC 27853 and Candida albicans ATCC 90028. The bacteria were inoculated onto Muller-Hinton Agar and 2 sterile blank disks were placed. NTC was also used as a control plate. On every blank disk, it was placed approximately 1g of each toothpaste included in this study. Therefore, all toothpastes were distributed on the surface of every blank disk. All Muller-Hinton plates were placed in the incubator at 37 Celsius degrees, for 18 to 20 hours. All the diameters higher than NTC were considered susceptible. **Results :** After the incubation time and measurement of diameters it was concluded that toothpaste 5 reached the highest antimicrobial level of activity, effectively inhibiting the growth of C. albicans, S. aureus, K. pneumoniae, and P. aeruginosa. C. albicans demonstrated susceptibility to all tested toothpastes, having inhibition zone diameters of 18 mm for toothpaste 1, 16 mm for toothpaste 2, 16 mm for toothpaste 3, 23 mm for toothpaste 4, and 22 mm for toothpaste 5. Toothpaste 3, 4, and 5 showed limited activity against K. pneumoniae, with inhibition zone diameters of 7 mm, 11 mm, and 10 mm. E. coli and P. aeruginosa were susceptible only for toothpaste 2 (7mm) and toothpaste 5 (12mm). **Conclusions:** The results highlighted the variability in antimicrobial efficacy of these 5 different toothpaste brands, with some of them not performing optimal activity against the tested bacterial strains. On the other hand, in the case of fungal infections caused by C. albicans, all tested toothpastes showed susceptibility. Regular use of toothpaste can help prevent the occurrence of Candida infections by maintaining oral hygiene and reducing the growth of harmful microorganisms.

Keywords: toothpaste, oral microbiome, antimicrobial activity, C. albicans

DEEP LEARNING-DRIVEN DISCOVERY OF ANTIBIOTICS AGAINST METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

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Background: Artificial intelligence includes a variety of branches, such as machine learning and deep learning. These tools are currently being used to combat the shortage of new antibiotics caused by infections with multi-drug resistant pathogens, such as *Methicillin-resistant Staphylococcus aureu*s (MRSA), associated with challenging nosocomial and blood infections. **Objective:** This review aims to investigate how deep learning contributes to the identification of new antibiotic structural classes for methicillin-resistant bacterial strains, as it has already been done in developing antimicrobials against Gram-negative bacteria, such as *Halicin* and *Abaucin*. **Material and methods:** We conducted thorough searches in the PubMed database using the keywords "artificial intelligence", "antibiotic discovery", and "Staphylococcus aureus" to incorporate the most significant literature studies. A total of 14 full-text review articles were identified. After analyzing the content of the articles, we selected four pertinent articles that satisfied the inclusion criteria. **Results :** Using a collection of neural models such as Chemprop, the authors trained sets on the screening data to anticipate whether a compound would exhibit chemical activity in inhibiting bacterial growth of a MRSA strain based on its chemical framework. The large collection of 39,312 structures was reduced to 512 that showed notable growth inhibition. Additional evaluations were made in the hope of improving the search for target antibiotics. Thus, their toxicity towards human cells was evaluated, specifically on liver, muscle, and lung fibroblast cells. For these cells, the results showed 3,341 (8.5%), 1,490

(3.8%), and 3,447 (8.8%) cytotoxic entities, out of which 512 were identified as antibacterial substances. Among these, 306 were found to be inoffensive. Encouraging results were detected, especially for toxicity mediators in the lungs and connective tissues. Next, graph neural networks were used to recognize molecular substructures ("rationales"). These contribute to the prediction of high scores for antibiotics by discovering new structural frameworks not encountered before in training. Thus, 1,261 compounds were selected out of 3,646, of which 186 structural elements had predictive value. Five distinctive frameworks were identified, and nine results were tested. From groups G1-G5, four results, in particular 1 and 2, showed efficacy against MRSA with minimal cytotoxic effects, advantageous drug-like properties, and exhibited selectivity, indicating their potential as valuable antibiotic candidates. **Conclusions:** Artificial intelligence can be a great aim in identifying and validating promising new antibiotic candidates against *Staphylococcus aureus*, including compounds with a novel specific mechanism of action. Further research is needed to confirm the results for their full pharmacological characteristics and effectiveness in clinical environments.

Keywords: Staphylococcus aureus, deep learning, MRSA resistance, antibiotics

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BURN WOUND INFECTIONS - AN OVERVIEW OF THE BIOFILM ROLE AND POTENTIAL THERAPEUTIC APPROACHES

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Background: Burn wounds are among the most severe types of injuries, often leading to immune suppression and high infection risks. Bacterial biofilm formation on the wound surface plays a central role in bacterial persistence and resistance to treatment. Recent advances in nanotechnology have enabled the development of anti-biofouling, hydrogel-forming polymers that prevent bacterial adhesion and support wound healing, offering a promising alternative for burn wound management. **Objective:** The current literature overview aims to critically examine the most relevant antibiofilm strategies in burn wound management, with emphasis on nanotechnology-based approaches designed to target specific stages of biofilm development. The review highlights how understanding the sequential progression of biofilm formation informs the rational design of advanced, antibiotic-free interventions for preventing burn-related infections. **Material and methods:** Systematic literature research was conducted using specific keywords like "burn wound dressings", "anti-biofouling", "bacterial adhesins", "hydrogels", and "surface modifications" across PubMed, Scopus, and Web of Science, with inclusion criteria focusing on peer-reviewed articles published between 2015-2025. A total of 12 original research articles and 22 review articles were thoroughly analyzed, from which two of each type were selected based on their scientific relevance and innovative therapeutic approaches. **Results :** The selected studies emphasize the importance of nanoscale engineering in enhancing the antimicrobial performance of burn wound dressings. Surface patterning at the nanometer scale significantly reduces bacterial adhesion, interferes with extracellular matrix production, and disrupts biofilm maturation. Hydrophilic and biocompatible polymers, such as chitosan, polyacrylate, and PEG derivatives, functionalized with antibiofilm agents, showed promising results. As an example, chitosan-derived hydrogels, infused with nitric oxide donors, have demonstrated efficacy in promoting wound healing for burns infected with MRSA, showing both antimicrobial effects and regenerative capabilities. The films promoted continuous release of NO, resulting in a significant decrease in bacterial viability and enhanced anti-biofilm effects when compared to the controls. In vivo, the treatment expedited the dispersal of biofilms, decreased wound size, and enhanced epithelialization and collagen formation, indicating that these films could be effective in managing MRSA-infected chronic wounds. Therefore, these materials support wound hydration and regeneration, while their tunable nanoscale features enable targeted interference with key microbial virulence mechanisms. **Conclusions:** Nanostructured wound dressings represent a promising therapeutic approach for preventing biofilm-related infections in burn patients. By targeting key steps in biofilm formation, these antibiotic-free strategies reduce infection risks while limiting selective bacterial pressure and the spread of antimicrobial resistance. The reviewed technologies highlight the potential of nanotechnology to advance effective, resistance-conscious wound care solutions.

Keywords: burn wound dressings, antibiofilm, hydrogels, nanotechnology

THE ASSESSMENT OF AWARENESS LEVEL ABOUT SUN EXPOSURE AND SKIN CANCER IN RURAL POPULATIONS

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Background: The impact of sun exposure for developing skin cancer is well known and proved in numerous scientific models. The risk is even higher for people with fair skin, which are under prolonged exposure or intermittent of high intensity. Rural residents and those with professional exposure are two specific groups that are particularly vulnerable. In these people, their awareness level might be a predictor of skin cancer development. **Objective:** The study's goals are to determine how much knowledge rural residents have about the negative effects of sun exposure, examine their behavior and awareness in relation to this topic, and correlate the findings to determine whether this population is more vulnerable and what can be done for protection. **Material and methods:** The study was conducted based on a face to face questionnaire on people from rural areas only. It includes 301 participants from age under 18 to over 60 and has 15 questions that asses their level of education, time spent under sun, UV protection practices, and level and source of information about the subject. **Results :** The population includes 61,5% female and 31,5% male participant. Their level of education is mostly medium, as follows: High School 33,6% as well as College 26,2% and Primary School 19,1%. More than half of the population spend 1-3 hours(35,9%) and 3-5 hours(23,6%) in the sun per day. Only 34,9% of them use sun screen, while 48,2% use a hat to protect themselves. Only 2,7% of the population studied goes regularly (once a year) to the dermatologist to check their skin, 41,2% check their skin only when something new appears on it, and 31,2% visit the dermatologist when a skin lesions becomes painful, while 28,2% treat any skin lesions with traditional and non-medical methods. A total of 73,4% knows that sun exposure is a risk factor for skin cancer. The high percentage of 52,5% got their information about the subject from friends, neighbors and media, while from educational system 17,9% and from doctors a total of 22,3%. **Conclusions:** From the data above we can conclude that even if this population is aware of the relation between sun exposure and skin cancer, they still neglect the importance of sun protection, dermatological appointments and treatment of suspect skin lesions. A possible reason for this maybe the fact that they get their information mostly from non-scientific sources.

Keywords: sun exposure, rural population, awareness, skin cancer

CAN HPV VACCINE BE EFFECTIVE AFTER NEOPLASIC DIAGNOSIS? - A SYSTEMATIC REVIEW

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Background: Human Papillomavirus (HPV) is a double-stranded DNA virus with a tropism for cutaneous and mucosal epithelia that can cause an infection that leads to dysplasia and, in more severe cases, to cervical cancer. Two of the most frequently involved types in this oncologic pathology are type 16 and 18. Depending on the severity of cervical intraepithelial neoplasia (CIN), the patients might need to undergo an excision procedure in order to stop the neoplasia from advancing and, also, to preserve the healthy tissue. **Objective:** The purpose of the review is to find the effects of the HPV vaccine in older women with an active HPV infection and CIN2 lesions, after undergoing a conization process. We wanted to see whether the administration of the vaccine can reduce the post-infectious risks and offer a better chance to a complete recovery in the case of dysplasia. **Material and methods:** In order to gather the information, we analyzed the existing literature, focusing on the studies released in the last 5 years. Using the keywords: "HPV vaccine", "conization" and "Gardasil", we found several cohort studies from PubMed and Google Scholar. One of the important criteria for selecting the articles was the median age of the women participating in the studies (higher than 35 years old). **Results :** The analysis revealed that using HPV vaccination as an adjuvant therapy post-conization lowers the risk of persistent CIN2-3 lesions and, moreover, the need for a reintervention. Furthermore, it can also prevent reinfection with HPV, offering protection. One study noted no difference between the number of doses and the types of vaccine used, while another one concluded that the 9-valent vaccine is more efficient. Two of the studies emphasized the compliance for the vaccination scheme to be directly related to the economical aspect, with a growth from 35.9% to 79.1% once the vaccine became free. One study that took place in Spain concluded that the rate of persistent/recurrent CIN2-3

was lower in vaccinated women (3.3%, n=5) than in non-vaccinated women (10.7%, n=12). **Conclusions:** This review aimed to emphasize the need for further studies on the efficiency of the HPV vaccine as an adjuvant treatment to conization and the possibility of preventing the recurrence of CIN2 lesions. The studies findings were statistically relevant, underlining the importance of delving into new potential treatments and raising awareness that HPV vaccination can be effective even for older women.

Keywords: HPV vaccine, conization, cervical intraepithelial neoplasia, CIN

POST-COVID-19 AND BASAL CELL CARCINOMAS: AN UPWARD TREND IN DIAGNOSES

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Background: Non-melanocytic skin cancers (NMSC) have an incidence in Romania according to the most recent statistics of 8.6 in 100.000 and a 1.1 mortality rate. Out of all NMSC cases, the basal Cell Carcinoma (BCC) represents one of the most diagnosed type of skin cancer and it is also one of the most outspreaded. COVID-19 pandemic has affected the diagnoses of this tumors in terms of access to medical services. **Objective:** The aim of the study was to analyse the epidemiological and histological features of BCC after the Covid-19 pandemic. **Material and methods:** A retrospective study has been performed that included a total of 540 patients with BCC based on the registered biopsies within the Pathology department of the Mures County Clinical Hospital during 2021-2024.The inclusion criterion was represented by a positive diagnose of Basal Cell Carcinoma and exclusion of all those who presented different diagnosis or had a positive diagnose prior to the study. **Results :** Out of all the tissue samples examined by the Department of Pathology over the period of interest a total of 540 were basal cell carcinomas. Based on age, the median of occurrence was 70 years (range 64-78), with a slight male predominance 54.10 % (n=292) where 45.90% were females (n=248). Compared to 2021 with a total of 103 diagnoses, there was an 80.58% increase in cases by 2024 with 186 cases diagnosed with 71.10% patients from urban areas (n=384) compared to 28.90% those from rural areas (n=156). Excision sites grouped on anatomic regions show a cranial predilection with 71% (n=383) with the pelvis being the least affected region with less than 1% (n=3). In terms of features, simple types of BCCs represent 16.11% of the amount (n=87) where mixt forms are 83.88% (n=453). **Conclusions:** In this study, there is a clear raise of BCCs, most basal cell carcinomas occurred in aged men mostly from urban areas. Frequent sites of excision were the head and neck region with a predominance of mixt type.

Keywords: Basal Cell Carcinoma, Post-COVID19, Pathology, Epidemiology

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“EXPLORING THE ROLE OF NON-TECHNICAL SKILLS IN ENHANCING EMERGENCY MEDICINE OUTCOMES”

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Background: Non-technical skills play a critical role in the practice of emergency medicine, directly impacting teamwork, clinical decision-making, and patient safety. Although technical proficiency is essential, competencies such as communication, leadership, and crisis management are equally vital in high-stakes, time-sensitive environments. Evidence suggests that deficiencies in non-technical skills are significant contributors to medical errors and adverse patient outcomes. Despite their recognized importance, these skills remain underrepresented in traditional medical education and training. **Objective:** To assess the perceptions of emergency medicine personnel regarding the importance of non-technical skills (such as communication, teamwork, and critical situation management) in enhancing professional performance and case management in emergency settings. **Material and methods:** Data were collected online using a self-administered questionnaire targeting four categories of emergency department personnel: doctors, nurses, volunteers, and paramedics. The questionnaire aimed to gather information about their motivations for choosing this department and their perspectives on how non-technical skills impact their daily work. **Results :** The study involved 104 participants, of whom 20.2% understood what non-technical skills entail, while 79.8% did not. Regarding their perspective on how case management is influenced by effective communication within an emergency team, 90% rated it as "very much" (score of 5), while 10% gave it a score of 4 out of 5. Additionally, 56.7% reported observing medical errors in the past 12 months due to poor communication. Nevertheless, approximately 90% believe crisis management

depends on the ability of medical personnel to work as a team, reinforcing the idea that collaboration is essential in critical contexts. **Conclusions:** The survey reveals that emergency medical personnel recognize the importance of non-technical skills, particularly communication and teamwork. Poor communication is perceived as a frequent cause of medical errors, and respondents strongly support the introduction of conflict management and leadership courses to improve team performance. The high interest in non-technical skills indicates a desire for professional development, which could be addressed through targeted training programs.

Keywords: Non-technical skills;, Emergency medicine;, Medical errors;, Communication;

ANTIBIOTIC RESISTANCE IN GENERAL POPULATION AS A CONSEQUENCE OF PAST ANTIBIOTIC USE

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Background: Antibiotics are a class of antimicrobial drugs, that destroy or stop the growth of bacteria and are used to prevent and treat bacterial infections. Regarding the antimicrobial resistance, it is a major problem in treating some infections and it is determined by some biological and molecular mechanisms. These include inactivation of the drug, reduced drug uptake, modifying an antibiotic target and active efflux of the drug. Besides, resistance can appear because of genetic mutations or horizontal gene transfer between bacteria. **Objective:** The main objective of this study is to verify if there is a prevalence of antibiotic resistance among people who have used antibiotics in the past. So, the study analyze some factors which contribute to antibiotic resistance, including inappropriate use , excessive and prolonged use of antibiotics, adherence to treatment and self-medication. **Material and methods:** To verify these aspects, we developed a cross-sectional study based on a questionnaire, targeting individuals who have used antibiotics in the past for various infections. The questionnaire consists of 35 questions, designed to collect data about the frequency of antibiotic use, reasons for antibiotic use, the most used drugs, improper use (duration, dosing intervals), antibiotic prescriptions, self- medication and about the history of recurrent infections which did not respond to the therapy. **Results :** The study involved a total of 300 participants from all the different age groups in almost equal proportions. Regarding the frequency of antibiotic use, 39,5% use more than one or two antibiotics/year and 60,5% take less than one antibiotic in a year. The results show that 54% of those who take more antibiotics during a year, had at some point to change their antibiotic because they didn't respond to the one initially administered. Also, 93% respondents confirm they usually follow the advice of a doctor, 19% used antibiotics when they had a common cold and 31,3% took once an antibiotic without a medical recommendation (self-medication), of which 76% had once an infection that did not respond properly to the antibiotic therapy. Additionally, almost 20% participants acquired antibiotics without a prescription from pharmacy. **Conclusions:** This study emphasize the important role of past antibiotic use in the development of antibiotic resistance. It is observed that several factors are involved, including the inappropriate, excessive and prolonged use of antibiotics. So, it is important to understand the biological and molecular mechanisms of resistance for implementing intervations and for preventing the development of a health crisis.

Keywords: antibiotics, bacterial resistance, self-medication

PROLONGED SCREEN EXPOSURE BEFORE SLEEP - THE IMPACT ON EYE HEALTH

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Background: The usage of screen devices, specifically smartphones, has become a extensively debated topic of discussion. Due to the excessive use of this networking without considering its negative effects, the issue worsens even further when vision problems are involved. **Objective:** The goal of this study is to determine whether the use of screen devices before sleep affects vision in any way,notably when they are used right before bedtime. Moreover, this study examines the rate of use of various eye protection filters available on smartphones. **Material and methods:** The Google Forms platform was utilized to apply an anonymous questionnaire on 300 subjects with different study levels ,aged between 15 and 40 years . The questions focused on the usage patterns of smartphones and other gadgets . The data collection was performed voluntarily and randomly and processed using SPSS, statistical package for the social sciences software and Microsoft Office Excel 365. A descriptive and interferential statistical analysis of the responses was conducted to asses relationships between variables. A

significance level of p-value <0.05 was considered to determine statistically meaningful associations. **Results :** After analyzing the responses, the results confirmed that out of 300 participants, 289 used screen devices before sleep. The percentage, 96,33%, indicates a very high level of device usage, despite the fact that 151 respondents had pre-existing eye problems at the time of the survey. The average time spent on gadgets before sleep was between 30 minutes and 1 hour (160 participants). The most related symptom was dry eyes for a stack of 32,67%, although an average of 27,33% didn't present any symptoms. The Fisher test was utilized for analizing the relationship between smartphone usage before sleep and implied social media activities. p value <0,001 and the OR=18.04, (IC 95%: 4.97 - 65.51), indicates that the persons who used gadgets before sleep are 18 times more predictable to also use social media in compare to those that use different technology devices before sleep. Notably unexpected , the respondends that visualized movies or series before sleep had an lower risk of presenting blurred vision by 1.75 times (p=0,043). **Conclusions:** The rate of smartphones usage continues to grow at an accelerating pace, starting from an younger age. The major issue lies in the systemic effects of this habit. The optic system is highly vulnerable, and prolonged exposure to screens significantly impacts its biochemical processes over time, particulary when technology is used excessively on a daily basis.

Keywords: Screen devices, Protection filters, Optic system

ZOSURABALPIN VS COMBINED ANTI-CRAB THERAPIES: A COMPARATIVE ANALYSIS OF MECHANISMS OF ACTION AND THERAPEUTIC IMPACT

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Background: Acinetobacter baumannii has gained the scientific community's attention due to its association with increasing antibiotic resistance. This Gram-negative, non-fermentative coccobacillus is one of the underlying causes of nosocomial infections among critically ill patients. The threat is posed by the carbapenem-resistant variants (CRAB-Carbapenem-Resistant Acinetobacter baumannii), which are regarded as a high-priority critical concern by the CDC and WHO. This pathogen harbors natural mechanisms responsible for producing AmpC cephalosporinases and oxacillinases (OXA), with the ability to degrade carbapenems, last-resort antibiotics. Additionally, two mechanisms shape the versatility of this pathogen. As a primary mechanism, disruptions occur in the outer membrane containing LPS, along with a downregulation of porins, leading to impermeability and decreased antibiotic uptake. The second mechanism is exhibited through genetic plasticity, which entails the incorporation of resistance genes via transposons, integrons, or plasmids. **Objective:** This review seeks to explore an emerging antimicrobial agent against CRAB, comparing it with combined therapies while we highlight their mechanisms, side effects, and limitations. **Material and methods:** To conduct this review, we performed a comprehensive PubMed search covering the past six years, using keywords such as "combined antibiotic therapy and CRAB," "Zosurabalpin and CRAB," and "antibiotic synergy and CRAB," excluding non-peer-reviewed studies, those not specifically addressing CRAB, or lacking insight into treatment strategies, ultimately including 35 studies. **Results :** The standard treatment for resistant Acinetobacter baumannii infections involves combined antibiotic therapy, including colistin with rifampicin, tigecycline, and carbapenems, or sulbactam/carbapenem, tigecycline/rifampicin, and minocycline/rifampicin. Due to therapy limitations, such as the nephrotoxicity of colistin and its resistance via PmrAB and LPS deficiency by mutation of lpxACD genes, a new therapeutic option has been deemed necessary. Two recent studies conducted by Zampaloni et al. and Kahne et al. provided in vitro and murine infection model evidence of the efficacy of a compound within the MCP (tethered macrocyclic peptide) class, referred to as Zosurabalpin, which inhibits the LptB2FG complex and disrupts LPS transport. Highly selective for CRAB with minimal impact against other Gram-negative and positive flora, Zosurabalpin is a promising therapeutic option for targeted treatment with reduced disturbance to the microbiome. However, mutations in the LPS transport system may decrease drug efficacy, thereby increasing the risk of developing resistance. Thus, it is important to assess the potential synergy of this novel drug with other antibiotics. **Conclusions:** The rise of Acinetobacter baumannii resistance, along with its adaptability to current therapies, renders it a major health threat and hastens the need for new agents, such as Zosurabalpin.

Keywords: Acinetobacter baumannii, Zosurabalpin, CRAB, Novel antimicrobial agents

AWARENESS OF SEXUALLY TRANSMITTED DISEASES AMONG FINAL-YEAR HIGH SCHOOL STUDENTS

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Background: STDs remain a significant public health concern, especially among adolescents. Understanding their perception and attitudes is essencial for developing effective sexual health education programs. **Objective:** The aim of the study was to assess the level of awareness, knowledge, perception, and attitudes towards STDs among these students. **Material and methods:** A cross-sectional study was conducted between 15.09.2024 and 30.09.2024, using a questionnaire adapted from the International AIDS Questionnaire-English Version (IAQ-E) and Teen Sexual Health Survey. The questionnaire included demographic questions, as well as questions evaluating awareness (4 questions), knowledge (6 questions), perception (3 questions), and attitudes (10 questions) regarding STDs. The survey was administered to two 12th-grade classes (Real and Human profiles) 152 adolescents , and responses were anonymous, with data remaining confidential. Statistical analysis was performed using descriptive and inferential statistics (Chi-square test). **Results :** Results indicated that students were well-informed about common STDs such as HIV/AIDS, syphilis, gonorrhea, herpes, and chlamydia, likely due to media exposure. All respondats from science and human profiles selected HIV as the main concern regarding STDs. However, other STDs like trichomoniasis, HPV, and hepatitis C were less familiar. Although most respondents cited parents as a primary source of information 59,21% science profile and 60,53% human profile , other trusted sources, such as healthcare providers and teachers, were used less frequently, which could contribute to misinformation.A significant proportion of students recognize the importance of being informed about sexually transmitted infections (STDs): 82.89% of students from the humanities track and 77.63% from the science track stated that this topic is very important. Additionally, 82.89% of students from the science track and 77.63% from the humanities track expressed the desire for more comprehensive discussions on STDs in schools. With regard to protective measures, 98.68% of students from both tracks (humanities and science) identified the use of male condoms as the primary method of STD prevention. Concerns related to sexual activity were primarily associated with the risk of contracting STDs, a worry expressed by 92.11% of students in the humanities track and 85.53% in the science track. Unintended pregnancy was also mentioned as a significant concern, reported by 51.32% of humanities students and 67.11% of those in the science profile. **Conclusions:** The study emphasizes the importance of comprehensive sexual education that corrects misconceptions and encourages open communication about sexual health. Early intervention in sexual education, particularly in high school can help adolescents make informed decisions and reduce the risk of STD transmission.

Keywords: Sexual Trasnmitted Diseases, Adolescents, Sexual Education, Awareness

HEAVY METALS, FRAGILE BEGINNINGS: CAN VITAMIN D DEFEND THE VERTEBRATE EMBRYO FROM LEAD TOXICITY?

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Background: Heavy metals are part of the environment and they represent a significant keystone to both natural and man-induced processes. Over the past four decades, research has shown an increased use of heavy metals in various practices, resulting in negative effects at both macro and molecular level. This concern has led scientists to study the effects of the heavy metals found in embryogenesis, especially at the embryo level of development. Although Pb has been shown to cause developmental toxicity, there is limited knowledge about how it affects early development. **Objective:** The aim of this study is to show the effects of heavy metals on the vertebrate embryos and to present possible approaches for treatment and prevention. **Material and methods:** For the following study we used unincubated Gallus gallus eggs weighing around 60g, which were provided by a local hatchery in Suceava, Suceava county, Romania. The chicken embryos were exposed to a solution of Pb and another solution of Pb with Vitamin D3 from day 1 of incubation to day 3. Stern (2005) showed that the Gallus gallus avian species

shared fundamental developmental mechanisms with humans such as gastrulation, neurulation and organ formation (early embryogenesis). We examined the teratogenic changes including gross malformations, cellular and molecular magnitude. **Results :** Embryo mortality and morphology were assessed. The heavy metals exposure increased mortality and induced malformations. Changes were noted for the Vitamin D3 group. **Conclusions:** Considering the results of our studies the chicken embryos represent a promising model of future studies on human embryotoxicity.

Keywords: Embryogenesis, Heavy Metals, Teratogenic, Vitamin D3

RESISTANCE AND ADAPTATION: CONFRONTING CHRONIC ILLNESSES DURING MEDICAL STUDIES (PERSPECTIVES FROM SIXTH-YEAR)

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Background: The increasing incidence of chronic diseases among students and their effects on academic and personal life underscore the need to explore the specific challenges students face in managing chronic conditions. In the current context, where medicine is placing an ever-greater emphasis on holistic care, it is essential for future doctors to understand the challenges posed by chronic diseases and their impact on the healthcare system. These conditions have not only physical implications but also psychological, social, and economic consequences. **Objective:** The present paper analyzes the opinions of sixth-year medical students at UMFST Târgu Mureș regarding the impact of chronic diseases on student life and the challenges they face in managing academic tasks and the special requirements related to their own illness. **Material and methods:** As a psychological investigation method, a questionnaire was used and applied to sixth-year medical students at UMFST, Faculty of Medicine, across all teaching lines between March 1-28, 2025, including a study sample of 64 respondents. **Results :** According to the study, 73.4% (47 respondents) are female, reflecting trends in medical faculties. Women also have a higher incidence of autoimmune and chronic diseases. 65.6% (42 respondents) come from urban areas. Individuals from these environments generally have better access to healthcare services and treatments, which may influence how they respond to and manage chronic illnesses throughout their university studies. 79.8% (51 respondents) reported suffering from chronic metabolic, endocrine, or respiratory diseases. Given the high percentage, it is important to mention that these conditions are significantly influenced by factors such as lifestyle, diet, and stress. They may reflect not only aspects of physical health but also socio-economic influences, such as urban living habits or access to medical services. 76.6% (41 respondents) report that chronic illnesses impact their academic performance, affecting concentration, study time, and course participation due to stress, fatigue, or physical limitations. 42.2% (27 respondents) are unaware of university-provided psychological counseling or medical support. This highlights the need for better awareness campaigns, as limited knowledge may prevent students from accessing essential resources, especially under academic pressure. **Conclusions:** Chronic diseases significantly affect students' lives, both physically and academically. Factors such as gender, background, and access to medical support influence disease management. Increasing awareness of available resources could improve the support offered to students.

Keywords: chronic diseases, academic performance, student, stress

EVALUATION OF ORAL HEALTH KNOWLEDGE AND PRACTICES IN A SCHOOL FROM TÎRGU MUREȘ

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Background: During childhood, between 6-10 years of age there are major changes in the development of the jaws and from this moment the eating habits and oral hygiene should be monitored more closely, for preventive purposes. **Objective:** Increasing knowledge on eating habits and improving practical oral hygiene skills in Mures pupils. **Material and methods:** In 2024, we applied for a qualitative transversal study, on a group of 100 children, aged 7-10 years, from a secondary school in Targu Mures. We applied a targeted questionnaire with 21 questions for children and another with 16 questions for teachers, following the level of health education in school and the preferred methods of information. We subsquently presented 50-minute course in the presence of the educator, exposing the functions of the dento-maxillary apparatus (posture, breathing, chewing, deglution, phonation,

physiognomy, self-maintenance), followed by mirror exercises for the correct incision and mastication of food, the deglutition of the food bowl, drinking liquids, gargle, tongue position, respectively the gingivo-dental brushing technique. Practically by self-assessment in the mirror all the children in the study learned the correct food and oral hygiene habits. They were used as demonstration materials: mirror, planks, demonstrative dental arches, manual/electric toothbrush, hourglass, mouth shower. **Results :** To the question 'Where would you like to learn about health?" 56% of children chose school, and 27% chose medical practices;. To question ,, What type of toothbrush do you use?", 74% of children answered 'normal/classical toothbrush and 36% electrical toothbrush. To the question, Are you afraid of the dentist?" 38% of children replied " Yes". To the question "Do you think it would be good to have oral health in the curriculum?", only 57% of teachers answered "Yes". Three months after this informative course and practical workshop, we applied again the questionnaire for the assessment of knowledge and practical skills, in order to assess the impact of intervention on oral hygiene practices in children. **Conclusions:** Dentists and health school instructors are the first health professionals with whom children come in contact during primary shool period. Using the concept of "education to each student and from student to student" each child in the project learned "to know -to do -to explain" what oral health is. Community health education interventions in schools are important in the implementation of preventive measures, need practical involvement, regularity and continuous information.

Keywords: health education, food habits, oral hygiene

ASSESSING MEDICAL STUDENTS' KNOWLEDGE ON HIV PREVENTION AND TRANSMISSION: A COMPARATIVE ANALYSIS BETWEEN YEAR 1 AND YEAR 6

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Background: Human Immunodeficiency Virus is a major global public health concern. Knowledge and awareness of HIV transmission and prevention are crucial among young populations, particularly students, who play a key role in promoting public health. Educational institutions are central in shaping students understanding of HIV and sexual health. However, cultural stigma, limited sex education, and misconceptions still hinder awareness in multiple areas. **Objective:** In light of these realities, this paper aims to comparatively highlight the level of knowledge about HIV among first and sixth year Medicine and Dentistry students. One of the objectives of this study is to identify gaps in medical and dental students knowledge and to understand how lack of information may affect students behaviour regarding sexual health and HIV prevention. **Material and methods:** The dates for this study were collected between February-March through an online survey intended only for first and sixth year medical students from different faculties of Medicine and Dentistry. The questionnaire was shared via social media platforms and was focused on the knowledge related to transmission, prevention, pathophysiology, diagnosis, treatment and attitude towards HIV. **Results :** We conducted a study based on a sample of 274 students, 54,74 % faculty of Medicine and 54,26% from the faculty of Dentistry. The results indicated significant differences in HIV-related knowledge between first-year and sixth-year students. For instance, 96.79% of sixth-year students correctly identified the false statement about HIV transmission via insect bites, compared to only 58.47% of first-year students. Similarly, knowledge about the main target cell of HIV was correctly identified by 99.36% of sixth-year students, while only 85.59% of first-year students gave the correct response. Additionally, sixth-year students demonstrated greater accuracy in understanding the duration of the asymptomatic phase (92.31%-correct) compared to first-year students (87.29%). In terms of diagnosis, sixth-year students had a better grasp of the utility of HIV antibody tests (94.23%) and antigen-p24 tests (92.95%) than their first-year counterparts (73.73%). Regarding treatment, 94.87% of sixth-year students correctly recognised the method of antiretroviral-treatment administration to maintain undetectable viral load, compared to 70.34% of first-year students. In the prevention category, 89.74% of sixth-year students understood the importance of post-exposure prophylaxis within 72 hours, compared to only 65.25% of first-year students. **Conclusions:** Based on the statistics, sixth-year students demonstrate a higher level of knowledge about HIV transmission, pathophysiology, diagnosis, and treatment compared to first-year students. This underscores the crucial role of education in ensuring the accurate and comprehensive training of future healthcare professionals.

Keywords: HIV, Antiretroviral Treatment, Antigen p24

PHENOTYPIC AND LIPID METABOLIC CHANGES IN HUMAN MONOCYTE SUBSETS AFTER A SINGLE HIGH-FAT MEAL: AN EX VIVO ANALYSIS

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Background: Human peripheral blood monocytes are classified into three subsets: classical (CM, CD14++CD16-), intermediate (IM, CD14++CD16+), and non-classical (NCM, CD14+CD16++). While all subsets are responsive to various stimuli (including dyslipidemia) and contribute to pathologies such as atherosclerosis, their exact mechanisms remain incompletely understood. **Objective:** This study aimed to analyze the impact of postprandial hyperlipidemia on the immunometabolic phenotype of human peripheral blood monocyte subsets. **Material and methods:** Nineteen healthy individuals were enrolled in this study. Blood samples were collected in a fasting state (T0) and three hours after consuming a standardized high-fat, high-calorie meal (T3). Standard lipid profiles and ex vivo flow cytometry analyses of monocytes were performed at both time points. Parameters evaluated included cell morphology (FSC, SSC), subset classification and activation markers (CD14, CD16, CD11b), and lipid uptake/ metabolism markers (BODIPY, CD36, LDLR). Changes in median fluorescence intensity (MFI) were assessed using paired statistical tests (t-test or Wilcoxon), and principal component analysis (PCA) was applied to delta values (T3-T0) to identify biomarker clusters evolving in the postprandial state. **Results :** At T0, IMs displayed the most inflammatory phenotype, while NCMs had the least. At T3, phenotypic distinctions between subsets became less pronounced, though NCMs consistently retained the lowest inflammatory profile. Significant postprandial changes included increased FSC across all subsets ($p<0.05$), decreased LDLR expression ($p<0.005$), and a marginal reduction in CD16 ($p<0.13$). Notably, NCMs showed a significant reduction in CD36 expression ($p=0.004$). PCA identified three principal components per subset, accounting for 65%-78% of data variance. A recurring lipid-morphology cluster - comprising FSC, SSC, and BODIPY - was present across all subsets. Also, a consistent association between CD11b and CD36 was observed, suggesting a link between inflammatory activation and lipid scavenging, respectively. While several studies have examined inflammatory markers in monocytes, the novelty of this study lies in its specific analysis of postprandial lipid effects on intracellular lipid content (BODIPY) and LDL receptor (LDLR) expression across monocyte subsets. **Conclusions:** A single high-fat, high-calorie meal induces marked phenotypic shifts in all monocyte subsets, affecting both inflammatory status and lipid metabolism. This study highlights the complex interplay between morphological, inflammatory, and lipid metabolism characteristics of monocytes in the postprandial state, offering new insights into their potential roles in lipid-driven pathologies. This work was supported by the George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures research grant number 164 / 19 / 10.01.2023.

Keywords: high-fat meal, inflammatory profile, lipid metabolism, monocyte subsets

KNOWLEDGE, ATTITUDES AND PRACTICES ON SEXUALLY TRANSMITTED INFECTIONS AMONG NICARAGUAN ADULTS IN FORCED MOBILITY IN COSTA RICA - PRELIMINARY RESULTS

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Background: Sexually Transmitted Infections (STIs) are a significant cause of morbidity and mortality worldwide representing a spreading public health problem. **Objective:** To assess the knowledge, attitudes, and practices regarding STIs among Nicaraguan adults in forced mobility in Costa Rica. **Material and methods:** A 54-question questionnaire about STIs was designed to assess the research objective and was distributed online (via instant message) to the target population (Nicaraguan refugees). Inclusion criteria: to be a Nicaraguan, holding the status of asylum seeker or refugee in Costa Rica, aged 18-60 years old, access to the internet. Exclusion criteria: year of migration before 2018, have a status other than refugee or asylum seeker. Data was analyzed with SPSS Statistics. **Results :** Sixty-one people responded to the questionnaire. Most respondents were women 69%(42). Regarding the level of STIs knowledge, 47.5%(29) appreciate it to an intermediate level, 23%(14) to high, 23% to low, while 6.6%(4) denied any level of knowledge. Regarding preventive measures, 41%(25) consider that condoms are 100% effective against STIs, 34%(21) believe it is not and 25%(15) have a neutral opinion. Testing attitude: 38%(23) feel afraid of being tested for STIs, 46%(28) do not have this feeling, and 16%(10) have a neutral

attitude. To note that 51%(31) don't feel afraid to be tested for HIV. The practice of talking with sexual partners about STIs was frequent for 36%(22) of respondents, occasional for 33%(20), hardly ever for 20%(12), and 11,5 %(7) admitted never talking about it. Regarding practices, 26%(16) always use condoms during casual sex, 16%(10) almost always,13%(8) sometimes,15%(9) hardly ever,11,5%(7) never and 18%(11) deny to practice casual sex. Regarding access to medical care, 51%(31) reported being denied access because of the migratory status they have and 56%(34) experienced discrimination in health centers. **Conclusions:** Among Nicaraguan adults in forced mobility, a low-intermediate self-perception of general knowledge regarding STIs was observed, with a high number of respondents being unaware of appropriate prevention methods for STIs. Additionally, risky practices were identified, as well as a high perception of discrimination and denial of medical services. These data highlight the need to provide sex education and access to health care for migrants.

Keywords: STIs, Sexual Health, Migration, Nicaragua

SCAFFOLD DEVELOPMENT FOR TISSUE ENGINEERED VASCULAR GRAFT

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Background: The increasing demand for tissue or organ substitutes to address a wide range of health concerns has prompted scientists to explore the field of tissue engineering. Specifically, in our area of focus, the advancement of tissue-engineered vascular grafts (TEVGs) aims to replicate the structure and function of native blood vessels, incorporating properties such as self-regeneration and growth. Nonetheless, despite these advancements, there remains a persistent necessity for further research to optimize scaffold materials that are biocompatible, durable, and capable of accurately mimicking the complex mechanical and biological properties of natural tissue vessels. **Objective:** The objective of this study was to evaluate the bovine carotid and bovine pericardium to determine their suitability as options for a bioengineered scaffold. **Material and methods:** In this experimental study, we utilized 50 bovine carotid artery specimens (BCA), 30 human carotid artery specimens (HCA), and 11 native bovine pericard specimens (NBP). We measured their thickness using a Mitutoyo 547-500S and subsequently evaluated the mechanical properties with a Biotester CellScale 5000, applying a 25% stretch along the circumferential axis. For our statistical analysis, we employed SPSS for Mac OS version 28.0.1.0. **Results :** Wall thickness measurements showed that BCA had the thickest walls, followed by HCA, and then NBP. Statistically significant differences were observed across all groups ($p < 0.0001$), except between HCA and NBP ($p = 0.0905$), where the difference was not significant. The analysis of Young's modulus revealed that HCA exhibited significantly higher stiffness than BCA and NBP ($p < 0.0001$). No significant difference was observed between BCA and NBP ($p = 0.1260$). At the evaluation of Cauchy stress, HCA displayed the highest stress values, significantly exceeding those of BCA ($p < 0.0001$) and NBP ($p = 0.0370$). Additionally, BCA exhibited greater strength than NBP ($p = 0.0268$). **Conclusions:** Despite being thicker than HCA and NBP, BCA exhibits greater compliance than HCA, suggesting it could be an ideal scaffold for developing TEVG through decellularization. Consequently, selecting suitable scaffold materials for vascular grafts requires carefully assessing these mechanical properties to ensure they align with human physiology. These findings indicate that BCA is a fitting candidate for a vascular scaffold.

Keywords: Vessel Scaffold, Bovine Carotid Artery, Vessel Development, Tissue Engineering

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ANTIOXIDANT EFFECT OF RUTIN IN SKELETAL MUSCLE IN A HEALTHY RAT MODEL OF INTENSE RUNNING

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Background: Athletes encounter more pathologies compared to the general population: osteo-articular, muscular, cardiac. Stimulating the metabolism of skeletal muscular cells generates excessive reactive oxygen/nitrogen species (ROS/RNS). These are then released in the systemic circulation, where they pose a threat to all cells. **Objective:** This study wanted to identify the antioxidant effects of Rutin, a polyphenol extracted from citrics, on skeletal muscles, cardiovascular and respiratory systems. **Material and methods:** Twenty-one healthy male adult rats were distributed in groups. The exercises consisted of five minutes treadmill running at progressive speeds

(30/40/50 cm/s). Substances were administered orally, every day for 26 days.Samples were collected for oxidative stress and transmission electron microscopy examination (TEM).For oxidative stress quantification, we determined: malondialdehyde, a metabolite of lipidic peroxidation (MDA), reduced glutathione (GSH), oxidized glutathione (GSSG) and inducible nitric oxide synthase (iNOS). **Results :** In the skeletal muscle, Rutin showed: decreased MDA, increased GSH and GSH/GSSG, compared to the other groups. Rutin and NS groups presented TEM vacuolisation in skeletal muscle cells. In the lungs, Rutin decreased MDA and increased GSH/GSSG. The cardiovascular system exhibited a very low level of MDA in Rutin compared to other groups. The aorta showed a non-significant modification of TNF-alpha level. **Conclusions:** Rutin has a high antioxidant capacity (indirectly - by increasing GSH, upregulate the expression of antioxidant enzymes such as catalase and superoxide dismutase; directly - by decreasing ROS/RNS, a biomarker of ROS/RNS) in sustained effort. The vehicle used, CMC, showcased pro-oxidant effects.

Keywords: Rutin, CMC, Antioxidant, skeletal muscle

EPIDEMIOLOGICAL RISK FACTORS AND CAUSES ASSOCIATED WITH THE DECREASE IN LIFE EXPECTANCY IN ROMANIA AFTER THE COVID-19 PANDEMIC

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Background: The COVID-19 pandemic significantly affected world public health, causing an additional decline in life expectancy in many countries, Romania being one of them. The dynamics of social determinants of health, vulnerabilities of the healthcare system, economic disparities, and individual behaviors are just a few of the essential aspects addressed. **Objective:** The aim of this research is to investigate the epidemiological risk factors and associated causes contributing to the decrease in life expectancy in Romania following the COVID-19 pandemic. **Material and methods:** As a method, a questionnaire was applied to a sample of 423 individuals. The participants in the study were not selected based on clinical criteria, as they were not patients registered in a medical facility. They were individuals from the general population. Selection was carried out through the online distribution of the questionnaire, and the responses were anonymous. The questionnaire included 37 questions, the first 5 of which collected demographic data from the participants (gender, age, place of origin, education level, income), while the following 32 questions gathered information about COVID-19 (presence or absence of the virus, its symptoms, associated chronic diseases, addictions, mortality, the healthcare system during the pandemic, the vaccine, and psychological impact). **Results :** A total of 75.9% of the participants agreed that "the reduction in life expectancy is due to an increased rate of chronic diseases in the wake of the pandemic", 53.8% said that "they were discouraged from receiving medical treatment for other conditions during the pandemic, which can affect life expectancy", 75.5% said that "they experienced a loss of faith in the health system after the pandemic, which can affect life expectancy". A total of 72.9% of said that "they had difficulty accessing specialist medical treatment as a consequence of the pandemic" . **Conclusions:** The results highlight both the social and personal impact of the pandemic. Based on these findings, improvement is needed through focused health policies, better access to medical services, and informational campaigns promoting prevention, healthy lifestyles, and effective chronic disease management.

Keywords: COVID-19, life expectancy, healthcare system

HEALTH LITERACY IN OBESE ADULTS

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Background: Health literacy plays a crucial role in the prevention and management of obesity, influencing individuals' ability to understand, process, and apply health-related information. Previous studies suggest that low health literacy may be associated with poor weight management behaviors, reduced adherence to dietary recommendations, and lower levels of physical activity. Given the increasing prevalence of overweight and obesity, especially among women, it is essential to assess the impact of health literacy on obesity-related behaviors. **Objective:** To evaluate the level of health literacy (HL) among women with overweight/obesity compared to those of normal weight. To identify interactions between health literacy levels, sociodemographic factors, and obesity management behaviors. **Material and methods:** A cross-sectional study including women aged 18-65 years was

conducted in a general practitioner surgery and the Mures County Hospital Endocrinology Compartment. Inclusion criteria were age, BMI, waist circumference measurement, and willingness to fill in a questionnaire. For health literacy assessment, the Romanian version of the HLS-EU-Q16 was used. Other variables included age, environment, level of education, smoking status, BMI, waist circumference, metabolic syndrome components, and obesity management options (diet, physical activity, pharmacological treatment, surgery). For statistical analysis, SPSS v. 25.0 was used, with a significance level α=0.05. **Results :** One hundred ninety-nine women were included in the study, with a mean age of 40.4 ± 12.3 years, 85.4% with a college degree, and 69.3% from urban areas. 63.3% (n=126) had an inadequate or problematic level of health literacy, while 67.3% were overweight or obese (n=134). Only 3/5 women with overweight/obesity considered they had a weight problem, with a positive association with their HL level (r=0.342, p<0.001). Three out of four women had abdominal obesity. Subjects with adequate health literacy were significantly younger (p<0.001) and had a lower BMI (p<0.001) and waist circumference (p<0.001). Health literacy level was negatively associated with waist (r= -0.3, p<0.001), BMI status (r= -0.415, p<0.001), and urban environment (r= -0.234, p<0.001), but not with smoking, treatment recommendations, or acceptable methods for weight management. **Conclusions:** Women living with overweight or obesity have lower heath literacy levels, but this seems to not influence their weight management options' level of acceptance. Only a small percentage of women have an adequate level of HL. Future policy might focus on improving this important factor which influences health status.

Keywords: obesity, health literacy, women

CIRCADIAN RHYTHM AND COGNITIVE PERFORMANCE: ANALYZING THE EFFICIENCY OF STUDYING DURING THE DAY VS. NIGHT

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Background: Nighttime examining is common among college understudies, particularly amid examination periods, as they endeavor to compensate for deficiently daytime consider hours. Whereas this propensity is frequently seen as profitable, it can adversely affect physical wellbeing, mental well-being, and scholarly execution. This study aims to survey the broader suggestions of nighttime examining on students' wellbeing and success. **Objective:** The main objective of this study was to look at the relationship between nighttime study habits and their impacts on scholarly execution, mental wellbeing, and physical wellbeing. By distinguishing these affiliations, the study looked for to supply significant techniques for improving students' generally well-being and efficiency. **Material and methods:** This cross-sectional ponder included 251 college understudies from different resources, chosen through arbitrary testing. Information were assembled through a approved survey tending to nighttime ponder habits, rest quality, fatigue levels, and scholarly results. The chi-square test was utilized to analyze the affiliations between nighttime examining and factors such as scholarly execution and wellbeing pointers. Factual noteworthiness was set up at $p < 0.05$. **Results :** Among the participants, 64% reported frequent nighttime studying, with 66% experiencing significant daytime fatigue and reduced concentration levels. The chi-square analysis revealed a statistically significant association between nighttime study habits and poor academic performance ($\chi^2 = 18.27$, $p < 0.05$). Students with irregular nighttime study patterns were more likely to report lower grades and heightened mental and physical health challenges compared to those with regular study schedules. **Conclusions:** Nighttime studying, though often viewed as a means to boost academic productivity, is associated with poorer academic outcomes and adverse health effects. Students who prioritize consistent sleep schedules and adopt structured study routines achieve better academic performance and maintain better health. Institutions should raise awareness about the potential risks of poor study habits and provide support programs, such as time management workshops and mental health resources, to promote healthier and more effective study practices.

Keywords: Sleep, Nap, Health, Habits

THE NEUROPROTECTIVE POTENTIAL OF MULTITARGET PLANT EXTRACTS IN ALZHEIMER'S DISEASE: INSIGHTS FROM IN SILICO PREDICTIONS AND BEHAVIORAL ANALYSIS IN THE 5XFAD MOUSE MODEL

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Background: Alzheimer's disease(AD) is a multifactorial neurodegenerative disorder marked by progressive cognitive decline, functional impairment, and pathological hallmarks such as amyloid-β plaques and neurofibrillary tangles. Despite current therapeutic strategies, effective treatments remain elusive. Phytochemicals have emerged as potential neuroprotective agents, and transgenic models like 5xFAD mice offer a robust platform for preclinical evaluation. **Objective:** This study aimed to evaluate the pharmacokinetic properties, predicted molecular targets, and behavioral effects of seven phytochemical extracts derived from *Rubus fruticosus*(FT,FH,LH), *Abutilon pannosum*(A2), *Abutilon grandifolium*(A1), *Rheum palmatum*(R), and *Zingiber officinale*(G), using a 5xFAD murine model expressing five AD mutations. **Material and methods:** Pharmacokinetic parameters, including gastrointestinal absorption, blood-brain barrier(BBB) permeability, cytochrome P450 interactions, and P-glycoprotein efflux, were predicted using SwissADME and ADMETlab. Molecular interactions with AD-relevant targets, including β-secretase, acetylcholinesterase, GSK3β, CDK5, ERK2, Aβ, and tau, were assessed via SwissDock and SwissTargetPrediction. In vivo, 5xFAD mice(n=70) were divided into treatment groups(n=10 per extract, administered at 50mg/kg and 100mg/kg) and controls (NaCl,n=5;Galantamine,n=5). Extracts were administered via oral gavage for seven consecutive days and one hour prior to behavioral testing. Cognitive and anxiety-and depression-related behaviors were assessed using the Y-Maze, Open Field, Novel Object Recognition, Elevated Plus Maze, Forced Swimming, and Radial Arm Maze tests. Body weight was monitored to assess tolerability and ensure accurate dosing. **Results :** In silico analyses predicted favorable pharmacokinetic profiles and strong CNS-targeted activity for several extracts, particularly those from *Rubus fruticosus*, with high affinities for acetylcholinesterase and kinases involved in tau pathology. Behavioral testing corroborated these predictions, revealing extract-specific effects. *Rubus fruticosus* extracts exhibited an inverse dose-dependent profile, with lower doses yielding superior cognitive performance and improvements in anxiety- and depression-related behaviors, often outperforming Galantamine. Extracts such as FH and A2 demonstrated classical dose-dependent effects, with cognitive enhancements at higher doses and increased locomotor activity at lower doses. No significant changes in body weight were observed, suggesting good systemic tolerability. **Conclusions:** These findings underscore the neurotherapeutic potential of select phytochemical extracts - particularly those from *Rubus* , *Abutilon*, and *Zingiber* - and emphasize the importance of integrating in silico screening with behavioral assays in preclinical AD research. The results provide compelling leads for future translational research into plant-derived neuroprotective agents. Future studies will incorporate post-mortem analyses, including biochemical, genetic, and histological evaluations, to further validate these findings and elucidate the underlying mechanisms. These analyses are essential for advancing our understanding of these compounds' potential in neurodegenerative disease therapy and warrant continued exploration in AD and related conditions.

Keywords: Alzheimer's disease, 5xFAD mouse model, phytochemicals, behavioral neuroscience

HISTOPATHOLOGICAL MONITORING AND CLASSIFICATION OF MALIGNANT TUMORS: A RETROSPECTIVE STUDY (2023–2024)

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Background: Cancer remains one of the leading causes of mortality and morbidity worldwide, representing a pathology with a significant impact on both society and healthcare systems globally. **Objective:** This study aims to monitor and statistically classify malignant tumor cases recorded in the Pathology Department of the County Emergency Clinical Hospital of Târgu Mureș during the years 2023-2024. **Material and methods:** This retrospective study included neoplasm cases recorded between 2023 and 2024. Data were collected from archived medical records and were histopathologically analyzed and classified based on tumor location, patient age, and sex. **Results :** In 2023, among a cohort of 1014 patients, the most frequent tumor locations were: skin (24.1%),

colon (11.2%), followed by soft tissue tumors (7.1%). Regarding histopathological types, the majority of cases were: adenocarcinoma (23.6%), squamous cell carcinoma (19.3%), and basal cell carcinoma (17.1%). In 2024, from a group of 1000 patients, the most common tumor sites were: skin (21.2%), brain (11.2%), and cervix (6.9%). The predominant histopathological types were: adenocarcinoma (20.3%), squamous cell carcinoma (16.9%), and basal cell carcinoma (15.5%). The most affected sex was female (57%), with males accounting for 43% of cases. The most affected age categories, in descending order of frequency, were patients aged 63-69 years, followed by those aged 69-75 years and 57-63 years. **Conclusions:** A thorough classification and continuous monitoring of malignant tumors provides a dynamic overview of their distribution over time. This supports the improvement of preventive strategies, diagnostic techniques, and treatment approaches.

Keywords: malignant tumors, cancer, histopathology, 2023-2024

FROM POLYMER TO PATCH: 3D-PRINTED BIODEGRADABLE SCAFFOLDS FOR CONGENITAL HEART SURGERY

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Background: Congenital heart diseases (CHDs) are the most common congenital malformations, with approximately half of affected newborns requiring early surgical intervention to restore cardiovascular function and prevent future disabilities. Currently used vascular patch materials - bovine pericardium, polyethylene terephthalate (Dacron®), and expanded polytetrafluoroethylene (Gore-Tex®) - are associated with critical drawbacks, including excessive calcification, aneurysm formation, exaggerated immune response, and intraluminal thrombosis, leading to limited patency and adverse clinical outcomes. **Objective:** This study aims to develop a cell-free biodegradable vascular patch that mimics the extracellular matrix (ECM) of native vessels, facilitating autologous cell repopulation and promoting tissue integration. Accordingly, the grafts are intended to support cell growth and differentiation, critical for the pediatric population. **Material and methods:** The patches were fabricated using fused deposition modeling (FDM) with thermoplastic polyurethane (TPU) and polylactic acid (PLA) (BASF S.R.L.), chosen for their distinct biodegradability and mechanical profiles. The multilayered design was created in Autodesk Inventor® (CAD) and printed using an Ultimaker S3®. Patch performance was evaluated through three in vitro tests: (1) degradation at 37°C in phosphate-buffered saline (PBS) to simulate physiological conditions, (2) optical microscopy to analyze fiber structure and pore size, and (3) permeability testing to determine fluid passage time across pores. **Results :** The obtained variants differed in geometric specifications, polymer quantity and composition, layer arrangement and fiber orientation along the three axes (Ox, Oy, Oz). Variant V5 was composed exclusively of TPU, with uniformly aligned layers, whereas variants V6b (one PLA layer) and V7b (two PLA layers) combined TPU and PLA, incorporating a controlled horizontal displacement of the layers (0.2 mm) to optimize permeability, minimize leakage risk, and improve elasticity. After 42 days, all samples exhibited degradation, with PLA-containing grafts showing the lowest mass gain, indicating superior resistance to aqueous degradation and better mechanical retention. Variants with minimal PLA content and perfectly aligned layers demonstrated optimal pore arrangement, leading to the shortest permeability time though an increased predisposition to leakage upon implantation. **Conclusions:** This study demonstrates the effectiveness of combining two polymers with distinct physicochemical properties to develop synthetic vascular grafts. TPU provided elasticity and enhanced interaction with aqueous environments, reducing degradation time, while PLA contributed to mechanical robustness and dimensional stability, potentially preventing aneurysm formation. The use of 3D printing and a layered architecture enabled fabrication of grafts with complex geometries that replicate the ECM of native vessels, adapt to patient-specific anatomy, and support long-term implant viability and functional patency.

Keywords: vascular patch, 3D printing, FDM, PLA

CLINICAL - MEDICAL

NEW OUTLOOK ON SEPSIS IMMUNOPATHOPHYSIOLOGY

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Background: Involving both excessive inflammation and simultaneous immune suppression, the complexity of the syndrome is not fully encompassed by the definition of sepsis, which is a severe condition resulting from a dysregulated immune response to an infection, leading to life-threatening organ dysfunction. The management of sepsis remains primarily supportive, focusing on fundamental interventions. While these measures have been shown to improve survival, achieving better outcomes in clinical trials remains challenging. **Objective:** Recent attempts have concentrated on identifying supplementary stratification methods for this subset of patients, with the objective of delivering optimal treatment and achieving the most favorable outcomes for each group. The aim of this review is to establish a classification system for patients with sepsis based on immunopathophysiology. The review synthesizes data from studies published in prestigious journals to determine whether this patient group can be further categorised into immunophenotypes. **Material and methods:** For this review, relevant articles were analyzed that highlighted the criteria used to classify patients with sepsis into subendotypes, as well as the necessity of targeted therapy to combat this condition. The inclusion criteria focused on patients over the age of 18 who developed sepsis as a result of pneumonia-related infections and were subsequently admitted to intensive care units. To highlight the characteristics of each endotype, a global gene expression analysis was conducted in peripheral blood leukocytes for a prospective discovery cohort. Additionally, an equal number of survivors and non-survivors were selected for genetic material collection to maximize the clinical relevance of the findings. **Results :** The analysis of peripheral blood leukocytes identified two Sepsis Response Signatures, namely SRS 1 and SRS 2. While the SRS1 endotype is characterized by an immunosuppressed phenotype, exhibiting features such as endotoxin tolerance, T-cell exhaustion, and downregulation of human leukocyte antigen (HLA) class II, the SRS-2 was defined by reduced activation of the innate immune system, maintained lymphocyte function, and diminished transcriptional responsiveness to corticosteroids. Notably, patients classified as SRS1 demonstrated a higher 14-day mortality rate compared to those with the SRS2 endotype. **Conclusions:** Although sepsis is defined as a syndrome, further refinement of its definition must acknowledge that it comprises distinct manifestation forms, each marked by specific dysregulations in immune responses, as demonstrated by the identification of various sepsis response signatures and immune phenotypes. These findings suggest that further stratification of these patients may have important implications for guiding individualized therapeutic strategies in the management of sepsis and septic shock.

Keywords: Sepsis Immunopathophysiology, Immunological Phenotypes, Sepsis Prognostic

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OTC SUPPLEMENTS IN ENDOCRINE PATIENTS – TOO MUCH?

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Background: Over-the-counter supplements, including vitamins, minerals, herbal extracts, omega-3 acids, and probiotics, are widely used to improve physical and mental health. Furthermore, dietary intervention has been extensively observed in managing endocrine disorders. Due to widespread deficiencies in the population, vitamin D is the most commonly consumed nutraceutical. **Objective:** The study aims to investigate the frequency of dietary supplements use among patients with and without endocrine pathology. We also want to highlight the reasons for consumption, sources of recommendation, and awareness of component information. **Material and methods:** A cross-sectional study was conducted and included subjects from an Endocrinology clinic and a general practitioner surgery. Inclusion criteria were age between 18-65 years and willingness to complete the questionnaire. The study used a questionnaire including items on demographics, dietary supplements usage frequency, type - 6 included, and reason. For statistical analysis, SPSS version 25.0 was used and included descriptive statistics and association testing with a significance level α=0.05. **Results :** One hundred forty-eight women with a mean age of 48±12.5 years, 53.4% from urban areas, were included. 93/148 (62.8%) had an endocrine dysfunction, the most common being thyroid dysfunction (75.5%). Only 30/148 (20%) were not taking supplements, while 26.3% were taking 5 or more. Calcium (51.2%) and vitamin D (72.3%) were the most often

used supplements. Forty percent were taking them based on self-conviction or family/peer recommendation. The main two reasons for consumption were health promotion (52.1%) and immunity (35.8%), and the great majority were convinced of their efficiency (72.3%) and safety (81.7%), despite not checking composition in 43.2% of cases. Endocrine dysfunction was associated with a higher frequency of consumption (r=0.177, p=0.019), but there was no association with level of education, income, or type of endocrine dysfunction. **Conclusions:** This study showed that women aged 18-65 from Romania frequently consume OTC supplements for health promotion and immunity, with calcium, vitamin D, and magnesium being the most often used. Moreover, safety and efficacy are not a concern without verifying the composition before usage. These findings point toward a need for health education regarding the usefulness of OTC supplements compared to allopathic treatments.

Keywords: OTC supplements, endocrine dysfunction, safety, efficacy

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BIORESORBABLE STENTS: CHALLENGES AND BENEFITS

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Background: Percutaneous coronary interventions (PCI) have undergone significant advancements over the past decades, progressing from the use of bare-metal stents (BMS), which offered basic mechanical support, to drug-eluting stents (DES), designed to reduce neointimal hyperplasia and lower restenosis rates. More recently, the development of bioresorbable vascular scaffolds (BVS) has introduced a novel approach aimed at minimizing the long-term complications associated with permanent metallic implants. **Objective:** This review compares BVS and DES in terms of vascular healing, risks of restenosis and thrombosis, in order to evaluate the long-term clinical advantages of biodegradable stents. **Material and methods:** This review examines 11 randomized trials and meta-analyses, focusing on device safety (thrombosis occurrence), efficacy (late lumen loss, binary restenosis), and the vascular healing process. We conducted a PubMed search and selected 11 studies from a total of 345 results. **Results :** At the time of implantation, the risk of acute thrombosis did not differ significantly between BVS and DES. However, some studies observed a tendency for increased thrombosis risk with BVS, as exemplified by the ABSORB III study, in which the thrombosis rate within the first 36 months was 2.5% for BVS compared to 1.1% for DES. Between three and five years, no significant differences were found between the two stent types. Still, regarding very late thrombosis, data remain limited, as most studies had a follow-up of only 1 to 2 years. After complete resorption of BVS, the risk of very late thrombosis could be reduced due to the elimination of the foreign body. Regarding restenosis, BVS showed greater late lumen loss (LLL) than DES, but binary restenosis rates were similar, indicating that greater LLL did not lead to a higher incidence of restenosis.Despite greater LLL, BVS did not significantly impact binary restenosis compared to DES. The increased thrombosis risk may be related to inflammatory responses or stent strut thickness, though this does not necessarily imply a higher risk of late thrombosis. BVS demonstrated favorable vascular healing and restoration of vasomotor function, making them a promising option for long-term PCI. **Conclusions:** Although bioresorbable vascular scaffolds (BVS) offer advantages, such as restoring natural vessel function, risks like thrombosis and restenosis remain significant. One promising direction to mitigate these risks is the reduction of stent strut thickness. Thinner struts could improve biocompatibility, minimize vessel injury during implantation, and promote enhanced healing, potentially optimizing long-term outcomes and reducing complications.

Keywords: PCI, DES, BMS, Thrombosis

BEYOND THE NEEDLE: REDEFINING PORTAL HYPERTENSION DIAGNOSIS THROUGH NON-INVASIVE METHODS AND ARTIFICIAL INTELLIGENCE

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Background: Portal hypertension (PH) is a prevalent complication of cirrhosis that leads to complex phenomena such as ascites, oesophageal varices, hepatic encephalopathy and hepatorenal syndrome - all of which are associated with considerable morbidity and mortality. Due to its invasiveness, cost, and requirement for specialized expertise, the hepatic venous pressure gradient (HVPG) is not widely used to prognosticate PH in cases of compensated advanced chronic liver disease. Non-invasive techniques and recent advances in artificial

intelligence (AI) are a new era in PH diagnosis and management, harnessing large data sets for improved diagnostic accuracy and risk stratification for personalized treatment protocols. **Objective:** This study aims to systematically review emerging non-invasive methods and AI-based diagnostic tools for assessing PH and evaluate their diagnostic accuracy and clinical utility. **Material and methods:** We conducted a systematic review of studies from PubMed, Scopus and ScienceDirect. Inclusion criteria comprised studies evaluating non-invasive methods like serum markers (APRI, FIB-4, ALBI score, vVF), elastography (FibroScan, spleen stiffness measurement), imaging-based methods (AI-enhanced radiomics), and AI models (machine learning-based algorithms) for diagnosing clinically significant portal hypertension (CSPH). Studies focusing solely on invasive techniques such as HVPG measurements and animal-based research were excluded. We assessed the correlation between non-invasive methods and AI models in CSPH diagnosis (defined by HVPG ≥ 10 mmHg). Only retrospective multicentre studies and comprehensive review articles reporting diagnostic accuracy based on sensitivity, specificity, and the Area Under the Receiver Operating Characteristic Curve (AUROC) were included. **Results :** Serum biomarkers such as FIB-4 and APRI showed moderate correlation with HVPG (AUROC ~ 0.75 to 0.85) but lacked precision for distinguishing CSPH. vVF and ALBI score demonstrated promising accuracy as emerging biomarkers (AUROC ~ 0.85 to 0.90). Liver stiffness measurement (LSM) via FibroScan exhibited high diagnostic accuracy (AUROC ~ 0.88 to 0.92) while spleen stiffness measurement (SSM) surpassed LSM in performance (AUROC ~ 0.92 to 0.95). AI models like Deep Learning Network, when combined with radiomics, clinical markers, and elastography showed high sensitivity (~90%) and specificity (~85%). The need for HVPG measurements was significantly reduced when LSM, SSM and AI-based imaging were combined, achieving a diagnostic accuracy of approximately AUROC ~ 0.95. **Conclusions:** This study underscores the advancing role of non-invasive biomarkers, elastography and AI in the diagnosis of CSPH. These methods have the potential to revolutionize PH management by offering less invasive and more accessible diagnostic alternatives - without compromising accuracy or clinical relevance.

Keywords: Portal Hypertension, Artificial Intelligence, Non-Invasive Biomarkers, Elastography

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CHRONIC SPONTANEOUS URTICARIA – A CONDITION WITH MULTIPLE FACES

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Background: Chronic spontaneous urticaria (CSU) is a condition characterized by the spontaneous occurrence of pruritic wheals and/or angioedema lasting for at least six weeks. It affects 1-2% of the population and is frequently associated with other conditions, significantly impacting quality of life. CSU involves the spontaneous degranulation of basophils and mast cells, leading to histamine release, as well as basophil/mast cell activation mediated by IgG/IgE antibodies against the Fc portion of IgE or cross-linking of Fc epsilon R1 (FcεR1). **Objective:** The aim of this study was to analyze the serum antibody values in patients diagnosed with UCS under biological treatment. This assessed the status of the disease and raised awareness of the disease so that additional investigations could be performed. **Material and methods:** This retrospective, observational study included a group of 13 patients diagnosed with CSU at the Allergology Department of Târgu Mureș County Emergency Hospital. Initially, they were treated with the maximum recommended dose of second-generation H1 antihistamines, followed by anti-IgE monoclonal antibody therapy with omalizumab. Serum levels of IgE and anti-TPO antibodies were measured, and correlations were made with clinical parameters: Urticaria Activity Score Over 7 Days (UAS7) and Dermatology Life Quality Index (DLQI) questionnaires. **Results :** Patients initially presented to the clinic with a mean UAS7 score of 21.92 ± 4.35. 54% of patients reported severe urticaria, 31% free-urticaria and 15% reported moderate urticaria. After treatment, UAS7 score had a mean of 14.46 ± 4.51 (a mean score difference of 7.46): 31% of patients reported a severe urticaria, 31% urticaria-free, 23% a well-controlled urticaria, 8% a moderate urticaria and 7% mild urticaria. The DLQI was reduced after immunotherapy (14.55 ± 2.7 versus 7.46 ± 2.48, p=0.008) and most patients have a quality of life poorly influenced by urticaria. Serum IgE values before and after treatment (169.46 ± 57.15 UI/mL versus 204.107 ± 91.21 UI/mL, p>0.05) and anti-TPO antibodies (8.31 ± 4.39 UI/mL versus 4.65 ± 2.86 UI/mL, p>0.05) did not change significantly. **Conclusions:** Chronic spontaneous urticaria is a complex condition, primarily driven by autoimmune mechanisms, though its physiological processes remain under investigation. The response to omalizumab therapy is favorable; however, CSU should not be treated as an allergic disorder. All known factors influencing urticaria must be considered in the investigation and management of this condition.

Keywords: IgE, chronic spontaneous urticaria, omalizumab, autoimmunity

RISK FACTORS ASSOCIATED WITH RECURRENT MYOCARDIAL INFARCTION

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Background: Identifying risk factors for recurrent myocardial infarction (MI) in patients with a previous episode is crucial for improving clinical outcomes. Recognizing these characteristics enables stratified risk assessment, focused therapeutic interventions, and personalized prevention strategies, reducing the likelihood of further cardiovascular events and informing clinical decision-making procedures. **Objective:** The present study aimed to evaluate the differences between patients with a history of acute MI and those without at the time of admission for acute MI. **Material and methods:** This retrospective analysis involved 96 consecutive patients with acute MI who underwent percutaneous coronary intervention (PCI) at the Cardiology Department of the Târgu Mureș Emergency Clinical County Hospital. Participants were divided into two groups based on their history of myocardial infarction: group 1 - 76 patients with a previous MI, and group 2 - 20 patients without prior episodes. Comprehensive evaluations were conducted for all patients, assessing demographic data, medical history, lipid profiles, inflamatory markers and cardiac biomarkers. **Results :** The mean age of the analyzed population was 58 ± 6 years, and the male-to-female ratio was 1.40, with no significant differences observed between the two groups (both p> 0.05). Patients with prior MI exhibited more frequent a positive familial history of cardiovascular disease (50.00 % versus 15.78%; OR 5.33; p= 0.03), as well as a higher prevalence of hypertension (85.00% versus 70.66%; OR 2.45; p= 0.04), diabetes (75.00% versus 53.97%; OR 2.56; p= 0.04), and chronic kidney disease (40.00% versus 15.78%; OR 3.55; p= 0.009), compared to those without a history of MI. Furthermore, group 1 exhibited lower levels of LDL-cholesterol (62.4 ± 12.5 mg/dL versus 98.2 ± 18.9 mg/dL; p < 0.0001) but significantly higher levels of high-sensitivity C-reactive protein (7.25 ± 1.23 mg/L versus 2.46 ± 0.90 mg/L; p < 0.0001) and serum uric acid (8.47 ± 2.42 mg/dL versus 3.17 ± 1.46 mg/dL; p < 0.0001). **Conclusions:** In conclusion, patients with a history of acute myocardial infarction exhibited distinct risk profiles, including higher prevalences of hypertension, diabetes, and chronic kidney disease, along with elevated inflammatory markers. These findings underscore the importance of targeted prevention and management strategies for this high-risk group.

Keywords: myocardiacl infarction, risk factors, secondary prevention

REAL-LIFE STUDY OF PATIENT OUTCOMES AFTER KALIKREIN INHIBITOR MONOCLONAL ANTIBODY TREATMENT IN HEREDITARY ANGIOEDEMA

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Background: Hereditary angioedema (HAE) is a rare and complex genetic disorder, primarily caused by mutations in the SERPING1 gene, leading to either a functional or a quantitative deficiency of the C1-esterase-inhibitor (C1-INH) protein. HAE is a life-threatening condition due to its unpredictable swelling attacks, which can obstruct the airways and cause asphyxiation, while its recurrent, debilitating symptoms profoundly impair daily activities, emotional well-being, and overall quality of life. Several controlled clinical trials have shown lanadelumab, a new kalikrein inhibitor monoclonal antibody, as a promising therapeutic option, but its real-life effects have not yet been studied in Romania. **Objective:** To evaluate attack frequency (AF), the changes in the Angioedema Control Test (AECT), and Angioedema Quality of Life (AE-QoL) in a group of Romanian HAE patients, over a period of one year, under treatment with lanadelumab. **Material and methods:** The real-life, observational study included 24 patients from the Romanian HAE Center of Reference and Excellence. AF and data needed to evaluate AECT and AE-QoL were collected by a specialist at the initial pre-treatment consultation (T0) and three (T1), six (T2), nine (T3), and 12 (T4) months after initiation of lanadelumab. Mean AECT and AE-QoL scores were calculated at three months intervals, and Wilcoxon or paired t-test were applied to compare values at each successive interval. The threshold for statistical significance was set at 0.05. **Results :** Mean values of AF at T0, T1, T2, T3 and T4 were 10.0; 3.4; 2.8; 2.2 and 1.4, respectively. Mean AECT values at T0, T1, T2, T3 and T4 were 4.5; 12.0; 12.3; 12.6 and 12.9, respectively. Mean AE-QoL values at T0, T1, T2, T3 and T4 were 66.1; 35.3; 35.4; 34.1 and 32.1 respectively. Comparison tests revealed a statistically significant and clinically dramatic decrease in AF from T0 to T1 (p<0.0001), and also a statistically significant reduction in AF from T2 to T3 (p=0.0273), and T3 to T4 (p=

0.0049). As far as AECT and AE-QoL scores, the tests indicated an important and statistically significant improvement from T0 to T1 ($p<0.0001$), while at all the other intervals, the initial progress was maintained. **Conclusions:** The first study on Romanian HAE patients demonstrated a clear efficiency of lanadelumab, regarding attack frequency, disease control, and quality of life. While the most dramatic improvements in patient outcomes were observed within the first three months, the response was sustained over the whole studied period.

Keywords: Hereditary angioedema, Kalikrein inhibitors, Quality of life, Real-life study

SLOWING MYOPIA PROGRESSION IN CHILDREN: A REVIEW OF ORTHOKERATOLOGY OUTCOMES AND SAFETY

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Background: Myopia affects about a third of the global population, with increasing diagnoses in children. If left untreated, high myopia can lead to serious complications like glaucoma and retinal detachment. Orthokeratology (OKL) uses special lenses to reshape the cornea and may help slow myopia progression and prevent high-degree myopia. **Objective:** This review aims to explore the efficacy and safety of orthokeratology. **Material and methods:** A PubMed search from the past 10 years using keywords "myopia," "orthokeratology," and "treatment" included both prospective and retrospective studies with at least 10 pediatric patients and a minimum follow-up of 6 months. Most studies evaluated the effects of OKL compared to single-vision spectacles (SVS) in children previously diagnosed with myopia, focusing on changes in axial length (AL) and spherical refraction. Additionally, studies reporting potential adverse effects were included. Articles on different OKL types were excluded. Bias risk was not assessed, and data were synthesized using an abstraction method. **Results :** Fifteen eligible articles were found - 12 prospective and 3 retrospective, covering 1666 patients. Jakobsen et al (2021) found in a clinical trial that the AL elongation in the OKL group was 0.24mm smaller than in the SVS group (95% CI: 0.12-0.36mm), with no fast progressors (>0.75D/year) compared to 22% in the SVS group. Na et al (2018) analyzed 45 monocular myopic patients, treating them with OKL. The eyes treated with OKL showed less AL elongation compared to the emetropic eyes (0.09mm vs. 0.17mm, $p=0.01$). In order to evaluate the effects of discontinuation of OKL compared to SVS, Zhu et al(2023) led a study in which subjects were asked to stop wearing OKL for a month after wearing them for 12 months. The group wearing OKL reported a significantly smaller elongation, even after stopping to wear the lenses (0.22mm vs 0.35mm, $p<0.01$). The most recent study on adverse effects, by Santodomingo et al. (2025), reported 13% of eyes treated with OKL experienced one minor adverse event over one year. Larger retrospective studies indicated rare but serious complications like microbial keratitis, with an incidence of 5.4 cases per 10,000 patients. Average study follow-up of was 3 years, with a 5 year maximum, limiting insight into long-term safety. **Conclusions:** OKL is an effective and generally safe method for treating children with myopia, helping to prevent further axial length elongation and reduce the risk of associated complications. Further research is needed to assess the long-term effects of OKL, with careful patient selection and monitoring.

Keywords: Myopia, Orthokeratology, Axial length

IMPACT OF UNTREATED HYPERTRIGLYCERIDEMIA ON CARDIOVASCULAR OUTCOMES IN PATIENTS FOLLOWING ST-ELEVATION MYOCARDIAL INFARCTION: A ONE-YEAR FOLLOW-UP STUDY

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Background: Hypertriglyceridemia enhances cardiovascular risk in ST-elevation myocardial infarction (STEMI) patients by promoting atherosclerosis and inflammation. Elevated triglyceride levels can impair outcomes in these individuals, emphasizing the importance of careful management and evaluation. **Objective:** The aim of this study was to investigate the impact of untreated hypertriglyceridemia on cardiovascular outcomes at one-year follow-up in patients with STEMI. **Material and methods:** This prospective analysis involved 93 consecutive patients with STEMI who underwent percutaneous coronary intervention (PCI) at the Cardiology Department of the Târgu Mureș Emergency Clinical County Hospital. Eligible patients had serum triglyceride (TGL) levels exceeding 150 mg/dL upon admission. Patients were divided into two groups based on TGL levels recorded one month post-STEMI; only

those who retained their TGL profile after one year were included in the final analysis. Patients with serum triglyceride levels < 150 mg/dL were assigned to group 1 (n=40), while those with levels ≥ 150 mg/dL were assigned to group 2 (n=34). Comprehensive evaluations were conducted for all patients, assessing demographic data, lipid profiles, documented arrhythmic episodes, hospitalizations for heart failure, in-stent restenosis, and the incidence of recurrent acute coronary syndrome after one year. **Results :** The mean age of the analyzed population was 61 ± 7 years, and the male-to-female ratio was 1.46, with no significant differences observed between the two groups (both p> 0.05). No statistically significant differences were observed in LDL-cholesterol levels at one year between the two groups (68.35 mg/dL ± 8.12 mg/dL versus 71.12 mg/dL ± 7.34 mg/dL; p= 0.13). Patients with elevated serum TGL levels, despite receiving optimal medical treatment, experienced more frequent episodes of atrial fibrillation during the first year following STEMI (58.82% versus 20.00%; RR 0.34; p= 0.0006). Additionally, they exhibited higher rates of hospitalization for heart failure (44.12% versus 12.50%; RR 0.28; p= 0.002), in-stent restenosis (23.53% versus 5.00%; RR 0.22; p= 0.02), and recurrence of acute coronary syndrome requiring PCI (17.65% versus 2.50%; RR 0.14; p= 0.03), compared to patients with normal triglyceride levels. **Conclusions:** Untreated hypertriglyceridemia significantly worsens cardiovascular outcomes in STEMI patients, leading to increased rates of atrial fibrillation, heart failure hospitalizations, in-stent restenosis, and recurrent acute coronary syndrome within one year.

Keywords: cardiovascular outcome;, hypertriglyceridemia;, STEMI

PREVALENCE OF CHRONIC KIDNEY DISEASE PHENOTYPES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Background: Diabetic chronic kidney disease (DCKD) is a well-known chronic complication of type 2 diabetes mellitus (T2DM). Albuminuria is a hallmark of diabetic nephropathy, but in T2DM, deterioration of kidney function may also occur in the absence of albuminuria. **Objective:** The study aimed at identifying the prevalence and characteristics of DCKD phenotypes. **Material and methods:** The study included adult T2DM patients who attended the diabetes clinic during 2024 and had concomitant kidney function and metabolic evaluation. The following data were collected from the medical records: age, sex, duration of T2DM (DD), weight, height, blood pressure (BP), HbA1c, urinary albumin/creatinine ratio (UAC), serum creatinine. The body mass index (BMI) and estimated glomerular filtration rate (eGFR) were calculated. Three DCKD phenotypes were defined: PhA (with albuminuria; UAC>30 mg/g), PhG (with reduced eGFR [<60 ml/min/1.73m2]), PhAG (with both albuminuria and reduced eGFR). Ph0 was defined by the absence of either changes. Statistical significance was set at p<0.05. **Results :** In this observational study 62 patients were included (age: 67.4±9.5 years, DD: 11.7±5.9 years, BMI: 31.0±6.2 kg/m2, and BP: 134.6±12.0/80.3±10.9 mmHg). 40.3% of all subjects were female. In the overall group the mean HbA1c was 6.8±0.9%, mean UAC was 33.0±58.6 mg/g and mean eGFR was 79.5±23.4 ml/min/1.73m2. Of all subjects, 16.13% had PhA, 12.9% had PhG, 11.3% had PhAG, while 59.7% did not present markers of renal deterioration (Ph0). No significant differences were noted between the 4 groups with regard to age, BMI, BP, and HbA1c. However, PhAG patients had longer DD (20.0±8.8 years) compared with PhA patients (DD: 8.7±4.1 years, p<0.01) and Ph0 patients (DD: 10.6±4.1 years, p<0.05) (p=0.0094). Moreover, there were significant differences in the UAC (p<0.0001) and eGFR (p<0.0001) between groups resulting from the DCKD phenotypes classification. Patients with PhAG and PhA had higher UAC values (100.8±97.2 mg/g and 93.7±78.5 mg/g, respectively) compared to PhG (8.7±9.7 mg/g) and Ph0 (9.0±7.2 mg/g). Furthermore, patients with PhGA and PhG had lower eGFR values (40.3±8.6 ml/min/1.73m2 and 45.6±8.9 ml/min/1.73m2, respectively) versus patients with PhA (91.1±11.3 ml/min/1.73m2) and Ph0 (91.1±11.8 ml/min/1.73m2). **Conclusions:** Different phenotypes are important indicators of DCKD, and regular kidney function monitoring is required, as a high percentage of T2DM patients (mainly with longer disease duration) present markers of kidney dysfunction, even with an overall good glycemic control.

Keywords: Type 2 diabetes mellitus,, diabetic chronic kidney disease,, albuminuria,, decreased eGFR

HPV VACCINATION IN MALES: A KEY STRATEGY FOR PREVENTING PENILE CANCER

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Background: Human Papillomavirus (HPV) is a widespread virus primarily transmitted through sexual contact. It is responsible for various types of cancer, such as cervical cancer, oropharyngeal, cancer and penile cancer. Some of the most important strains of HPV that have a high oncogenic risk are 16, 18, 31, 33, 35 and 39. While penile cancer is rare, its incidence is increasing, especially in developed countries, ranging worldwide from 0.1 to 0.9/100,000 men in Europe, accounting for approximately 1% of male malignancies. **Objective:** The aim of this study is to evaluate the role of HPV vaccination in preventing penile cancer as well as asses the rate of vaccination in males. **Material and methods:** We conducted an extensive search of the Google Scholar data base using the following keywords: "HPV vaccination and male" and "prevention of penile cancer". We evaluated and included only the studies that are relevant to the research. **Results :** HPV infection is responsible for up to 50% of penile cancers and almost 80% of penile intraepithelial neoplasia, with HPV-16 being the most common high-risk type. A quadrivalent HPV vaccine for use in males was licenced by the Food and Drug Administration (FDA) in 2009, with a potential efficacy of 90% and a potential of 77.5% to reduce genital warts and anal intraepithelial neoplasia. Although HPV vaccination programs primarily target females, there is growing support for gender-neutral vaccination. Approximately 42 countries, such as the USA and Australia have implemented vaccination in males. **Conclusions:** HPV vaccination in males is an essential yet underutilized tool for preventing penile cancer and limiting viral transmission. Increasing vaccination coverage among males can significantly reduce HPV-related disease burden. Public health policies should prioritize gender-neutral vaccination strategies to enhance protection and curb the spread of HPV infections. HPV vaccination most effective in HPV-negative males.

Keywords: HPV vaccination, Penile Cancer Prevention, Male Immunization, Disease Prevention

EVALUATING THE QUALITY OF LIVER CANCER CONTENT ON GERMAN-LANGUAGE WEBSITES: A CROSS-SECTIONAL STUDY

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Background: Liver cancer is the third leading cause of cancer-related deaths worldwide. Most patients are diagnosed at late stages of the disease, resulting in poor prognosis. Nowadays, individuals rely on the internet for health information, therefore, it is essential for high-ranking websites on Google to be reliable and complete. **Objective:** The aim of the study was to evaluate the quality of liver cancer related information on German websites in terms of credibility, completeness and accuracy. **Material and methods:** A cross-sectional study analyzed 25 German-language websites about liver cancer, which were selected based on predetermined inclusion and exclusion criteria. The websites were evaluated by two independent evaluators. Scores from 1-10 were assigned for credibility, accuracy and completeness. These values were compared to previously published credibility, accuracy and completeness scores of English websites. Correlations were examined between Google rank, credibility, accuracy and completeness. A threshold of 0.05 was established. **Results :** Regarding the general characteristics, most of the websites were medical portals (64%), all of which specialized in multiple topics (100%), were owned by associations (36%), with an educational (40%) and commercial (32%) goal with information based on conventional medical approach (76%). Regarding credibility, most websites had confidentiality regulations (100%), an owner's name, mailing address / phone number (92%), a direct possibility to contact the owner (88%) and a description of the purpose / mission (84%). The credibility scores of German and English websites were 5.4 and 7.2, respectively (p=0.0004). The completeness scores of German and English websites were 4.8 and 4.9, respectively (p=0.8385). The accuracy scores of German and English websites were 6.3 and 6.3, respectively (p=0.8473). For the German websites, the following correlation tests were performed: completeness-credibility (r=0.4752; p=0.0164), accuracy-credibility (r=0.3822; p=0.0594), completeness-Google rank (r=-0.016; p=0.9393) and accuracy-Google rank (r=0.0623; p=0.767). **Conclusions:** The quality of liver cancer information on German websites was not ideal. A moderate positive correlation was found between completeness-credibility. We can presume more credible websites are likely to be more complete but not necessarily more accurate. The Google rank didn't correlate with the quality (completeness, accuracy) of the websites. As a result, individuals should be

aware of these findings when searching liver cancer-related information online as some information may be incomplete, outdated or misleading.

Keywords: liver cancer, health website quality, online health information, medical misinformation

COMPARATIVE ASSESSMENT OF AIRWAY RESISTANCE USING ADVANCED PULMONARY FUNCTION TESTS

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Background: The pulmonary function testing has a big influence in reaching a definitive diagnostic in both restrictive and obstructive respiratory pathologies. This area of the respiratory medicine is in a continuous search for more specific and sensitive instruments and measured parameters. One example is the body plethysmography, which represents a standard in the guidelines for examining the pulmonary static volumes. As such, this advanced technique of measurement is capable of quantifying the total lung capacity, residual volume and the functional residual capacity. Another primary role is that it allows us to measure the specific airway resistance. One other example of advanced measurement technique is represented by the impulse oscillometry. It is a notable non-invasive method that during the physiological breathing applies oscillating pressure signals at particular frequencies, depending on the need to better study the resistance of large or small airways. **Objective:** The objective of this study was to evaluate the role of the impulse oscillometry in assessing the airway resistance in both obstructive and restrictive diseases in comparison with body plethysmography, an already established advanced measurement technique. **Material and methods:** We concluded a retrospective study for the period of 01.01.2018 - 30.09.2024. The data from the informatics system used in the Mures County Clinical Hospital was analyzed retrospectively. The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of Mures Clinical County Hospital, Romania. We included all the patients who went through both methods of advanced measurement and were diagnosed with restrictive or obstructive disease. Patients with contraindications and those who could not do both examinations were excluded. **Results :** We included 106 patients in the study who requested a body plethysmography or an impulse oscillometry. After the selection of patients and the application of the exclusion criteria, the study group comprised of 69 patients. Of these, 35 were having an obstructive disease and 34 were having a restrictive disease. **Conclusions:** The positive correlations between sRaw and the R5, R5%, R20, R20% and R5-20 in the obstructive patients suggests that both methods can detect similar changes in the resistance of the respiratory airways. The moderate aspect of this correlation may be explained by the fact that the methods used in our study determine the airway resistance in different manners. In essence, the body plethysmography has a static and dynamic way of determining the resistance, meanwhile the impulse oscillometry is measuring the resistance during the physiological breathing.

Keywords: Airway resistance, Body plethysmography, Impulse oscillometry, Pulmonary function testing

THE DYNAMICS OF ORGAN DONATION IN THE ANESTHESIA AND INTENSIVE CARE CLINIC OF TÂRGU-MUREȘ COUNTY EMERGENCY CLINICAL HOSPITAL

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Background: Organ donation is influenced by various medical, psychological, social, and technological factors. **Objective:** This study aimed to describe the dynamics of organ donation in the Anesthesia and Intensive Care Clinic of the Târgu-Mureș County Emergency Clinical Hospital during 2019-2024, also seeking to evaluate the impact of the COVID-19 pandemic on those processes. **Material and methods:** We conducted a retrospective observational study of 136 Anesthesia and Intensive Care Clinic patients of the Târgu-Mureș County Emergency Clinical Hospital. The inclusion criteria were patients officially brain death diagnosed between 1st January 2019 and 31st December 2024. **Results :** Although the statistical comparison of the number of cases diagnosed with brain death per year did not show a significant difference across the six years studied (p=0.25), results of data analysis showed a falling total of donor registers in recent years. At the onset of COVID-19 (2020), Organ Donation was impacted by fewer patients being diagnosed with brain death. A sharp increase in brain death patients in both 2021 and 2022 has led to an uptick in donors. However, there has been a general trend downward in the last few years, driven by various reasons, such as new technologies for polytrauma and strokes, which have lower rates of

brain death. **Conclusions:** The evolution of organ donation between 2019 and 2024 is decreasing except for a spike post-pandemic in 2021 and 2022. While social and psychological factors, along with the pandemic, initially were significant stumbling blocks, technological and critical care advances now appear to contribute to the decrease in the number of donors.

Keywords: organ donation, brain death, organ procurement, COVID-19

THE IMPORTANCE OF SLEEP IN CARDIOVASCULAR DISEASE PREVENTION: EXAMINING THE LINK BETWEEN SLEEP DISORDERS AND THE RISK OF HYPERTENSION, MYOCARDIAL INFARCTION AND HEART FAILURE

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Background: Sleep is a major factor in cardiovascular health, yet sleep disorders such as obstructive sleep apnea (OSA) and insomnia are frequently overlooked in cardiovascular risk assessments. OSA affects a large majority of patients with cardiovascular disease, but is undiagnosed in most cases. With OSA, then appears intermittent airway obstruction causing hypoxia and systemic inflammation as well as autonomic dysfunction, which are all contributing factors to hypertension, heart failure and myocardial infarction. Insomnia and chronic stress increase the cardiovascular morbidity and mortality. Despite all the recent discoveries corelating sleep disorders and cardiovascular diseases, they still remain heavily undiagnosed and untreated, impeding their integration in routine disease prevention. **Objective:** To evaluate the importance of sleep diseases on the major cardiovascular diseases, using epidemiological and pathophysiological data and integrating clinical implications, while also suggesting future research possibilities. **Material and methods:** A literature review was conducted using PubMed and Google Scholar to analyze cohort studies, meta-analyses, and clinical trials published in the past decades. Studies reporting prevalence rates, pathophysiological mechanisms, and treatment outcomes for sleep disorders and cardiovascular diseases were included. **Results :** More than three quarters of the cardiovascular patients have undiagnosed OSA. A 2-fold higher risk of heart failure and a 2.5-fold higher risk of hypertension is associated with moderate to severe OSA. Sleeping less that 5 hours per night means increasing the risk of myocardial infarction by 45%. OSA- induced hypoxia triggers oxidative stress, endothelial dysfunction, and sympathetic activity, generating hypertension and ventricular remodeling. Sleep fragmentation caused by insomnia is the cause of cortisol surges, inflammation, and autonomic dysregulation, worsening cardiovascular health even further. Continuous Positive Airway Pressure therapy reduces the nocturnal blood pressure by 3-7 mmHg and decreases by 35% the cardiovascular risk. Cognitive Behavioral Therapy for Insomnia improves sleep quality, reducing cardiovascular risk. **Conclusions:** Sleep disorders are modifiable yet underrecognized cardiovascular risk factors. Routine sleep assessments should be considered into cardiovascular care, given the strong evidence linking OSA and insomnia to cardiovascular risk. Future research should explore AI- driven diagnostics, genetic links, wearable technology, and combination therapies for optimized cardiovascular outcomes.

Keywords: Sleep disorders, hypertension, myocardial infarction, heart failure

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PERSPECTIVES ON FAMILY PLANNING

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Background: In 2023, according to the National Institute of Statistics, 1,697 teenage first-time mothers were reported, accounting for 2% of all first-time mothers. The number of abortions, in this age category particularly, was almost 1,000 higher, reaching 9% of all abortions that year. These data highlight the importance of sexual education and family planning on a population level, as well as an acute lack of such programs. **Objective:** The study asseses the level of knowledge among young people about contraception and family planning, as well as their perspectives on implementing these programs in general practitioners offices, focusing on the patients receptiveness and the challenges faced by healthcare professionals. **Material and methods:** The study was based on two questionnaires: one addressed to 315 young respondents and another to 40 family doctors from Mureș County. These questionnaires aimed to assess the level of knowledge about contraception and perceptions regarding the implementation of family planning and contraceptive counseling in family medicine practices. **Results :** Half of the respondents first learned about contraception through mass media, which also remains the

main source of information for 55% of them. Over 90% of young people are familiar with common contraceptive methods, though 72% do not consider them 100% effective. 66% use contraceptive methods during every sexual encounter, with nearly 90% preferring condoms. 86.4% purchase their contraceptives from pharmacies. Almost half of the respondents would turn to their general practitioner for family planning counseling if this service was available. Among the doctors surveyed, 37.5% already routinely provide these services. 77.5% of patients who seek counseling are between 18 and 25 years old. In cases of unwanted pregnancies, 67.5% of patients requested a referral to a gynecologist during consultations. 3 out of 5 doctors consider the appropriate age range for starting contraceptive counseling to be 14-18 years. Among contraceptive methods to be discussed, condoms were preferred by 82.5% of doctors. 87.5% of doctors believe that sexual education and family planning programs conducted in general practice settings are useful, but only 45% would be available to implement them, citing lack of time as a limiting factor (mentioned by 62.5%). **Conclusions:** Integrating family planning programs into family doctors offices could help reduce the lack of sexual education and prevent unintended pregnancies. However, their success depends on finding solutions that allow these services to be incorporated into the working schedule of family doctors.

Keywords: family planning, contraception, sexual education

THE CONTRIBUTION OF CARDIOVASCULAR IMPLICATIONS ASSOCIATED WITH LANGDON-DOWN SYNDROME TO THE DEVELOPMENT OF GROWTH RETARDATION

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Background: Langdon-Down syndrome, also known as trisomy 21, is a chromosomal abnormality often associated with congenital heart defects, which, if left uncorrected, can lead to severe complications over time. **Objective:** The aim of this study is to analyze the existing relationship between the cardiovascular implications associated with Langdon-Down syndrome (which contribute to a certain degree of heart failure) and the presence of stature and weight dystrophy. **Material and methods:** We performed a retrospective study on 42 patients, with a mean age of 6 years and 6 months, who were hospitalized in the Pediatric Cardiology Department between 01.01.2018 and 31.12.2023. The children were divided into two groups based on the severity of heart failure: those with non-significant heart failure (NYHA/ROSS classes I and II) and those with severe heart failure (NYHA/ROSS classes III and IV). They were also categorized into two additional groups according to the degree of dystrophy: those with mild or no dystrophy (absence of dystrophy or grade 1) and those with significant dystrophy (grades 2 and 3). **Results :** After grouping, 14 patients (33,3%) were classified as having a non-significant degree of heart failure, with no cases of significant growth retardation observed in this group. A total of 28 patients (66,6%) had severe heart failure; among them, 15 (35,7%) did not exhibit significant growth retardation, while the remaining 13 (30,9%) were found to have a severe form of dystrophy. A significant correlation was demonstrated between the sevetity of heart failure and the degree of growth retardation (p=0,0066), with a calculated odds ratio (OR) of 25,258 (OR>1, indicating a strong influence of the risk factor on the disease). **Conclusions:** According to the result, the progression of heart failure significantly contributes to delayed height and weight development in patients. Children in the severe heart failure categories (NYHA/ROSS III and IV) are at a much higher risk of experiencing some degree of growth retardation.

Keywords: Congenital Heart Defects, Langdon-Down Syndrome, Heart Failure, Growth Retardation

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ALCOHOL WITHDRAWAL: THE IMPORTANCE OF EARLY DIAGNOSIS AND TREATMENT – A CASE STUDY

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Background: Alcohol withdrawal syndrome is a set of clinical manifestations that can occur when an individual reduces or abruptly discontinues alcohol consumption after a prolonged period of use. Over time, the central nervous system adapts to the presence of alcohol. The body exerts significant effort to maintain brain activity and neuronal communication. If the alcohol level in the system suddenly drops, the brain remains in a state of hyperexcitability, leading to withdrawal symptoms. **Objective:** This case study emphasizes the importance of

timely diagnosis and prompt medical intervention in severe alcohol withdrawal. It highlights complications arising from delayed or inadequate treatment and analytically examines how intervention delays contribute to patient deterioration. This is particularly relevant in cases where patients or families hesitate to seek immediate medical attention. Additionally, the study explores the pathological mechanisms leading to multi-organ failure and mortality. **Material and methods:** This case summary describes a 35-year-old male with chronic alcohol dependence who presented with withdrawal symptoms, including convulsive seizures, tongue trauma, sweating and weakness. His condition rapidly deteriorated to delirium tremens with hallucinations, severe confusion and psychomotor agitation. Despite intensive treatment, the metabolic acidosis state persisted and he succumbed to multi-organ failure. The autopsy findings included trauma-related excoriations, cerebral and pulmonary edema, severe hepatic steatosis, acute renal failure and left ventricular hypertrophy, confirming alcohol withdrawal complications as the cause of fatal organ dysfunction. **Results :** This case illustrates the severe and unpredictable course of untreated or inadequately managed alcohol withdrawal, often leading to life-threatening systemic complications. It underscores the limited efficacy of delayed intervention in advanced withdrawal stages and the frequent necessity for mechanical ventilation and vasopressor support. Early risk stratification, timely medical intervention, and intensive monitoring are crucial in mitigating morbidity and mortality. **Conclusions:** This case highlights the severe systemic complications of untreated alcohol withdrawal, including metabolic, neurological, and cardiovascular dysfunction, ultimately resulting in fatal outcomes despite treatment.

Keywords: organ dysfunction, alcohol withdrawal, convulsive seizures, hallucinations

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PEDIATRIC MORTALITY-CLINICAL AND ETIOLOGICAL ASPECTS

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Background: Despite the progress that has been made over the years, pediatric mortality remains an important health problem worldwide, with 4.8 million deaths under the age of five presented in the last statistics. Globally, the main causes of death are represented by malnutrition, infectious diseases, and birth conditions. According to EU statistics, in 2023, Romania had the highest infant mortality rates, with congenital malformations and perinatal distress being the main causes. Given the fact that a lot of these deaths can be prevented, understanding the causes behind them is an essential step in reducing child mortality in the future. **Objective:** The study aims to offer a better understanding of the main causes of pediatric death, and how different factors such as age, sex, and preexisting health conditions can influence them. **Material and methods:** Our study included 116 cases of pediatric deaths recorded in the pediatric department of Emergency Clinical County Hospital Târgu Mureș, during the last five years. We collected the data from the medical record, analyzed them in statistics programs, and represented the results in charts. **Results :** From the entire sample, 66% of deaths were under the age of five, with the highest numbers occurring in the one-month to one-year age group each year. Another relevant finding was that 59% of all patients presented one or more congenital malformations, with congenital heart diseases being the most frequent. The most common causes of death for both sexes over the past five years were cardiopulmonary arrest, sepsis, and respiratory pathologies such as pneumonia, bronchopneumonia, and acute respiratory failure. Infectious agents were identified in 75.6% of all hospitalized patients, with viral infections being the most common, followed by gram-negative and gram-positive bacterial infections. **Conclusions:** This research indicates that infectious diseases, particularly respiratory illnesses, remain the leading cause of mortality among children annually. Additionally, the existence of underlying health conditions, such as congenital malformations, significantly influences the progression of these diseases towards fatal outcomes.

Keywords: Child, Death, Malformation, Infection

COLOR A GATEWAY TO HEALING: MEDICAL SPACE AS A CHROMATIC UNIVERSE

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Background: Color is not merely a cosmetic feature in healthcare facilities but also a powerful determinant of patients' emotional states and comfort levels. Color psychology studies have shown that color provokes physical and emotional responses that affect anxiety, security, and even pain. Therefore, chromatic design in medical clinics goes beyond aesthetics as a treatment intervention that facilitates recovery, alleviates distress, and

improves the doctor-patient relationship. **Objective:** This research examines how color influences patients' psychological and physiological states, influencing professionalism, sense of security, and emotional well-being. It also investigates patient awareness of color selection in healthcare facilities and their color preferences to optimize medical space design. **Material and methods:** This study utilized psychological and sociological approaches using questionnaires and statistical analysis, conducted from June to October 2024. There were 217 participants across all age ranges who completed questions about the perceived color of medical offices, the emotional effect they have, and how they shape doctor-patient interactions. **Results :** The results underscore the strong influence that color selection has on patients' emotional states and perceptions in healthcare settings. Most respondents (83%) recognized the significance of color in the design of medical offices, emphasizing both psychological and aesthetic importance. When it comes to color preferences, cool and neutral tones (green, blue) were linked to relaxation and comfort by nearly half the respondents (47%), while warm tones (orange, yellow, red) produced mixed reactions - 65% felt comfortable, while 15% reported discomfort or agitation. Regarding color dominance, 30% of the participants described neutral tones as having positive or neutral emotional impacts. Stronger colors received more polarized reactions -warm colors tended to enhance comfort but potentially inducing agitation in others, whereas cool colors were usually calming but occasionally inducing discomfort in certain individuals. Age also played an important role in color preference. Children liked warm tones most frequently (80%), while adolescents (55%) and adults (58%) liked cool tones. Warm tones were preferred by older participants (66%), in line with age-based color preferences and the psychological impacts. **Conclusions:** Color plays a significant role in medical architecture extending beyond aesthetics and having profound implications for patient psychology and experience. Strategically used color has the potential to make medical facilities warm and less intimidating environments, fostering positive doctor-patient interactions. This study highlights the need to integrate color psychology into healthcare design, reinforcing how chromatic choices can act as a true "gateway to healing."

Keywords: Chromatics, Color psychology, Medical design, Patient perception

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A RETROSPECTIVE COMPARATIVE STUDY OF POST RENAL TRANSPLANT PATIENTS IN CORRELATION WITH THE GRAFTS' ORIGIN FROM AN ALIVE VERSUS BRAINDEAD DONOR.

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Background: Kidney transplantation is the gold standard in end stage chronic kidney disease offering a major improvement of life quality for the patients. The graft might either be received by a braindead anonymous donor or a living donor out of the patient's inner social circle. **Objective:** The goal of this retrospective study was to show if there is a possibility to establish if patients with kidney transplants from a living donor are more responsible with their health in comparison to patients with a braindead donor by monitoring blood and body parameters. **Material and methods:** Within the time span of 2020 to 2025 we collected the following laboratory data of 35 renal post-transplant patients enrolled in the nephrology department of Spitalul Clinic Judeţean Tirgu Mureş: Sex (male/female), age (years), height (cm), weight (kg), Body-Mass-Index (kg/m²), systolic blood pressure (mmHg), diastolic blood pressure (mmHg), heart rate (beats/minute) and if the graft was transplanted from a living or braindead donor. Furthermore, from the serum we collected: triglycerides (mg/dl), urea (mg/dl), GGT (U/l) and GOT (U/l). We also gained information about the albumin-creatinine-ratio (mg/g (urine)) and the respective values of creatinine (mg/dl (Urine)) and albumin (µg/mL (Urine)) in the urine. We calculated the patients' estimated Glomerular filtration rate (mL/min/1.73 m2) and set the responding stages of chronic kidney diseases. The patients were grouped according to living or braindead donors. We further removed the outliers and conducted statistical analysis using the Mann-Whitney-Test and Fisher Test. **Results :** Our analysis showed that the difference between our averages after removing our outliers were in a range of 0,85% to 59,79%. Intriguingly, after conducting the statistical analysis we obtained for each set of data a p-value of >0,05, meaning there is no significant difference in those outcomes. **Conclusions:** Our results show that there is no statistical difference in body and blood parameters in patients with a kidney graft from a living or braindead donor. By this we were not able to establish whether the patients with a transplant received from a living donor have a healthier lifestyle than those patients with a graft from a braindead donor.

Keywords: Kidney transplant, graft, donor, braindead

IMPACT OF PRIOR STATIN THERAPY ON CORONARY DISEASE PATTERNS AND ACUTE COMPLICATIONS IN ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION PATIENTS TREATED BY PRIMARY PERCUTANEOUS CORONARY INTERVENTION

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Background: Statins represent a cornerstone in the pharmacological management of ST-segment elevation myocardial infarction (STEMI). Nevertheless, the clinical significance of chronic ongoing statin therapy in patients presenting with STEMI patients is still poorly defined. **Objective:** This study sought to evaluate the impact of chronic lipid-lowering pharmacotherapy with statins on the pattern of coronary artery disease (CAD) development and subsequent incidence of cardiac arrhythmogenic events and hemodynamic instability in STEMI patients undergoing primary percutaneous coronary interventions (pPCI). **Material and methods:** A retrospective analysis was conducted on 1049 STEMI patients who underwent pPCI. Classical cardiovascular risk factors and acute-phase parameters were stratified according to prior statin use. The relationship between statin therapy and the pattern of CAD and STEMI-associated atrial fibrillation (AF), ventricular tachycardia, cardiogenic shock, and asystole were investigated. **Results :** The median age of the population was 62 (IQR 53-69) years. Compared to patients without statin therapy, patients undergoing chronic statin treatment were older (67 [IQR 56-73] years vs. 61 [IQR 51-68] years, p< 0.0001), and more likely to present hypertension, diabetes, chronic kidney disease, heart failure, and previous myocardial infarction (all p< 0.05). Patients on chronic statin therapy were significantly less likely to present with single-vessel disease during STEMI compared with their non-statin treated counterparts (p = 0.04). Prior statin therapy demonstrated no significant associations with the occurrence of AF, ventricular tachycardia, cardiogenic shock, or asystole in patients with STEMI and pPCI (all p >0.05). **Conclusions:** Prior statin therapy does not appear to significantly impact electrical and hemodynamic complications in patients with STEMI treated by pPCI. The more severe pattern of coronary involvement observed in the statin-treated group likely reflects a higher chronic disease burden, rather than a direct effect of the medication. This emphasizes the importance of exhaustive cardiovascular risk assessment and management, beyond pharmacological intervention, for this high-risk population.

Keywords: arrhythmic and hemodynamic complications;, single-vessel disease;, statin treatment;, ST-segment elevation myocardial infarction

THE ROLE OF CALCIUM INTAKE IN PATIENTS WITH OSTEOSARCOPENIA

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Background: Osteoporosis is considered a major global health concern due to its silent nature and severity. It has a significant impact on the daily lives of postmenopausal women. Sarcopenia often arises because of osteoporosis but can also act as a contributing factor in developing it, with the two conditions being strongly interconnected. Calcium is an essential nutrient for maintaining musculoskeletal health. Dietary calcium deficiency is associated with an increased risk of occurrence of both osteoporosis and sarcopenia. **Objective:** The aim of this study is to analyze the implications of dietary calcium intake over the development and progression of osteoporosis and sarcopenia, particularly focusing on the patients at high risk. **Material and methods:** To achieve the objectives, we conducted a case-control clinical study. The target population consisted of female patients between 40 and 90 years old. The two groups were divided based on the presence or absence of osteoporosis. After signing the informed consent form, eligible patients completed a 24-question survey, we collected lab samples regarding the phosphor-calcium metabolism, dual-energy X-ray absorptiometry and bioimpedance measurements were performed, the Timed Up and Go and the Hand Grip strength tests were conducted and the FRAX score was calculated. **Results :** Out of the total of 95 patients, 66 were part of the case group and 29 of the control group. The median daily calcium intake in the case group (715, IQR: 414.5 - 1077.75) did not differ from that in the control group (667, IQR: 429 - 927), with p>0.05. Additionally, no statistically significant correlation was found between daily calcium intake and any of the parameters determined in the study. Considering daily calcium intake, r-squared suggests that 1.71% of the variation is explained by the regression model, which included age, place of residence and education level as independent variables (p=0.6626). However, for the TUG test and HGS test, r-

squared suggests that 24.9%, respectively 22.97% of the variation is explained by the regression model while using the level of education as the independent variable (with p-values of 0.0007 and 0.0016). **Conclusions:** No correlation was found between calcium intake and osteosarcopenia. However, a correlation was found between the functional tests for sarcopenia and the level of education: the higher the educational level, the better the mobility and muscle strength.

Keywords: osteoporosis, sarcopenia, calcium

A NOVEL COL2A1 IN-FRAME DELETION IN STICKLER SYNDROME: INTERDISCIPLINARY PERSPECTIVES FOR OPTIMIZED MANAGEMENT

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Background: Stickler syndrome is an autosomal dominant connective tissue disorder primarily caused by COL2A1 mutations, affecting vision, hearing, and joints with variable severity. Despite clinical recognition, standardized treatment guidelines are lacking, leading to inconsistent management. This report describes a previously undocumented COL2A1 in-frame deletion (c.1085_1096delCTGGTGGTGCTG), exhibiting consistent phenotypic expression across two generations. It underscores the importance of interdisciplinary management and the need for mutation-specific treatment strategies to improve long-term patient outcomes. **Objective:** This study documents a novel COL2A1 mutation and its phenotypic impact in two patients. It evaluates organ-focused versus interdisciplinary management approaches and highlights the need for tailored treatment strategies. The goal is to expand genetic databases, encourage research on mutation-specific therapies, and promote the development of Stickler-specific clinical guidelines to optimize patient care and prevent complications. **Material and methods:** This case report describes two genetically confirmed Stickler syndrome patients (parent and child) carrying the COL2A1 c.1085_1096delCTGGTGGTGCTG mutation. Clinical data, including ophthalmologic, orthopedic, and audiological assessments, were collected. Genetic analysis via Sanger sequencing confirmed a de novo heterozygous mutation. Treatment approaches were compared, focusing on differences between organ-focused and interdisciplinary management. Disease progression, therapeutic outcomes, and genotype-phenotype correlations were analyzed. **Results :** Despite appearing healthy, both patients exhibited congenital hearing loss, early-onset retinal detachments (first at age 11), and progressive joint pathology. The first patient underwent intraocular oil tamponade and multiple knee osteotomies, leading to complications such as progressive polyarthritis and blindness due to secondary glaucoma. The second patient, benefiting from interdisciplinary insights, received scleral buckling instead, preserving vision. This suggests that certain COL2A1 mutations may follow a distinct phenotypic pattern, requiring tailored treatment strategies. **Conclusions:** This case highlights the need for interdisciplinary strategies in Stickler syndrome. While general guidelines exist, mutation-specific approaches could improve patient care. The COL2A1 c.1085_1096delCTGGTGGTGCTG mutation is newly identified, emphasizing genetic database expansion. With both patients under 35 and still in medical follow-up, this case provides real-time clinical insights, urging the development of Stickler-specific management protocols to prevent complications and enhance long-term outcomes.

Keywords: Stickler Syndrome, COL2A1 Mutation, Phenotypic Invisibility, Interdisciplinary Management

THE RELATIONSHIP BETWEEN ST-SEGMENT RESOLUTION AND LEFT VENTRICULAR EJECTION FRACTION AT DISCHARGE IN PATIENTS WITH ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION TREATED BY PRIMARY PERCUTANEOUS CORONARY INTERVENTION

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Background: The magnitude of ST-segment resolution is a well-established electrocardiographic indicator of successful myocardial reperfusion in patients with ST-segment elevation myocardial infarction (STEMI). However, its correlation with left ventricular ejection fraction (LVEF) recovery remains unclear. **Objective:** This study aimed to assess the relationship between ST-segment resolution and LVEF recovery at hospital discharge in patients with STEMI undergoing primary percutaneous coronary intervention (pPCI). **Material and methods:** A prospective analysis was conducted on 1,049 patients with STEMI who underwent pPCI. Traditional cardiovascular risk factors

were recorded, along with baseline and discharge values of ST-segment elevation and LVEF. ST-segment resolution was classified into three categories: absent (< 30%), partial (30-70%), and complete (>70%), based on the percentage reduction in the sum of ST-segment elevation after pPCI. The relationship between initial ST-segment elevation severity, its resolution post-pPCI, and LVEF recovery was analyzed. **Results :** The median age of the population was 62 (IQR 53-69) years. No significant correlation was found between ST-segment resolution and LVEF recovery after pPCI (p = 0.74). The distribution of cardiovascular risk factors showed no statistically significant differences among the three ST-segment resolution groups, except for smoking status. Post-hoc Tukey analysis identified significant differences between patients with absent and complete ST-segment resolution, with non-smokers having a higher likelihood of exhibiting absent ST-segment resolution (p < 0.001). **Conclusions:** Although post-pPCI ST-segment resolution is commonly considered a marker of successful reperfusion, the present study did not find a significant correlation with LVEF recovery at discharge. While ST-segment resolution remains a useful electrocardiographic parameter, its association with myocardial recovery appears limited, at least over the short term, suggesting the need for assessing additional markers of functional outcome in this high-risk population.

Keywords: Left ventricular ejection fraction, Primary percutaneous coronary intervention, ST-segment elevation myocardial infarction, ST-segment resolution

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THYROID DYSFUNCTION IN MITOCHONDRIAL DISEASES: EXPLORING THE CONNECTION AND CLINICAL IMPACT

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Background: Mitochondrial diseases are heterogeneous disorders caused by mutations in nuclear or mitochondrial DNA. These diseases affect various organ systems, including the endocrine system. **Objective:** This review explores thyroid dysfunction in mitochondrial diseases, its frequency, underlying mechanisms, and clinical significance. **Material and methods:** A systematic literature search was conducted in PubMed using the key words "Mitochondrial disease", "Thyroid dysfunction", "mtDNA mutations" and "Endocrine disorders". Relevant studies from the last 15 years were selected based on predefined inclusion criteria. **Results :** Thyroid dysfunction in mitochondrial diseases includes both hypothyroidism and hyperthyroidism. However, its prevalence, approximately 6%, does not significantly exceed that of the general population. Unlike diabetes or growth disorders, thyroid dysfunction in mitochondrial diseases appears in publications as case reports only, and no systemic association or established significant link has been found. Reported cases include sub-clinical hypothyroidism in an infant with m.8619A>G and hyperthyroidism in a child with Leigh syndrome. Thyroid abnormalities can be either primary, directly caused by mitochondrial dysfunction, or secondary, resulting from other metabolic disturbances. The complexity and heterogeneity of mitochondrial diseases, alterations of various enzyme complexes resulting in the same phenotype, highlight the importance of genetic testing for accurate diagnosis and adequate management, choice of optimal therapy. **Conclusions:** In the identification and multidisciplinary care of patients with mitochondrial disorders, endocrinologists may have an important role. Mitochondrial disease should be suspected in patients with multiple and/or atypical forms of endocrinopathies, including thyroid dysfunction, which, however, appears as a less characteristic manifestation.

Keywords: Mitochondrial disease, Thyroid dysfunction, mtDNA muations, Endocrine disorders

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ADOLESCENTS' PERCEPTIONS ON ACNE: PRELIMINARY RESULTS FROM A CROSS-SECTIONAL STUDY

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Background: Acne vulgaris, a common dermatological condition, is a chronic inflammatory disease of the pilosebaceous unit caused by Propionibacterium acnes. **Objective:** This study aimed to evaluate adolescents' knowledge, attitudes, and beliefs regarding acne. **Material and methods:** A cross-sectional survey was conducted among 295 students aged 11-15 from National College "Emil Racoviță" in Iași, Romania, between November 2024 and February 2025. A 30-item questionnaire assessing demographic information, clinical knowledge, and perceptions of acne was applied to every student. **Results :** The study population consisted of 51.9% males. While

81.6% recognized acne as non-infectious and 93.2% believed it was treatable, significant knowledge gaps were identified. Only 69.4% identified hormones as acne-triggering factors. Alarmingly, 74.1% incorrectly believed that pimple-popping was an appropriate management strategy. Regarding treatment, 90.1% believed washing the face was helpful, while, concerningly, 17% believed sleep was a significant treatment factor. **Conclusions:** Adolescents exhibit limited awareness and significant misconceptions regarding the etiology and management of acne. Substantial differences in knowledge were noted across the four grade levels. These findings underscore the urgent need for comprehensive and interdisciplinary acne education programs targeting this age group.

Keywords: acne, knowledge, treatment, education

THE RELATIONSHIP BETWEEN ADRENAL DISORDERS AND PSYCHIATRIC SYMPTOMS IN THE CONTEXT OF MENTAL HEALTH

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Background: A well-known aspect of endocrine disorders is their impact on mental health. Normal cortisol secretion is essential for neuronal homeostasis, while deviations are linked to significant behavioral and cognitive perturbations. Dysregulated cortisol production contributes to affective disorders, impairs memory consolidation, disrupts circadian rhythms, and also affects mood stability, underscoring the critical interdependence of endocrine and neuropsychiatric processes. **Objective:** Our objective was to investigate the prevalence, gender distribution, and clinical presentation of adrenal dysfunctions and psychiatric disorders, as well as to study the correlations between them. **Material and methods:** We conducted our cross-sectional study using the data of patients registered at the Mures County Clinical Hospital's Department of Psychiatry I and the Department of Endocrinology, in the time interval between January 1, 2020, and September 1, 2024. To ensure result relevance, strict inclusion and exclusion criteria were established. Inclusion criteria required a definitive psychiatric diagnosis, based on DSM/ICD guidelines, alongside a confirmed endocrine disorder, well-defined symptoms, and complete medical records. Exclusion criteria included unclear or incomplete diagnoses, endocrine or psychiatric conditions outside the study scope, patients under diagnostic observation, and insufficient medical data. Microsoft Office Excel 365 was used to structure and analyze the data, and we calculated chi-square tests and odds ratios (OR). **Results :** Within the study, 620 patients were diagnosed with Cushing's syndrome, of whom 84 (13.54%) presented with concomitant psychiatric disorders. Among these, depression was the most prevalent, accounting for 41.66% of the psychiatric cases. Notably, psychiatric impairments manifested within six years post-diagnosis in 42.85% of affected patients. In the subgroup of 95 patients diagnosed with Addison's disease, the most frequently observed psychiatric condition was a mixed depressive-anxiety disorder, which was identified in 52.63% of cases, with psychiatric impairments emerging within six years in 47.36% of these patients. In all cases, a female predominance was observed, and an analysis of the age groups revealed that disease prevalence increased proportionally with age in both conditions. Moreover, a statistically significant correlation was identified in both cases. Patients with Cushing's syndrome exhibited a 74.3% increased likelihood of being diagnosed with psychiatric disorders, while those with Addison's disease had a 2.69-fold higher risk compared to the control group, consisting of patients with other endocrine disorders. **Conclusions:** The relationships are, in most cases, complex and difficult to trace due to the lack of proper documentation. According to the inferential analysis, both Cushing's syndrome and Addison's disease significantly increase the risk of developing psychiatric disorders.

Keywords: Cushing’s syndrome, depression, Addison’s disease, neuroendocrinology

A DESCRIPTIVE STUDY OF CLINICAL PATTERNS AND MANIFESTATION VARIABILITY IN PULMONARY EMBOLISM

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Background: Due to its variable clinical features and frequent atypical presentation, pulmonary thromboembolism represents a frequently unnoticed or misdiagnosed condition. Patients can present with either subtle symptoms or with severe hemodynamic instability. Early recognition of this condition is vital for the proper management of the patient. **Objective:** This study analyzes the typical presentation patterns of pulmonary thromboembolism to facilitate the early recognition and diagnosis of affected patients. **Material and methods:** We analyzed 42

discharge reports of patients with pulmonary thromboembolism for the period 2023-2024 within the Cardiology Clinic of SCJU Târgu Mureș. The cases were evaluated based on clinical, laboratory, and imaging criteria. **Results :** 42 cases were analyzed. Of these, 64% were women, and 36% were men. More than 85% of the patients were above the age of 40. The patients with pulmonary thromboembolism showed multiple comorbidities, with the most frequent associated conditions being arterial hypertension (61%), dyslipidemia (47%), followed by chronic kidney disease (31%), and diabetes mellitus (31%) ,cancer (29%), and heart failure (29%). Nearly 50% of the patients were obese or overweight. Additionally, 52% presented with deep vein thrombosis, while 11% had pleurisy and pulmonary infarction. D dimers showed to be a sensitive analysis.About 45% of the patients had D-dimers above 1600 ng/ml, and only 26% had a value under 500 ng/ml (hence being under the cutoff value). There was no specific ECG pattern,some patients were showing only non-specific changes. Most frequently observed EKG changes were inverted T waves (47%), the S1Q3T3 sign (31%), and right bundle branch block (19%).The majority of the patients presented pulmonary hypertension- echocardiography detected tricuspid regurgitation in 62% of the cases. **Conclusions:** Pulmonary thromboembolism has no pathognomonic signs.This study emphasizes the importance of early diagnosis by integrating clinical, laboratory, and imaging data. The affected group consists of individuals with multiple comorbidities and advanced age ,hence pulmonary embolism management must be multidisciplinary.

Keywords: pulmonary thromboembolism, clinical variability, early diagnosis, comorbidities

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COMPARATIVE EFFICACY OF PELOTHERAPY AND PHYSIOTHERAPY IN PATIENTS WITH INFLAMMATORY CONDITIONS.

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Background: Inflammatory rheumatic diseases are chronic conditions that affect the joints, ligaments, tendons, and other structures of the musculoskeletal system. They are characterized by persistent inflammation of the tissues and can cause pain, stiffness, and, in the long term, can lead to joint damage. **Objective:** The aim of our study is to compare the benefits of mud treatment versus physiotherapy in the recovery of patients with inflammatory diseases. **Material and methods:** We conducted a retrospective observational study on 144 patients from County Clinical Emergency Hospital Tg. Mures, Rheumatology department and Ensana Sovata treatment base between January and March 2025. The patients were divided into 2 groups: the first group represented by patients who underwent physiotherapy, and the second group represented by patients who underwent peloid therapy. The first group included 123 patients from the Rheumatology department, of whom 68 (55.28%) were female and 55 (44.71%) were male, with an average age of 56 years, 61 (44.60%) of them coming from rural areas and 62 (50.40%) from urban areas. 64 (52.23%) patients with ankylosing spondylitis (AS), 42 (34.14%) with rheumatoid arthritis (RA) and 17 (13.82%) with psoriatic arthritis (PsA) were included. At admission, 27 (21.95%) had intense pain, according to the VAS (Visual analogue) scale, 68 (55.28%) had moderate pain and 28 (22.76%) had mild pain. At discharge, the pain scale changed as follows: 19 (15.44%) had moderate to intense pain, 65 (52.84) had moderate pain and the rest had mild pain or no longer had joint pain. In the second group, we included 21 patients, the average age being 47.5 years, of which 12 (57.14%) were female and 9 (42.85%) male, 3 (14.28%) coming from rural areas and the rest from urban areas. 11 (52.38%) patients with AS, 6 (28.57%) patients with RA and 4 (19.04%) patients with PsA were included. **Results :** At the initial VAS, 3 (14.21%) had intense pain, 5 (23.8%) had moderate pain and the rest had mild pain. After treatment, all patients reported mild pain or no longer had joint pain. **Conclusions:** In conclusion, although the second batch was smaller than the first one, the benefits of mud treatment in inflammatory diseases were found. The beneficial and curative effects of treatment with mud from Lacul Ursu (Sovata Bai), although known since ancient times, would require confirmation by conducting new clinical studies in this regard.

Keywords: rehabilitation, mud therapy, kinetotherapy, inflammatory diseases

THE ASSOCIATION BETWEEN PERICORONARY INFLAMMATION ASSESSED BY CORONARY COMPUTED TOMOGRAPHY ANGIOGRAPHY AND THE NUMBER OF ANTIHYPERTENSIVE MEDICATIONS

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Background: Hypertension continues to represent the primary modifiable risk factor for cardiovascular diseases and is characterized by structural and functional alterations in the blood vessels. These changes are associated with increased arterial stiffness, vascular inflammation and endothelial dysfunction. Vascular inflammation, particularly in the coronary arteries, induces phenotypic modifications in the PeriVascular Adipose Tissue (PVAT). These changes can be detected through gradients of perivascular attenuation using coronary computed tomography angiography (CCTA). Such gradients are measured and quantified using the Fat Attenuation Index (FAI), a biomarker derived from CCTA that reflects the level of coronary inflammation. **Objective:** The primary objective of this study was to evaluate the relationship between the degree of coronary inflammation and the number of classes of antihypertensive medications administered to patients. **Material and methods:** A total of 73 patients who had undergone clinically indicated CCTA between 2018 and 2022 were included in the study. In all cases, PVAT mapping and FAI analysis were performed. Inclusion criteria required that PVAT assessment and FAI quantification be clinically relevant and feasible. Patients were divided into two groups based on the number of antihypertensive medication classes prescribed: Group 1 included those receiving two or fewer classes, while Group 2 comprised patients on more than two classes. In cases of combination therapy, medications were categorized according to their distinct active substances. **Results :** The findings indicated that patients in Group 1, taking two or fewer classes of antihypertensive medications, exhibited higher coronary inflammation, quantified through the Fat Attenuation Index (FAI), across all three major coronary arteries: the left anterior descending artery, circumflex artery and right coronary artery. Specifically, FAI values were significantly higher in Group 1 compared to Group 2 (left anterior descending artery: -72.3±6.5 vs -77.9±7.2, p=0.007; circumflex artery: -67±7.7 vs -73.4±6.9, p=0.004; right coronary artery: -69.4±9.4 vs -74.6±6.8, p=0.02), indicating greater pericoronary inflammation. In contrast, patients in Group 2, prescribed more than two classes of antihypertensive medications, showed lower FAI values, reflecting reduced vascular inflammation. **Conclusions:** In conclusion, this study demonstrated that patients who were prescribed a greater number of antihypertensive medication classes exhibited lower levels of pericoronary inflammation. This effect can be attributed to the combined anti-inflammatory and antioxidant properties of the medications, as well as to a more effective control of hypertension achieved in these patients. These findings suggest that the broader use of multiple antihypertensive drug classes may contribute to a more significant reduction in vascular inflammation, potentially offering additional protective benefits for cardiovascular health.

Keywords: Pericoronary inflammation, Antihypertensive medications, Coronary computed tomography angiography (CCTA)

THE INCIDENCE AND IMPACT OF MENTAL HEALTH DISORDERS IN TURNER SYNDROME PATIENTS- A CROSS-SECTIONAL STUDY

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Background: Turner syndrome (TS) is the most common sex chromosome aneuploidy, having an incidence of 4 in 10,000 female births. Its characteristic phenotype is well-known, including dysmorphic features, abnormalities of the skeleton (namely short stature), hearing issues, infertility, cardiac malformations, diabetes mellitus and thyroid disorders. However, these patients are not often studied from a psychological wellbeing standpoint. Among the psychological difficulties TS patients face the most common ones are depression and exhibition of traits similar to those of autistic spectrum disorder patients. **Objective:** This study aims to review the mental health of women diagnosed with TS and to gap the underrepresentation these topics get in academical research, mainly focusing on the most common psychological issues these women face: depression, anxiety and social difficulties. **Material and methods:** For our study, we developed a non-validated questionnaire which was presented to patients with TS, both in a physical clinic (SCJM Targu Mures- Endocrinology department) and online in several TS support groups.

The patients were of various ages ranging from <18 years of age to 56 and older and were 164 in total. The questionnaire was focused on their overall quality of life and contained some mental health specific questions. **Results :** Among the interviewed women, the most present issue was feeling excluded (122 or 74,4%), followed by anxiety (101 or 61,6%), difficulty in making friends (88 or 53,7%) and lastly communication challenges (73 or 44,5%). Only 9,8% (16) declared no issues whatsoever while 10,4% (17) claimed to have other challenges among which shyness and height related preoccupations. It is also important to mention that when asked how impactful these issues are on their daily lives on a scale from 1 to 10, most of the women chose to position themselves from 4 to 7, indicating a moderate and thus significant impact on their satisfaction regarding their day to day lives, although therapy has shown great results in the management of these important issues. **Conclusions:** As established by previous studies, anxiety seems to affect 37,1% of the general female population. Considering this, the results of this study show a definite increase in the prevalence of these mental health disorders in women affected by TS worldwide which is in line with other studies and literature concerning this very under-treated and understudied topic. The main goal of this study is awareness, so that their mental health and overall quality of life can improve

Keywords: Turner syndrome, Anxiety, Depression, Mental health

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ASSESSING THE CORRELATION BETWEEN DIET, FASTING AND DEPRESSIVE SYMPTOMS AMONG UNIVERSITY STUDENTS

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Background: Depression is currently a prevailing form of mental illness in the world today. Student populations around the world make up a large proportion of those who suffer, possibly due to the social and financial burdens of student life. While conventional therapies are immensely useful for treating those already suffering, interest is growing in the study of nutrition as a holistic aspect of mental well-being. Research is still ongoing on the effect that nutrition fully has on mental health, and therefore a lack of information exists for specific demographics such as students. **Objective:** This study aims to explore a possible correlation between dietary patterns, fasting practices and depression among students of UMFST Targu Mures. **Material and methods:** An online questionnaire was used to assess students on their dietary habits, fasting practices and mental health. The 9-item Patient Health Questionnaire (PHQ-9) was used to assess the participants on possible symptoms of depression. **Results :** : Of the 80 students who have thus far participated in the questionnaire, 60% attested to nutrition having a positive effect on diet, while 40% had noticed changes in their mood from fasting. The main dietary patterns included Keto, Vegetarian/Vegan and Mediterranean, while most students did not follow to a specific diet. There was a wide range of average weekly calorie intakes, which suggests diverse eating habits. A noticeable number of students reported having experienced symptoms of depression, with quite a few selecting that such symptoms intervened on their daily routine. **Conclusions:** Findings suggest that there may be an association between nutrition and mental health. While fasting had varying outcomes on their mental health, there was a generally positive outlook on nutrition and its positive effect on mood. Further research is necessary from here to explore current findings and causality.

Keywords: depression, nutrition, fasting, university students

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THE PROFILE OF MOTOR COMPLICATION IN ADVANCED PARKINSON DISEASE BEFORE THE INITIATION OF LEVODOPA INFUSION TREATMENT

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Background: Parkinson disease is a progressive neurological condition characterized by gradual loss of striatal dopamine, leading to motor symptoms (tremor, rigidity, akinesia) and nonmotor symptoms (pain, cognitive impairment) that reduce patients` quality of life. In advanced stages, symptoms worsen and become resistant to conventional oral dopaminergic therapy. Before initiating advanced levodopa-based therapy, it is important to be aware of these complications to optimize therapeutic strategies. **Objective:** The aim of this study is to compare baseline motor complications in advanced Parkinson disease before initiating one of the three different treatments: subcutaneous levodopa infusion, levodopa/carbidopa intestinal gel (LCIG), levodopa/entacapone/carbidopa

intestinal gel (LECIG). **Material and methods:** With a total of 177 patients, a retrospective analysis from different studies was performed on three groups: 20 patients eligible for LECIG, 150 patients for LCIG, and 7 patients for subcutaneous therapy. Demographic data and clinical parameters were recorded: age, gender, disease severity (both the ON and OFF phases, measured with the Hoehn and Yahr scale). We assessed baseline motor complication by observing: motor fluctuation, presence of early morning akinesia, delayed ON respectively no ON, dyskinesia, freezing phenomenon. **Results :** The average age of the study group was 63.4±7.5 years, with 78.3% being male. Mean duration since diagnosis until treatment was 10.5±4.3 years. Average OFF time was the highest in the LECIG group(4.8 hours/day,) followed by the LCIG group and then the subcutaneous infusion group. Peak-dose dyskinesia was longest in the LECIG group (4.8±0.9 hours/day), followed by LCIG (2.96±0.84 hours/day) and subcutaneous infusion (2.1±0.2 hours/day).Mild to moderate peak-dose dyskinesia appeared in 65% of LECIG patients, with 15% experiencing severe dyskinesia. Diphasic dyskinesia was more common in LCIG (28.33%). Early morning akinesia affected 90% of LECIG and 88% of LCIG patients. Delayed ON was seen in 50% of LECIG and 60% of LCIG patients, while sudden OFF was more frequent in LCIG (38.67%) than LECIG (20%). Freezing episodes occurred in 50% of LECIG and 54% of LCIG patients. Hoehn and Yahr scores were similar in the ON state for LECIG (3.25±0.4) LCIG (3.23±0.42), with lowest scores in the subcutaneous group (3). In the OFF state, LCIG patients had slightly higher scores (4.39±0.5) than LECIG and last came subcutaneous therapy with the lowest results (4). **Conclusions:** This study highlights the baseline motor complication in advanced Parkinson disease before they undergo different types of levodopa therapy strategies Early recognition of these symptoms is essential for personalizing treatment and improving quality of life.

Keywords: Advanced Parkinson Disease, Levodopa Therapy, Motor Complications

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"CHEMOEMBOLIZATION SUCCESS IN THE TREATMENT OF HEPATIC TUMORS: THE ROLE OF INTERVENTIONAL RADIOLOGY IN HEPATIC ARTERY EMBOLIZATION FOR PRIMARY AND METASTATIC CASES"

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Background: Neoplastic liver diseases, consisting of primary and metastatic malignancies, represent a significant global health burden with complex diagnostic and therapeutic challenges. Interventional radiology (ir) has emerged as a pivotal field in the management of these conditions, offering minimally invasive, image-guided techniques that complement or even replace traditional surgical and systemic treatments. A Brief History of Chemoembolization The idea of blocking blood flow to tumors dates back to the 1970s when doctors first explored cutting off a tumor's blood supply to starve it. By the 1980s, interventional radiologists began combining chemotherapy drugs with embolic agents to deliver treatment directly to liver tumors while minimizing side effects. Over time, techniques improved with better imaging like CT and MRI, advanced catheters, and new embolic materials, such as drug-eluting beads, which slowly release chemotherapy. **Objective:** The purpose of this presentation is to present the differences between primary hepatic tumors and metastatic tumors from radiology point of view, and to explores the current plan of interventional radiology (IR) procedures for neoplastic liver diseases, including mainly trans-arterial chemoembolization (TACE), as well as to evaluate the relationship between the degree of tumor devascularization (assessed angiographically/post-TACE imaging) and treatment efficacy in hepatic tumors. **Material and methods:** We designed the study to be a retrospective, observational study over a period of 2 years where we included 47 patients that underwent Trans arterial chemoembolisation (TACE) in the Interventional Radiology department. The 47 patients statistics were collected from emergency county hospital of targu mures, radiology department. **Results :** we discovered that In all situations a reduction in the arterial supply of the tumors was observed, 63% of cases had a near-complete devascularization, and 12% of patients had a complete devascularization of the neoplastic formation. Indicating better general prognosis and a relative high succession rate of this procedure **Conclusions:** to conclude this study, it was demonstrated that In all situations a reduction in the arterial supply of the tumors was observed, 63% of cases had a near-complete devascularization, and 12% of patients had a complete devascularization of the neoplastic formation. By employing catheters to provide regional arterial medicines directly into segmental, lobar, or whole liver distribution using angiographic catheters. The hepatic dual blood supply enables the safe targeting of metastatic liver diseases as well as primary hepatic tumors. Particle embolization alone or in conjunction with chemotherapy can effectively devascularize hepatic illness, reduce biomarkers, and debulk the disease while also regulating symptoms.

Keywords: neoplastic, devascularization, chemoembolisation, neuroendocrine tumors

INCIDENTAL VERSUS SYMPTOMATIC PITUITARY TUMORS: CLINICAL PROFILES AND THERAPEUTIC OUTCOMES

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Background: Pituitary tumors are common benign intracranial neoplasms that may be discovered incidentally during imaging for unrelated reasons, or as a result of clinical manifestations such as hormonal hypersecretion or neuro-ophthalmologic symptoms. The distinction between incidentalomas and symptomatic tumors remains clinically relevant regarding behavior and therapeutic approaches. **Objective:** The aim of our study was to evaluate differences in hormonal activity, size, and treatment strategies between incidentally discovered and symptomatic pituitary neoplasms. **Material and methods:** We conducted a retrospective observational study including 100 patients diagnosed with pituitary tumors. The patients were selected from the database of the Endocrinology Department at the Emergency Clinical County Hospital in Targu Mures, between 2020 and 2024. Patients were classified as having an incidentaloma (tumor discovered incidentally) or a symptomatic neoplasm (tumor diagnosed due to symptoms). We analyzed hormonal function (secretory vs non-secretory), tumor size (microadenoma <10 mm or macroadenoma ≥10 mm), and treatments received (medication, surgery, radiotherapy). Statistical tests included Chi-square for categorical variables and Mann-Whitney U for non-normally distributed continuous variables. **Results :** Among the 100 patients, 10% had incidentally discovered tumors and 90% were diagnosed due to symptoms. Half of the tumors were non-secretory (50%), while the other half were secretory. Symptomatic tumors were predominantly hormone-secreting (67.4%), particularly GH- or PRL-secreting, with only ~32.6% being non-functional. There was no significant difference in tumor size between the two groups ($p = 0.75$), although the median tumor size was slightly higher in incidentalomas (15 mm) compared to non-incidentaloma cases (12 mm). A significant association was observed between hormone-secreting tumors and radiotherapy: 21.2% of secretory tumors (14/66) received radiotherapy versus only 2.9% (1/34) of non-secretory tumors ($\chi^2 = 4.53$, $p = 0.03$). **Conclusions:** Incidentally discovered pituitary tumors represent a minority and are often non-functional. Although not statistically significant, incidentalomas showed a higher median size. This may be explained by the fact that symptom onset is more strongly associated with hormonal activity or local mass effect rather than tumor volume per se. Hormonal secretion and tumor size both play a pivotal role in symptom onset and treatment planning. Secretory tumors are significantly more likely to require radiotherapy, underlining the clinical importance of phenotypic and morphologic tumor characteristics.

Keywords: Pituitary tumor, Hormonal activity, Incidentaloma, Radiotherapy

CHARACTERISATION OF LEFT VENTRICULAR HYPERTROPHY AND PULMONARY HYPERTENSION IN HFPEF PATIENTS: A SINGLE-CENTRE EXPERIENCE

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Background: Left ventricular hypertrophy (LVH) is a structural abnormality that can suggest diastolic dysfunction and is often linked to heart failure with preserved ejection fraction (HFpEF). Elevated left ventricular filling pressures, which play a key role in HFpEF pathophysiology, can lead to secondary pulmonary hypertension (PH) and subsequent right heart dysfunction. **Objective:** This retrospective observational study aimed to assess the association between PH phenotype in HFpEF patients exhibiting LVH. **Material and methods:** Data was retrieved from the Clinic of Internal Medicine II-Department of Cardiology, Emergency County Hospital of Targu Mures, Romania, between 2022 and 2024. The study included 140 adult patients with a prior HFpEF diagnosis, who provided written informed consent. Patients with implanted cardiac devices, previous diagnoses of pulmonary arterial hypertension (PAH) or chronic thromboembolic pulmonary hypertension (CTEPH), extensive pulmonary fibrosis, or those not meeting inclusion criteria were excluded. Demographic information and echocardiographic parameters were collected from the medical records. Patients were stratified into low-intermediate and high probability groups for PH based on peak tricuspid regurgitation velocity (TRV) and additional markers (right atrial area, inferior vena cava dimensions, and interventricular septum flattening). LVH was defined as a left ventricular mass index of ≥95 g/m² for females and ≥115 g/m² for males. Statistical significance was set at a p-value <0.05. **Results :**

Out of the 140 patients, 56.4% (n=79) were females, with a mean age of 71.4 years. LVH was more common in females, with a ratio of 1.48:1 compared to males. The majority of the patients in both genders exhibited TRV values under 3.4 m/s (96.2% in females and 86.9% in males), with average TRV values of 2.70 m/s and 2.78 m/s, respectively. A Chi-square test comparing the presence of LVH and the high probability of PH in the overall cohort generated a p-value of 0.40, suggesting no significant association. Gender-specific analysis similarly revealed no significant correlation (p=0.21 in females and p=0.68 in males). Nonetheless, 26.8% of patients with LVH were classified in the high-probability PH group. **Conclusions:** Although LVH is more prevalent in females, no direct association between LVH and PH probability was observed in this cohort. Further studies involving larger patient populations are warranted to better describe this relationship.

Keywords: heart failure with preserved ejection fraction, left ventricular hypertrophy, pulmonary hypertension, echocardiography

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NEGATIVE PROGNOSTIC FACTORS IN SEPSIS

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Background: Sepsis is one of the most common causes of death worldwide. It is characterized by an exaggerated response of the body to a pathogenic agent, leading to major organ dysfunction. Individuals at higher risk include patients with compromised immune systems, chronic conditions, and especially those admitted to intensive care units. In ICU patients, the risk of developing sepsis is increased due to a persistent proinflammatory state, caused by an imbalance between antioxidant mechanisms and elevated production of reactive oxygen species by neutrophils. This oxidative stress contributes to tissue damage and worsens the inflammatory response. **Objective:** The aim of this study is to evaluate the clinical significance of neutrophil and lymphocyte counts, as well as their ratio, in monitoring disease progression and estimating prognosis in patients with sepsis. **Material and methods:** This retrospective study analyzed data from 120 patients diagnosed with sepsis and admitted to the ICU of the Municipal Hospital in Târgu Mureș between January 1, 2023, and January 1, 2024. Of the total, 41.67% of the patients were discharged, while 58.33% died. Neutrophil and lymphocyte values were extracted from complete blood counts, and the neutrophil-to-lymphocyte ratio (NLR) was calculated. **Results :** At admission, the median neutrophil count was higher among discharged patients (12.75) compared to those who died (10.95), though this difference was not statistically significant (p = 0.2769). Similarly, lymphocyte values were higher in discharged patients (median 0.93 vs. 0.76), without reaching statistical significance (p = 0.1477). However, the neutrophil-to-lymphocyte ratio (NLR) was significantly higher in patients who died (median 15.46) than in those who were discharged (median 10.52), with a statistically significant difference (p = 0.0092). **Conclusions:** The findings suggest that lymphocytes may play a role in modulating the inflammatory response triggered by neutrophils. A lower NEU/LYM ratio (reflecting a higher proportion of lymphocytes) may be associated with reduced mortality. Therefore, the neutrophil-to-lymphocyte ratio could serve as a valuable prognostic marker in assessing sepsis associated mortality.This work was supported by the George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș, Research Grant number 170/1/09.01.2024.

Keywords: sepsis, lymphocyte, neutrophil

REPERCUSSIONS OF COVID-19 PANDEMIC ON PATIENTS WITH CHRONIC HEART FAILURE

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Background: Heart failure affects an increasing number of individuals annually. Predictions by the European Society of Cardiology (ESC) in 2021 indicate a rise in hospitalizations over the next 25 years. Although mortality rates have improved, likely due to more effective treatment and management, the Covid-19 pandemic may alter this trajectory. **Objective:** This study aims to determine the impact of the Covid-19 pandemic on the status, mortality rates, and other relevant indicators of patients with chronic heart failure and comorbidities. **Material and methods:** This retrospective observational and comparative study includes 406 patients with heart failure and comorbidities represented by 165 females [40.6%] and 241 males [59.4%], with a median age of 69 years,

hospitalized in the Cardiology Department of the Internal Medicine Clinic II of the County Emergency Clinical Hospital of Târgu Mureș, Romania. Patients were divided into three groups based on the year of hospitalization: 2019 (pre-pandemic), 2021 (during the pandemic), and 2023 (post-pandemic). Exclusion criteria included a history of malignant tumors, congenital heart disease, genetic syndromes affecting the cardiovascular system and autoimmune diseases. **Results :** The data regarding hospital admission revealed a lower percentage of emergency department (ER) presentations in the post-pandemic group (2023) compared to the pre-pandemic group (2019). Ejection fraction of the left ventricle (LVEF) data was analysed by gender, age, type of admission and place of origin. Statistically significant differences were found by gender and type of admission, with males exhibiting lower LVEF (p=0.002) and ER-admitted patients showing lower LVEF compared to those admitted by appointment (p<0.001). The functional NYHA (New York Heart Association) classification has been evaluated and it appears to show important differences by year: post-pandemic and during the pandemic, the patients were more symptomatic having a higher severity of NYHA class (OR=1,78) compared to the pre-pandemic group. **Conclusions:** The pandemic appears to have positively influenced the type of admission for patients with chronic heart failure. The data suggests that males and ER-admitted patients had lower LVEF compared to females and patients admitted by appointment for the whole studied sample of patients. The post-pandemic and during the pandemic groups had a poorer functional status compared to the pre-pandemic group, regarding the NYHA class.

Keywords: Covid-19, chronic heart failure, ejection fraction

CLINICO-BIOLOGICAL CORRELATIONS BETWEEN SARS-COV-2 INFECTION AND THE INFLAMMATORY STATUS OF PATIENTS WITH METABOLIC ASSOCIATED FATTY LIVER DISEASE

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Background: Metabolic Associated Fatty Liver Disease (MAFLD) is increasingly recognized as a key determinant in modulating the host response to SARS-CoV-2 infection. Its association with systemic inflammation and hepatic dysfunction may predispose affected individuals to more severe clinical outcomes. Although evidence suggests potential mechanistic links, further research is required to elucidate their clinical significance. **Objective:** This study aims to examine how SARS-CoV-2 infection affects liver function in patients with MAFLD by correlating clinical and biological markers - such as liver enzymes and metabolic parameters - to assess disease progression and complications. **Material and methods:** A cohort of 400 patients analyzed using Microsoft Excel and GraphPad InStat was classified based on the presence (n=120) or absence (n=280) of SARS-CoV-2 infection. Further stratification was performed by infection year (2022, 2023, 2024). Key variables such as metabolic comorbidities, liver enzymes, albumin levels, and hepatic pain were assessed to explore the relationship between MAFLD and SARS-CoV-2. **Results :** Of the 400 patients, 30% were infected with SARS-CoV-2, revealing a significant association with liver dysfunction (p=0.0385). Elevated VSH was observed in 62% of infected patients compared to 45% of non-infected individuals (p=0,0022). ALT and AST levels were elevated in 58% and 49% of infected patients, respectively, compared to 37% and 31% in non-infected patients (p=0,0001). The infected cohort also exhibited a higher prevalence of metabolic risk factors, such as obesity (57% vs. 41%) and diabetes (44% vs. 29%)(p=0,004), contributing to greater disease severity. **Conclusions:** This study demonstrates that SARS-CoV-2 infection significantly affects liver function and metabolic health in MAFLD patients. The results show a clear association between infection and increased liver enzyme levels, particularly ALT and AST, as well as elevated VSH, indicating exacerbated hepatic inflammation. Additionally, the higher prevalence of metabolic comorbidities in the infected group exacerbates liver dysfunction. These findings underscore the need for monitoring and management of MAFLD patients during SARS-CoV-2 infection, as the interplay between metabolic factors and viral infection may lead to more severe clinical outcomes.

Keywords: Metabolic Associated Fatty Liver Disease (MAFLD), SARS-CoV-2, Systemic inflammation, Metabolic comorbidities

MANAGEMENT OF SEVERE ASTHMA: FROM EARLY DIAGNOSIS TO PERSONALIZED THERAPIES

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Background: Severe asthma that is not well-controlled continues to pose a major clinical challenge, impacting a small percentage of asthma patients globally. Despite progress in treatment options, some patients still face frequent exacerbations, persistent symptoms, and a reduced quality of life. The European Respiratory Society/American Thoracic Society defines severe asthma as a subtype that requires high doses of inhaled corticosteroids (ICS) along with a second controller medication and/or oral corticosteroids (OCS) to achieve control, or one that remains uncontrolled despite this treatment. **Objective:** The main aim of the study would be to explore and analyze modern and personalized approaches in the diagnosis and treatment of severe asthma, and therapeutic strategies tailored to the individual characteristics of patients. Through the use of statistical analysis, we sought correlations between certain parameters and the treatment considered. **Material and methods:** The records of 29 patients diagnosed with severe asthma hospitalized in the Pulmonology Department of the County Clinical Hospital Târgu Mureș between 01/2022 and 12/2023 were analyzed. Patients with other chronic respiratory conditions (tuberculosis, lung cancer, idiopathic fibrosis) or those noncompliant with the treatment regimen were excluded, reducing confounding errors. The patient's records included gender, environment, age, profession (low/high risk), smoker status, body mass index (BMI), allergies, asthma control test result (ACT), oxygen saturation, eosinophils (%), forced expiratory volume (FEV), eosinophilic syndrome, chronic obstruction pulmonary disease coexistence (COPD). Treatment options were: inhalatory cortical steroids (ICS), long-acting beta agonists (LABA), long-acting muscarinic agonists (LAMA), and leukotriene receptor antagonists (LRA). Statistical tests were performed using IBM's Statistical Package for the Social Sciences (SPSS) Programme. **Results :** The Chi-square and Fisher tests, appropriate for assessing relationships between nominal variables, were used to evaluate the association between specific treatments and the presence of hypereosinophilic syndrome. Significant correlations were found for LAMA ($p = 0.047$) and biological therapies ($p = 0.042$), while no association was observed for LRA ($p = 0.340$). The Mann-Whitney U test ($p = 0.019$) indicated a significant difference in FEV values among patients with both asthma and COPD, aligning with existing literature. Lastly, the Kruskal-Wallis test showed no significant differences in eosinophil levels among patients treated with different monoclonal antibodies. **Conclusions:** It was demonstrated that the medication directly impacts certain parameters, however, one of the limitations was the reduced number of patients considered in the study and the similarity of the data values. By increasing the number of patients, additional correlations could be revealed.

Keywords: severe asthma, medical treatment, statistical analysis

THE GP'S ROLE IN PREVENTION AND MAINTAINING GENERAL HEALTH

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Background: General practitioners (GPs) represent the cornerstone of primary healthcare, providing accessible and continuous care. Their role extends beyond treatment to include prevention, early detection of diseases, and long-term health management. A strong GP-patient relationship contributes to personalized care and improved outcomes, especially when preventive consultations are encouraged. **Objective:** This study aimed to evaluate patients' perceptions of their GP regarding trust, perceived competence, diagnostic accuracy, and involvement in maintaining long-term health. **Material and methods:** A cross-sectional survey was conducted using an online Google Forms questionnaire between January 25 and March 25, 2025. A total of 163 respondents participated. Questions explored trust in the GP, belief in diagnostic accuracy, perceived long-term health impact, and attendance at preventive consultations. Chi-square tests were used to assess associations between patient perceptions and demographic variables (gender, education, social status), excluding "Don't know" responses from analyses. **Results :** Most respondents expressed high trust in their GP (87.5%), believed in the accuracy of diagnoses (85.6%), and acknowledged a positive long-term health impact (69.4%). However, only 33.5% regularly attended preventive consultations. Chi-square analyses revealed no significant association between gender and

trust in the GP (p = 0.725), trust in diagnoses (p = 0.437), long-term health perception (p = 0.544), or preventive consultation attendance (p = 0.563). Similarly, no significant association was found between education level and frequency of preventive visits (p = 0.339 and p = 0.240 across separate categorizations), or between social status and belief in long-term health benefits (p = 0.126). Although some expected frequencies were below five - particularly in lower-education or social status categories - the overall results suggested no statistically significant demographic associations. **Conclusions:** Participants generally viewed their GPs positively in terms of trust and competence. However, preventive consultation attendance remains low across demographic groups. These findings underscore the importance of strengthening patient education on preventive care. Broader studies with more diverse samples are needed to support targeted strategies that enhance preventive healthcare engagement.

Keywords: General Practitioner (GP), Family medicine, Prevention, Health Maintenance

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PATIENTS' ATTITUDE TOWARDS PRIMARY CARE IN ROMANIA

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Background: General practitioners (GPs) play a crucial role in Romania's healthcare system. A 2019 study evaluating family medicine in the Netherlands highlighted that 90% of the population's medical issues were resolved and treated by GPs using only 3% of the national healthcare budget. GPs are responsible for prevention, diagnosis, and the management of most medical conditions. Patient trust in family doctors is essential for the efficiency of the primary healthcare system and adherence to medical recommendations. **Objective:** This study aims to analyze the level of trust and patient satisfaction regarding family doctors in Romania, assessing perceptions of their competencies, diagnostic accuracy, and the importance of the primary healthcare system. **Material and methods:** The study was conducted through an online questionnaire distributed via Google Forms. A total of 160 respondents participated. The data collection period was from January 25, 2025, to March 25, 2025. The questions focused on patients' experiences with diagnosis, satisfaction with their GP, and preferences regarding direct access to specialists without referrals. **Results : Diagnostic accuracy:** 58.1% of respondents reported never receiving an incorrect diagnosis from their GP, while 18.8% had experienced this. Meanwhile, 23.1% were unsure. **Patient satisfaction:** 79.4% of participants were satisfied with their GP, 11.3% were dissatisfied, and 9.4% had no clear opinion. **Preference for the primary care system:** 66.3% of respondents did not support eliminating the family medicine system, while 22.5% preferred its removal to allow direct access to specialists without referrals. 11.3% had no clear opinion on the matter. **Treatment options:** 80% of respondents preferred to be treated by their GP, while 16.2% preferred to see a specialist even for minor conditions. 3.7% had no clear opinion. However, for severe health conditions, 93.1% would not prefer treatment from their GP, 3.8% would, and 3.1% had no clear opinion. **Conclusions:** The results highlight a high level of satisfaction and trust in family doctors in Romania. However, a significant percentage of patients express concerns about diagnostic accuracy. Most respondents appreciate the current structure of the primary healthcare system and recognize the GP's role in managing access to specialized care. Patients showed a preference for treatment from GPs in minor conditions but opted for specialists when facing more serious health issues. Improving doctor-patient communication and strengthening trust could enhance the efficiency of Romania's primary healthcare system.

Keywords: Primary care, General practitioners (GPs), Patient satisfaction, Diagnostic accuracy

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NOVEL INFLAMMATORY BIOMARKERS IN ATRIAL FIBRILLATION: OPTIMIZING RISK STRATIFICATION AND CLINICAL DECISION-MAKING

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Background: Inflammation plays a key role in atrial fibrillation (AF), with classic markers such as C-reactive protein (CRP) and interleukin-6 (IL-6) offering limited specificity in predicting AF onset and progression. Recently, novel biomarkers - including interleukin-1 beta (IL-1β), interleukin-18 (IL-18), interleukin-34 (IL-34), interleukin-38 (IL-38), and the NLRP3 inflammasome - have been studied for their potential to provide a more precise understanding of AF pathophysiology. **Objective:** This review explores the new inflammatory markers used in AF,

highlighting their biochemical properties and their clinical significance. **Material and methods:** A literature search was conducted using PubMed and Google Scholar to identify studies on the role of inflammation in AF published in the past 10 years. It used the Boolean operators (AND, OR) to search terms that included AF and inflammatory markers, inflammatory pathways, laboratory, interleukin, and cytokines. A total of 25 studies were retrieved, of which 10 met the inclusion criteria. Both clinical and preclinical studies were included, focusing on cytokines, inflammatory pathways, and the effects of anti-inflammatory treatments. **Results :** Recent studies highlight the potential of novel inflammatory biomarkers in AF risk stratification. Traditional markers like CRP and IL-6 indicate systemic inflammation but lack specificity in predicting complications. In contrast, cytokines such as IL-34, IL-38, IL-1β, and IL-18 offer more direct insights into AF pathophysiology. Among these, IL-34 and IL-38 have shown prognostic value - low IL-34 levels predict stroke risk, while elevated IL-38 is linked to higher mortality. Integrating IL-38 and NT-proBNP into the CHA2DS2-VA3Sc score significantly improves its predictive accuracy for AF-related mortality ($p < 0.01$), suggesting these biomarkers could enhance clinical decision-making. A key inflammatory pathway in AF involves the NLRP3 inflammasome, which activates IL-1β and IL-18, driving myocardial fibrosis, immune cell infiltration, and atrial remodeling. Hyperactivation of NLRP3 in left atrial cells has been closely linked to postoperative AF and recurrence risk. Inflammation-driven structural and electrical remodeling plays a role in AF pathogenesis, with immune cell recruitment and oxidative stress leading atrial fibrosis and altered conduction properties. Additionally, hyperuricemia contributes to AF by promoting oxidative stress and NLRP3 activation in macrophages, increasing IL-1β and IL-18 secretion. These inflammatory processes create a proarrhythmic substrate that facilitates AF onset and progression. **Conclusions:** Emerging inflammatory biomarkers appear to offer greater specificity and mechanistic insight than traditional markers, with potential applications in risk stratification and targeted therapies. However, further research and clinical trials are needed to validate their role in AF management.

Keywords: atrial fibrillation, inflammation, interleukins, laboratory markers

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MORE THAN JUST WEIGHT: METABOLISM AS A RISK FACTOR FOR COLONIC DIVERTICULOSIS

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Background: Colonic diverticulosis is a common gastrointestinal pathology in which small saccular protrusions, called diverticula, are formed from the intestinal mucosa in the colon wall. While a low-fiber diet and altered intestinal motility are well-known risk factors, metabolic factors, such as obesity and diabetes mellitus, are increasingly being implicated in the development of diverticulosis in the current days. These two pathologies are often associated with chronic low-grade inflammation, insulin resistance and alterations in the intestinal microbiota; these changes result in impaired intestinal integrity and motility. **Objective:** The central focus of this study is to demonstrate a close correlation between metabolic risk factors, which are very common nowadays, and colonic diverticulosis. **Material and methods:** We conducted a retrospective observational study from the database that included 137 patients diagnosed with colonic diverticulosis, who were hospitalized in the Gastroenterology Department of the "Mureș Country Clinical Hospital" from Târgu Mureș, between the 1st of January 2023 and the 31st of December 2024. In our study, we analyzed two of the main metabolic factors: body mass index (BMI) and diagnosed diabetes. Thus, the patients were classified based on obesity (BMI ≥ 25 kg/m^2) and diabetic status. Statistical analyses and graphical representations were generated using Microsoft Excel, part of the standard Microsoft 365 app, and IBM SPSS Statistics. **Results :** Of the 137 patients diagnosed with colonic diverticulosis, 76 are women and 61 men, most of whom come from rural areas (62%). The average age of the group is 68 years, with a majority distribution in the range of 71-80 years (n=55), followed by the group between 61-70 years (n=41). The analysis of metabolic factors reveals a prevalence of diabetes mellitus in the cohort of 53%, with a female predominance (n=42). The Chi-Square test revealed a significant association between sex and diabetes (x^2=5.010, p= 0.025), with a higher susceptibility of women to this comorbidity in the context of diverticulosis. Regarding the weight status, 81 patients (59%) have a BMI ≥ 25 kg/m^2, and statistically we found a marginally significant association (x^2=9.328, p= 0.053), with obesity predominance among men, while women are more frequently < 25 kg/m^2. **Conclusions:** The information obtained from our study helps to form an idea of the close correlation between the metabolic risk factors and the occurrence of colonic diverticulosis. These findings support the hypothesis that in addition to the dietary and motility-related factors, there is also a metabolic component.

Keywords: Colonic Diverticulosis, Obesity, Diabetes, Metabolic Risk Factors

AUXOLOGICAL AND CLINICAL IMPACT OF HYPOVITAMINOSIS D IN PEDIATRIC ENDOCRINE PATIENTS

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Background: Vitamin D deficiency is highly prevalent in pediatric populations and has been linked to disturbances in bone metabolism, growth and overall health. While its classical role in calcium-phosphate homeostasis is well established, the associations between hypovitaminosis D and growth patterns, adiposity and metabolic risk in children remain a topic of active clinical interest. **Objective:** This study aimed to evaluate serum 25-hydroxyvitamin D [25(OH)D] levels in hospitalized pediatric patients with various endocrine disorders, and to assess potential associations with auxological parameters, nutritional status and demographic variables. **Material and methods:** We conducted a retrospective, observational study on 308 pediatric patients (ages 0-17) admitted to the Endocrinology Clinic in Târgu Mureș between 01/2022 and 05/2023. Data were collected from electronic medical records of patients with available serum 25(OH)D levels. Patients were categorized into three groups based on vitamin D status: deficiency (<20 ng/mL), insufficiency (21-29 ng/mL), and normal levels (≥30 ng/mL). Anthropometric data, including height, weight, abdominal circumference (CA), body mass index standard deviation score (BMI SDS) and height T-scores, were analyzed and statistical tests were performed. **Results :** Hypovitaminosis D (either deficiency or insufficiency) was identified in 70% of patients. Vitamin D levels significantly varied with age (lower in adolescents) and season (lower in winter). A moderate inverse correlation was observed between serum 25(OH)D and weight ($\rho = -0.44$, $p < 0.001$), BMI standard deviation score ($\rho = -0.27$, $p < 0.001$) and abdominal circumference ($\rho = -0.465$, $p < 0.001$). Children with deficient vitamin D levels were more likely to present with abdominal obesity (OR = 3.93; 95% CI: 1.66-9.28) and BMI SDS >+2 (OR = 2.27; 95% CI: 1.34-3.83). Prescribed daily doses of cholecalciferol positively correlated with height ($\rho = 0.49$, $p < 0.001$) and weight ($\rho = 0.44$, $p < 0.001$). No significant association was found between 25(OH)D and severe growth deficit (OR = 0.76; 95% CI: 0.43-1.35; $p = 0.436$). **Conclusions:** Clinical and auxological findings varied depending on the degree of hypovitaminosis D, with lower serum levels associated with more significant anthropometric deviations and metabolic risk. Our results emphasize the importance of routine screening and personalized supplementation strategies, especially in at-risk pediatric subgroups and during periods of low sun exposure.

Keywords: Vitamin D status, Hypovitaminosis D in children, Pediatric auxology

PHARMACOLOGICAL CHALLENGES IN PATIENTS WITH PHILADELPHIA-POSITIVE ACUTE LYMPHOBLASTIC LEUKEMIA (PH+ ALL)

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Background: Philadelphia chromosome-positive acute lymphoblastic leukemia (Ph+ ALL) is an aggressive subtype of ALL, driven by the BCR-ABL1 fusion gene. Managing this disease presents challenges, as highlighted in numerous studies. Previously, Ph+ ALL was associated with a poor prognosis, but the introduction of tyrosine kinase inhibitors (TKIs) has revolutionized treatment, dramatically altering the course of the disease and improving survival rates. Despite these advancements, pharmacological challenges remain a major concern. **Objective:** This review aims to provide an overview of the currently evolving pharmacological landscape in Ph+ ALL, highlighting key obstacles and emerging strategies to enhance patient outcomes. The objective of this review is to offer an assessment of the pharmacological strategies in Ph+ ALL, with an emphasis on the key challenges such as variable treatment response, drug resistance and treatment related toxicities. **Material and methods:** We performed a case study research based state-of-art literature review from PubMed. Additionally, the review presents a real-world clinical case which was encountered in practice that shows the real obstacles we have to face when facing such patients. This case provides an insight into the complexities of Ph+ ALL management beyond published data. **Results :** In clinical practice, the challenges are highlighted by some of the complex patient cases and observations are compared in observational and meta-analysis studies, One such case involved a pediatric patient diagnosed with Ph+ ALL (t(9;22) translocation) and CNS involvement. Evaluation revealed a significant elevation in white blood cell count, hemosiderosis, sepsis, and neuropsychiatric symptoms, including suicidal thoughts following Imatinib therapy. A high-risk (HR) protocol was initiated, the patient began 2 cycles of

Blinatumomab, 2 blocks of Cyclophosphamide, and intrathecal Methotrexate. After this therapy, the patient experienced prolonged episodes of fever and cytopenia. The patient received Vincristine, Doxorubicin and Pegaspargase (Oncospar). The patient completed therapy and began maintenance therapy. In a randomized clinical trial among 189 participants the 4-year event-free survival and overall survival rates were 71.0% in the Dasatinib group and 48.9 in the Imatinib group. There were no significant differences in the frequency of severe toxic effects between the 2 treatment groups. **Conclusions:** Philadelphia chromosome-positive acute lymphoblastic leukemia (Ph+ ALL) has seen significant improvements in treatment outcomes. However, several challenges continue to impact patient management including all the abovementioned toxicities and the variability in treatment response among patients remain a critical concern. The case studies reviewed in this article highlight the complexity of the management of the disease especially in pediatric populations.

Keywords: ALL, Philadelphia Chromosome, Therapy

THE HIDDEN COST OF WAITING: HOW TIME SHAPES THE EXPERIENCE OF A PATIENT

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Background: Delay means that the event or action takes place after the anticipated or previously scheduled time. A mechanism, system or organization that works "like clockwork" conveys to the users the idea that the actions performed are of great value and highly accurate. Expectation is that timing imperfections such as schedule sliding will negatively impact the image of the health providing system. **Objective:** In our paper, we address the delay of a medical consultation, treatment or intervention relative to the time it was scheduled for in the specialized outpatient clinic and the impact on the patient's relationship with his or her doctor. Especially at the first consultation but also in general, it is difficult to anticipate the exact amount of time a patient needs. This leads to shifts in the daily schedule. The resulting delays can influence the appreciation of medical providers by patients. **Material and methods:** This research used psychological and sociological methods, including questionnaires and statistical analyses. In total, 118 people provided answers to questions regarding delays in medical appointments and how they perceive such situations, especially in terms of the relationship with the doctor providing care. **Results :** 80% of respondents claim that they have been faced with delays . A half-hour delay is a good approximation of the mean value in these situations that are perceived as disturbing by two thirds of respondents. More than half of patients believe that the delay will not lead to rushing and will not negatively influence the service that will be provided to them, slightly more than a third having the opposite opinion. About a third of patients are demanding in the face of delays and about the same ratio transfers the negative impact and frustration generated by the delay to the doctor. If two thirds of respondents would choose a doctor where the appointment is respected exactly without delays, a similar share of two thirds of the answers nuance the situation: the first selection criteria is the professional reputation of the doctor in question compared to the punctuality of the consultation schedule. **Conclusions:** Delay of a scheduled medical consultation or treatment is a common situation that any scheduled patient expects. The tolerated value is up to an hour. In most cases, the patient does not transfer the negative impact due to the delay onto the doctor who provides the respective care. The professional reputation of the doctor is the first selection criteria and comes before punctuality.

Keywords: Patient, Time, Doctor, Relationship

THE ERASMUS PARADOX: ADVENTURE OR ANXIETY?

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Background: Anxiety is one of the most prevailing mental health conditions globally, with the potential to significantly debilitate daily functioning. International students often encounter heightened anxiety due to the combined challenges of academic responsibilities, intercultural adaptation, logistical complexities, and financial constraints. Understanding the interplay between anxiety and the Erasmus experience is essential for evaluating its psychological impact. **Objective:** This pilot study aims to assess anxiety levels among Erasmus students, differentiating between trait anxiety (a stable predisposition) and state anxiety (transient anxiety influenced by situational factors). Additionally, the study explores the relationship between substance use patterns and host country environments. **Material and methods:** The study included 4th- and 5th-year general medical students G.

E. P. University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș, who studied abroad with an Erasmus SMS scholarship during the 2024/2025 academic year. Students from the English faculty were excluded due to pre-existing adaptation to a foreign educational setting. Data were collected via an online questionnaire comprising demographic variables, sleep and social behaviour, substance use patterns, and Spielberger's State-Trait Anxiety Inventory (STAI). Statistical analyses were performed utilizing both Microsoft Excel and SPSS. **Results :** 37 students participated (78.37% female, 21.62% male; mean age: 23.13 years). The mean STAI-S (state anxiety) score was 34.83 ± 11.3, while the STAI-T (trait anxiety) score was 46.1 ± 13.18. Based on the STAI-T classification, 10 students exhibited low trait anxiety, 10 moderate, and 17 high. For STAI-S, 24 students fell into the low anxiety category, 6 into moderate, and 7 into high. A Paired Samples T-test indicated that state anxiety was significantly lower than trait anxiety during the Erasmus period ($p < 0.001$), suggesting a temporary alleviating effect of international mobility on situational anxiety. Substance use patterns varied by host country: students in Italy and Turkey reported increased consumption, whereas those in Western European countries showed reduced or unchanged usage ($p = 0.01$, Chi-square test). **Conclusions:** Despite a predisposition to anxiety, Erasmus students exhibited significantly lower state anxiety while abroad, implying that cultural immersion and environmental changes may serve as protective factors. However, substance use trends were significantly influenced by the host country, potentially reflecting cultural attitudes and social norms regarding alcohol and recreational substances. These findings underscore the need for further research with a larger sample and longitudinal assessments to understand better the long-term psychological effects of international mobility on anxiety regulation and adaptive coping strategies.

Keywords: Anxiety, Erasmus, Substance use

TRAUMA, ATTACHMENT, AND RELATIONSHIP DYNAMICS: UNDERSTANDING THE ADULT CONSEQUENCES OF CHILDHOOD EXPERIENCES

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Background: Psychological traumas, especially those from childhood, permanently shape an individual's destiny. They can condition the development of dysfunctional attachment styles, which, in turn, affect the quality and functioning of romantic relationships. **Objective:** The study aims to investigate the relationship between childhood trauma and adult attachment styles, exploring their impact on romantic relationship behaviors, such as infidelity. Additionally, it aims to identify the prevalence of childhood trauma among university students, focusing on the connection between different trauma types and attachment patterns. **Material and methods:** An online questionnaire was used as a method of psychological investigation, consisting of demographic questions, the Childhood Trauma Questionnaire (CTQ), the Adult Attachment Style questionnaire (AAS), and additional questions related to relationship dynamics. The study was conducted among UMFST (University of Medicine, Pharmacy, Science, and Technology "George Emil Palade") students, with data analysis performed using Fisher's exact test. **Results :** The study included a total of 68 participants, of which 52 (76.47%) were female and 16 (23.53%) were male. According to the CTQ data, 73.52% of the participants reported experiencing some form of childhood trauma. The most prevalent forms of trauma were emotional abuse (45.58%) and emotional neglect (47.05%), often co-occurring, with 59.37% of participants reporting at least one of these experiences. 36.76% of participants experienced moderate to severe trauma across the five categories (emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect). Based on the AAS data, 47.05% of participants exhibited a secure attachment style, while 52.95% exhibited insecure attachment styles (10.29% avoidant, 39.70% anxious, and 2.94% disorganized). 88.88% of the anxiously attached and 85.71% of the avoidantly attached experienced childhood trauma, while 53.12% securely attached had traumatic experiences in their childhood. A statistically significant correlation was identified between the presence of childhood trauma and the development of insecure attachment styles ($p < 0.001$). Furthermore, emotional abuse and emotional neglect were significantly associated with the anxious attachment style ($p < 0.001$). Out of all participants, 14.70% admitted to being unfaithful to their partners, 90% reported experiencing trauma, and 80% exhibited an insecure attachment style. **Conclusions:** A significant portion of students reported exposure to adverse childhood experiences. The findings suggest a connection between childhood trauma and insecure attachment styles in adulthood, with these experiences potentially being associated with relationship behaviors such as infidelity and the ability to maintain long-term partnerships. These results underscore the importance of addressing childhood trauma in therapeutic settings to foster healthier adult attachment and relationship dynamics.

Keywords: childhood trauma, attachment, relationships, infidelity

MEDICO-LEGAL CONSIDERATIONS ON DECISION-MAKING CAPACITY IN DEMENTIA

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Background: Dementia is a neurocognitive disorder characterized by the progressive decline of higher cortical functions, including memory, judgment and reasoning, without affecting consciousness. As the global population ages, dementia presents increasing medical and legal challenges, particularly regarding decision-making capacity. The ability to make informed decisions plays a crucial role in ensuring individual autonomy. Consequently, evaluating this capacity is essential for legal competency assessments, medical consent, financial autonomy, and personal care decisions. **Objective:** This retrospective pilot study examines the medico-legal aspects of decision-making capacity in dementia, identifying cognitive and legal factors influencing competency assessments. By analyzing forensic criteria and statistical data, we aim to highlight patterns of cognitive decline and their implications for autonomy and legal protection. **Material and methods:** A systematic analysis was conducted on forensic psychiatric patients diagnosed with dementia in Mureș County in 2021. A total of 183 forensic reports were reviewed, identifying 50 dementia cases. Data included demographic characteristics, cognitive evaluation scores, and forensic assessments. Statistical analysis was applied, using SPSS and Microsoft Excel to examine correlations between cognitive impairment severity and legal competency outcomes. **Results :** Of the 50 dementia cases, 37 (76%) were female and 13 (24%) male, with a mean age of 78.28 years. Legal interdiction was the primary medico-legal objective in 90% of cases, while 8% involved legal document signing, and 2% were related to domestic violence. Mixed dementia (vascular and Alzheimer's disease) was most prevalent (52%), followed by Alzheimer's disease (34%), vascular dementia (6%), and frontotemporal dementia (2%). Advanced neurocognitive decline was observed in 66% of patients, while 34% had mild-to-moderate impairment. The mean Mini-Mental State Examination (MMSE) score was 10.54, reflecting significant cognitive impairment, and the mean Global Assessment of Functioning Scale (GAFS) score was 22.94, indicating severe functional decline amongst patients. Forensic evaluations concluded that 90% of patients lacked decision-making capacity. Patients with preserved capacity had significantly higher MMSE scores than those without (19.33 ± 4.04 vs. 9.81 ± 3.49, $p < 0.001$). A chi-square test demonstrated a strong association between decision-making capacity and dementia stage ($p < 0.001$). **Conclusions:** This study highlights the correlation between dementia severity and impaired decision-making capacity, with 90% of cases resulting in legal interdiction. The significant association between lower MMSE scores and reduced decision-making ability underscores the necessity of standardized cognitive assessments in forensic evaluations. The predominance of mixed dementia and the high proportion of patients in advanced disease stages emphasize the progressive nature of neurocognitive decline and its legal implications.

Keywords: Dementia, Decision-Making Capacity, Medico-Legal Assessment

THE PROFILE OF GUT MICROBIOTA IN CHILDREN WITH CONGENITAL HEART DISEASES

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Background: Congenital heart disease (CHD) remains an important risk for morbidity and mortality in the pediatric population. The gut microbiota plays a pivotal role in various aspects of human health. The imbalance in the normal microflora of the gut has been implicated in a variety of cardiovascular diseases. Patients with CHD remain at risk for developing intestinal dysbiosis and intestinal epithelial barrier dysfunction due to reduced systemic cardiac output, hypoxemia, and impaired nutrition. **Objective:** Limited studies have evaluated the gut microbiome profile in children with CHD. We aim to synthetize the scientific insights into the implications of the gut microbiome for children with CHD. **Material and methods:** Three studies including metagenomic analysis evaluated the gut microbiome profile in children with CHD and correlations between microbiota composition and subsequent clinical outcomes have been identified. **Results :** The metagenomic analysis of fecal samples in pediatric patients with CHD demonstrated significant changes in bacterial diversity and abundance of the gut microbiota in pediatric population with CHD compared to healthy children. A cross-sectional study conducted by Liu Xiang et al. provided evidence that the gut microbiota in pediatric patients with unrepaired tetralogy of Fallot differs from that in healthy

children in terms of taxonomic composition, beta diversity, and functional profile. Ohuchi Hideo et al. demonstrated that patients with Fontan pathophysiology exhibited gut dysbiosis compared to healthy individuals, and gut dysbiosis was linked with failed hemodynamics and systemic inflammation with a poor prognosis. In a prospective cohort study, Fatma Koc et al. revealed that infants with CHD have an altered gut microbiome when compared to healthy controls and there might be a possible link between an abundance of virulent species and post-operative necrotizing-enterocolitis. **Conclusions:** The results suggest that changes in the gut microbiome may influence the clinical course of pediatric patients with CHD. Although published data is poor, there is clear evidence that an imbalanced microbiome can contribute to the development of the clinical complications associated with CHD. Therapeutic interventions targeting the microbiome, such as the use of probiotics or prebiotics, may offer a potential therapeutic management in these patients.

Keywords: gut microbiota, congenital heart disease, children

OUTCOMES OF TRANSARTERIAL CHEMOEMBOLIZATION IN HEPATIC TUMORS: A RETROSPECTIVE ANALYSIS OF 78 CASES

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Background: The anatomy of the hepatic arterial system is of paramount importance in the planning and execution of hepatobiliary surgeries, liver transplantation, and interventional procedures. Detailed radiological assessment of hepatic artery variations provides essential guidance for targeted therapies. Among these, transarterial chemoembolization (TACE) has emerged as a minimally invasive and effective treatment for hepatic tumors. A thorough understanding of hepatic vascular anatomy enhances procedural precision and therapeutic outcomes in endovascular oncology. **Objective:** This study aims to evaluate the efficacy of transarterial chemoembolization in hepatic tumors and to underscore the relevance of hepatic arterial anatomy in optimizing endovascular interventions. **Material and methods:** This retrospective study included 78 patients treated in the Interventional Radiology Department. Patients underwent TACE for either primary hepatic tumors or secondary (metastatic) liver lesions. Inclusion criteria included confirmed hepatic malignancy with indication for embolization; patients with advanced liver failure or contraindications to embolization were excluded. The TACE protocol involved intra-arterial administration of a chemotherapeutic agent (doxorubicin or cisplatin) followed by embolization with drug-eluting beads or lipiodol-based agents. Follow-up imaging with contrast-enhanced CT or MRI was conducted at 1-month and 3-month intervals to assess vascular response and tumor necrosis. **Results :** Radiological evaluation demonstrated that 95% of patients achieved >50% reduction in tumor arterial supply post-TACE. Of these, 66% showed near-complete devascularization (≥75% reduction), while 33% exhibited complete devascularization. When stratified by tumor type, primary hepatic tumors (n=45) had a higher rate of complete devascularization (38%) compared to metastatic lesions (n=33, 27%). **Conclusions:** Transarterial chemoembolization is a valuable treatment modality in managing hepatic malignancies. The success of the procedure is closely linked to an accurate understanding of hepatic arterial anatomy, which enables tailored, effective, and safe embolization strategies.

Keywords: TACE, chemoembolization, interventional radiology, liver tumors

ANALYSIS OF RAPID SEQUENCE INDUCTION PRACTICES IN THE EMERGENCY DEPARTMENT OF TÂRGU MUREȘ – PARTIAL RESULTS

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Background: Rapid Sequence Induction (RSI) is a critical procedure in emergency airway management. Despite its routine use in emergency settings, clinical practices vary considerably, potentially affecting patient outcomes. Identifying discrepancies in RSI practices among emergency care providers can help standardize protocols and improve patient safety. **Objective:** To evaluate current RSI practices among physicians working in the Emergency Department of Târgu Mureș, with a focus on adult and pediatric patient management, pharmacological choices, and perceived procedural challenges. **Material and methods:** A cross-sectional survey was conducted using an anonymized questionnaire distributed to physicians from the Emergency Department. The form was structured in three main sections: (1) participant demographics, (2) RSI practices for adult patients (questions 3-13), and (3) RSI

practices for pediatric patients (questions 14-25), followed by an open-ended question on perceived challenges (question 26). Responses from 26 participants were analyzed using descriptive statistics. **Results :** Of the 26 respondents, 53.8% were emergency medicine residents, 34.6% were emergency medicine specialists, and 11.5% were anesthesiology specialists. RSI was performed at least weekly by over 60% of participants. For adult patients, trauma (80.8%) and acute respiratory failure (84.6%) were the leading indications. A neutral supine position was preferred by 81% of respondents, and 65% reported not using a nasogastric tube. Preoxygenation with 100% oxygen via face mask for 3 minutes was the standard practice. The Sellick maneuver was selectively performed depending on clinical context. Propofol was the most frequently chosen induction agent for hemodynamically stable adult patients (58%), whereas ketamine was the preferred option in unstable adults (92%). Regarding neuromuscular blockade, suxamethonium was selected by all participants as first-line. In pediatric RSI, ketamine was again the most common first-choice agent in unstable children (88.5%), followed by etomidate as second-choice (53.8%). Suxamethonium was the top choice for neuromuscular blockade, while most respondents ventilated pediatric patients manually with a mask prior to induction. The most frequently reported challenges were the absence of a clear institutional protocol (50%), limited availability of equipment or materials (45.8%), and restricted access to alternative pharmacological agents (33.3%). **Conclusions:** Despite adherence to some core RSI principles, notable variability exists in both adult and pediatric RSI practices in the emergency setting, particularly regarding pharmacologic strategies and the use of adjunct techniques. These findings support the need for standardized RSI protocols and improved resource allocation to ensure safe and consistent airway management across all age groups.

Keywords: Rapid Sequence Induction, Emergency Medicine, Airway Management, RSI Protocols

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ANALYSIS OF TREATMENT TYPES AND ADHERENCE IN PATIENTS WITH IRRITABLE BOWEL SYNDROME:DETERMINANTS AND CLINICAL IMPLICATIONS

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Background: Irritable bowel syndrome is one of the most common chronic debilitating intestinal disorders and represents a real challenge for public health. **Objective:** The objective of this study was to analyze the impact on the population,as well as the clinical implications and treatment. **Material and methods:** A cross-sectional study was conducted on 84 patients between 18.11.2024 and 20.01.2025,using a structured, self-administered online questionnaire developed in Google Forms,consisting of 28 questions.These addressed demographic data, symptoms reported by patients(including the Rome IV criteria),the type of medication therapy followed,treatment adherence, therapy-related cost, quality of life, psychological impact of the syndrome, dietary habits and whether the treatment was prescribed by a healthcare professional. **Results :** The study included 84 patients, aged between 22 and 73 years, the majority of affected patients being young women(71,4%).The results show that 72,6% of patients experienced recurrent abdominal pain at least once a week, associated with pain that disappears or intensifies normally after defecation(67,9%).Abdominal bloating and dissension present a percentage of 86,9%.Constipation was present in 38,8% of patients.Regarding treatment, it was prescribed by a doctor(70,7%) and 66,7% of patients follow the treatment exactly as prescribed by the doctor.Personal and emotional life was affected in 81% of cases. **Conclusions:** The diagnosis of irritable bowel syndrome relies on the identification of characteristic symptoms and the exclusion of other organic disease.Management of patients with irritable bowel syndrome is optimized by individualized, holistic approach that embraces dietary, lifestyle,medical and behavioral interventions.

Keywords: irritable bowel syndrome, Roma IV criteria, FODMAP diet, probiotics

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IMPLICATIONS OF HIGH-RISK STRAINS HPV INFECTION IN THE DEVELOPMENT OF COLPOSCOPIC LESIONS.

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Background: Human Papillomavirus (HPV) is a DNA virus from the Papillomaviridae family. HPV subtypes 16 and 18 are high-risk and considered being a major cause for intraepithelial lesions that can progress to malignancies. Other high-risk strains such as 31, 33, 35 and etc., however, are also regarded as carcinogenic and responsible for

such lesions. **Objective:** This study explores the comparison between the infection with HPV strains 16 and 18 and other high-risk strains infection in the development of colposcopic lesions. **Material and methods:** A retrospective study was conducted based on data collected from the Obstetrics-Gynaecology Clinic of Mures County Hospital between January 2022-October 2024. Colposcopy was performed on unvaccinated females aged 22-42, infected with different high-risk HPV strains, and the obtained results were statistically analysed with Fisher´s exact test to determine their implication in development of colposcopic lesions. **Results :** The mean age of the study subjects was 28,2 years. A total of 31 reports, from January 2022-October 2024, were analysed: 10 people were HPV 16 or 18 positive (n=10) and 21 were infected with other high-risk HPV types (n=21), among which the first group (HPV 16/18) comprised 30% of patients (3/10) having colposcopic lesions, and among the second group (Other high-risk HPV types) 24% patients (5/21) were identified with according changes. Thereby, no statistically significant association was found between HPV group (HPV types 16/18 versus other high-risk HPV types) and colposcopic lesions (Fisher's exact test, two-tailed). While HPV 16/18 showed a slightly higher lesion prevalence, this tendency was not statistically significant. **Conclusions:** Previous evaluations have classified HPV strains 16 and 18 as the most carcinogenic, so the colposcopic changes would be expected to be prevalent for these types. However, according to obtained statistics, other high-risk strains showed almost equivalent results. In the analysed reports it was revealed that similar proportion of patients in each group displayed colposcopic lesions.

Keywords: Human Papillomavirus, HPV high risk types, Colposcopy

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ASSOCIATION BETWEEN PROTEIN POWDER SUPPLEMENTATION AND SELF-REPORTED MUSCLE GROWTH IN RECREATIONAL ATHLETES

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Background: Dietary supplements, particularly protein powder, are widely used and recognized by athletes of both genders to enhance muscle growth and development. **Objective:** This study explores the relationship between protein powder supplementation in recreational athletes and its impact on self-reported enhanced muscle growth. **Material and methods:** A questionnaire-based survey (n=43) was conducted in Târgu Mureș between 03.03-30.03.2025 to collect data on demographics, supplement usage and perceived performance and health benefits. Statistical analysis was performed to identify significant associations. The subjects of the study were university students aged 18 to 44 years. Statistics were performed with GraphPad Prism 10 software. **Results :** The mean age of the study subjects was 24.7 years +/- SD. This study revealed a significant association between protein powder supplementation and self-reported muscle growth (Fisher's exact test, two-tailed p=0.0005), with 64.7% of protein users (22/34) reporting improvements compared to 0% of non-users (0/9). While males exhibited higher protein usage rates (86.2%, 25/29) than females (64.3%, 9/14), this difference was not statistically significant (Fisher's exact test, two tailed p=0.1242). **Conclusions:** Protein powder use is strongly associated with self-reported muscle growth in recreational athletes. While males show a higher usage rate, gender differences were not statistically significant. These results provide empirical support for incorporating protein powder supplementation into the diets of athletes targeting a muscle-building regimen.

Keywords: protein, supplementation, muscle, athletes

COMPARATIVE ANALYSIS OF INFLAMMATORY BOWEL DISEASE MANAGEMENT BEFORE AND AFTER THE COVID-19 PANDEMIC: A 200-PATIENT STUDY USING GRAPHPAD INSTAT

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Background: Inflammatory Bowel Disease (IBD), including Crohn's disease (CD) and ulcerative colitis (UC), is a chronic, immune-mediated condition that requires consistent clinical surveillance, endoscopic assessment, and immunomodulatory or biologic therapy to prevent flares and complications. Before the COVID-19 pandemic, routine endoscopic evaluations and biologic infusions were standard components of care. Unfortunately, the COVID-19 pandemic introduced unique challenges for patiens with these pathologies such as disrupted healthcare systems worldwide, limiting access to diagnostics and biologic treatments. This study compares IBD outcomes

pre- and post-pandemic onset to evaluate the pandemic's effect on disease control, complications, and care continuity. **Objective:** To assess differences in IBD disease flares, complications, and treatment adherence before and after the onset of the COVID-19 pandemic, and to evaluate the impact of restricted endoscopic access on disease outcomes. **Material and methods:** A cohort of 200 IBD patients was analyzed using Microsoft Excel and GraphPad InStat. Patients were categorized into two groups: pre-pandemic (2018-2019) (n = 136) and post-pandemic(2022-2023) (n =64). Data included COVID-19 infection status, disease flares, complication, biologic therapy adherence, and availability of endoscopic evaluations. **Results :** Post-pandemic patients showed a higher flare rate (59%) compared to the pre-pandemic group (38%) ($p < 0.01$). Complications were more frequent post-pandemic (21% vs. 10%, $p < 0.05$). The number of young age at diagnosis increased from 18% pre-pandemic to 34% post-pandemic. Delayed and a decrease in endoscopic evaluations were reported in post-pandemic patients, contributing to late detection of mucosal inflammation and more severe flares. Female patients in the post-pandemic group reported more flares, likely influenced by psychological stress and care access issues. **Conclusions:** The post-COVID-19 pandemic period was associated with significantly worse IBD outcomes, including more frequent flares and complications. Limited access to endoscopy and higher rates of biologic discontinuation were key contributors. Ultimately, the pandemic has revealed vulnerabilities in chronic disease management systems and offers a powerful opportunity to reimagine resilient, patient-centered IBD care for the future.

Keywords: Crohn’s desease, ulcerative colitis, COVID-19, endoscopic

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COMPARATIVE ANALYSIS OF APRI SCORE IN VIRAL VS. ALCOHOLIC LIVER CIRRHOSIS: A DESCRIPTIVE RETROSPECTIVE STUDY

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Background: Liver cirrhosis remains a major global health concern, resulting from the chronic progression of hepatic fibrosis due to various etiologies, the most common being chronic viral hepatitis (HBV/HCV) and long-term alcohol abuse. Timely and accurate assessment of fibrosis severity is crucial in guiding therapeutic strategies and predicting patient outcomes. While liver biopsy is the standard for fibrosis staging, its invasiveness limits routine use. The APRI (AST to Platelet Ratio Index) offers a non-invasive alternative with proven clinical utility. **Objective:** To describe and compare the APRI scores in patients with liver cirrhosis of viral versus alcoholic etiology, highlighting the index's potential in estimating fibrosis severity based only on laboratory parameters. **Material and methods:** This is a retrospective, descriptive observational study conducted at the Gastroenterology Clinic of SCJU Târgu Mureș between 2022 and 2024. A total of 198 patients diagnosed with liver cirrhosis were analyzed - 99 with viral etiology and 99 with alcoholic etiology. APRI values were calculated using standard formulas and statistically compared between groups using the Kolmogorov-Smirnov test for distribution analysis and the Mann-Whitney U test for non-parametric comparison. The data were processed using GraphPad InStat. **Results :** The group with viral cirrhosis presented significantly elevated APRI scores (mean: 1.15) compared to the alcoholic group (mean: 0.79), with a p-value < 0.0001, indicating a statistically significant difference. The distribution of APRI values in the viral group showed higher consistency toward moderate and severe fibrosis thresholds. Additionally, 71,7% of viral patients had APRI values suggestive of advanced fibrosis, compared to 15,2% in the alcoholic group, supporting the idea that viral etiology correlates with faster fibrotic progression. **Conclusions:** The APRI score demonstrates a marked ability to differentiate the degree of hepatic fibrosis based on cirrhosis etiology. Elevated APRI values in viral cirrhosis suggest a more aggressive fibrotic evolution compared to alcoholic cirrhosis, where APRI appears less sensitive, possibly due to variable platelet dynamics. These findings support the use of APRI as a cost-effective, non-invasive tool in stratifying fibrosis, particularly in viral liver disease. Its integration into routine evaluation protocols could enhance early detection and monitoring, especially in resource-limited settings.

Keywords: APRI, cirrhosis, viral, alcoholic

HOW THE BLOOD GLUCOSE LEVEL MAY AFFECT 18F-FDG PET-CT ACQUISITIONS

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Background: Background The PET/CT (Positron Emission Tomography-Computed Tomography) investigation is an advanced medical imaging technique based on the administration of a radiopharmaceutical based on glucose 18 F- FDG (18 Fluoride-deoxy-glucose) - an intermediate of anaerobic glycolysis, so the tumors (glucose consumers) will uptake this substance, making it possible to diagnose mainly oncological pathologies. It must be taken into account that 18F-FDG uptake is non-specific in tissues based on anaerobic glycolysis, this radiopharmaceutical (RF) is physiologically uptake at the level of brain tissue, muscle tissue (muscle activity is related with insulin and glucose consumption), vascular remnants and due to the mechanism elimination at the renal-bladder level. **Objective:** Objective The purpose of the present work aimed to highlight the importance of the patient preparation. In order to achieve an optimal PET/CT investigation the blood glucose value must be at minimum values (maximum 120 mg/dL for non-diabetic patients, with the acceptance of higher limits for diabetics). **Material and methods:** Materials and Methods The retrospective study on 96 patients, with oncological pathology (pre-therapeutic evaluations), who had PET-CT examination between September and November2024 at the "Sfântul Ioan cel Nou" County Emergency Hospital, Suceava. The patients were divided into three groups: 68 without diabetic pathology (Non-DM), 12 with insulin-dependent diabetes mellitus (DM-I) patients and 16 with diabetes on oral antidiabetic drugs (DM-ADO). The statistical analysis implied Pearson correlation blood glucose values before performing PET-CT and - Standard Value Maxim (SUVmax) for the most metabolically active oncological lesion, blood pool, gluteal muscle and cerebral tissue. **Results :** Results There are significant differences in blood glucose values between the Non-DM group and the other two groups (DM-I and DM-ADO), without significant correlations for the Non-DM group. Regarding the sensitivity of PET/CT examination, expressed by the SUVmax the most metabolically active lesion, there was no significant difference between the DM-I group and Non-DM groups. However, statistically significant difference were observed between the DM-ADO and DM-I groups, as well as between the Non-DM and DM-ADO groups at the lesion level. **Conclusions:** Conclusion In patients with DM-ADO, glycemic values are suboptimal controlled, and oncological lesions show a lower expression. This suggests that hyperglycemia could be associated with reduced tumor expression. The proper preparation before the PET/CT investigation with 18F-FDG is crucial and the high blood glucose level indirectly decreasing the lesional 18F-FDG consumption.

Keywords: PET-CT, 18F-FDG, blood glucose

FEBRILE SEIZURES-PRACTICAL AND CLINICAL ASPECTS

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Background: Febrile seizures are one of the most common neurological affections, which appear in childhood, especially in children under 5 years old. Worldwide, approximately 20%-35% of children come to the Pediatric Emergency Room with fever and febrile seizures. Febrile convulsions are described as sudden, involuntary and prolonged contractions of the musculature. They are manifested in children between the age of 6 months and 5 years old, which have a fever above 38°C (100,4°F) and are not associated with central nervous system infections, neither seizures inducing disease (fluid and electrolytes imbalance, hypoglicemia and drug abuse), nor afebrile convulsions. **Objective:** The purpose of this study is to evaluate the clinical, etiological, paraclinical and therapeutic aspects of febrile seizures.In this regard, we carried out a numerical and percentage-based distribution of patients according to age groups, sex, place of origin, type of seizures and associated pathology.Additionally, information was recorded on the socio-demographic profile, medical history, possible risk factors and other important parameters. The two types of seizures (febrile and afebrile) were examined separately, while neonatal seizures (of age under 1 month) were excluded from the study. **Material and methods:** This is an objective, retrospective study done by analizing the pediatric pacients' medical record, which were admitted in the Pediatric Clinic I of Spitalul Clinic Județean Târgu Mureș with the diagnose of febrile seizures. **Results :** During 2023-2024,

62 pediatric pacients with febrile seizures were admitted.Out of the total of pacients, there were 52% (32 cases) female pacients and the most frecvent manifestations were simple convulsions 53% (33 cases).Etiologically, the most cases were caused by infections 79% (51,6% viral and 27,41% bacterial).It seems children from the countryside were more affected compared to the one coming from towns (52% compared to 48%).From age group perspective, the most affected ones was the 1-2 year olds (22 cases), followed by the 2-3 age group (17 cases).The most frecvent type of seizes were the tonico-clonic generalized seizures 60% (37 cases), while the clonic only manifested in the lower limbs was presented the least 25 (1 case). It is been pointed out that most of the episodes lasted between 1-5 minutes 53% (29 cases). **Conclusions:** Even if febrile seizures represent a reason for parents to worry, these are self-limiting, benign and do not predispose to neurological disease and epileptic disorders.

Keywords: febrile seizures, fever, infection, seizures

POINT-OF-CARE PROGNOSTIC INDICATORS IN SEPSIS

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Background: Sepsis is a life-threatening organ dysfunction caused by a dysregulated response to infection. Early diagnosis is critical for improving outcomes, but it remains challenging due to costly tests and the urgency of treatment - each hour of delay raises mortality by 7-10%. **Objective:** This study aims to establish reliable, cost-effective bedside prognostic tools that provide clinically significant information for disease diagnosis and outcome prediction. We assessed the relationship between the neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), severity scoring systems, including the Sequential Organ Failure Assessment (SOFA), Acute Physiology and Chronic Health Evaluation II (APACHE II), and Simplified Acute Physiology Score II (SAPS II) - and the inflammatory marker ferritin. **Material and methods:** This retrospective observational study included 101 critically ill patients admitted to the Intensive Care Unit of Târgu Mureș Emergency Clinical County Hospital between July 2021 and March 2023, diagnosed with sepsis or septic shock per the SEPSIS-3 Consensus. We divided the patients into four groups, Sepsis, Septic shock, Survivors, and Non-survivors, and monitored parameters on days 1 and 5 after diagnosis. **Results :** Of the 101 patients in our study (63 males, 38 females; mean age 68), the average ICU stay was 14 days. Sixty-two patients presented sepsis and 39 had septic shock. Overall, 26 patients survived, while 75 died during their ICU admission. Statistical analysis established a significant variation in NLR median values between day 1 and day 5 for all study groups ($p < 0.0001$), with PLR reaching statistical significance in the sepsis ($p = 0.0037$) and non-survivor ($p = 0.0090$) groups. We found statistically significant correlations between the severity scores for all the studied groups for both day 1 and day 5. Regarding cellular ratios, we observed statistically significant correlations between NLR and PLR in the sepsis ($p = 0.0039$, $\rho = 0.4516$), survivor ($p = 0.0412$, $\rho = 0.4853$) and non-survivor ($p = 0.0187$, $\rho = 0.3614$) groups. We found statistically significant correlations between SAPS II and ferritin for the sepsis ($p = 0.0017$, $\rho = 0.4925$), septic shock (day 1 $p = 0.0136$, $r = 0.3919$; day 5 $p = 0.0447$, $r = 0.4533$), and non-survivor ($p = 0.0003$, $\rho = 0.5262$) groups. **Conclusions:** In sepsis and septic shock, NLR and PLR represent promising bedside prognostic tools. They significantly correlate with severity scores to assess clinical progression and treatment efficacy. Further correlation with biomarkers like ferritin is recommended to optimize their prognostic utility.

Keywords: Sepsis, NLR, PLR, SOFA

IMPACT OF CHRONIC PROTON PUMP INHIBITOR USE ON ENDOSCOPIC AND HISTOPATHOLOGICAL FINDINGS IN HELICOBACTER PYLORI-INFECTED PATIENTS

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Background: Helicobacter pylori(H. pylori) infection remains a prevalent gastric condition and is closely linked to the development of gastric malignancies. Proton pump inhibitors (PPIs) are frequently used for symptom management and mucosal healing, but their long-term use may affect gastric mucosa, especially in H. pylori-infected patients. Understanding these interactions is essential for optimizing treatment strategies and long-term risk prevention, such as malignant transformation. **Objective:** This study aimed to evaluate the impact of chronic PPI use on endoscopic and histopathological outcomes in patients with histopathologically confirmed H. pylori

infection. Specifically, it compared demographic characteristics, endoscopic modifications, and biochemical parameters between patients with chronic PPI use and those without. **Material and methods:** A retrospective analysis was conducted on 339 H. pylori-infected patients that were divided into two groups: 178 individuals with chronic PPI use and 161 controls without such use. Data collection included demographic, clinical, biologic, endoscopic (e.g., erythema, erosions, ulcerations), and histopathological findings (e.g., intestinal metaplasia, gastric atrophy), and symptomatology. Statistical analyses were performed to compare groups, using p-values and odds ratios to assess the significance of observed differences. **Results :** Female patients were more likely to use PPI on a regular basis (p=0.01, OR 1.78, CI95% 1.123-2.2660). Chronic PPI consumers exhibited a statistically significant lower prevalence of antral erosions(p=0.0029, OR=0.4931, CI95% 0.3083-0.7887). No significant differences regarding age (STDV ±13,62), dyspeptic symptoms, or endoscopic features (gastric erythema or ulcer, irrespective of location) were identified. Regarding premalignant gastric lesions, corporal intestinal metaplasia (p=0.0084, OR=1.982, CI95% 1.186-3.313) was less frequent in PPI users. Biochemical analysis demonstrated that patients with chronic PPI use had lower hemoglobin levels (p=0.0014), while other parameters did not show significant intergroup differences. **Conclusions:** Chronic PPI use in H. pylori-infected patients is associated with a reduced prevalence of antral erosions and corporal intestinal metaplasia, suggesting a potential protective effect against certain mucosal alterations. However, these patients also exhibited significantly lower hemoglobin levels, underscoring the need for careful monitoring during long-term PPI therapy.

Keywords: Helicobacter Pylori, Proton Pomp Inhibitor, Gastric mucosa, Intestinal metaplasia

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BLOOD PRESSURE CONTROL AND CARDIOVASCULAR RISK MANAGEMENT IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD)

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Background: Non-alcoholic fatty liver disease (NAFLD) represents the most prevalent chronic liver disorder worldwide and is increasingly acknowledged as an independent cardiovascular risk factor. Given the strong association between NAFLD, hypertension, and metabolic syndrome, effective cardiovascular risk management is a key component of care in this patient group. **Objective:** This retrospective observational study aimed to assess blood pressure control and cardiovascular risk stratification in a cohort of patients diagnosed with NAFLD and undergoing antihypertensive treatment. **Material and methods:** Inclusion criteria were: confirmed diagnosis of NAFLD by imaging or clinical criteria, and availability of 24-hour ambulatory blood pressure monitoring (ABPM) data. Patients were excluded if they had a history of chronic alcohol consumption, known neoplastic disease, or lacked valid ABPM recordings. **Results :** A total of 85 patients were included in the final analysis. Despite all being under antihypertensive therapy, only 68.2% achieved adequate blood pressure control. The metabolic burden was significant: 62.4% of patients were obese (BMI ≥ 30 kg/m²), 24.7% had type 2 diabetes mellitus, and 20.0% presented with hypercholesterolemia. Cardiovascular risk, assessed according to standard risk stratification tools, was elevated in most patients: 55.3% were classified as having a very high cardiovascular risk, 25.9% as high cardiovascular risk, and 18.8% as moderate cardiovascular risk. Ambulatory blood pressure monitoring proved essential in detecting abnormal circadian blood pressure patterns, including masked hypertension and non-dipping profiles, which were common in the cohort. **Conclusions:** These findings highlight the complex interplay between hepatic, metabolic, and cardiovascular factors in patients with NAFLD. The high prevalence of uncontrolled hypertension and elevated cardiovascular risk emphasizes the need for routine ABPM and a multidisciplinary, individualized approach to therapy in this vulnerable population.

Keywords: NAFLD, ABPM, Dipper

ETIOPATHOGENETIC FACTORS INVOLVED IN ALCOHOL USE DISORDERS IN WOMEN

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Background: Alcholism, formally known as Alchohol Use Disorder (AUD) is a matter that could be considered a never ending pandeminc, since it has affected millions of people, be it directly the user, but also indirectly as consequences such as driving under the influence or domestic violence. Alcohol abuse peaks between the ages of 20-30 years old, and some studies show that while men are currently in the lead on this habit, women are starting

to narrow the difference. Romania is at the moment the number one country with the highest alcohol consumption per capita, in men as well as women, which makes the matter of AUD in women that much more concerning, especially due to the low number of studies surrounding this issue. **Objective:** To reveal the possible causes that might lead to AUD in order to potentially recognise it in it's earlier stages and possibly be able to prevent it's later onset. **Material and methods:** An online survey regarding psychological and socio-demographic aspects was administered to the 221 female subjects, aged 20-50. The AUDIT scala was used to determine whether AUD was present, thus resulted an AUD positive lot of 68 subjects and an AUD negative lot of 153 subjects **Results :** Among the AUD positive lot the Median AUDIT Score was 7. Among the associated risk factors and harmful behaviours investigated by us, the most statistically significant results were obtained regarding family issues (OR=1.24) and relationship status, namely those who were single appear to have a 1,69 higher chance of developing AUD. Out of the AUD positive lot 35% showed deteriorated mental health, compared to only 24% of the AUD negative lot. As far as harmful behaviours go, both smoking and coffee drinking were found in 64% of the AUD positive lot, while only 24% of the AUD negative lot presented the same habits. The highest chances of developing AUD (OR=9.31) were found among those who tend to consume more alcohol while stressed. Family history of excessive drinking was also more common among the AUD positive lot (60% compared to 49%). **Conclusions:** We tested some of the most common risk factors associated with AUD in men and found that, while we expected stress, family history, family issues and relationship status to influence a woman's drinking patterns as well, it also appears that compared to men, peer pressure, upbringing environment and the age at which they first consumed alcohol don't seem to affect women as much.

Keywords: Alcohol Use Disorder, Women, Etiopathogenetic Factors, AUDIT

SOCIAL LIFE WITH ACNE, A LOOK INTO HOW ACNE AFFECTS SOCIAL INTERACTIONS

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Background: Acne is a common dermatological condition affecting both genders. It can have an impact on psychosocial behaviour by to decreased self esteem and social withdrawal. **Objective:** This study explores the relationship between acne severity and its association with gender and how it influences individuals willingness to socialize and to engage social interactions. **Material and methods:** A questionnaire-based survey was conducted among students of university in Targu Mures between 02.02.2025-03.03.2025 to collect data on demographics acne severity and its impact on social interactions. Statistical analysis was performed to identify significant associations. The subject of the studies were University students (n=40), aged 18-35 years. Statistics was performed using Chi2test with JASP software **Results :** The study showed that no significant association was found between acne severity and gender (chi2test, $X^2(2)=0.059$,p = 0.971).Among the participants(n=40), 17.5% of females and 15% of males were presented with mild acne. Moderate acne was common affecting 30% of females and 25% of males. Severe acne was reported in 7.5% of females and 5% of males. However, acne severity was significantly associated with avoiding social interactions (chi2test, $X^2(2)=8.575$,p = 0.014). **Conclusions:** Acne is more than a skin condition,it has a significant psychosocial impact other than its physical symptoms. Raising awareness of these associations could lead to improved treatment strategies and better patient outcomes with better life quality and social interactions.

Keywords: acne severity, social interactions, psychosocial impact, chi-square Test

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CORRELATIONS BETWEEN SERUM VITAMIN D LEVELS AND CLINICAL PROGRESSION IN AMYOTROPHIC LATERAL SCLEROSIS

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Background: Amyotrophic lateral sclerosis (ALS) is a fatal neurodegenerative disease with an average survival of 3 to 5 years. This is caused by the progressive degeneration of motor neurons, which eventually leads to respiratory failure. Currently, therapeutic interventions are primarily based on supportive care, as no effective treatments exist. In recent years, research on the pathophysiology of ALS has increased to better understand the mechanisms involved and to potentially identify new treatment strategies. Vitamin D deficiency is a common global finding and has been associated with various dysfunctions, including neurodegenerative disorders. This nutrient

exerts multisystem effects, including the maintenance of the structural and functional integrity of the brain and nervous system. Observational studies suggest that vitamin D may attenuate neurodegeneration through multiple neuroprotective mechanisms. However, clinical trials investigating vitamin D supplementation on ALS patients have shown conflicting outcomes. Therefore, additional well-designed studies are necessary to clarify the potential therapeutic role of vitamin D in ALS management. **Objective:** To analyze whether lower vitamin D levels are associated with greater clinical severity in ALS patients. **Material and methods:** This retrospective, observational study collected demographic data, functional ALS scores and laboratory findings from 44 ALS patient records at the 1st Neurology Clinic, County Emergency Clinical Hospital of Târgu Mureș. Statistical analysis was performed to determine possible correlations between vitamin D levels and functional ALS scores. **Results :** The analysis indicated a statistically significant, albeit weak, positive correlation between vitamin D levels and the overall functional ALS-FRS score ($r = 0.316$, $p = 0.001$), suggesting that higher vitamin D levels are modestly associated with better clinical prognosis in ALS patients. Statistically significant, weak positive correlations were found between vitamin D levels and most functional domains. **Conclusions:** The results identify a weak but statistically significant positive correlation between vitamin D levels and functional ALS scores, suggesting a potential role for vitamin D in modifying disease severity. Addressing vitamin D deficiency in these patients may hold clinical relevance, potentially improving functional outcomes and quality of life. Although the modest correlation coefficient indicates that vitamin D levels account for only a small fraction of the variability in the clinical outcome, the findings support the hypothesis that vitamin D may contribute to neuroprotection in neurodegenerative diseases.

Keywords: amyotrophic lateral sclerosis, vitamin D, ALS-FRS, clinical severity

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EFFICACY OF VAGUS NERVE STIMULATION IN PEDIATRIC PATIENTS WITH TREATMENT-RESISTANT EPILEPSY: A REVIEW OF RECENT STUDIES

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Background: Epilepsy is a neurological disorder characterized by recurrent, uncontrolled electrical activity in the brain, leading to epileptic seizures. Drug-resistant epilepsy, also known as refractory epilepsy, refers to cases in which seizures cannot be adequately controlled with anti-seizure medications. In recent years, vagus nerve stimulation (VNS) has emerged as a therapeutic option. This technique involves the implantation of a pacemaker-like device in the chest, which is connected to the vagus nerve, delivering regular electrical impulses to the brain. **Objective:** This paper aims to review the VNS efficacy as a treatment option for children with drug-resistant epilepsy. **Material and methods:** A literature review was conducted using PubMed and Google Scholar, focusing on studies from the past 10 years that investigated the effectiveness of VNS in pediatric patients with treatment-resistant epilepsy. Boolean operators (AND, OR) were used to combine keywords such as epilepsy, VNS, children, pediatric, efficacy, outcome, and follow up. Approximately 1000 studies were initially identified, many of which presented overlapping data or similar findings. However, from these, the 15 most relevant studies were selected for detailed analysis. **Results :** Recent studies have shown significant effectiveness of VNS implantation, with some patients achieving seizure-free outcomes. A meta-analysis of 99 studies (3,474 patients) showed that 56.4% of patients had fewer seizures after treatment compared to before, with a mean follow-up duration of 2.54 years. In another study with 58 pediatric patients, 45% responded to the therapy, and 5.8% were completely seizure-free after a mean follow-up duration of 5.7 years. There is currently no clear consensus regarding the influence of age on treatment outcomes. While the meta-analysis indicated better outcomes in older patients, other studies found that younger age did not significantly affect the efficacy of VNS. Notably, one study reported improved quality of life in children under the age of 5 who received VNS therapy. **Conclusions:** These results highlight the potential of VNS as a beneficial option for children with drug-resistant epilepsy, though careful monitoring for complications is necessary. The therapy demonstrated safety and effectiveness across different age groups, indicating that there is no strict age restriction for VNS treatment. Overall, VNS proves to be a promising treatment option for children with drug-resistant epilepsy.

Keywords: vagus nerve stimulation, pediatric epilepsy treatment, drug-resistant epilepsy, seizure reduction

SEVERITY OF INFLAMMATORY BOWEL DISEASE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Background: Inflammatory bowel disease (IBD) and type 2 diabetes mellitus (T2DM) are two chronic diseases with an increasing global prevalence, which change significantly the quality of life and life expectancy of affected patients. Recent studies suggest a bidirectional relationship between these two diseases, although the evidence in the literature is scarce. **Objective:** The purpose of the study was to evaluate the influence of T2DM on the IBD by assessing several markers of disease severity. **Material and methods:** This observational study included subjects with IBD with and without T2DM hospitalized in the Gastroenterology Department of Mureș County Hospital between 2017-2024. Data was collected from the medical records and included the following information: demographical data (age, sex, residence), medical data (number of in-patient days, number and location of IBD complications, severity of recurrent flares), and laboratory data (C reactive protein (CRP), erythrocyte sedimentation rate (ESR), fecal calprotectin, fasting blood glucose (FBG), glycated hemoglobin (HbA1c)). The statistical significance was set at $p<0.05$. **Results :** This analysis included data from 120 IBD patients, of whom 23 presented concomitantly T2DM (Group 1) and 97 did not have T2DM (Group 2). There were no significant differences with regards to age, sex or residence between the two groups ($p>0.05$ for all), but patients with T2DM had higher FBG (134.0 (105.0-515.0) mg/dl vs. 87.0 (62.0-111.0) mg/dl; $p<0.0001$) and fecal calprotectin levels (1823.0 (300.0-9400.0) µg/g vs. 190.0 (4.0-4610.0) µg/g; $p<0.0001$), while ESR (30.0 (4.0-88.0) mm/h vs. 22.0 (2.0-120.0) mm/h; $p=0.35$) and CRP were similar (0.45 (0.08-12.0) mg/l vs. 0.33 (0.01-160.0) mg/l; $p=0.0613$, respectively). The flares were more severe in Group 1, as all patients had moderate or severe flare-up (69.6% and 30.4%, respectively versus 43.3% and 5.2%, respectively in group 2; $p<0.0001$), but complication rates were similar ($p=0.9499$). FBG levels were correlated with fecal calprotectin ($r=0.35$ [95% confidence interval (CI): 0.18-0.50]; $p<0.0001$) and with flares severity ($r=0.29$ [95%CI: 0.12-0.45]; $p=0.0011$). **Conclusions:** Patients with IBD and concomitant T2DM had a more severe intestinal disease, as evidenced by the severity of recurrent flares and higher fecal calprotectin levels. FBG correlated with both flare-up severity and fecal calprotectin levels, suggesting a possible contributing role to disease severity.

Keywords: Inflammatory bowel disease;, type 2 diabetes mellitus;, fecal calprotectin;, fasting blood glucose.

DURATION OF HOSPITALIZATION AND SURVIVAL OF PATIENS WITH ALCOHOLIC LIVER CIRRHOSIS: A RETROSPECTIVE APPROACH BASED ON THE CHILD-PUGH SCORE

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Background: Chronic alcohol consumption causes chronic fibrosis of the liver and leads to cirrhosis. The Child-Pugh score is used to predict mortality and uses as parameters: ascites, encephalopathy, INR, albumin and bilirubin. The final score has a value between 5 and 15 points and classifies the pacient into 3 classes (A, B and C). **Objective:** The objective of this study is to evaluate the prognostic of patients by analyzing the relationship between the number of days of hospitalization, discharge status (alive/dead) and Child-Pugh score **Material and methods:** This study is a retrospective study that included 104 patients with ethanolic cirrhosis admitted to the Gastroenterology Department of the Târgu-Mureș County Hospital over a period of 10 months (01 January 2024 - 30 October 2024). **Results :** Of the 104 patients hospitalized for ethanol-induced liver cirrhosis, 83% were male and 17% were female. The youngest patient was 43 years old and the oldest was 83 years old. The mean age was 59.14 years old. The longest hospitalization was 28 days and the shortest was 2 days. 79% of the patiens were discharged alive, while 21% died during hospitalization. From Class A Child Pugh, all patients were discharged alive, from Class B 85.7% (30 patients) were discharged alive and 14.3% (5 patients) died. From Class C, 73.2% (41 patients) were discharged alive and 26.8% (15 patients) died. There is a positive correlation ($rs=0.20517$) statistically significant ($p=0.03668$) between Child-Pugh score and number of days of hospitalization. There is a positive an statistically significant correlation between the discharge status and the number of points related to the variables according to the Child-Pugh score: albumin ($rs=0.34931$, $p=0.00028$), bilirubin ($rs=0.2848$, $p=0.0039$), ascites ($rs=0.34331$, $p=0.0036$) and encephalopathy ($rs=0.2783$, $p=0.00423$). There is no correlation between the

number of points related to INR and discharge status (rs=0.16853, p=0.08723). **Conclusions:** Ethanol-induced liver cirrhosis is more common in males. As the Child-Pugh score increases, the survival rate decreases, so the more severe the liver disease, the greater the need for hospitalization and for a longer period of time. Patients with severe liver disease require a longer hospitalization period. Increasing albumin, bilirubin, ascites and encephalopathy scores will worsen the prognosis upon discharge.

Keywords: cirrhosis, hospitalization, Child-Pugh score, prognosis

FACTORS ASSOCIATED WITH FEBRILE SEIZURES IN CHILDREN

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Background: Febrile seizure is one of the most common emergency conditions in the pediatric population, but it is generally considered benign and self-limited, meaning they do not cause long-term health problems. Febrile seizures typically occur during fever, often as a result of viral infections, and are generally not associated with significant metabolic disorders or central nervous system infections. Understanding the incidence of febrile seizures and the underlying risk factors is crucial in the care of children, as seizures may signal an increased risk of later neurological complications. Furthermore, inflammatory markers such as C-reactive protein (CRP) are gaining increasing attention, as they can aid in assessing the type and severity of infection, as well as determining the extent of the inflammatory response. **Objective:** The objectives of our study are to investigate the clinical and biological factors in patients with febrile seizures and those with seizures associated with neurological pathologies. **Material and methods:** In our retrospective study, we reviewed and compared the medical records of patients diagnosed with febrile seizures and seizures in patients with different neurological pathology at the Pediatric Clinic of the Mureș County Clinical Hospital between 2020 and 2024. **Results :** In the study, a total of 52 patients' data were analyzed. Among them, 35 patients were diagnosed with febrile seizures, while 17 had other seizures caused by neurological pathology. The patient group included 19 boys and 33 girls, with an average age of 2.62 years. Laboratory tests revealed anemia in 19% of cases, iron deficiency in 10%, elevated transaminase levels in 17%, leukocytosis in 8%, increased creatinine levels in 19%, and elevated CRP levels in 45%. Additionally, 32% of the patients were dehydrated, and 39% faced nutritional difficulties. Respiratory infections were the most common cause of fever, accounting for 50% of the cases, with 7% showing SARS-CoV-2 infection. Furthermore, clinical and laboratory data were compared between the two groups. The values did not show statistically significant differences, except for the AST enzyme levels, which were higher in the group of patients with neurological pathologies. **Conclusions:** The children included in the study showed a significant prevalence of laboratory abnormalities, nutritional and dehydration issues, as well as respiratory infections. Additionally, AST levels were significantly elevated in the group of patients with neurological pathologies.

Keywords: febrile seizures, neurological pathology, laboratory abnormalities, liver enzyme levels

ANALYSIS OF THE MEASLES OUTBREAK IN MUREȘ COUNTY IN 2023-2024

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Background: In the period between 2023-2024, measles saw a significant increase in cases, mainly due to the decline in vaccination rates. The disease, which is highly contagious, primarily affects young children and unvaccinated individuals, but in this case, adults were also involved. Outbreaks had a major impact in several countries, including Romania, particularly in Mureș County, where significant cases were reported. Preventive measures included vaccination campaigns and public education, but the epidemic highlighted the need to strengthen public health policies and promote vaccination to prevent future outbreaks. **Objective:** Our research aimed to analyze the epidemiological, clinical, and preventive aspects of the measles epidemic between 2023-2024, focusing on the increase in cases, the impact on different age groups, and the effectiveness of vaccination campaigns in controlling outbreaks. **Material and methods:** We conducted a two-step observational study focusing on the measles epidemic between 2023-2024, which included individuals diagnosed with measles and admitted to multiple hospitals in Mureș County, Romania. Data referring to sociodemographic status, clinical manifestations, disease severity, and complications were extracted from patient records and analyzed using statistical software, such as Excel. The study compares health outcomes between genders, age distribution and

geographical spread. Additionally, we reviewed public health measures implemented during the epidemic, including vaccination campaigns, educational programs, and containment strategies. Descriptive statistics were used to summarize the data, and continuous variables were analyzed. The study focuses on the data collected during the peak of the epidemic in the winter months, with a follow-up planned for the other seasons to analyze the evolution of the situation. **Results :** In 2023, Mureș County distributed 9,700 ROR vaccine doses, with 8,606 administered. Vaccination rates were lower in rural areas, where 43% of children missed the first dose by 18 months, compared to 18% in urban areas. By August 2023, 50% of 12-month-olds and 81% of 2-year-olds were vaccinated. Measles cases were predominantly in rural areas but significantly decreased in 2024, indicating improved vaccination efforts. However, the risk remains higher in rural regions due to ongoing vaccination gaps. **Conclusions:** The study clearly highlighted the increased risk of measles among children from rural areas, with rural cases consistently surpassing urban ones each month.Most cases were in children aged 1 and 5-9 years, highlighting the need for timely vaccination. Cases in those over 20 indicate long-term vaccination gaps. The epidemic peaked in fall 2023 and ended by October 2024, with a notable decline in 2024.

Keywords: Measles, Vaccination, Retrospective Study, Public Health

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BIOFILM FORMATION ABILITY OF CLINICAL ISOLATES OF KLEBSIELLA PNEUMONIAE AND THEIR CORRELATION WITH THE RESISTANCE PHENOTYPES

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Background: Klebsiella pneumoniae is one of the six notoriously difficult-to-treat ESKAPE pathogens and represents an enormous treatment challenge all over the world. Multiresistant uropathogenic K. pneumoniae strains lead to complex and resistant urinary tract infections with a high impact on mortality and morbidity.
Objective: The study aims to shed light on the current biofilm-forming properties of the local K. pneumoniae strains and their association with antibiotic-resistance phenotypes within the County Hospital of Targu Mures, Romania. **Material and methods:** K. pneumoniae with and without resistant phenotypes were isolated from urine cultures, as part of the routine laboratory work. The strains were kept at -70°C. The biofilm formation ability was assessed by culturing bacteria in sterile microtiter plates, in Muller Hinton broth. The plates were incubated for 24 hours, at 37° C. After incubation, the wells were stained by the crystal violet method, and the Optical Densities (ODs) were read by spectrophotometry. The experiment was conducted in triplicate. By comparing the ODs of the samples with the ODs of the positive controls, the strains were categorized into non-biofilm producing, as well as weak, moderate, or strong biofilm producing. Data regarding the biofilm production abilities were correlated with resistance phenotypes (ESBL - Expended Spectrum Beta-Lactamase producing Enterobacterales, CPE - CarbapenemEse Producing Enterobacterales, and resistance to Colistin). Fisher's Test was used to assess the statistical difference between the resistance phenotypes and biofilm formation. **Results :** A total of 59 strains of K. pneumoniae were included in the study, most of them isolated from middle-stream urine (81.36%). Regarding the resistance phenotype: 30.51% of the strains were ESBL, 27.12% were CPE and 15.25% presented on top of the CPE, resistance to Colistin. From the total number of strains, 45.76% were strong biofilm producers, 28.81% were classified as moderate biofilm producers, 10.17% were weak biofilm producers and 15.25% did not form biofilm. There was a statistically significant difference between biofilm formation and resistant strains ($p< 0.01$).
Conclusions: Our study supports an association between advanced biofilm formation and antibiotic resistance capabilities in local K. pneumoniae strains. More research is needed in order to understand the molecular mechanisms behind these findings.

Keywords: Biofilm formation, K.pneumoniae, antibiotic resistance

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REALITIES AND PERSPECTIVES IN COUNSELING SMOKING PATIENTS

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Background: Smoking cessation counseling strategies, as well as anti-smoking campaigns, should include primary health care because the family doctor represents that segment of the medical staff that has long-term interaction, both with the patient and with his family. **Objective:** The objective of the study is to highlight how family doctors approach, monitor and manage the collaboration with the smoking patient in order to counsel for smoking

cessation. **Material and methods:** On the occasion of the monthly meeting of the Association of General Practitioners-Family Physicians in Mureș County, a survey was conducted, in which the position expressed by the 56 family doctors who participated in this event was followed. The distributed questionnaire included a number of 9 questions and the answers were statistically processed. **Results :** Of the 56 doctors who participated in the survey, 18% worked in rural areas. Regarding the identification of smoking patients, almost two-thirds of the respondents (62.50%) specified smell as the method used, and over half of them (57.14%) initiate a dialogue about smoking, but rarely (33.93%) record this in the medical record. However, 71.86% say that the time allocated to a discussion on smoking is less than 2 minutes. 62.50% of respondents believe that the patient chooses not to abandon this vice, 87.71% considering smoking a chronic disease. In order to achieve success in the fight to quit smoking, 87.50% of respondents believe that medication coupled with psychological counseling is needed. 83.93% of respondents did not participate in courses to acquire skills in counseling to combat smoking and only 8.93% consider that they have skills in practical guidance for treating addiction and tobacco use. **Conclusions:** According to the data obtained, it can be stated that the family physicians who participated in the survey do not have skills in the management of the smoking patient in order to counsel for the abandonment of this vice. The time allotted to initiating counseling is extremely low, and the medical activity carried out in this regard is not highlighted in the medical documents.

Keywords: smoking, smoking cessation counseling, family medicine

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COMPARING THE QUALITY OF INFORMATION ON NEUROLOGICAL DISEASES: A STUDY OF SPANISH AND ITALIAN WEBSITES

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Background: The internet has become one of the greatest tools for spreading information, playing an essential role in health education. However, the benefits of its use can be easily outweighed by the risk of misinformation. This makes assessing the quality of online medical information a priority for healthcare professionals, as they are the guardians of public health. Parkinson's disease, Alzheimer's disease, and multiple sclerosis were chosen for this study due to their rapidly increasing prevalence in recent decades. **Objective:** Using the Brief DISCERN (BD) tool, we aimed to evaluate the quality of information disseminated through Spanish and Italian websites regarding three neurological conditions, Parkinson's disease, Alzheimer's disease, and multiple sclerosis. **Material and methods:** This observational cross-sectional study included a total of 150 websites, comprising 25 Spanish and 25 Italian websites for each of the three diseases. The websites were analyzed using the six-item BD tool, followed by a rigorous investigation of the completeness and accuracy of the information they provided. Statistical methods were applied to compare the Spanish and Italian samples, using Mann-Whitney or Student's t-tests. To assess the correlation between BD scores and characteristics indicating information quality, such as credibility, completeness, and accuracy, Pearson and Spearman tests were used. **Results :** The results of the BD for Parkinson's disease, Alzheimer's disease, and multiple sclerosis in the Spanish sample were 13.2 ± 5.8, 15.4 ± 7.0, and 12.6 ± 5.1, respectively. In the Italian sample, the corresponding values were 13.0 ± 5.4, 12.7 ± 5.7, and 12.0 ± 6.4. No significant difference was found between the two groups. A positive correlation was demonstrated between the BD mean score on the one hand and the credibility ($p=0.0034$; $r=0.33$), completeness ($p<0.0001$; $r=0.79$), and accuracy ($p=0,0022$; $r=0.35$) mean scores in the Spanish websites on the other hand. For the Italian websites, only credibility ($p=0.0217$; $r=0.26$) and completeness ($p < 0.0001$; $r=0.7$) showed significant correlations with the BD mean score. **Conclusions:** As a result of the analysis, it was determined that the websites recorded low BD scores. No significant difference in the quality of information was found between Spanish and Italian websites, as assessed by the BD standards. Among the evaluated variables, the most consistent correlation emerged between BD scores and the completeness of the information. To strengthen the study and improve the evaluation process, introducing additional tools into the assessment of online medical information is necessary.

Keywords: Brief DISCERN, quality of information, neurological conditions

CLINICAL-BIOLOGICAL AND ENDOSCOPIC CORRELATION IN THERAPEUTIC DECISION-MAKING IN INFLAMMATORY BOWEL DISEASES

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Background: Inflammatory bowel diseases encompass two distinct pathologies, Crohn's disease and ulcerative colitis, characterized by chronic damage to the digestive system through a severe inflammatory response, with serious consequences for the quality of patients' life. **Objective:** The aim of the study was to perform a comparative analysis of clinical and paraclinical elements, investigations, and treatments to identify similarities and differences, as well as possible correlations between the two pathologies. **Material and methods:** The retrospective study was conducted on a sample of 70 patients diagnosed with Crohn's disease or ulcerative colitis, hospitalized in the Gastroenterology Department of the Târgu Mureș County Clinical Hospital in 2022-2023. **Results :** The sample included 70 patients, of which 33 (47.14%) had Crohn's disease and 37 (52.86%) had ulcerative colitis. Of these, 36 (51.43%) were women and 34 (48.57%) were men, with ages ranging from 22 to 88 years, with a mean age of 48.26. In Crohn's disease, the most common form was ileocolonic (n=18), followed by terminal ileum (n=8), colonic (n=6), and gastro-duodenal (n=1). In ulcerative colitis, left-sided colitis predominated (n=15), followed by pancolitis (n=12) and proctitis (n=10). 27 patients did not have complications (38.57%), while others presented isolated intestinal complications (n=18), isolated extra-intestinal complications (n=18) and mixed complications (n=7). 33 patients had an active flare (47.14%) and 37 did not (52.86%). Most patients underwent ultrasonography (n=36), followed by lower digestive endoscopy (n=27), CT/MRI (n=11) and upper digestive endoscopy (n=7). 5-ASA was the most frequently administered treatment for both Crohn's disease (n=27) and ulcerative colitis (n=35). There was a relationship between pathology and the rate of surgical interventions (p=0.004). OR=0.114 indicates that those with ulcerative colitis are less likely to undergo surgery (by 8.77 times). There was no statistically significant correlation between pathology and sex (p=0.155). A statistically significant correlation was found between the laboratory results of patients with and without active flare (p<0.05). **Conclusions:** The majority of patients diagnosed with Crohn's disease had ileocolonic forms, while left-sided colitis was more frequent in ulcerative colitis. The average age of the patients was 48.26 years, and no statistically significant correlation was observed between the pathology and the sex of the patients.

Keywords: Crohn’s disease, ulcerative colitis, digestive tract, inflamation

MANAGEMENT OF ACUTE RESPIRATORY FAILURE USING THE NATIONAL EARLY WARNING SCORE IN EMERGENCY DEPARTMENT

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Background: Acute respiratory failure (ARF) is a critical condition requiring early detection to prevent severe complications. The National Early Warning Score (NEWS) is a widely used tool to assess patient severity and guide urgent interventions. **Objective:** The aims of this study were to evaluate the validity of the NEWS in identifying patients at risk for ARF, to determine the optimal NEWS cutoff for predicting the need for mechanical ventilation, and to assess the relationship between the NEWS score and mortality in Emergency Department (ED). **Material and methods:** We conducted a retrospective observational study included 45 ARF patients admitted to the ED of Târgu Mureș County Emergency Hospital. NEWS was calculated at admission. Data distribution was assessed using the Shapiro-Wilk test. Group comparisons for NEWS values were performed with Student's t-test and Chi-Square Test. Logistic regression models were constructed to evaluate the predictive value of NEWS for mechanical ventilation and mortality. ROC curve analysis was conducted to determine the discriminative ability of NEWS and to identify optimal cutoff values. **Results :** Of the 46 patients analyzed, 18 females and 27 males. 64,4% (n=29) were from rural areas, while 35,6% (n=16) were from urban areas. Regarding age distribution, 8.7% were aged 54 years old or younger, 60.9% were between 55 and 75years, and 30.4% were 75 years old or older. The optimal NEWS cutoff for predicting the need for orotracheal intubation was 10 (sensitivity 47%, specificity 100%; AUC 0.805 ± 0.0719; IC 95% 0.6637-0.9455; p **Conclusions:** The NEWS is a reliable tool for predicting the need for mechanical ventilation and mortality in ARF patients presenting to the ED. Early identification of high-risk

patients based on NEWS scores may facilitate timely therapeutic interventions and improve patient outcomes.

Keywords: Acute Respiratory Failure, National Early Warning Score, Mechanical ventilation, Mortality

CHALLENGES AND SOLUTIONS IN THE MANAGEMENT OF CRITICALLY ILL PSYCHIATRIC PATIENTS IN INTENSIVE CARE

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Background: Critically ill psychiatric patients admitted to intensive care units (ICUs) present complex challenges due to the interplay between acute somatic conditions, psychiatric decompensation, and psychotropic-medication interactions. This population is at heightened risk for systemic complications, requiring integrated interdisciplinary management. **Objective:** This study aimed to evaluate the management of critically ill psychiatric patients in the ICU, focusing on diagnostic categories, treatment interactions, clinical complications, and patient outcomes. **Material and methods:** A retrospective, descriptive study was conducted on 78 patients admitted between 2022 and 2024 to the ICU of Târgu Mureș County Clinical Hospital. Patients aged 18-80 years, with concurrent psychiatric and somatic diagnoses, were included. Data collected included demographics, primary diagnoses, treatment regimens, complications, and laboratory/imaging findings. Statistical analyses (Chi-square and Pearson-R) were used, with $p<0.05$ considered significant. **Results :** Alcohol-related disorders (25%), psychoses (20%), and intentional poisoning (15%) were the most common psychiatric conditions. Frequent ICU complications included agitation requiring sedation (60%), requiring delirium (60%), and mechanical ventilation-associated pneumonia (20%). Notably, 44% required physical restraint, and 34% underwent mechanical ventilation. Rhythm disturbances occurred in 40% (e.g., sinus tachycardia, atrial fibrillation), often linked to electrolyte imbalance and QT-prolonging medications such as haloperidol or antidepressants. Severe metabolic disturbances (e.g., hyperlactatemia, acidosis) were common. The overall survival rate was 70%, while mortality reached 20%, particularly among those with SOFA scores >9 and procalcitonin >2 ng/mL. Seasonality patterns were observed, with admissions peaking in winter and early spring. **Conclusions:** The management of psychiatric ICU patients demands vigilant monitoring, tailored pharmacologic strategies, and close collaboration among intensivists and mental health professionals. Cardiac arrhythmias, metabolic instability, and treatment resistance are prevalent, highlighting the importance of integrated protocols to reduce morbidity and improve outcomes.

Keywords: Critically ill psychiatric patients, Cardiac arrhythmias, Psychotropic drug interactions, Intensive care unit (ICU)

ASSESSMENT OF THE PSYCHO-SOCIAL SUBSTRATE OF PATIENTS WHO HAVE ACCEPTED DIALYSIS AS A RENAL REPLACEMENT THERAPY.

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Background: Dialysis involves the external supplementation of renal function. This limited and non-curative modality of renal replacement has a major impact on patients' emotional, psychological and cognitive well-being. **Objective:** The objectives of the study included the evaluation of the psychological and social changes that occurred in the lives of these patients, following the acceptance of hemodialysis treatment. We also analyzed how religious behavior and psychological counseling decreased the intensity of negative states. **Material and methods:** For the psychosocial assessment we used a questionnaire, designed with 34 questions, filled in by the patients of the Nephrology Department of the Mureș County Clinical Hospital. The study was conducted over a 14-month period from April 2024 to May 2025. The sample included 100 people aged 40 - 79 years. The assessment of the relationships between variables was performed using the GraphPad Prism8 program, using the statistical significance level of $p<0.05$. **Results :** The feeling of loneliness is best felt by patients: who live alone, who have gone through a divorce or are unmarried ($p=0.0467$). 48 out of 66 people from urban areas did not seek psychological counseling. 17% of those who have not given up traveling consistently see a psychologist ($p=0.0250$). Stress is more common among patients diagnosed with hypertension, diabetes mellitus ($p=0.0999$). 30 of the males and 16 of the females "voluntarily" chose dialysis as a form of treatment ($P=0.4133$). 46% of the people who completed this questionnaire at the time of the interview "felt good". 34 people agreed that

interpersonal relationships had changed following receiving this diagnosis and implicitly due to dialysis (p= 0.0306). 34% of patients opted for psychological counseling. Of the 72 patients diagnosed with genetic/congenital and autoimmune diseases, 64 considered themselves Christians (p=0.1514). **Conclusions:** Renal replacement has a negative impact on emotional wellbeing, while also altering interpersonal relationships. Psychological counseling and practicing religious behavior can play an important role in mitigating these adverse consequences of dialysis.

Keywords: dialysis,, psychological aspects,, emotional status,, interpersonal relationships,

EVALUATING THE ACCURACY AND COMPLETENESS OF LLM RESPONSES TO HEALTH QUERIES: A CASE STUDY ON HEREDITARY ANGIOEDEM

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Background: The internet is increasingly used as a sourse of health-related information and the rise of Large Language Models (LLMs) could soon present a new option for educating patients and their caregivers. Although these emerging tools may impact patient decision-making, their reliability in offering accurate information about symptoms and treatments has yet to be thoroughly examined. **Objective:** To evaluate the completeness and accuracy of responses provided by four LLMs - ChatGPT (OpenAI), Gemini (Google), Copilot(Microsoft) and Deepseek - to English-language questions regarding hereditary angioedema. **Material and methods:** Two scenarios were applied to evaluate the responses of the modles: A, a single general question about hereditary angioedema, plausible for most users and B multiple, specific questions covering different aspects of the condition. The responses were evaluated for completeness and accuracy using an evidence-based quality benchmark, following a predefined protocol. Scores ranging from 0 to 10 were computed based on these assessments. **Results :** In Scenario A, the completeness scores were 6.1 for ChatGPT, 2.6 for Gemini, 4.8 for Copilot, and 6.1 for Deepseek, with a mean score of 4.9. The corresponding accuracy scores were 5.7, 5.0, 5.0, and 6.4, yielding a mean of 5.5. In Scenario B, the models achieved the accuracy scores of 8.5, 7.4, 8.9, and 9.1, with an overall mean score of 8.7. **Conclusions:** Under the Scenario A conditions, the LLMs performance was modest but showed notable improvement in Scenario B. The findings indicated a slight advantage for ChatGPT and Deepseek over the other two evaluated models. The study suggests that to receive more complete and accurate responses, patients should ask specific questions regarding the particular aspects of hereditary angioedema they wish to understand. For safety reasons, LLMs should be used to complement, not replace, professional medical consultation.

Keywords: Large Language Models, Artificial Intelligence, Hereditary Angioedema, completeness, accuracy

PATIENTS' PERCEPTION REGARDING NOSOCOMIAL INFECTIONS

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Background: Nosocomial infections, defined as infections acquired during hospitalization, are not only a real medical problem but also a frequent cause of concern among patients. These infections have the potential to influence decisions and perceptions related to accessing healthcare services. **Objective:** The purpose of this study is to assess the degree of concern and frequency with which patients think about the risk of nosocomial infections when utilizing health care services, and the impact of these concerns on decisions to seek medical care. **Material and methods:** The study was conducted through an anonymous survey distributed online using the Google Forms platform and asked questions about the perception of the risk of nosocomial infections and the impact of fears on health care seeking behaviors. **Results :** Concern about nosocomial infections: 52.6% of the respondents stated that they had fears about infections acquired during hospitalization, while 47.4% stated that they did not feel fear about nosocomial infections. Perception of the risk of acquiring a nosocomial infection: 45.6% said they rarely think about the risk of nosocomial infections, while 33.1% said they think about it occasionally, and 21.3% of respondents think about the risk of acquiring a nosocomial infection in a healthcare setting very often. Impact on decisions to use healthcare services: 37.1% of patients stated that the fear of nosocomial infections influences their attitude towards the use of healthcare services, while 62.9% stated that they are not affected by the fear of nosocomial infections when making the decision to perform medical procedures. **Conclusions:** The survey results reflect that patients are significantely concerned about the risk of nosocomial infections, with over half stating that

they had concerns about contracting these infections. Although a proportion of these patients admit to frequently thinking about the risk of infection in the healthcare setting, only a relatively small percentage change their help-seeking behavior. These results suggest that, although anxieties related to nosocomial infections do exist, they do not have a strong impact on decisions to access health care, but may influence attitudes towards the health care system. Doctor-patient communication and health education remain essential to reduce health anxiety and to encourage access to safe health care.

Keywords: Nosocomial infections, Risk perception, Patient behavior

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EXAMINING SOCIO-CULTURAL INFLUENCES ON BREASTFEEDING OUTCOMES: A GLOBAL SENSITIVITY ANALYSIS APPROACH

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Background: In Romania, exclusive breastfeeding rates have fluctuated considerably between 2004 and 2016, despite educational campaigns. This is correlated with ongoing health issues in young children, especially in rural areas, due to unsafe feeding practices. **Objective:** The aim of this study is to analyze the correlations, and lack thereof, between several socio-cultural factors, and outcomes related to breastfeeding. **Material and methods:** The study utilized a questionnaire (N=80) completed by mothers to assess breastfeeding parameters, including: medical support offered, age, studies completed, urbanicity, single parenting. The relevant outputs considered in this study included: baby health perception, mother-baby attachment, breastfeeding duration, and formula usage. **Results :** Two types of quantitative analysis has been conducted: A global sensitivity analysis was used to inform the existence of possible correlations between the aforementioned inputs and outputs - note that this type of modern variance analysis does not impose a specific form on the correlation; it focuses on explaining variance between the factors considered. Classical statistical correlation coefficients computed based on the primary relationships found by the sensitivity analysis, including the Pearson's R test and the Kendall Tau test; their P-values were used to inform the statistical significance of the correlations found. The "Random Balance Designs for the Estimation of First Order Global Sensitivity Indices" [1] - or RBD-FAST - global sensitivity analysis algorithm has been used, with all inputs above (see "Materials and Methods"), and one output at a time. The most significant first-order sensitivity indices found (above 0.1, and over 3 times larger than the others) were for the following: Medical support offered (0.138) and single parenting (0.102) most strongly explained the variance in the mother's health perception over their child. Urbanicity (0.187) and medical support offered (0.179) most strongly explained the variance in the use of formula in parallel with breastfeeding. Classical statistical correlation tests revealed - due to their large P-values (>0.6) - that the correlations for the latter cannot be explained by a linear or monotonic relationship between the variables. Therefore, this data can form the basis of a more sophisticated statistical model such as modern surrogate modelling or symbolic regression. **Conclusions:** In summary, the study found that socio-cultural factors such as medical support, single parenting, and urbanicity significantly influence breastfeeding outcomes. Medical support and single parenting affected maternal health perceptions, while urbanicity impacted formula usage.

Keywords: Breastfeeding, high P-values, attachment, formula

CLINICAL - SURGICAL

“BUTTOCK PATHOLOGY”-A CASE SERIES PRESENTING RARE LESIONS OF THE GLUTEAL AREA

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Background: The gluteal areas are strong muscular regions of the human body covering the back of the girdle joints and the posterior part of the coxal bones. Due to the protected position (clothes, chairs and so on), gluteal areas are seldom involved in traumatic or other types of injuries. The paper presents two iatrogenic electrical burns, a giant neurofibroma and a malignant melanoma of perianal region, very rare cases that have not been published before in the studied medical literature. **Objective:** The aim of the study is to present the diagnosis and all the steps of the conservative and surgical treatment, highlighting surgical procedures that intend to cure such rare problems. **Material and methods:** The paper presents four different lesions occurring in the gluteal areas and the perianal region. This is a case series so all the patients have been collected by the local beginning of the medical problem. No statistical data could be observed because there are only four cases with different types of pathology. **Results :** For all the four cases is presented the beginning of the initial wound, the diagnosis, and the steps of the treatment until the complete healing is occurring. The first two cases present iatrogenic lesions of the buttock due to inadequate use of a medical device. Both cases have been treated only by conservative procedures (autolytic debridement following alternative treatment with silver sulfadiazine cream -SSD- and different absorbent dressings such nitrocellulose, alginates and polyurethane foam). The third case shows the treatment of a huge neurofibroma of the left buttock that has been excised and the extensive excisional defect has been grafted with STSG (split thickness skin graft). The last case presents a malignant melanoma of the perianal region which has been excised and the extensive excisional defect has been covered by two large bilateral triangular fascio-cutaneous flaps. **Conclusions:** All four cases had very good outcome, the iatrogenic lesions and the surgical wounds completely healing at the end of the treatment.

Keywords: autolytic debridement, neurofibroma, malignant melanoma, fascio-cutaneous flaps

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ADVANCED MATERNAL AGE IN MULTIPAROUS WOMEN: ASSOCIATED RISKS

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Background: The term multiparous refers to women who have given birth at least twice, with each delivery involving a fetus that reached the threshold of viability (≤ 20 gestational weeks), regardless of the outocome. Both low parity (primiparous and secundiparous women) and high parity (grand multiparous and great grand multiparous women) have multifactorial implications, among which maternal age represents a formidable element. Multiparous women - particularly those of advanced maternal age - are associated with a higher incidence of obstetric complications (such as preeclampsia, placenta previa, abruptio placenta, and maternal soft tissue injuries), as well as extra-obstetric complications. **Objective:** The objective of this study is to assess the risks associated with childbirth in multiparous women of advanced maternal age (≥35 years) in comparison to younger multiparous women (≤35 years). **Material and methods:** We conducted a retrospective observational study including a cohort of 2,807 patients, of whom 532 were multiparous. All patients were admitted to the Obstetrics and Gynecology department of the Targu Mures County Emergency Hospital, between January 1, 2023 and December 31, 2024. Relevant data were extracted from medical records. Statistical analysis was performed using IBM SPSS Statistics 2, applying the Chi-square test (considered significant at $p < 0.05$) and binary logistic regression. **Results :** The mean age of the multiparous women in the study was 30.22 years (±6.49). Of the total 532 multiparous patients (18.9%), 124 (23.3%) were classified as being of advanced maternal age (36-46 years). Based on the collected data, we aimed to quantify the increased risk of obstetric and extra-obstetric complications in the two groups: younger versus older multiparous women. Advanced maternal age was significantly associated with a higher incidence of preeclampsia ($p < 0.001$, OR = 1.500, 95% CI = 1.020-2.045), placenta previa ($p = 0.044$, OR = 4.005, 95% CI = 1.321-4.099), and extra-obstetric complications ($p < 0.001$, OR = 3.687, 95% CI = 1.696-8.015). No statistically significant association was found between maternal age and either abruptio placentae or soft tissue injuries. The results indicate that multiparous women aged 36-46 years have a 1.5-fold higher risk of developing preeclampsia, a four-fold increased risk of placenta previa, and nearly a four- fold increased risk of extra-obstetric complications compared to their younger counterparts. **Conclusions:** Multiparous

women of advanced maternal age (≥35 years) have a higher risk of complications compared to their younger counterparts, with risks increasing proportionally with parity and follow an age-associated pattern.

Keywords: multiparity, age, risks

MOLAR PREGNANCY-OUR EXPERIENCE

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Background: Gestational trophoblastic disease refers to a group of pathologies resulting from the abnormal histological development of the placental tissue, ranging from hydatidiform mole, also known as molar pregnancy (complete or partial) to the development of gestational trophoblastic neoplasms (NTG) such as invasive mole, placental site trophoblastic tumors, and choriocarcinoma. Considering the evolution of the medical system in recent decades, it is assumed that the early diagnosis of molar pregnancy is straightforward, but clinical reality contradicts this aspect and frequently highlights delays in establishing a positive diagnosis. **Objective:** This paper aims to explore the complexity of molar pregnancy from a diagnostic and therapeutic perspective, emphasizing the difficulties encountered in practice, as well as new management and post-therapeutic monitoring directions. **Material and methods:** The data presented is based on a retrospective study conducted at the Obstetrics-Gynecology Clinic of the Târgu-Mureș County Emergency Hospital during the period 01.01.2022-31.12.2024. **Results :** During this period, 14 patients were admitted with suspected molar pregnancy for investigations, positive diagnosis and specialized treatment. Based on the medical history and clinical examination, the main complaints of the patients were abdominal pain in 28.57% and vaginal bleeding in 71.42%. Ultrasound findings indicated that 78.57% of patients presented criteria suggestive of molar pregnancy with the gestational age at which suspicion arose varying: 64.28% in the first trimester and 35.71% in the second trimester. Laboratory examinations (serum β-hCG) showed the following changes: in 64.28% of cases, elevated values but below 100000 mUI/ml, and in 35.71% of cases, above 100000 mUI/ml. The suspicion of diagnosis was confirmed by histopathological examination in 92.85% (13 cases), with the following categories: 46.25% partial hydatidiform mole (6 cases), 38.46% complete hydatidiform mole (5 cases), and 15.38% invasive hydatidiform mole (2 cases). Regarding treatment, in 92.85% (12 cases) of instances, uterine evacuation curettage under ultrasound guidance and Oxytocin infusion was chosen, while in 7.14% (1 case), hysterectomy was performed. The complication rate due to retained molar (2 cases) or degenerate tissue (1 case) is 21.42%. The delay in diagnosis in most cases resulted from ambiguous ultrasound interpretations and, unfortunately, the inability to measure β-hCG at the central laboratory of the hospital (most patients had their β-hCG measured at a private laboratory). **Conclusions:** Although relatively rare, molar pregnancy remains a clinical entity that poses real challenges in establishing a positive diagnosis early. A favorable prognosis can be influenced by early recognition, complex monitoring accompanied by individualized treatment, and increased accessibility to diagnostic methods.

Keywords: molar pregnancy, gestational trophoblastic disease, experience

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EVALUATING THE IMPACT OF AN ENHANCED PERIOPERATIVE CARE UNIT ON ELECTIVE SURGICAL PATHWAYS AND CRITICAL CARE UTILISATION

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Background: The elective surgical burden in the UK is increasing with older, more comorbid patients having more complex procedures. The need for ring-fenced beds for high-risk elective surgical patients has never been greater. Previously, such patients would be booked into ITU, mixing elective and emergency care, posing logistical problems for ITU and reducing patient flow through theatres. **Objective:** The Enhanced Perioperative Care (EPOC) unit was developed in Cornwall to address a historical lack of Critical Care beds in the region and provide protected beds with enhanced, perioperative interventions, monitoring and senior clinical support. Data suggest EPOCs may effectively improve efficiency, outcomes, and patient satisfaction cost-effectively. **Material and methods:** We analysed 2,220 patients admitted to the EPOC unit at Royal Cornwall Hospitals NHS Trust from June 2021 to December 2024. Pre-EPOC data (2017-2020) served as a baseline for trend analysis and was compared with post-EPOC data (2021-2024). Outcomes measured included elective higher-level care bookings,

ICU escalations, theatre efficiency, surgical cancellations, and patient satisfaction. Anterior resection (AR) patients were specifically analysed to evaluate EPOC's impact on length of stay (LOS), readmission rates, and postoperative care pathways. **Results :** EPOC significantly reduced elective higher-level care bookings to HDU. In May 2021, 23 patients were booked for elective higher-level care in HDU, whereas in December 2024, EPOC managed 47 cases, with HDU handling only 3, demonstrating its capacity to absorb patients and ease HDU pressure. In 2021, 28.3% of AR patients were managed by EPOC post-operatively, rising to 92.5% in 2024, demonstrating a clear trend of EPOC becoming the standard of care for AR patients. EPOC maintained a stable LOS for AR patients, comparable to pre-EPOC levels, despite managing more frail and higher-risk individuals, preventing longer stays and reducing ICU burden. Furthermore, AR patients in EPOC had lower emergency readmission rates than non-EPOC patients. Post-EPOC introduction, elective and total surgical activity rose by 33% and 25%, respectively, with cancellations due to unavailable HDU beds declining. Theatre efficiency improved due to fewer lost theatre minutes and reduced prolonged recovery stays. Approximately three patients per month require escalation to ICU, either due to EPOC's weekend closure or promptly identified need for additional organ support. Patient satisfaction scores increased. **Conclusions:** EPOC is an effective, scalable solution for improving perioperative care. It offers a replicable framework for hospitals to optimise surgical pathways and manage ICU/HDU resources, ultimately setting a new standard for higher risk elective surgical care.

Keywords: Perioperative Care, Elective Surgery, Critical Care Utilisation, Theatre Efficiency

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AUGMENTED REALITY IN PITUITARY TUMOR SURGERY: A GAME CHANGER FOR PRECISION AND OUTCOMES

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Background: Pituitary tumors are usually benign, with macroadenomas defined as those exceeding 10 mm in diameter. These tumors can cause significant endocrine dysfunction and neurological symptoms, depending on their size, location, and hormonal activity. **Objective:** This report analyzes the clinical presentation, surgical intervention, and postoperative outcomes of a patient with a pituitary macroadenoma, highlighting the innovative use of intraoperative augmented reality in surgical navigation **Material and methods:** A 37-year-old male presented with clinical signs of Cushing's disease and hormonal imbalance. MRI revealed a pituitary macroadenoma (25×30 mm) with suprasellar extension. Preoperative endocrine assessment confirmed hypercortisolism and secondary diabetes insipidus. The patient underwent a transnasal-transsphenoidal approach under general anesthesia, utilizing an innovative neuronavigation system enhanced by augmented reality. Intraoperative use of augumented reality lead to faster more precise approach and an improved tumor control. Following the resection the sellar floor was reconstructed to prevent cerebrospinal fluid (CSF) leakage, with use of special polymer glue. Postoperative management included hormonal therapy, electrolyte monitoring, and imaging follow-up to assess residual tumor presence and complications. **Results :** Postoperatively, the patient remained hemodynamically stable, with resolution of Cushing's syndrome, though diabetes insipidus persisted but was medically controlled. Imaging confirmed complete tumor removal without residual mass or significant complications. Neurological examination was normal, with no signs of CSF leakage or meningeal irritation. Hormonal follow-up indicated remission of hypercortisolism and normalization of pituitary function. **Conclusions:** Successful surgical management of pituitary macroadenomas requires precise preoperative planning and careful intraoperative techniques. Among emerging advancements, augmented reality has shown promise in improving surgical accuracy and tumor resection.

Keywords: Macro adenoma, Transphenoidal surgery, Augmented Reality, Outcomes

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TIME-DEPENDENT OUTCOMES AFTER DECOMPRESSIVE CRANIECTOMY FOR ACUTE ISCHEMIC STROKE

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Background: Decompressive craniectomy is defined as a surgical procedure aimed at controlling increased intracranial pressure, a life-threatening consequence that occurs following an ischemic stroke, often associated with the development of malignant cerebral edema. **Objective:** The aim of this study is to evaluate the impact of

decompressive craniectomy on postoperative outcomes in patients experiencing acute ischemic stroke, with a focus on elucidating the critical role of prompt surgical intervention in the acute management of ischemic cerebrovascular disease. **Material and methods:** This is a retrospective analytical observational study, conducted in the Neurosurgery Clinic, Emergency County Hospital of Targu Mures, Romania, involving 68 patients (age 63 ± 11,2, 39 men, 29 women) who underwent decompressive craniectomy for acute ischemic stroke complicated by the emergence of malignant cerebral edema. The eligibility criteria for decompressive craniectomy include malignant ischemic stroke within the middle cerebral artery territory, clinical presentation consistent with a cerebrovascular event and infarct volume exceeding 150 cm3. Statistical analysis was performed using GraphPad and IBM SPSS with a p-value <0,05 considered statistically significant. **Results :** Temporal analysis of decompressive craniectomy revealed bimodal distribution, with peak interventions occurring between 25-47 hours (20,58% relative frequency) and >72 hours (36,76% relative frequency) post-acute cerebrovascular event. Cox regression analysis revealed that the 72-hour waiting period was significantly influenced by thrombectomy or thrombolysis (p <0,0001) and was notably shorter in patients with diabetes mellitus (p= 0,026). The overall mortality rate in this cohort was 11,8%. Postoperative outcomes demonstrate a notable reduction in mass effect (23,5%) and vascular edema (0%) on CT scans. Decompressive craniectomy resulted in a significant reduction of mass effect in 76,5% of the patient population. Preoperative clinical examination reveals a predominant incidence of facial paresis (80,9%) which resolves after surgery. Furthermore, aphasia, present in 66,2 % of patients before surgical intervention, decreases to 52,9% after surgery. The modified Rankin Scale (mRS) score distribution indicates a mean value of 3 points, suggesting that patients require moderate assistance but are able to walk independently. **Conclusions:** Our research indicates that prompt intervention can significantly improve outcomes in ischemic stroke patients by mitigating the consequences of malignant cerebral edema. Decompressive surgery can substantially restore pre-stroke quality of life, as it effectively addresses a multitude of potential complications.

Keywords: Acute Ischemic Stroke, Decompressive Craniectomy, Malignant Edema, Time-Dependent Outcomes

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EXPLORING THE ROLE OF THE MIDCUBITAL VEIN IN VASCULAR ACCESS FOR DIALYSIS: TECHNIQUE, INDICATIONS, AND MID-TERM RESULTS

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Background: Patients diagnosed with end-stage kidney disease (ESKD) require renal replacement therapy facilitated by vascular access. The first choice is the autologous arteriovenous fistula (AVF), known for its satisfactory long-term outcomes. However, the feasibility of creating an AVF depends on the vessel characteristics observed during the preoperative mapping. **Objective:** This study aims to demonstrate the feasibility and effectiveness of utilizing the cubital vein for AVF creation. Additionally, we will outline the surgical technique, indications for this AVF type, and the mid-term results. **Material and methods:** In this study, we analyzed all ESKD patients admitted to the Vascular Surgery Clinic in 2024 for AVF creation. Patients who received radio-cephalic AVF, brachio-cephalic AVF, or brachio-basilic AVF were excluded from the analysis. Before surgery, each patient underwent a vascular mapping assessment, followed by evaluations at 12-hours and 6-weeks postoperative. The ultrasound examination measured the diameters of the radial artery and cubital vein, along with flow assessment at the brachial artery level. This research was funded by George Emil Palade UMFST of Targu Mureș, Romania, grant number 170/3/09.01.2024. **Results :** In the present study, we enrolled 14 patients with a mean age of 60.33 years, including nine males and four females. Preoperatively, we measured a mean artery diameter of 2.59 mm and a vein diameter of 2.99 mm. During the follow-up period, at 12-hours postoperative, we observed an average increase of approximately 51% in venous diameter (a mean diameter of 4.49 mm). Additionally, at 6-weeks, we recorded an average diameter of 8.05 mm. From the moment of AVF placement, participants were monitored for an average of 4.74 months. The surgical success rate was 100%, with a maturation rate of 92.85% at 6 weeks (notably, one case did not meet the maturation criteria at 6 weeks due to the presence of heart failure with severe impairment of cardiac function). **Conclusions:** Utilizing the cubital vein for creating an AVF is effective and yields excellent medium-term outcomes. Additionally, since the cubital vein drains into both the cephalic and basilic veins, the risk of aneurysm formation in this AVF is significantly reduced. Furthermore, this approach allows us to preserve the cephalic and basilic veins in the arm, which can be used for a new AVF in the event of failure.

Keywords: Arteriovenous fistula, Vascular surgery, Vascular access, Dialysis

IMPACT OF VASCULAR MAPPING ON ARTERIOVENOUS FISTULA (AVF) SURVIVAL AMONG HEMODIALYSIS PATIENTS

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Background: Arteriovenous fistula (AVF) is the preferred vascular access for patients undergoing chronic hemodialysis, as it carries a lower risk than arteriovenous grafts and central venous catheters (CVC). **Objective:** This study aims to investigate the impact of preoperative vascular mapping on the long-term functionality of AVFs. **Material and methods:** This retrospective observational study included 216 patients with end-stage chronic kidney disease who underwent surgical AVF creation at the Vascular Surgery Clinic between 2019 and 2024. Demographic data, comorbidities, and laboratory results were collected from the hospital's electronic records. Preoperative vascular mapping included measurements of the arterial and venous diameters. Long-term AVF patency was assessed through follow-up at chronic dialysis centers. This work was supported by the George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mures, Romania, with research grant number 170/3/09.01.2024. **Results :** In the cohort with AVF failure, there was a significantly higher prevalence of radio-cephalic AVF (p=0.020) and the presence of CVC at the time of AVF creation (p<0.001). Preoperative vascular mapping revealed significantly smaller arterial (p<0.001) and venous (p<0.001) diameters in this group. Receiver Operating Characteristic (ROC) curve analysis demonstrated a significant association between preoperative vessel diameters and long-term AVF failure, with optimal cut-off values of 2.75 mm for the artery (AUC: 0.670, p=0.014) and 2.90 mm for the vein (AUC: 0.662, p=0.005). Kaplan-Meier survival analysis showed that smaller vessel diameters at baseline were linked to a higher incidence of AVF failure (p=0.003 for artery, p=0.005 for vein). Cox regression analysis further revealed that larger arterial (HR: 0.56, p<0.001) and venous (HR: 0.54, p<0.001) diameters were associated with improved long-term AVF survival. **Conclusions:** Preoperative assessment of arterial and venous diameters through vascular mapping is strongly correlated with long-term AVF failure, suggesting its potential as an important predictor for AVF outcomes.

Keywords: arteriovenous fistula, vascular mapping, vascular access, vascular surgery

ADVANTAGES OF MINIMALLY INVASIVE MITRAL VALVE SURGERY IN MANAGEMENT OF SEVERE MITRAL REGURGITATION

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Background: Mitral regurgitation (MR) presents itself as one of the most common valvular pathologies worldwide. For decades the primary surgical correction method of severe/moderate to severe MR has been the surgical repair/replacement of the mitral valve (MV) through the conventional sternotomy. With the rise of minimally invasive mitral valve surgery (MIMVS), a new approach of MV correction via right mini-thoracotomy has been gaining popularity due to its non-invasive benefits. **Objective:** The main objective of this study is to review the advantages of MIMVS by evaluating the performed surgical correction method as well as the postoperative echocardiographic manifestations in retrospect of the severity of MR. **Material and methods:** A total of 20 patients (11 men, 9 women) ages from 35 to 74 admitted at the IuBCVT Targu Mures with diagnosed severe MR who underwent MIMVS from 2022 until 2024. Additionally, the postoperative evolution of MR has been documented through echocardiographic imaging. **Results :** From 20 patients only 2 cases received a total mitral valve replacement with a bioprosthetic valve, concurrently 18 cases received an annuloplasty with a MV reconstruction which in addition included 16 cases that benefited from implantation of NeoChords. During the postoperative echocardiographic reassessment, it is to be noted that 63% of patients presented with MR grade 1, whereas 21% presented with MR grade 1/2, 11% showed MR grade 0/1 and 5% had no observed regurgitation. None required long-term chronic anticoagulation therapy. All patients were mobilized on the 1st postoperative day with no respiratory complications and reported low intensity of pain from the surgical wound that measured approximately 5 cm in length. **Conclusions:** In comparison to conventional sternotomy, endoscopic access offers a less invasive surgical entry to the MV, thus creating less surgical trauma which allows much faster regeneration and overall reduced blood loss that will potentially require less blood transfusion. The favourable cosmetic evolution has been

observed, resulting in decreased risk of possible infections, decreased postoperative pain and better aesthetical outcome. MIMVS provides additional thorax stability coupled with increased thorax mobility which allowed early mobilisation of the patient postoperatively. 90 % of patients did not require a valve replacement, allowing to preserve the natural MV as well as showing significant improvement of MR. In conclusion, although MIMVS presents several challenges such as technical complexity of surgical execution, accompanied with a steep learning curve, the long-term advantages including patients´ faster recovery and avoiding possible complications of lifelong anticoagulation therapy outweigh the arising difficulties.

Keywords: Minimally Invasive Mitral Valve Surgery, Mitral Valve Reconstruction, Annuloplasty, Mitral Regurgitation

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THE IMPORTANCE OF MULTIDISCIPLINARY COLLABORATION IN COMPLEX PEDIATRIC GYNECOLOGICAL SURGERY

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Background: In pediatric surgery, a multidisciplinary approach is essential to ensure comprehensive and effective care, accurate diagnosis, and appropriate therapeutic management. This collaboration significantly contributes to minimizing complications and optimizing patient prognosis. **Objective:** This paper highlights the importance of multidisciplinary collaboration in the management of gynecological pathologies in children and adolescents, emphasizing the need for a complex and individualized approach, considering the delicate nature and specific characteristics of each case. **Material and methods:** The first case involves a 12-year-old female patient with multiple comorbidities, including morbid obesity (130 kg). Following a gynecological consultation, a diagnosis of a giant right ovarian cyst was confirmed. Given the cyst's size (50 cm) and the potential risk of complications, surgical intervention was indicated. The procedure was performed by a team consisting of two pediatric surgeons and two gynecologists and included right ovarian cystectomy and adnexectomy via laparotomy, viscerolysis, and prophylactic appendectomy. The second case concerns an 11-year-old female patient diagnosed with a complex genital malformation - a double uterus with a communicating left hemi-uterus. Due to the increased risk of complications, a multidisciplinary team comprising pediatric surgeons and gynecologists performed a laparoscopic left salpingectomy for a left-sided pyosalpinx. Subsequently, the patient presented with suspicion of hematocolpos. Vaginal examination revealed that the previously surgically created vaginal orifice had almost completely closed. Surgical exploration involved widening the orifice towards the midline and marsupialization of the vaginal mucosa to the common vaginal cavity. **Results :** Both cases reflect complex gynecological pathologies requiring advanced and personalized therapeutic management. These cases necessitate a careful balance between the principles of pediatric surgery and those of adult gynecological surgery, the latter often favoring a more radical approach. **Conclusions:** Collaboration among specialists from various medical disciplines significantly enhances the quality of patient care by combining the expertise and experience of each field. This synergy allows not only for the establishment of an early and precise diagnosis but also for the prompt initiation of optimal therapeutic strategies. An adequate interdisciplinary approach accelerates decision-making, shortens the time to surgical intervention, and improves patient prognosis while minimizing postoperative risks. Therefore, collaboration between specialists from surgical fields, including pediatric surgery, is crucial to ensuring comprehensive and effective patient care. It is also important that this collaboration continues postoperatively, as the gynecologist may more readily identify certain complications, while the pediatric surgeon can tailor the recovery process to a growing organism, optimizing long-term therapeutic outcomes.

Keywords: Cystectomy, Genital malformation, Pediatric surgery

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CARDIAC SURGERY IN INFECTIVE ENDOCARDITIS: AN EIGHT-YEAR RETROSPECTIVE INSTITUTIONAL STUDY

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Background: Infective endocarditis (IE) is a life-threatening infection of the endocardium, predominantly involving the cardiac valves. The aortic and mitral valves are most frequently affected due to high intracardiac pressures,

turbulent flow, and elevated endothelial shear stress. This study analyzes the predominant valvular pathologies and surgical strategies implemented in managing IE. Surgical intervention is typically indicated in cases of severe valvular dysfunction, heart failure, or local destructive complications. IE remains a diagnostic and therapeutic challenge, necessitating prompt recognition and a multidisciplinary management approach. **Objective:** This study aims to identify the valves most commonly affected by infective vegetations, characterize the associated valvular lesions, profile the most susceptible patient demographics, assess the spectrum of complications, and outline the surgical approaches utilized in our cardiac center. **Material and methods:** We conducted a retrospective analysis of 60 patients diagnosed with IE who underwent cardiac surgery at IUBCVT Târgu Mureș, Romania, between January 2017 and February 2025. All patients met the diagnostic criteria for IE according to the modified Duke criteria, with positive blood cultures and consistently elevated inflammatory markers, including C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), and leukocyte count. The study primarily focused on the surgical management of IE and its clinical outcomes. **Results :** The aortic and mitral valves were the most frequently involved, in 93.8% and 5.2% of cases respectively. Dual-valve involvement was observed in 65% of cases. Local complications included abscess formation, leafle0074 perforations, and bulky vegetations in 71.5% of patients. Systemic complications were significant: 51% developed septic embolism, acute pulmonary edema, or pulmonary hypertension secondary to embolic events. Prompt surgical intervention contributed to a 0% intraoperative mortality rate. The main procedures were valve replacement with bioprosthetic valves in 81% of cases, valvuloplasty in 19%, and abscess drainage performed in 65%. **Conclusions:** The findings confirm a predominant involvement of the left-sided heart valves. Valvular stenosis caused by calcified and infected vegetations was the most common lesion. A wide range of complications was documented, with local manifestations such as perivalvular abscesses, leaflet perforations, bulky vegetations, and pericardial involvement, as well as systemic events including septic embolism, ischemic stroke, and acute pulmonary edema. Surgical interventions included prosthetic valve replacement or reconstructive valvuloplasty, often associated with radical debridement of infected tissue, excision of vegetations, and drainage of perivalvular abscesses. In select cases, pleural or pericardial drainage was also required due to thoracic extension of the infectious process.

Keywords: valve replacement surgery, systemic embolism, infective endocarditis

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THE ROLE OF SURGICAL TREATMENT IN DIFFERENTIATED THYROID CANCER

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Background: For the past decades, thyroid carcinoma not only has seen a rising incidence but also became the most frequent type of endocrine cancer. Thyroidectomy is the surgical procedure indicated for patients with thyroid tumors whether malignant characteristics are confirmed or suspected, as well as for benign tumors with increased size associated with compressive phenomena. **Objective:** Our study aims to highlight the role of surgery in the management of thyroid cancer and present the experience and results of Second Department of Surgery in this field. **Material and methods:** We conducted a retrospective study, in which we included patients who underwent thyroidectomy interventions for differentiated thyroid cancer in our surgery department between March 2024 and February 2025. We excluded patients with inconclusive histological examination at the fine-needle aspiration biopsy and those with medullary or anaplastic thyroid cancer. **Results :** The study group comprises 36 patients with diverse types of differentiated thyroid cancer most of them being women between 40 and 60 years old. In terms of surgical interventions, the majority of patients (33 patients) have had a total thyroidectomy procedure, for 1 patient right istmlobectomy was performed, 1 underwent left istmlobectomy and completion thyroidectomy was done in 1 case. In 19 cases central compartment neck dissection was needed. The majority of patients were diagnosed and received surgical treatment at an early stage: 27 patients with pT1 tumors, 4 with pT2 and 3 cases of pT3 stage. The most frequent histological type was conventional papillary carcinoma (26 cases). In more than half of the patients with lymphadenectomy (10 cases), lymphnode metastases were found at the histopathological exam of the surgical sample. **Conclusions:** Thyroid cancer needs a multidisciplinary approach in order for the patients to get the best therapeutic management. Thyroidectomy is a safe and effective procedure for patients with malignant thyroid nodules, ensuring a favorable mid- and long-term prognosis when done properly by experienced surgical teams in dedicated centers.

Keywords: Thyroid cancer, Thyroidectomy, Thyroidectomy

INNOVATIVE APPROACH IN THE SURGICAL TREATMENT OF MALLET FINGER DEFORMITY: PROXIMAL PEDICLED SKIN FLAP TECHNIQUE FOR RESTORING EXTENSOR FUNCTION – A MULTIPLE CASE PRESENTATION

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Background: Post-traumatic Mallet Finger deformity is a commonly encountered injury of the finger extensor apparatus, characterized by the loss of active extension at the level of the distal interphalangeal joint following direct trauma. Without appropriate intervention, this condition can progress to permanent deformities, negatively impacting hand function. Surgical treatment is indicated in cases of extensive extensor tendon avulsion or significant bone fragment involvement. **Objective:** The treatment of this condition remains a subject of debate, with numerous conservative and surgical techniques proposed. We present a series of cases in which an innovative extensor apparatus reconstruction technique was used, employing a proximal pedicled deepithelised dermal flap, offering superior biomechanical and aesthetic benefits. **Material and methods:** In this context, we present an innovative technique for extensor apparatus reconstruction, including four cases of patients with extensor apparatus injuries, one of whom had unilateral involvement of two digits. The surgical procedure involved the use of a proximal pedicled deepithelised dermal flap intended to restore the continuity of the extensor apparatus, combined with intramedullary fixation for stabilizing the distal interphalangeal joint, with the goal of restoring extensor function in patients with Mallet Finger injuries. The interventions were performed under local anesthesia, through a dorsal incision at the level of the distal and middle phalanx.We started with a dermal incision, creating a 3-5 mm wide pedicled flap. The flap was deepithelialized using hydrodissection and lifted from the paratenon layer, identifying the extensor tendon lesion. It was reinserted at the proximal third of the distal phalanx, in order to restore the integrity of the extensor tendon and stabilize the distal interphalangeal joint. Maximum stabilization was achieved using an intramedullary pin, followed by a progressive functional recovery protocol. **Results :** Compared to classical techniques, this method demonstrated accelerated recovery, significantly reduced postoperative risks, and successfully restored extensor function without residual biomechanical restrictions. The integration of the flap was optimal, demonstrating significantly superior clinical effectiveness. **Conclusions:** The technique of reconstruction with a proximal pedicled deepithelised dermal flap represents a safe and highly effective alternative for the treatment of post-traumatic Mallet Finger injuries. This procedure offers superior functional and aesthetic advantages, minimizes postoperative risks, and accelerates recovery, showing significant potential in optimizing therapeutic strategies in reconstructive hand surgery.

Keywords: Mallet Finger, proximal pedicled deepithelised dermal flap, extensor tendon reconstruction, intramedullary pin

TOTAL KNEE ARTHROPLASTY IN THE CASE OF VALGUS DEFORMITY

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Background: Rheumatoid arthritis (RA) is a chronic autoimmune disease characterized by inflammation in synovial joints, leading to joint destruction. RA primarily affects smaller joints, such as those in the hands and feet, but it can also involve larger joints like the knees. Without proper treatment, RA leads to joint deformities, pain, and reduced mobility, significantly impairing quality of life. The disease is more common in individuals aged 30-50, with a higher incidence in women. The treatment of RA includes disease-modifying antirheumatic drugs (DMARDs) that reduce inflammation and prevent joint damage. However, in advanced cases where medical treatment is insufficient, surgical interventions like total knee arthroplasty (TKA) are necessary. RA patients often face unique challenges in knee replacement surgeries due to systemic inflammation, increasing the risk of complications like infection and poor wound healing. Additionally, RA-induced deformities, such as valgus deformity, complicate TKA, requiring specialized implants for alignment correction and prolonged postoperative rehabilitation. **Objective:** Analyze the impact of valgus deformity on TKA outcomes. Compare postoperative results between patients with valgus and varus deformities. Identify factors influencing surgical success in RA patients with valgus deformity. Assess preoperative and postoperative management in severe valgus cases. **Material and methods:** Study Type:

Case study and literature review. Patient: 48-year-old female diagnosed with rheumatoid arthritis. Orthopedic History: Bilateral meniscectomy, total hip and knee prostheses, right hip periprosthetic fracture. Surgical Methodology: Lateral approach (Keblish) for valgus >10°, constrained condylar knee (CCK) implant, progressive release of soft tissues. **Results :** Significant improvement in Knee Society Score (KSS): from 33.7 ± 16.4 preoperatively to 93.5 ± 5.29 at 1 year. Postoperative stiffness was slightly higher in valgus patients compared to varus. Increased risk of complications linked to socioeconomic disadvantages. **Conclusions:** TKA for valgus deformity yields results similar to varus deformities. Lateral approach and constrained implants ensure proper alignment and stability. Socioeconomic factors influence recovery and rehabilitation access. Personalized surgical approaches lead to excellent postoperative outcomes.

Keywords: Total Knee Arthroplasty (TKA), Valgus Deformity, Rheumatoid Arthritis (RA), Surgical Management

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OTOPLASTY: TECHNIQUES AND BENEFITS IN AESTHETIC EAR RESHAPING

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Background: In a society increasingly sensitive to the nuances of aesthetic appearance, the ears play a significant role in the harmony of facial proportions. Otoplasty is a complex surgical procedure aimed at correcting proeminent or deformed ears to improve proportional facial aesthetics and psychosocial well-being. **Objective:** This study focuses on presenting the fasciperichondral flap technique, in addition to conventional methods and to assess the aesthetic and functional outcomes of otoplasty, as well as patient satisfaction and complication rates, based on a retrospective analysis of clinical cases. **Material and methods:** A retrospective study was conducted on 24 patients who underwent otoplasty between 2022 and 2024 within the Plastic Surgery and Reconstructive Microsurgery Unit in Târgu-Mureș. Data collected from the patients included demographic information such as age, sex, place of origin, the occurrence of the malformation (unilateral or bilateral), measurements such as the distance from the helical rim to the mastoid skin and the auriculomastoid angle, as well as postoperative follow-up and the satisfaction level of each patient. The technique used was a combination of cartilage-cutting with retro auricular fascioperichondral flap. **Results :** We considered each ear an independent variable, with a total of 48 procedures analyzed. No major complications or need for revision surgery were recorded. The level of patient satisfaction was high, out of the total 24 patients, 14 rated the surgical outcome with the maximum score (VAS = 10), 7 patients gave a score of 9, and 3 patients assigned a score of 8, resulting in an average VAS score of 9.46. In our results, the measurements from the newly formed helical rim to the mastoid skin ranged between 10 and 21 mm, and the new auriculomastoid angles ranged between 18 and 27 degrees (mean of 23.40), which is considered normal according to anthropometric guidelines. Aesthetic evaluation showed significant improvement in ear projection and symmetry. Statistical analysis revealed a statistically significant correlation and of moderate intensity, between age and superior helicoidal-mastoidian distance in the postoperative period ($r = 0.466$, $p < 0.001$) and at 6 weeks postoperatively ($r = 0.477$, $p < 0.001$). **Conclusions:** The combination of cartilage-cutting techniques with a retroauricular fascioperichondrial flap is an effective otoplasty method, offering favorable aesthetic outcomes and a low recurrence rate. Beyond the technical success, patient satisfaction remains a central aspect of aesthetic surgery, reflecting both objective correction and personal perception. This procedure not only restores facial balance but also contributes significantly to improving self-esteem and enhancing personal confidence.

Keywords: otoplasty, proeminent ear, fasciperichondral flap, pacient satisfaction

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THE ROLE OF STRENGTH AND EXERCISE IN DEVELOPING A NEW PROTOCOL THAT ENHANCES ARTERIOVENOUS FISTULA PARAMETERS IN DIALYSIS PATIENTS

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Background: Arteriovenous fistula (AVF) is the optimal vascular access method for hemodialysis in end-stage kidney disease patients. Nonetheless, inadequate vessel quality in the forearm may preclude the establishment of an AVF. At present, a validated pre-operative isometric exercise protocol aimed at enhancing vessel diameter is lacking. **Objective:** This study intends to examine the correlation between muscular strength and vascular

diameter. Furthermore, we assessed the effects of isometric exercises on venous diameter in the upper limb. **Material and methods:** This study enrolled 24 healthy subjects, and the following data were collected: demographic data and BMI. Each subject underwent the pre-operative vascular mapping protocol for AVF creation on both upper limbs. We recorded the cephalic vein and radial artery diameter at the distal third levels in the forearm and the cephalic/basilic vein and brachial artery diameter at the same levels in the arm. We also quantified blood flow at the brachial artery level, including peak systolic velocity (PSV). The maximum force in the upper limbs was recorded using a digital dynamometer (Kern,Germany). This research was funded by George Emil Palade, UMFST of Targu Mureș, Romania, grant number 170/3/09.01.2024. **Results :** The mean age of participants was 27.68±3.23 years, with a mean BMI of 23.58±4.51. At the distal forearm, the mean diameter measured for the cephalic vein was 2.69±0.53 mm, while the radial artery averaged 2.33±0.39 mm. At the arm level, the mean diameters were 4.09±0.88 mm for the cephalic vein, 4.73±1.22 mm for the basilic vein, and 3.91±0.76 mm for the brachial artery. The mean brachial artery flow was recorded at 76.94±24.19 ml/min with a PSV of 99.37±20.81 and strength measured at 37.28±16.06 kg. No differences were observed between the dominant and non-dominant upper limbs. However, 13 subjects did not fulfill the criteria for a radio-cephalic AVF, 21 were ineligible for a brachio-cephalic AVF, and 15 were ineligible for a brachio-basilic AVF. Additionally, a positive correlation was noted between strength and the diameter of the cephalic vein at the arm ($r=0.383$, $p=0.040$), cubital vein ($r=0.436$, $p=0.016$), radial artery ($r=0.480$, $p=0.007$), and brachial artery ($r=0.787$, $p<0.001$). **Conclusions:** Our research reveals that many individuals fail to satisfy the AVF criteria. It also shows a positive relationship between strength and vascular diameter, which is crucial for the success of AVF. By introducing an AVF protocol that includes customized isometric exercises, we could increase vascular diameter and, in turn, boost the chances of successful AVF maturation.

Keywords: Arteriovenous Fistula, Vascular Mapping, Isometric Exercises, Vascular Surgery

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THE ROLE OF 3D-PRINTED MODELS IN ENHANCING SURGICAL SKILLS FOR VASCULAR SURGERY RESIDENTS

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Background: Open vascular surgery demands exceptional skill and precision to achieve optimal patient outcomes. Unfortunately, the limited training time for residents, combined with the high number of trainees, can hinder skill optimization and experience accumulation. Therefore, developing simulator models tailored to individual patient characteristics using 3D printing technology could significantly enhance resident training. **Objective:** This study aims to create and validate a 3D-printed simulator for training in proximal anastomosis for aortofemoral bypass. Additionally, we will examine how this simulator impacts the surgical skills of vascular surgery residents. **Material and methods:** Concerning the 3D-printed simulator, we construct a custom abdominal cavity derived from one of our patients' computed tomography angiography (CTA). After the processing of the CTA, the obtained data is imported and segmented using Slicer3D software to delineate the pertinent anatomical structures. The resultant models are subsequently exported in STL format and refined in Blender for topological corrections, incorporation of support elements, and preparation for the printing process. Following optimization, the files are entered into the slicing software (Cura, Anycubic Slicer), where the printing parameters, materials (PLA), and necessary supports are configured. The resulting physical model is then employed as a foundation for ballistic gelatin casting and integrating soft components, thus providing a realistic surgical simulator for practical training. To validate the 3D-printed simulator model, two consultant vascular surgeons and 11 vascular surgery residents, each with varying surgical experience levels, participated in the evaluation process. The performance of each operator was assessed through quantitative and qualitative metrics. **Results :** Concerning the total duration required to execute the anastomosis at the abdominal aorta's level, our analysis revealed a mean value of 302±8.48 seconds for consultants, 581.6±131.43 seconds for fourth and fifth-year residents, and 981.83±148.03 seconds for second and third-year residents. Furthermore, we identified a negative correlation between the operator's experience, measured in years of practice in vascular surgery, and the total time taken to perform the procedure ($r=-0.720$, $p=0.005$). Moreover, the operators conveyed their satisfaction regarding the fidelity of our proposed model, specifically emphasizing the efficacy of the three-dimensional printed model of the abdominal cavity, the ballistic gelatin casting for retroperitoneal coverage, and the utilization of porcine aorta. **Conclusions:** The procedural steps were reproduced with high fidelity, and the subjects' performance metrics were systematically correlated with the operators' training and experience. This model serves as a valuable tool for identifying areas of competence or deficiency in the techniques of aortic anastomosis during vascular training.

Keywords: 3D-printing, Vascular Surgery, Model Training, Surgical Skills

NEGATIVE PRESSURE WOUND THERAPY FOR DIABETIC FOOT ULCERS, A SEVERE CHRONIC WOUNDCOMPLICATION IN DIABETIC PATIENTS

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Background: Diabetic foot ulcers are common wound complications in patients with diabetes mellitus. A commonly used technique to treat diabetic foot ulcers is negative pressure wound therapy (NPWT). With this technique, wound healing is promoted by enhancing perfusion, stimulating the granulation of the tissue, and reducing bacterial load. An insulation due to the Wagner classification for 5-20 days results in lower rates of amputation and a shorter hospitalization compared to the conventional healing methods. Especially in Wagner stages 3 and 4, the negative pressure wound therapy shows evidence of avoiding major surgeries. **Objective:** Show the aim of NPWT in diabetic foot ulcers **Material and methods:** In retrospective studies of patients with diabetic foot ulcers who received an NPWT, the data is collected from medical records. The patient received an NPWT with regular dressing changes, and all of them got monitored for infections and wound healing improvement. **Results :** The study includes patients with diabetes type 1 and 2; in the study, there was a higher number of male patients. The study shows us that the patients who got selected for NPWT with an average therapy time of 5-20 days had significantly better results, fewer complications, and lower amputation rates than patients with conventional therapy. The usage of an NPWT reduces the healing time on average by 33% due to that it´s showing better outcomes than regular therapy. **Conclusions:** The negative pressure wound therapy is a very good and effective therapy option for diabetic foot ulcers. It helps the patients recover faster, spend less time in the hospital, and lower the risk of amputations and major surgical interventions. Due to all these benefits for patients and doctors, negative pressure wound therapy should get added as standard management in diabetic foot ulcer therapy. But still more research is needed to optimize the processes, like refining the therapy parameters and optimizing the selection of the patients, to get the maximum benefit out of the NPWT.

Keywords: diabetic ulcers, negative pressure wound therapy, chronic wounds, diabetes mellitus

A COMPARISON OF CLINICAL OUTCOMES OF TOTAL KNEE ARTHROPLASTY USING CRUCIATE-RETAINING AND POSTERIOR-STABILIZED IMPLANTS

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Background: Total knee arthroplasty (TKA) represents a surgical procedure designed to substitute a compromised knee joint with a prosthetic implant. This operation is extensively conducted, driven by its success rate and the growing demand from patients needing care. The main condition prompting TKA is knee osteoarthritis. **Objective:** This study aimed to compare the clinical outcomes of cruciate-retaining and posterior-stabilized total knee prostheses, focusing on postoperative range of motion and functional improvement. **Material and methods:** A retrospective cohort study was conducted involving 40 patients who underwent TKA at the Clinic of Orthopaedics and Traumatology, Mureș County Clinical Hospital, Romania, between July 2024 and April 2025. Patients were divided into two groups based on implant type: cruciate-retaining (CR, n=18) and posterior-stabilized (PS, n=22) prostheses. Demographic characteristics, perioperative data (including hemoglobin and hematocrit levels), administration of tranexamic acid, and functional outcomes were extracted from electronic medical records. Functional evaluation included the Knee Society Score (KSS) and range of motion, recorded preoperatively and at three months postoperatively. Patients with incomplete data were excluded from analysis. Comparisons between groups were performed using the Mann-Whitney U test for continuous variables and the chi-square test for categorical variables. A p-value of <0.05 was considered statistically significant. **Results :** Patients who received PS prostheses were older than those in the CR group, with a median age of 70 years vs. 65 years (p=0.008). Perioperative laboratory showed lower median hemoglobin and hematocrit levels in the PS (13.55 g/dL and 40.6%, respectively) compared to the CR group (14.2 g/dL and 42.3%, p=0.04 and p=0.02). Tranexamic acid was administered intraoperatively in a higher proportion of patients in the PS (76.47%) than in the CR group (23.53%, p < 0.001). Preoperative functional assessment revealed higher Knee Society Scores (KSS) in the CR (mean 36.94) compared to the PS group (mean 31.5, p = 0.02). However, at three months postoperatively, patients in the PS

group achieved greater knee flexion (112°) than those in the CR group (104°, p=0.04). **Conclusions:** CR prostheses appear to be more commonly selected for younger patients, while PS implants are associated with slightly better flexion at three months postoperatively. These findings suggest a potential age- and outcome-based selection pattern between implant types. This study provides preliminary evidence to support further large-scale, prospective research comparing the functional and clinical performance of CR versus PS knee prostheses.

Keywords: total knee arthroplasty, cruciate-retaining, posterior-stabilized

EVALUATING POSTOPERATIVE OUTCOMES OF LAPAROSCOPIC VERSUS OPEN COLON CANCER RESECTION IN OBESE PATIENTS

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Background: The incidence of colon cancer is continually increasing worldwide, posing a significant global health burden. With the simultaneous increase in global obesity, assessing colon cancer treatment methods specifically amongst obese patients provides the possibility of optimizing surgical outcomes. Although laparoscopic surgery has been associated with improved outcomes, obesity was traditionally deemed a contraindication for laparoscopic surgery due to technical difficulty and higher expected complication rates. As a result, surgeons generally prefer an open laparotomy approach to colon cancer resection in this cohort. By assessing the different colon cancer resection methods and their outcomes in obese patients, more insight can be provided on the feasibility and associated risks of minimally invasive procedures amongst this demographic. **Objective:** This study compares the outcomes of laparoscopic versus open surgical approaches of colon cancer resection amongst obese patients to provide insight on the optimal surgical procedure in this demographic. **Material and methods:** A retrospective study was performed using data collected from a cohort of 38 obese patients who underwent colon cancer resection at the Târgu Mureș County Emergency Clinical Hospital between 2015-2025. Patients who underwent emergent colon resection, as well as patients with metastatic and locally invasive cancer were excluded to avoid the involvement of confounding factors. Postoperative complications, recurrence, and hospital stay data were recorded and stratified according to the corresponding procedure. Fisher's Exact Test and the Mann-Whitney U test with a significance level set at $p<0.05$ were used to assess whether there is a statistically significant difference of outcomes between laparoscopic and open colon cancer resection in obese patients. **Results :** A total of 38 obese patients were included, of which 11 underwent laparoscopic colon cancer resection and 27 underwent open colon cancer resection. 1 laparoscopic resection patient (9.1%) and 8 open resection patients (29.6%) experienced complications and readmission. According to the analysis of this cohort, no statistically significant difference between the complication rates (p=0.2373), as well as the recurrence rates (p=0.3902) of the two surgical approaches was found. The length of hospital stay was significantly reduced in the laparoscopic cohort compared to the open resection cohort (p=0.00544). **Conclusions:** While laparoscopic colon cancer resection in obese patients was deemed a contraindication for several years, the results of this study prove that laparoscopic surgery does not demonstrate a greater risk to obese patients when compared to open surgery. This study also demonstrates the benefits of minimally invasive surgery in providing faster recovery and shorter hospital stay in obese patients.

Keywords: Colon Cancer, Obesity, Laparoscopic Resection

PERCEVAL SUTURELESS AORTIC VALVE REPLACEMENT VERSUS CONVENTIONAL BIOPROSTHESIS: PRELIMINARY FINDINGS FROM A RETROSPECTIVE STUDY

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Background: Aortic stenosis is a significant cause of mortality and morbidity, with a substantial economic impact on healthcare systems. It is characterized by narrowing of the aortic valve orifice, resulting in pressure overload and compensatory left ventricular hypertrophy. Surgical aortic valve replacement is still the treatment of choice for patients with severe aortic stenosis. In recent years, sutureless valves have been increasingly adopted, with their main benefit being a simplified replacement technique associated with improved hemodynamic outcomes and reduced cardiopulmonary bypass (CPB) and cross-clamp times. **Objective:** The aim of this study was to evaluate

the efficacy and hemodynamic performance of the sutureless Perceval aortic valves, when compared to conventional bioprostheses. **Material and methods:** This is a retrospective study conducted at the Cardiovascular Diseases and Heart Transplant Institute of Târgu Mureș, a high-volume tertiary referral center in Romania. We collected data from 118 patients, including 77 who underwent conventional bioprosthesis implantation and 41 who received sutureless Perceval aortic valve replacement, between November 2017 and March 2025. The Perceval group was further subdivided into two subgroups: 14 patients with associated procedures and 27 patients with isolated valve replacement. Baseline characteristics, comorbidities, and etiologies were comparable across all groups. **Results :** The sutureless Perceval aortic valve was associated with improved hemodynamic parameters and reduced procedural and ventilation times compared to conventional bioprostheses. The group of 27 patients demonstrated a shorter operation time (209.29 ± 44.38 min vs 213.64 ± 62.89 min; p=0.74), reduced cardiopulmonary bypass duration (88.44 ± 18.12 min vs 105.07 ± 47.32 min; p=0.07), shorter aortic cross-clamp time (59.66 ± 12.24 min vs 74.38 ± 29.94 min; p=0.004, a statistically significant difference), and a decreased mechanical ventilation duration (mean: 12.8 ± 4.8 h vs 16.4 ± 9.1 h; p=0.009, also statistically significant). No statistically significant difference was observed in the postoperative transvalvular gradients between the two groups (29.80 ± 8.13 mmHg vs. 34.44 ± 14.63 mmHg, p = 0.18). **Conclusions:** Aortic valve replacement using the Perceval S valve appears to be a favourable alternative in high-risk patients with severe aortic stenosis, comorbidities and small aortic annulus, due to shortened operative and ventilation times and satisfactory hemodynamic performance. These advantages are particularly relevant in the context of minimally invasive surgical approaches.

Keywords: Aortic stenosis, Perceval, Sutureless, Retrospective study

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COMPLICATIONS OF PERIPHERAL VASCULAR ACCESS IN CARDIOVASCULAR SURGERY: EARLY CLINICAL INSIGHTS FROM AN IN-HOSPITAL COHORT

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Background: The Seldinger technique is a minimally invasive method for accessing blood vessels and hollow structures, commonly used in interventional radiology, cardiology, and vascular surgery. While effective, it carries risks such as vascular trauma, hemorrhage, thrombotic events, embolization, site infection, and guidewire-related incidents. Risk mitigation relies on adherence to procedural protocols, including ultrasound guidance, sterile technique, and operator experience. **Objective:** This study aims to characterize femoral artery complications, identify predominant risk factors, establish high-risk patient profiles, and evaluate contributory technical errors. **Material and methods:** This single-center retrospective study examined vascular access-related complications in patients undergoing cardiovascular interventions between 2017 and 2024. Among 81 cases of post-puncture complications associated with the Seldinger technique, 73 involved the femoral artery. Descriptive analysis was conducted, and group comparisons were made using the chi-square test. A significance level of $p < 0.05$ was considered statistically significant. **Results :** The study includes 73 patients with a mean age of 65.7 ± 13.3 years, with 87.6% over 50 years old, the majority being men (60.2%). Among the major modifiable cardiovascular risk factors, hypertension (42.4%), diabetes mellitus (36.9%), dyslipidemia (35.6%) and smoking (34.2%) were identified. Patients with prior vascular interventions had a higher incidence of vascular complications (45.2%) compared to those without such history (42.9%). The chi-square test confirmed a statistically significant association between prior procedures and complication risk in future interventions ($p < 0.001$). Analysis of post-puncture vascular complications showed that the most frequent were pseudoaneurysm (43.8%), followed by hematoma and fistula. The most frequently employed surgical intervention was arterial suturing (67.1%). Comparing their distribution by sex, pseudoaneurysm was present in 40.91% of men and 48.28% of women ($p = 0.7042$) and suturing was performed in 61.36% of men and 75.86% of women ($p = 0.3003$). **Conclusions:** Preliminary analysis indicates that patients with a prior history of vascular interventions are at increased risk for vascular access-related complications, underscoring the need for heightened clinical vigilance in this subgroup. Pseudoaneurysm was the most frequently observed complication, with no significant sex-based differences in incidence. Both technical parameters and patient-related cardiovascular risk factors - including hypertension, diabetes mellitus, and previous vascular procedures - were independently associated with the risk and severity of access site complications.

Keywords: Seldinger technique, pseudoaneurysm, femoral access, complications

SURGICAL OUTCOMES IN RIGHT COLON CANCER: A COMPARATIVE ANALYSIS OF EARLY POSTOPERATIVE OUTCOMES IN OPEN, LAPAROSCOPIC, AND CONVERTED PROCEDURES

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Background: Right colon cancer surgery can be approached via open or laparoscopic techniques, with the latter offering potential advantages in postoperative recovery. However, intraoperative conversion from laparoscopy to open surgery can impact the outcomes and must be taken into consideration when evaluating the effectiveness of minimally invasive approaches. **Objective:** This study aimed to compare perioperative outcomes among patients undergoing open, laparoscopic, and converted procedures for right-sided colon neoplasms. **Material and methods:** This retrospective study included 135 patients diagnosed with right colon cancer (from cecum to transverse colon) who underwent surgical intervention between 2018 and 2022 in the Surgery-I department of Târgu Mureș County Clinical Emergency Hospital. Patients were stratified into three groups: open surgery (n=104), laparoscopic surgery (n=23), and laparoscopic procedures converted to open (n=8). Data collected included demographics, admission type, surgical modality, analgesic and opioid use, total and postoperative hospital stay, and blood transfusion rates. Normality and variance were assessed using Shapiro-Wilk and Levene's tests. The Kruskal-Wallis test with Dunn-Bonferroni post-hoc analysis was used to evaluate differences in continuous outcomes, while the Chi-square test was employed for categorical variables. Statistical significance was set at $\alpha = 0.05$. All statistical analyses were performed using EasyMedStat software (version 3.40). **Results :** The cohort included 70 males and 65 females, with a mean age of 74.3 ± 10.8 years. The majority (78.5%) were admitted electively. Median total hospital stay was significantly reduced in laparoscopic cases compared to open and conversion groups: 8.0 (IQR 3.5), 10.0 (IQR 3.0), and 9.5 (IQR 3.25) days respectively ($p<0.001$). The postoperative stay was also shorter in laparoscopic patients: 6.0 (IQR 2.0) vs. 8.0 (IQR 2.0) in open and 7.5 (IQR 2.25) in conversion cases ($p<0.001$). Opioid use was markedly reduced in laparoscopic patients: 1.0 (IQR 1.0) vs. 4.0 (IQR 6.0) in open and 5.0 (IQR 6.0) in conversion ($p<0.001$). Similarly, the duration of analgesic use favored laparoscopy: 5.0 (IQR 1.5) vs. 7.0 (IQR 2.0) in open and 6.0 (IQR 2.5) in conversion ($p<0.001$). Blood transfusion rates were not significantly different across groups ($p=0.133$), though lower in the laparoscopic cohort (13.04%). **Conclusions:** Laparoscopic surgery for right colon cancer is associated with significantly shorter hospital and postoperative complications, as well as reduced need for opioid and analgesic use, compared to open surgery. Although conversion to open surgery may mitigate some of these benefits, laparoscopy remains a favorable approach where feasible ensuring a good outcome for the patients.

Keywords: Right Colon Cancer Surgery, Right-sided Colon Neoplasms, Comperative Analysis of Open, Laparoscopic and Con

CREATION OF A NEO-VAGINA FROM CAECUM IN A PATIENT WITH MAYER-ROKITANSKY SYNDROME

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Background: Mayer-Rokitansky-Küster-Hauser syndrome (MRKH syndrome), also known as Müllerian agenesis or vaginal agenesis, is a congenital malformation characterized by an underdeveloped vagina and uterus. The uterus may be small or absent and the vagina is typically absent or shortened. **Objective:** Depending on vaginal aplasia or hypoplasia, a number of non-surgical (vaginal dilators) or surgical treatments have been described in order to create a functioning vagina. **Material and methods:** In a 22 years old young lady with a complete vaginal aplasia, a neo-vagina was tailored from the caecum and sutured to the vaginal introitus. **Results :** Surgical procedures started with the removal of the non-functional, rudimentary uterus by laparotomy, creating a space between the urinary bladder and urethra anteriorly and rectum posteriorly, till to the level of vaginal introitus. The caecum was isolated receiving the blood supply from the ileo-cecal vessels and an anastomosis between ileum and ascending colon was performed. The limited length of the ileo-cecal vessels will prevent a future prolapse of the neo vagina. The caecum is sutured at the level of vaginal introitus and a mold is inserted into the neo-vagina. **Conclusions:** Among other surgical techniques, a neo-vagina could be created from caecum. This procedure will

insure a functioning vagina and will increase the patient's quality of life.

Keywords: Mayer-Rokitansky syndrome, neo-vagina, caecum

EVOLUTIVE ASPECTS ASSOCIATED WITH THE TREATMENT OF THORACIC TRAUMA

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Background: The thoracic lesions are frequent in trauma cases and have a high mortality and morbidity rate. They can occur through various mechanisms of action and are an important part of modern medicine, because of medical and legal implications and also the socio-economic burden they involve. **Objective:** The study intends to analyze the evolutive aspects associated with the treatment of thoracic trauma, in patients with only thoracic or thoracic associated injuries in polytrauma context. **Material and methods:** This retrospective, observational study included 574 patients admitted in the 1st Surgical Department of the County Emergency Clinical Hospital of Targu Mures, in a five-year period (January 2019 to December 2024). The data were collected from the observation sheets of the patients, organized in a data base and subjected to statistical processing. **Results :** Most of the patients (45.12%) were in the age group between 45 to 64 years. From the admitted patients, 213 patients (37.1%) needed a surgical intervention and the rest were managed conservatively. The most used procedure was minimal pleurotomy with passive drainage, in 76.52% of cases. For 90 patients (15.67%) intensive care was necessary and 29 of them (32.22%) died from complications. The high ISS (Injury severity score) was significantly associated with mortality ($p = 0.0048$). **Conclusions:** The high number of cases admitted in a surgical department, confirm us the importance of recognizing and treating these injuries. This study acknowledges that ISS represents a good indicator of severe evolution in patients with thoracic trauma.

Keywords: thoracic trauma, minimal pleurotomy, intensive care

SURGICAL OUTCOMES IN LEFT COLON CANCER: A COMPARATIVE ANALYSIS OF OPEN, LAPAROSCOPIC, AND CONVERTED PROCEDURES

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Background: Left-sided colon cancer, involving tumors from the splenic flexure to the recto-sigmoid junction, presents unique technical challenges. While laparoscopic approaches have gained ground due to their minimally invasive nature, intraoperative conversions to open surgery may alter expected benefits. **Objective:** To compare perioperative outcomes among open, laparoscopic, and converted surgical procedures for left-sided colon cancer in This study aims to compare perioperative outcomes among open, laparoscopic, and converted surgeries for left colon cancer in a single-center experience. **Material and methods:** This retrospective study included 183 patients who underwent surgical resection for left colon cancer between 2018 and 2022 at the Surgery-I Department of the Târgu Mureș County Clinical Emergency Hospital. Patients were classified into three groups: open surgery (n=146), laparoscopic surgery (n=26), and laparoscopic procedures converted to open (n=11). Demographic data, admission type, surgical modality, hospital stay, analgesic and opioid use, and blood transfusion requirements were recorded. Normality and variance were assessed using the Shapiro-Wilk and Levene's tests. Differences among groups were analyzed using the Kruskal-Wallis test followed by Dunn-Bonferroni post-hoc comparisons when appropriate. Categorical variables were assessed using the Fisher's exact test. A significance level of $\alpha = 0.05$ was applied. All statistical analyses were performed using EasyMedStat software (version 3.40). **Results :** The cohort included 118 males and 65 females, with a mean age of 71.4 ± 10.2 years. Most surgeries were elective (80.3%). Median total hospital stay was 10.0 days (IQR 4.0) in the open group, 8.0 (IQR 2.0) in the laparoscopic group, and 8.0 (IQR 3.0) in conversions ($p<0.001$). Postoperative stay showed a similar trend: 8.0 days (IQR 4.0), 7.0 (IQR 2.25), and 7.0 (IQR 3.0) respectively ($p<0.001$). Opioid use was reduced in laparoscopic cases: 1.0 day (IQR 3.0) versus 4.0 in open and 3.0 in conversions ($p=0.012$). Days of analgesic use were also lower for laparoscopy (5.0, IQR 1.75) compared to open (8.0, IQR 3.25) and conversions (6.0, IQR 2.0; $p<0.001$). Blood transfusion rates did not significantly differ across groups (11.54% in laparoscopy, 14.29% in open, 9.09% in conversion; $p>0.999$). **Conclusions:** Laparoscopic resection for left-sided colon cancer was associated with shorter hospitalization and reduced analgesic and opioid needs compared to open surgery. Although conversions partially compromise these advantages, the minimally invasive approach remains beneficial when feasible. Optimal

patient selection and technical proficiency are essential for maximizing laparoscopic outcomes.

Keywords: Left-sided colon cancer, Minimally invasive procedures, Laparoscopic surgery, Surgical outcomes

VEIN DISTENSIBILITY IS ASSOCIATED WITH LONG-TERM ARTERIOVENOUS FISTULA FAILURE

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Background: The autologous arteriovenous fistula (AVF) is the preferred vascular access for patients with end-stage kidney disease (ESKD) receiving maintenance hemodialysis, as it ensures better long-term performance compared to arteriovenous grafts (AVG). However, the ability of veins to distend presents a significant challenge to meeting maturation criteria, contributing to an early AVF failure rate of 30-40%. **Objective:** This study evaluates the influence of vein distensibility on the long-term outcomes of AVF failure. **Material and methods:** This study is a retrospective, observational analysis involving 76 patients diagnosed with ESKD admitted to the Vascular Surgery Clinic at Targu Mures Emergency Clinical County Hospital for AVF creation. Demographic information, comorbidities, and pre-operative laboratory data were meticulously recorded from the hospital's electronic database. Additionally, venous and arterial diameters were documented for each patient during the pre-operative vascular mapping and again during follow-up. The progression of the patients was monitored through telephone interviews or direct contact with patients. Based on the occurrence of AVF failure, the patients were categorized into two groups: "Functional AVF" and "AVF Failure". This work was supported by the George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, Romania, with research grant number 170/3/09.01.2024. **Results :** During follow-up, 29 patients experienced AVF failure. Regarding the comorbidities and risk factors, we recorded a higher incidence of diabetes mellitus (p=0.044) and active smoking (p=0.026) in the AVF failure group, as well as a higher incidence of radio-cephalic AVF (p=0.011) and lower incidence of brachio-cephalic AVF (p=0.023). At vascular mapping, we recorded lower values of vein diameter at 6 weeks (p<0.001), as well as lower values of vein distensibility (p=0.002) in AVF failure patients. ROC analysis found a strong association between vein distensibility and AVF failure (AUC: 0.712, p<0.001) with an optimal cut-off value of 1.90 mm. Furthermore, at the survival curve Kaplan-Meier analysis, we observed a higher incidence of AVF failure in patients with vein distensibility values below the cut-off value (p<0.001). At cox-regression analysis, vein distensibility below the cut-off value is associated with long-term AVF Failure (HR: 3.81, p<0.001). **Conclusions:** Short-term vein distensibility is correlated with long-term AVF failure, independent of age, sex, cardiovascular risk factors, and the type of AVF. Furthermore, active smoking and the presence of diabetes mellitus are associated with long-term AVF failure as well.

Keywords: arteriovenous fistula, vascular access, vein distensibility, vascular surgery

DOES LESS INVASIVE MEAN MORE EFFECTIVE? FUNCTIONAL OUTCOMES AFTER CARDIAC SURGERY IN A REHABILITATION COHORT

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Background: Postoperative cardiovascular rehabilitation (CR) is recognized as the most effective secondary prevention model for a broad spectrum of cardiovascular conditions, reducing mortality rates, hospitalizations, and enhancing quality of life. It facilitates structured physical reconditioning and psychosocial reintegration, particularly after major cardiac interventions. **Objective:** This study aimed to compare changes in functional exercise capacity between patients who underwent open heart surgery (OHS) and those who received minimally invasive cardiac surgery (MICS) after the completion of the CR program. **Material and methods:** In this retrospective observational study, 223 patients who participated in the CR program were recruited from January 2022 until December 2024 and stratified into two groups according to the surgical approach: OHS (163 patients) and MICS (60 patients). A total of 112 valve surgeries, 66 coronary revascularizations, and 45 other interventions (including congenital heart malformation corrections, ventricular aneurysm repair, and combined valvular-coronary treatments) were performed. All participants completed a standardized 2- to 3-week supervised rehabilitation protocol, and the primary endpoint was the improvement observed in the 2-minute walk test (2MWT) and the timed up and go test (TUG). Secondary endpoints included perceived exertion changes measured via Borg scale. **Results :** Patients in

the OHS group were older [mean age 61.82 ± 11.3 years (range 27-82)] and predominantly male (75.5%), compared to the MICS group [mean age 59.83 ± 10.2 years (range 32-85), 60% male]. MICS patients were referred to CR earlier post-surgery (mean postoperative day 8.62 vs. 10.07, $p<0.05$) and had better 2MWT scores at admission [mean distance 103.11 meters (range 74-131)] compared to OHS patients [101.89 meters (range 64-144)]. TUG performance at admission was also slightly better in the MICS group [9.48 seconds (range 6.82-13.19)] vs. OHS group [9.77 seconds (range 7.11-15.15)]. Upon CR completion, both groups showed statistically significant improvement in functional tests, with MICS group presenting greater overall gains in mobility and walking distance. **Conclusions:** Both surgical groups demonstrated improvements in functional capacity following completion of the CR program. However, the MICS group showed a more favorable trajectory of recovery, including higher levels of physical activity post-surgery, leading to earlier rehabilitation enrollment. These findings underline the potential superiority of the MICS approach in promoting faster and more effective postoperative functional recovery.

Keywords: cardiac rehabilitation, MICS, OHS, functional recovery

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VITAMIN D AND ROTATOR CUFF REPAIR - A SYSTEMATIC REVIEW

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Background: Rotator cuff tears represent one of the most prevalent musculoskeletal injuries, yet identifying patients at risk for suboptimal outcomes following arthroscopic rotator cuff repair (RCR) remains challenging. Studies suggest a potential association between low preoperative serum 25-hydroxyvitamin D levels and increased postoperative complications and poor functional outcomes. **Objective:** This systematic review aims to investigate the association between preoperative serum vitamin D levels, functional outcomes, and complications following arthroscopic RCR, such as: retear rate, revision RCR, stiffness, and VAS score. **Material and methods:** A methodical search through electronic databases (PubMed, Cochrane Library, Scopus, Web of Science, Epistemonikos) from inception to January 12, 2025, was conducted according to PRISMA guidelines using various combinations of the following keywords: "vitamin D", "rotator cuff" and "shoulder". Inclusion criteria were: (1) Studies containing the correlation between preoperative Vitamin D serum levels and Arthroscopic RCR, (2) Studies reporting complications and functional outcomes, (3) Human studies, (4) English language. Extracted data included patient demographics, complications, and functional outcomes. **Results :** One hundred and ninety-one studies met the inclusion criteria, and finally, 3 studies were available for the systematic review, with no RCT's with n = 2952 participants (64 % female). The included studies comprised 2 cohort and 1 observational study. Clinical relevance and strength of evidence of the included studies was assessed using the Methodological index for non-randomized studies (MINORS). Chen et al reported that the revision rotator cuff surgery rate was significantly higher in the vitamin D deficient group (5.88%) compared to the sufficient control group (3.7%) (OR 3.1, 95% CI 1.6-5.8, P = .007). The deficiency group showed a higher revision rate compared to the insufficient group (OR 2.4, 95% CI 1.5-3.9, P = .011). Harada et al found that the study assessing functional outcomes revealed that VAS scores at 1 month (1.09 ± 0.56 vs. 1.47 ± 0.66) and 3 months (1.14 ± 0.77 vs. 1.44 ± 0.66) (P < .05), as well as a lower retear rate (9.09% vs. 26.67%, P < .05). Cancienne et al described that in terms of postoperative stiffness after RCR, a higher frequency was observed in patients with insufficient serum vitamin D, requiring more frequent manipulation under anesthesia (OR 1.16, 95% confidence interval 1.03 to 2.03, P = 0.035). **Conclusions:** Although current evidence consistently indicates an association between low preoperative vitamin D levels and unfavorable outcomes after arthroscopic RCR, further research is needed to strengthen causal inference and assess its impact on clinical practice.

Keywords: Vitamin D, Rotator Cuff, Shoulder

NUTRITION AND DIETETICS

THE IMPACT OF HIGH-PROTEIN FOOD CONSUMPTION IN THE CONTEXT OF NUTRIVIGILANCE

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Background: Nutrivigilance, the field that studies and manages interactions between food and medications, is an emerging field requiring multidisciplinary approach. Many foods consumed by patients can influence the efficacy of medical treatments, sometimes posing potentially life-threatening effects. It is essential for healthcare professionals to be aware of these interactions to ensure patient safety. With the growing popularity of protein supplementation, patients undergoing medical treatment may consume protein-enriched foods such as protein bars and protein beverages. However, high-protein foods can negatively impact the effectiveness of certain treatments. Understanding the potential side effects of these foods and identifying ingredients that interfere with drug absorption, efficacy, or bioavailability is critical in medical practice. **Objective:** This study aims to highlight the importance of nutrivigilance within multidisciplinary healthcare team, particularly in the context of high-protein diets supplemented with additional protein sources beyond normal dietary intake. **Material and methods:** We analyzed the ingredients of five protein bars (containing 20-50% protein), one protein-enriched cookie (containing 27% protein) and four protein powders (containing 70-75% protein). Using data from Web of Science and PubMed, clinical and preclinical studies, medical guidelines, and drug knowledge bases, we examined how common ingredients in these products interact with medical treatments. **Results :** Research indicates that plant proteins, animal proteins and synthetic sweeteners interact with cytochrome P450 enzymes (CYP3A4, CYP1A2, CYP2C8), negatively affecting treatments for neurological conditions (Parkinson - levodopa), endocrine (hypothyroidism - levothyroxine), bacterial infections (tetracycline), neoplasms (erlotinib). **Conclusions:** To optimize patient treatment outcomes, collaboration among doctors, pharmacists, and dietitians is essential. A multidisciplinary approach ensures that dietary choices do not compromise the safety and effectiveness of medical therapies.

Keywords: high-protein, food-drug interaction, multidisciplinary team, diet

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THE ROLE OF VITAMIN D IN AUTOIMMUNE DISEASES IN PEDIATRIC PATIENTS

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Background: Vitamin D is a fat-soluble vitamin that is essential in numerous physiological processes, particularly in regulating calcium homeostasis and immune system function disease. **Objective:** This study aimed to evaluate the role of vitamin D in the pathogenesis and management of type 1 diabetes, systemic lupus erythematosus, juvenile idiopathic arthritis, and celiac disease in pediatric patients, by analyzing the impact of serum vitamin D levels on immune response and disease severity. **Material and methods:** A systematic literature review was performed using PubMed, Scopus, and Web of Science. Articles published in the last 10 years that investigated the relationship between serum vitamin D levels and the risk or progression of autoimmune diseases in children were selected. The inclusion criteria were clinical and observational studies that evaluated serum vitamin D levels in children with autoimmune diseases, studies that analyzed the immune response by measuring inflammatory markers and biochemical parameters, and studies that assessed the impact of vitamin D supplementation on disease severity and immune response. Research that did not report detailed data on vitamin D levels and immune response or focused exclusively on adults was excluded. **Results :** Out of 148 studies initially identified, 32 relevant studies were selected for the final analysis. The results suggested that vitamin D deficiency is frequently encountered in children with autoimmune diseases, especially in those with type 1 diabetes that prevalence of approximately 80%. Furthermore, low vitamin D levels were associated with elevated inflammatory markers (IL-6, TNF-α) and a more aggressive disease course in children with systemic lupus erythematosus. In patients with juvenile idiopathic arthritis, vitamin D supplementation was associated with reduced inflammatory activity and improved joint function. For celiac disease, low serum vitamin D levels were correlated with an increased prevalence of osteopenia and bone complications. Vitamin D supplementation significantly reduced IL-6 and TNF-α levels and improved immune response in pediatric patients with type 1 diabetes and systemic lupus erythematosus. **Conclusions:** Maintaining an optimal vitamin D status may protect against and manage autoimmune diseases in children by modulating the immune response and reducing inflammation.

Keywords: celiac disease, juvenile idiopathic arthritis, systemic lupus erythematosus, type 1 diabetes

THE IMPACT OF ONCONUTRITION ON BREAST CANCER PATIENTS

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Background: Breast cancer is the most frequently diagnosed type of cancer in women, accounting for one in four cancer cases worldwide each year. Its management requires a complex approach that includes specific oncological treatments as well as adequate nutritional support. **Objective:** This study aimed to identify, summarize, and critically analyze relevant articles on the effects of onconutrition in breast cancer patients and illustrate, through a clinical case, how nutritional intervention can influence the prognosis and quality of life of the patient. **Material and methods:** The research was conducted through a literature review of scientific databases such as PubMed, Scopus, and Web of Science, selecting articles published up to January 2025. The sample consisted of the 40 most relevant and recent articles that met the following inclusion criteria: 1) original research articles; 2) studies exploring the relationship between onconutrition and breast cancer; 3) participants were female patients diagnosed with breast cancer. Additionally, a clinical case was analyzed to illustrate the impact of a personalized nutritional plan on patient outcomes. **Results :** The analyzed data confirmed the essential role of onconutrition in improving nutritional status, optimizing treatment response, reducing adverse effects of oncological therapy, and enhancing the quality of life in breast cancer patients. Studies highlight the importance of a balanced diet rich in essential nutrients such as proteins, Omega-3 fatty acids, and antioxidants. The case study showed the beneficial effects of a structured nutritional intervention, contributing to the maintenance of muscle mass, reduction of fatigue, and improvement in clinical outcomes. **Conclusions:** Onconutrition plays a crucial role in the management of breast cancer patients, significantly impacting both prognosis and quality of life. The implementation of personalized nutritional strategies can improve therapeutic outcomes and reduce risks associated with malnutrition. Further studies are needed to optimize nutritional protocols tailored to each patient's needs.

Keywords: breast cancer, dietary intervention, nutritional support, onconutrition

DEVELOPMENT OF A PREBIOTIC FOOD WITHOUT ACRYLAMIDE PRECURSORS, GLUTEN-FREE AND LACTOSE-FREE

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Background: Due to the high content of reducing sugars (fructose and glucose) and the non-essential amino acid asparagine in foods, ammonium bicarbonate (as a leavening agent) leads to the formation of acrylamide at temperatures above 120°C. This may increase the risk of developing cancer for consumers of bakery products. **Objective:** Development of a prebiotic food without acrylamide precursors, gluten-free and lactose-free that can also be consumed by people with irritable bowel syndrome, type 2 diabetes, celiac disease and lactose intolerance. **Material and methods:** Raw materials and ingredients that do not contain gluten and cannot have globulin S11 were used, refractometer for food sugar, measuring range: 0 to 85% Brix, manufacturer Hanna Instruments Romania, digital pH meter with measuring range 0-14 pH and thermometer from -5 to +50°C, electronic scale, hand mixer and electric convection oven. Recent scientific articles (from 2020 to the present) were studied from the Web of Science and PubMed databases. European legislation was consulted using the official EUR-Lex website. International industrial property analysis was carried out using the World Intellectual Property Organization database. Sensory, physicochemical and pH analyses were carried out on all raw materials, ingredients and doughs. All samples were baked at 180°C for 30, 40 and 50 minutes, respectively. **Results :** All raw materials were sensory compliant. The pH of all ingredients used is in the range of 5.3 - 7.1, and the refractometric soluble solids (Brix) between 0.15 - 4.15. The doughs had a neutral pH, ranging from 6.4 to 6.85 and a Brix between 12.3 and 26.8. From a sensory point of view, the products have different characteristics compared to similar foods, but with gluten, milk and ammonium bicarbonate, sodium bicarbonate, humectants and other food additives. The assessment of the acrylamide content will be carried out at the Institute of Food Bioresources. **Conclusions:** The new product has sensory characteristics specific to the objective (composition without acrylamide precursors, prebiotic, lactose-free, gluten-free and without synthetic food additives). In the following

period, the preclinical evaluation of efficacy will be carried out on Wistar rats, for which the Opinion of the Ethics Committee No. 3612 of 07.02.2025 was obtained.

Keywords: Acrylamide, Cancer, Gluten-free, Diabetes

PHYSIOTHERAPY

PHYSIOTHERAPY INTERVENTION ON PATIENTS WITH CERVICAL SPONDYLOSIS

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Background: Cervical spondylosis belongs to a category of rheumatological diseases that include degenerative modifications of the spine, causing pain, stiffness, muscle weakness and decreased mobility. Due to the increased incidence of this pathology in the last years and because of its impact on the quality of life, modern research is focused on the most suitable treatment procedures. **Objective:** The aim of our study was to investigate the effects of a ten-day rehabilitation program on pain, range of motion and quality of life, in a group of twenty diagnosed cervical spondylosis patients. **Material and methods:** This study was conducted between February and April 2025 at the Sevalia Medica Clinic of Târgu Mureș, on a total number of twenty subjects, men and women. Our investigation consisted of an initial assessment, followed by a ten-day rehabilitation program through physiotherapy (therapeutical exercises), electrotherapy, thermotherapy and manual therapy and a final assessment. Initial and final assessment of the subjects included measuring the range of motion of the cervical spine, the Neck Disability Index, the numerical pain rating scale (0-10) and a symptoms questionnaire. **Results :** Our findings indicate a substantial impact of a ten-day rehabilitation program on range of motion and pain. Also, all the included subjects achieved a significant improvement on the Neck Disability Index. **Conclusions:** A complete rehabilitation program, consisting of therapeutical exercises, electrotherapy, thermotherapy and manual therapy, proved to bring numerous benefits for patients with cervical spondylosis. Through our study, we managed to show the effectiveness of a short ten-day rehabilitation program on pain, range of motion and quality of life.

Keywords: cervical spondylosis, range of motion, pain, quality of life

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THE EFFECTIVENESS OF SHOCKWAVE THERAPY IN ALLEVIATING THE SYMPTOMS OF CALCANEAL EXOSTISIS

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Background: Calcaneal exostosis, commonly known as heel spur, is an abnormal bone growth that develops on the underside of the calcaneus. It is often associated with conditions like plantar fasciitis and can lead to inflammation and pain in the heel area. This pathology is frequently diagnosed in patients experiencing chronic heel pain, and it can significantly affect mobility and quality of life. **Objective:** The aim of our study was to investigate the effects of a once-a-week extracorporeal shockwave therapy five-week program on pain, quality of life and rehabilitation, in a group of fifteen diagnosed calcaneal exostosis patients **Material and methods:** This study was conducted between February and April 2025 at the Sevalia Medica Clinic of Târgu Mureș, on a total number of fifteen subject, men and woman. Our investigation consisted of an initial assessment, followed by a five-week rehabilitation program, consisting of extracorporeal shockwave therapy once-a-week and a final assessment. Initial and final assessment included a questionnaire with items that described everyday circumstances, active range of motion evaluation and the numerical pain rating scale. **Results :** Our study indicate a statistically significance between initial and final assessment results. All the included subjects achieved higher active range of motion values, diminished pain rate and better quality of life. **Conclusions:** Our study shows that a short extracorporeal shockwave therapy programme of only five sessions shows a big impact on pain, increasing mobility and improving quality of life.

Keywords: Shockwave therapy, calcaneal exostosis, rehabilitation, electrotherapy

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THE IMPACT OF SUSTAINED PHYSICAL ACTIVITIES ON THE PROFESSIONAL CAREER OF MID-LEVEL MEDICAL PERSONNEL

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Background: Physical activity plays a key role in maintaining cardiovascular health, controlling body weight, improving psychological well-being by lowering stress and anxiety, increasing energy levels, building muscle mass

and bone density, boosting immune system strength, supporting cognitive functions, and improving sleep quality. All of these factors contribute to a balanced and harmonious lifestyle. It is feasible to talk about a process via which physical activity affects total life happiness, since work satisfaction is a key element of overall life contentment. Since overtime work is closely linked to workplace stress, the recovery process from work demands can be a meaningful way to alter this relationship. **Objective:** The purpose of our study was to investigate whether sustained physical activity impacts the professional career of a group of twenty-five subjects, who are mid-level medical staff. **Material and methods:** This study was conducted between February and April 2025 on a total of twenty-five subjects, men and women aged forty-five to sixty, employees of the "Dr. Aurel Tulbure" Municipal Hospital in Făgăraș. Our investigation was based on their responses to the Global Physical Activity Questionnaire (GPAQ) and the Nursing Workplace Satisfaction Questionnaire (NWSQ). **Results :** Our results show that physical activity improves work satisfaction, and maintaining good health is the key to achieving these advantages. Eighty percent of the included subjects are moderately satisfied with their professional activities, and sixty percent of them participate in recreational physical activity. The effect appears to be moderate due to job-related stress. **Conclusions:** The results demonstrate a positive relationship between physical activity of any kind and job satisfaction. Furthermore, the analysis highlights that the study of this relationship must take into account reverse causality and unobserved heterogeneity.

Keywords: physical activity, quality of life, health, job satisfaction

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THE IMPACT OF EXAM STRESS ON SLEEP, BODY WEIGHT, AND EATING PATTERNS IN HEALTH SCIENCE STUDENTS

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Background: Students frequently face elevated levels of stress and sleep disturbances, especially during exam periods, which can negatively influence eating behaviors and body weight. Analyzing these factors may provide a solid foundation for implementing personalized interventions, such as physical therapy exercises and relaxation techniques. **Objective:** To investigate perceived stress levels, sleep quality, and body weight among students before and after the exam session, with the aim of developing an intervention program based on physical therapy exercises and relaxation techniques, to be applied in the following academic year. **Material and methods:** The study was conducted on a sample of 50 students from UMFST Târgu Mureș, specializing in Balneophysiokinetotherapy and Recovery. Participants completed standardized questionnaires - PSS (Perceived Stress Scale), PSQI (Pittsburgh Sleep Quality Index), and DEBQ (Dutch Eating Behavior Questionnaire) - in both pre- and post-exam periods. Data on body weight and sleep habits were also recorded. The analysis focused on differences between scores at the two time points to evaluate the impact of academic stress. **Results :** The questionnaires revealed a significant increase in perceived stress scores (PSS) post-exams, reflecting the psychological impact of academic assessments. PSQI scores indicated a decrease in sleep quality, with shorter sleep duration and increased sleep latency. There was also a tendency toward emotional eating behaviors, shown by slight increases in DEBQ scores. A slight increase in body weight was observed in some participants, suggesting a possible relationship between stress, poor sleep, and compensatory eating behaviors. **Conclusions:** The results indicate a negative influence of the exam period on students' stress levels, sleep quality, and eating habits. Based on these preliminary findings, there is a clear need to develop an intervention program that includes physical therapy exercises and relaxation techniques. This program will be implemented and reevaluated in a new research cycle during the next academic year, aiming to determine whether guided interventions and accumulated experience can contribute to improving students' psychophysiological balance.

Keywords: Academic stress, Sleep quality, Eating behavior

THE EFFECT OF PROPRIOCEPTIVE NEUROMUSCULAR FACILITATION TECHNIQUES IN THE TREATMENT OF SCAPULOHUMERAL PERIARTHRITIS

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Background: Scapulohumeral periarthritis, or frozen shoulder, is a musculoskeletal disorder causing progressive

pain, stiffness, and limited ROM in the glenohumeral joint due to inflammatory and fibrotic changes. Proprioceptive Neuromuscular Facilitation (PNF) techniques aid rehabilitation by improving mobility, neuromuscular control, and function through diagonal movement patterns and proprioceptive input. However, further research is needed to confirm their effectiveness in treatment. **Objective:** This study aims to evaluate the effectiveness of PNF techniques in functional recovery (improving mobility and reducing pain) for patients with scapulohumeral periarthritis. **Material and methods:** A total of 20 patients diagnosed with scapulohumeral periarthritis were included in the study and divided into two groups: an experimental group undergoing a rehabilitation program incorporating PNF techniques and a control group following a conventional recovery protocol. The intervention lasted for twelve weeks, and the progress was assessed based on the range of motion, pain levels, and functional improvements. Measurements were conducted using standardized pain scales, goniometry for range of motion, and strength tests for muscle function. **Results :** The results indicate that the experimental group demonstrated a significant improvement in shoulder mobility and a reduction in pain levels compared to the control group. The use of PNF techniques contributed to a faster recovery and better functional outcomes. **Conclusions:** The findings of this study support the inclusion of PNF techniques in rehabilitation programs for scapulohumeral periarthritis, emphasizing their effectiveness in enhancing motor function and reducing pain. Further studies with larger sample sizes are recommended to validate these results.

Keywords: Proprioceptive neuromuscular facilitation, scapulohumeral periarthritis, shoulder rehabilitation, physiotherapy.

THE ROLE OF PREVENTION OF ALGONEURODYSTROPHIC SYNDROME IN TRAUMATIC ANKLE INJURIES – PHYSICAL THERAPY – ALTER G – VACUMED

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Background: Complex Regional Pain Syndrome (CRPS) is a neuropathic disorder causing persistent pain, motor dysfunction, and autonomic abnormalities, often exceeding the initial injury. It has two types: Type I (without nerve damage) and Type II (with nerve trauma). Primarily affecting distal extremities, CRPS involves sensory, motor, and circulatory dysfunctions. Due to its complexity, rehabilitation, including physical therapy, is crucial for symptom relief and functional recovery. **Objective:** This study aims to assess the effectiveness of physiotherapy interventions in managing pain, improving mobility, and enhancing functional recovery (restoring the patient's ability to perform daily activities by improving mobility, strength, motor control, and overall independence) for patients diagnosed with CRPS. **Material and methods:** A total of 10 patients with CRPS were included in the study, divided into an experimental group undergoing a targeted kinetotherapy program and a control group receiving standard care. The intervention lasted six weeks, with periodic assessments measuring pain levels, joint mobility, and muscle function. Measurements were conducted using standardized pain scales, goniometry for range of motion, and strength tests for muscle function. **Results :** The findings indicate that patients in the experimental group exhibited significant improvements in pain reduction, mobility enhancement, and motor function recovery compared to the control group. Physical therapy interventions contributed to better functional outcomes and faster recovery. **Conclusions:** The study emphasizes the crucial role of physical therapy in the rehabilitation of CRPS patients, showing its effectiveness in alleviating pain and enhancing neuromuscular function. Further research with larger sample sizes is needed to confirm these results.

Keywords: Complex Regional Pain Syndrome, pain management, neuromuscular recovery, Physical therapy

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THERAPEUTIC APPROACHES TO LUMBORADICULAR SYNDROME: TRIGGER POINTS THERAPY OR THERAPEUTIC MASSAGE?

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Background: Lumboradicular syndrome is a condition associated with the degeneration of the intervertebral disc of the spine, leading to irritation or compression of the surrounding nerve roots. Is it commonly used to describe sciatica-type pain, which manifest as lower back pain radiating to the buttock, thigh, calf or foot, accompanied by sensation of burning, tingling, numbness, or even muscle weakness. Physiotherapy and manual therapies play a

crucial role in rehabilitation, aiming to restore diminished functions, enhance overall physical performance, improve muscular function and reduce pain. **Objective:** Our study aims to evaluate the effect of two different therapeutic approaches for lumboradicular syndrome, comparing trigger points therapy and classical therapeutic massage. Given the high prevalence of this condition and its association with muscular imbalances, the research focuses on determining which method provides better pain relief and functional rehabilitation. **Material and methods:** Our study was conducted between February to April 2025 in Sevalia Medica Clinic of Târgu Mureș, on a total number of twenty patients, divided into two groups. Both groups of patients benefited from a ten-session medical rehabilitation program based on the same program of physiotherapy and the same program of electrotherapy but differentiated manual therapy programs. The physiotherapy program included the Williams method to relieve symptoms and increase range of motion for thirty minutes. The electrotherapy program included magnesium sulphate ionization for fifteen minutes at an intensity of 5.5 mA. Complementing identical methods, the control group underwent a rehabilitation program based on classical therapeutic massage for fifteen minutes, while the experimental group underwent a rehabilitation program that included trigger points therapy for fifteen minutes. Initial and final assessments included lumbar spine mobility measurements, Lasegue test, tiptoe and heel walking test, and a pain assessment questionnaire. **Results :** Our study found statistically significant differences between initial and final results in both control and experimental groups. Pain and disability were diminished for all subjects included in our research. **Conclusions:** Our study confirms that both trigger points therapy and classical therapeutic massage contribute to reducing pain and improving functional rehabilitation in patients

Keywords: lumboradicular syndrome, trigger points therapy, therapeutic massage, pain relief

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THE IMPACT OF AFTER-SCHOOL PROPHYLAXIS PROGRAMS ON HAND-EYE COORDINATION, MEMORY, AND ATTENTION

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Background: Children's ability to perform school and daily living activities to a large extent depends on their mental abilities, such as hand-eye coordination, memory, and attention. Exercise strengthens cognitive function, as well as neuroplasticity, in accordance with the findings from the scientific research. Prophylaxis programs that center on motor development as well as on musculoskeletal welfare can aid cognitive development as well. The targeted effect of after-school prophylactic training programs on cognitive processes, despite that, remains under-researched. **Objective:** The primary goals of this research were to assess how after-school prophylaxis programs impact auditory and visual memory and to evaluate how children who participate in prophylaxis programs and those who do not participate in after-school physical activities grow cognitively. **Material and methods:** The research was carried out in "Teodor Murășanu" Gymnasium School in Turda on 30 subjects aged 10-11 years. Participants were split into two groups. The control group: students who did not take part in any after-school sport or prophylaxis programs, while the experimental group: students who took part in after-school prophylaxis programs for 6 weeks. The initial and final assessment consisted of 5 tests, as follows: 1. Gathering of general information, including age, height, weight, BMI, physical activity level, and associated diseases. 2. Human Benchmark Visual Memory Test: A test of visual memory that measures the capacity to recall visual sequences. 3. Auditory memory and acquisition testing. 4. Attention evaluation: Standard attention survey, measuring concentration and attention. 5. The Reaction Time Test, which measures hand-eye coordination, is performed three times in order to calculate an average reaction time. **Results :** The research is still under progress, and the final assessments will be done after the submission of this abstract. For this, results and statistical interpretation will be presented at the Marisiensis Congress. **Conclusions:** Additional information regarding the efficacy of our after-school prophylaxis programs on hand-eye coordination, memory, and attention will be presented at Marisiensis Congress.

Keywords: Prophylaxis, After-school programs, Coordination, Memory

OCCUPATIONAL THERAPY AND HOME ADAPTATION IN MULTIPLE SCLEROSIS: STRATEGIES AND APPLICABILITY

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Background: Demyelination of the central nervous system manifested in multiple sclerosis determines progressive disability, significantly impacting the quality of life in such patients. It is important to understand the lifestyle and environmental factors that influence disease progression, as to identify the proper means of enabling and maintaining independence and improving overall well-being. **Objective:** The present study's aims were: to identify if there is a general tendency to modify and adapt the home in the case of such patients; to establish whether or not greater disability requires greater modifications; to assess overall quality of life improvements resulted from such modifications; to determine what modifications are the most valuable in ensuring independence; to ascertain what are the biggest challenges and concerns that represent an obstacle when engaging in such adjustments. **Material and methods:** The study was conducted in the Clinical Department of Neurology no. 1 of the Emergency County Hospital of Târgu Mureș, between February and May 2025. It involved a selection of fifteen subjects diagnosed with multiple sclerosis and evaluation encompassed: use of Scale of Assessment and Rating of Ataxia to rate general motor functions, use of the Functional Independence Measure in combination with the Functional Assessment Measure to assess ADL and IADL performance and a comprehensive questionnaire that had regard to the following aspects: to identify general information regarding the subject as well as to pinpoint the length of time since the diagnosis; to assess the ramifications of disability in the context of daily life of the subject; to determine whether or not the subject has taken steps toward occupational therapy tools and adaptations to accommodate independence. **Results :** The study is still ongoing and as such, the results will be presented during the Marisiensis International Scientific Congress. **Conclusions:** The conclusions will be presented along with the results during the Marisiensis International Scientific Congress.

Keywords: multiple sclerosis, disability, home adaptation, occupational therapy

ALLEVIATING SYMPTOMS OF LUMBAR DISC HERNIATION THROUGH STRETCHING EXERCISES

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Background: Lumbar disc herniation is a complex pathologic condition with a major biological, psychological and social impact. Low back pain is usually the first symptom experienced by the subject and one of the most common causes of discomfort. The source of this condition is most attributed to musculoligamentous damage or skeletal degenerative changes, although the differential diagnosis is wide. Physiotherapy and stretching play an essential role in management of lumbar disc herniation and are important components of both conservative treatment and post-surgical rehabilitation. The main goal of physiotherapy is to reduce pain and inflammation, improve spinal mobility, increase muscle strength and endurance and prevent recurrence. **Objective:** Our main goal was to assess and investigate the impact of an innovative stretching exercise program on the pain and disability caused by lumbar disc herniation. **Material and methods:** Our study consists of two groups of twenty subjects, aged between 35 and 60 years. Control group benefited of a classical therapeutical exercises program, while experimental group benefited, in addition to the classical program, from innovative stretching program. The study was conducted at County Clinical Emergency Hospital of Târgu Mureș, from February 10th to March 21st, 2025. Initial and final evaluation included Thomayer test, Lasegue test and Oswestry Disability Index. Between the two assessments, both groups underwent a two-week daily physiotherapy session. **Results :** Both control and experimental group showed statistically significant differences between initial and final assessment results ($p < 0.01$), on all three measurements: pain, mobility assessment and Oswestry disability index. Significant differences were found between control and experimental group, over time. **Conclusions:** Our study highlights important effects of a stretching program on low back pain, mobility, and disability, in subjects diagnosed with lumbar disc herniation. We proved that classical or innovative rehabilitation programs of only two weeks can play a huge impact in diminishing the symptoms encountered by lumbar disc herniation patients. We also proved that the use of a stretching program, brings better outcomes.

Keywords: Stretching, Lumbar Disc Herniation, Physiotherapy, Rehabilitation

NURSES

PRE-HOSPITAL CARDIAC ARREST MANAGEMENT: EVALUATING PARAMEDIC INTERVENTION THROUGH A CROSS-SECTIONAL STUDY

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Background: Out-of-hospital cardiac arrest (OHCA) is a critical emergency requiring rapid and effective intervention. Studies show that patient survival is influenced by response time, the quality of chest compressions, and early defibrillation. Paramedics play a crucial role in managing pre-hospital cardiac arrest; however, various challenges impact their performance. **Objective:** This study aims to assess the experiences, challenges, and effectiveness of paramedics in managing cardiac arrest cases, contributing to the improvement of pre-hospital intervention strategies. **Material and methods:** A cross-sectional study was conducted using a structured questionnaire comprising both closed and open-ended questions, with single and multiple-choice answers, distributed to 40 paramedics. **Results :** The majority of respondents had over 10 years of experience, managing 1-3 cases per week. In contrast, others reported no involvement in cardiac arrest cases in the week preceding the survey. Their level of training was advanced, with most belonging to the Module 2 professional training category. The main challenge reported was the prolonged time before resuscitation maneuvers began, followed by communication issues within the team and insufficient training. A smaller proportion highlighted environmental conditions and the lack of adequate equipment as challenges. The intervention of a doctor (through dispatch or telemedicine) was considered beneficial by 32 respondents, particularly in the use of advanced management techniques such as intravenous access or the combitube. The age distribution of cases was as follows: 27 respondents reported patients over 60 years old, followed by the 40-60 age group, with the lowest percentage being those aged 18-40 (the primary category responsible for road traffic accidents). **Conclusions:** Paramedics are the primary healthcare providers attending to patients experiencing OHCA. Post-cardiac arrest recovery largely depends on proper management within the first few minutes. More efficient resource allocation, identifying encountered challenges, and well-structured teams are essential for improving pre-hospital resuscitation outcomes

Keywords: telemedicine, combitube, resuscitation maneuvers, intravenous access

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THE IMPORTANCE OF TELEMEDICINE IN PRE-HOSPITAL CARE- PARTIAL STUDY

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Background: Telemedicine is defined as the integrity of remote medical services for the diagnosis, treatment, monitoring and prevention of diseases, without the simultaneous physical presence of the medical staff and the patient, using virtual communication. Târgu Mureș is the pilot centre for central region of Romania covering 6 counties: Mures, Alba, Sibiu, Harghita, Covasna and Brasov. **Objective:** The aim of the study is to outline the use and the importance of telemedicine in emergency situations in prehospital, especially in those areas where there is no ambulance with a doctor, or it is a difficult to reach area to intervene in a time beneficial to the patient. **Material and methods:** The study conducted is retrospective; the data collection method is secondary by consulting the registers of the Târgu Mureș Telemedicine Office in the Emergency Department. **Results :** The most cases of telemedicine assistance calls are from Sibiu County, followed by Mures county and Alba on the 3rd place, whereas the other 3 counties - Harghita, Covasna and Brașov make Simila numbers of calls. The urban environment predominates over the rural environment. The patients' symptomatology is predominantly cardiac (cardiac arrest, myocardial infarction, chest pain, hypertensive crises, arrhythmias). EMS SMURD first-aid teams transmit data in telemedicine more frequently than regular Ambulance Service teams. The summoned physician's recommendations/advice differ depending on the transmitted case; most often the physician instructed transporting the patient to a hospital or requesting an ambulance with a doctor. In some exceptional cases the medevac - SMURD helicopter was assigned to the case after Telemedicine data transmission. **Conclusions:** Telemedicine is a very useful method in pre-hospital medical care, most often used by paramedics on first aid ambulances in areas where it is difficult or impossible to reach an ambulance with a doctor. The chances of patient survival in situationds involving telemedicine transmission are significantly increased.

Keywords: Telemedicine, paramedics, hospital, EMS

PRECLINICAL DENTAL MEDICINE

COMPARATIVE STUDY OF THE ACCURACY OF VITA EASYSHADE SPECTROPHOTOMETERS IN DENTAL SHADE EVALUATION

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Background: Accurate and objective tooth shade matching using spectrophotometry is essential for successful prosthetic restorations. **Objective:** This study aimed to evaluate the measurements made with two spectrophotometers to determine the color of two Vita classical shade guides. **Material and methods:** In the study, each color from the Vita classical shade guide (A1-D4) was determined on a black-and-white background using two Vita Easyshade V spectrophotometers by two operators under the same lighting conditions. The values obtained from the measurements were recorded using the characteristics of the CIELAB system, with the coordinates L, a, b, ΔE. **Results :** The averages of ΔEab values recorded by device 1 are higher compared to those recorded by device 2 on white (7.58±3.242; 8.595±2.668 / 3.048±1.777; 2.747±1.626) and black (4.364±2.109; 8.108±2.578 / 3.077±1.706; 2.696±1.386) backgrounds. Applying the non-parametric comparison test demonstrated that there are statistically significant differences ($p<0.05$) between the ΔEab values calculated from the determinations with both devices.Non-calibration or poor self-calibration before use can influence the recorded values. Due to the lack of calibration verification measures, the veracity of the values cannot be controlled. **Conclusions:** The used spectrophotometers record the color range differently under the study conditions. There are differences between the records and the color that the shadeguide represents.

Keywords: spectrophotometer, Vita Easyshade V, Vita classical, CIELAB

INFLUENCE OF AMBIENT LIGHT ON THE ACCURACY OF DIGITAL IMPRESSIONS

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Background: Intraoral scanning technology is redefining dental practice. It's integration into CAD/CAM systems allows for creating prosthetic restorations with high precision and quality, optimizing clinical efficiency. **Objective:** This study evaluated the scanning accuracy of two intraoral scanners depending on ambient light and operator experience. **Material and methods:** A standardized Frasaco lower model, with a reference device and four magnetic balls, was scanned ten times with two intraoral scanners (Evo I.O.Scan, Runyes) at different light sources (neutral, white, yellow, dark) by an experienced and inexperienced operator. The obtained digital models (STL) were analyzed with the GOM Inspect 2018 software, comparing the distances AB, AC, AD, BC, BD, and CD with the reference values. **Results :** Scans of the inexperienced operator at all distances show statistically significant differences from the reference values, regardless of the ambient light ($p<0.05$). The differences are minimal for the experienced operator. The most accurate values resulted from scanning in cold light, with no statistically significant differences for scans with EVO I.O.Scan. Ambient light influences discrepancies, which increase as the scanning head moves away from the starting point. Scanning in the dark results in minimal differences at all distances, regardless of the scanner or operator's experience. **Conclusions:** The accuracy and precision of scanners operated by experienced operators are slightly influenced by the ambient light. Cold ambient light is the most suitable for digital impressions with the used scanners. It is recommended to avoid full-arch scans under warm light.

Keywords: accuracy, digital impression, intraoral scanning

MODERN PREVENTION STRATEGIES IN DENTISTRY: INTEGRATING PROPHYLACTIC MEASURES INTO CLINICAL PRACTICE

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Background: Considering recent developments in oral health and technology, prevention is essential for lowering the prevalence of dental disorders and preserving long-term oral health. **Objective:** This study aimed to evaluate the level of knowledge and awareness among dental professionals regarding modern preventive strategies and

their integration into clinical practice. **Material and methods:** A structured questionnaire was created using Google Forms and distributed online through social media platforms and professional networks. It included sections on demographic information, awareness and use of preventive techniques, perceived efficacy, and the need for continuing education. A total of 303 dental professionals participated. Data were analyzed in Microsoft Excel, and the Chi-square test was used to assess statistical significance between variables like age, gender, and work environment. **Results :** Most practitioners demonstrated solid knowledge of basic preventive concepts; however, their level of awareness regarding modern preventive methods was limited. While 76.4% of respondents reported being informed about the role of fluoride, awareness of newer preventive methods was notably lower: only 34.7% were familiar with therapeutic sealants, 26.3% with laser technology, 17.4% with ICON treatments, and 29.4% with the use of prebiotics and probiotics in caries prevention. No statistically significant differences were found across demographic groups, indicating a generally uniform, yet insufficient, level of awareness. **Conclusions:** Overall, preventive education among dental professionals remains insufficient, especially in relation to modern techniques. These findings highlight the need for more comprehensive and up-to-date continuing education programs to bridge the knowledge gap and enhance clinical practice.

Keywords: Dental professionals, Modern preventive methods, Continuing education

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A CT ANGIOGRAPHY STUDY OF THE ASCENDING PHARYNGEAL ARTERY ORIGIN

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Background: The occipitopharyngeal trunk (OPT) is a rare variant where the occipital (OA) and ascending pharyngeal arteries (APA) share a common origin. Typically branches of the external carotid artery (ECA), they may also arise from the internal carotid artery, forming an OPT at that level. **Objective:** The variability in the origin of the APA was assessed and found that, in most cases, it originates from the ECA. However, I identified cases where it originates from the OA, forming an OPT. More rarely, the OPT can also originate from the internal carotid artery (ICA). **Material and methods:** A retrospective analysis was conducted on 57 archived computed tomography angiography (CTA) scans, comprising 36 male and 21 female patients. The scans were analyzed using Horos software, using volumetric 3D reconstructions to identify and evaluate the anatomical variants. **Results :** Right APA (RAPA) most commonly originated from the medial portion of the ECA (m-ECA) in 38.6% of cases (n=22), followed by the posterior portion of the ECA (p-ECA) in 19.3% of cases (n=11). RAPA was absent in 17.5% of cases (n=10). Less frequent origins included the OPT in 12.3% of cases (n=7), the ICA in 10.5% (n=6), and the lingual artery in 1.8% (n=1). For the left APA (LAPA), the most common origin was p-ECA (35.1%, n=20), followed by OPT (24.6%, n=14) and m-ECA (21.1%, n=12). LAFA was absent in 17.5% of cases (n=10), while origin from carotid bifurcation was rare (1.8%, n=1). Regarding gender distribution, 63.2% of patients were male (n=36), while 36.8% were female (n=21). Gender-related differences were observed in RAPA and LAPA origins. RAPA originating from m-ECA (n=12) and p-ECA (n=8) was more frequent in males compared to females (n=10 and n=3, respectively). Similarly, LAPA origins from p-ECA and OPT were more common in males (p-ECA: n=12, OPT: n=9) than in females (p-ECA: n=8, OPT: n=5). Additionally, the bilateral absence of APAs was more frequently observed in males (n=7 each) than in females (n=3 each). In two males and one female, an OPT was identified bilaterally, in 5.26% of cases (n=3). **Conclusions:** The study found that ECA was the most common origin of both RAPA and LAPA, while OPT was a less frequent source. Bilateral OPT origin, observed in a few cases, represents a novel finding not previously reported in the literature. Variations were more prevalent in males.

Keywords: occipitopharyngeal trunk, ascending pharyngeal arteries, occipital arteries, Bilateral occipitopharyngeal trunk

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ANATOMICAL VARIATIONS OF THE DEEP CERVICAL VEIN: A PILOT CT ANGIOGRAPHIC STUDY

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Background: The deep cervical vein (DCV) is a component of the external vertebral venous plexus in the posterior cervical region. The DCV originates from the occipital vein (OV), venous tributaries from the suboccipital muscles, and veins of the perivertebral venous plexuses. Ultimately, it drains into the lower segment of the

vertebral vein (VV). **Objective:** This pilot study aimed to investigate the possible anatomical variants of the DCV on computed tomography angiography (CTA). In a case series format, we report on the unusual appearances of the DCV. By reporting these individual anatomical variants, the study aims to contribute to the knowledge of DCV morphology and its clinical relevance in head and neck imaging and interventions. **Material and methods:** A retrospective analysis was performed on 30 archived CTA scans. We used the Horos for macOS (Horos Project) program to explore and sample ten relevant cases. **Results :** In the first case, the left DCV was consistently supplied by the posterior (PCV) and lateral (LCV) condylar veins. It was larger than the opposite DCV. It had a large primary and multiple secondary fenestrations. In the second case, large DCVs were supplied by OVs, mastoid emissary veins (MEVs) and PCVs and were connected to the internal vertebral plexus. The right DCV had a large fenestration. In the third case, both DCVs were supplied by the OVs and were connected to the internal and external vertebral plexuses, as well as to the plexuses of the VAs. In the fourth case, the left DCV's main supply was from the PCV. The right DCV was absent. In the fifth case, a transverse anastomotic arch between the DCVs was found at the level of the axis. In the sixth case, double left OVs were found. In the seventh case, a plexus interconnected the DCVs at the level of the arch of the axis. In the eighth case, double venous pathways were identified in the posterior cervical region, including the DCVs and the posterior external jugular veins. In the ninth case, luxuriant posterior cervical veins were found. In the tenth case, the right DCV was supplied by the PCV and LCV while the OVs drained via the PEJV. **Conclusions:** Studies on the DCV revealed its critical functional importance as the primary extrajugular venous drainage pathway in cases of bilateral IJV resection. As morphological variations of the DCV may occur, it should be documented anatomically on a case-by-case basis.

Keywords: Deep Cervical Vein, Mastoid Emissary Vein, Posterior Condylar Vein, Occipital Vein

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THE BILATERAL ASYMMETRY OF THE STYLOID PROCESS: A CBCT STUDY

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Background: The styloid process (SP) is a bony projection of the temporal bone with anatomical and clinical relevance due to its proximity to neurovascular structures and musculoskeletal function. **Objective:** This study aimed to evaluate the bilateral asymmetry of the SP and explore its diagnostic relevance concerning Eagle's syndrome. **Material and methods:** Thirty archived cone-beam computed tomography (CBCT) scans were analyzed. The length, coronal and sagittal angulation of the SPs were measured and compared bilaterally. Relevant articles were selected from various platforms, including Google Scholar, PubMed, and Science Direct. All selected studies were appropriately reviewed, and relevant conclusions were extracted. **Results :** CBCT imaging provided a detailed three-dimensional assessment of the SP. Precise morphometric analysis revealed bilateral asymmetry of the SP in terms of both length and angulation. SP measured a mean length of 36.34mm on the left side and 38.24mm on the right. The mean sagittal angulation was calculated at 58.41° (left) and 56.53° (right). The mean medial angulation measured 68.51° (left) and 68.10° (right). The mean of the absolute differences in SP length between sides was 4.15mm. For sagittal angulation the mean of the absolute differences between sides was 3.38º, while in the case of medial angulation, the mean of the absolute differences reached 5.19º. **Conclusions:** Bilateral evaluation of the SP is critical for accurate diagnosis. CBCT scans should be considered as a routine evaluation of craniofacial pain of unclear origin.

Keywords: styloid process, bilateral asymmetry, Eagle’s syndrome, CBCT

STUDY ON COLOR CHANGES OF FELDSPARTIC CERAMICS

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Background: Aesthetics has become an important part of society, with dental aesthetics being an essential component. The interest in restorative materials with properties similar to those of natural teeth has experienced an upward trend over time. Although the physical properties of feldspathic ceramics are reduced, their aesthetics can reach the properties of restored teeth. Although the color of ceramic materials is stable over time, it can be influenced by factors such as the firing process, surface finishing, and the patient's eating and hygiene habits. **Objective:** The purpose of this study is to observe the coloristic behaviour of feldspathic ceramics with different surface treatments immersed in saliva and coffee solution. **Material and methods:** For the study, 90 samples of

feldspathic ceramics were made using the layering technique, which had an area of 1 cm2 and a thickness of 2 mm. The samples were divided into three equal groups according to the surface finish: hand-finished, overglazed and then processed with a diamond bur, overglazed. Each group was divided into two subgroups according to the liquid medium in which they were immersed: saliva or coffee solution. The color was determined with the PCE-XXM 30 Colorpicker colorimeter before immersion (T0) and at three different times. Between measurements, the samples immersed in the solutions were kept in harvesters in an incubator at 37 degrees. For the analysis, ΔEab was calculated, and the color difference was determined at T0 and Tx. The statistical analysis was performed with the GraphPad Prism software. The statistical significance threshold was set at $p<0.05$. **Results :** For samples immersed in saliva, the highest mean value was recorded for the overglazed ones at the T2 measurement time (M=6.628±0.2402), with statistical differences compared to the unglazed and manually glazed samples. Immersion in both coffee and saliva show similar behaviour in the samples regardless of the processing method. There is a tendency for the Δ value to increase from one measurement to another, and then a decreasing trend is observed. **Conclusions:** Overglazed ceramics require additional firing, which can lead to changes in the surface structure with the appearance of microcracks, explaining its more intense colouring.

Keywords: Dental ceramics, Saliva, Ceramic color

THE VERTICAL TOPOGRAPHY OF THE FORAMEN ROTUNDUM

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Background: The foramen rotundum (FR) is a bony structure inherent to the skull base, located in the greater wing of the sphenoid bone, on the floor of the middle cranial fossa. The FR's proximity to the pterygopalatine fossa, pterygoid canal, and palatovaginal canal makes it closely related to the transsphenoid and the extended transsphenoid sinus surgery. Taking all these factors into consideration, the FR is regarded as a significant landmark. **Objective:** This study aims to detail FR's bilateral vertical variation possibilities. **Material and methods:** Forty archived CBCT DICOM files were used. The anatomical details were studied using the Planmeca Romexis Viewer 3.5.0.R software. The measurements were taken between the inferior pole of each foramen rotundum and the anterior nasal spine, a fixed anatomical landmark. On sagittal slices, the distance from the entry of the FR in the middle cranial fossa to the tip of the anterior nasal spine was measured on both sides. The bilateral values were compared. **Results :** Just 25% of the FR pairs that were analysed showed no bilateral height differences. The results for the remaining 75% were as follows: 17.5% had the right FR positioned higher than the left one, with a mean difference of 1.56 mm. On the other hand, 57.5% of cases had a higher left FR, with a mean bilateral vertical position difference of 2.01mm. The most significant difference was observed in a case where the left FR was positioned higher, with a 4.36 mm difference compared to the right FR. **Conclusions:** While the bilateral vertical variations of the foramen rotundum may seem minor, they exist and can be significant if the foramen rotundum is used as a surgical landmark.

Keywords: Foramen Rotundum, CBCT, Vertical Variation

VARIABILITY OF THE MANDIBULAR CONDYLE: A CONE-BEAM COMPUTED TOMOGRAPHY STUDY ON ITS RELATIONSHIP WITH THE MANDIBULAR NOTCH

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Background: The temporomandibular joint is a complex joint with significant relevance in mastication, playing a crucial role in surgery, orthodontics, and prosthetics. The mandibular condyle (MC) is a rounded prominence with a typical biconvex shape in axial sections. **Objective:** This study aimed to determine the relationship between the MC and the mandibular notch plane and to observe any possible asymmetries between the two condyles. **Material and methods:** CBCT scans of 30 study subjects were analyzed. The files were examined using the Planmeca Romexis Viewer 3.5 software. All images were aligned so that the axial sections were parallel to the Frankfort horizontal plane. After establishing the mandibular notch plane, measurements were taken in the axial section at the level of the condyle's maximum diameter, finding out how much of the condyle is medial and how much is lateral to the chosen reference plane. The results were expressed both as percentages and as approximate ratios. **Results :** The arithmetic mean of the identified percentages was 68.61% for the right condyles

and 70.57% for the left condyles. The percentage of the condyle positioned medially to the notch was slightly higher on the left side in 18 cases (differences ranging from 2% to 10%), slightly higher on the right side in two cases, and 20% higher on the right side in one case. The corresponding ratio of the medial portion of the condyle was for the right side: 15 cases with a 2/3 ratio, 12 cases with a 3/4 ratio, and 3 cases with other values, and for the left side: 15 cases with a 3/4 ratio, 13 cases with a 2/3 ratio, and 2 cases with other values. **Conclusions:** The mandibular condyle has both an external and an internal portion depending on its positioning relative to the mandibular notch plane. The predominant ratios for the medial portion were 2/3 and 3/4. It is also important to consider the possibility of a medial displacement of the condyle on the left side. Although bilateral asymmetry is present, it is not significant, as both percentages and ratios were similar in most cases.

Keywords: mandibular condyle, mandibular notch, bilateral asymmetry, cone-beam computed tomography

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COMPARATIVE EVALUATION OF STATIC AND DYNAMIC OCCLUSION USING ARTICULATING PAPER AND 3D OPTICAL ANALYSIS

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Background: Precise occlusal assessment is essential for achieving functional balance and long-term restorative success. While articulating paper provides quick chairside evaluation of contact points, digital intraoral scanners such as the MEDIT i700 offer three-dimensional occlusal mapping with quantifiable data on contact location and intensity. **Objective:** To compare occlusal contact detection and distribution using articulating paper and 3D digital scanning in both static and dynamic mandibular positions in a patient with clinically normal occlusion. **Material and methods:** A single patient underwent occlusal analysis using articulating paper and the MEDIT i700 scanner. Contacts were recorded separately under static intercuspation and dynamic mandibular movements (protrusion and lateral excursions). The digital system generated color-coded occlusal maps based on contact proximity (e.g., red = 0 mm collision, yellow = 0.07 mm, blue = separation). Contact counts and overlap between the two methods were evaluated for anterior and posterior segments of both arches. **Results :** Static occlusion: The digital scan identified 56 occlusal contacts, while articulating paper recorded 27, 26 of the 27 paper contacts were confirmed on the scan (~96% match), In the maxillary posterior region, 12 digital contacts were recorded vs. 3 from articulating paper, In the mandibular posterior region, 11 digital contacts were recorded vs. 7 from articulating paper, with 6 matching, Anterior segments showed consistent, well-defined bilateral contacts in both methods, Dynamic occlusion: The scan recorded 57 contacts during mandibular movement, compared to 26 contacts detected by articulating paper, 25 of these 26 paper contacts matched the digital scan (~96% match), An additional 31 contact points were visualized only on the scan, mostly in anterior guidance and excursive contacts Overall, the digital scan detected over twice as many contacts as articulating paper in both occlusal states. While it offered greater diagnostic precision, slight over-registration was observed when the patient applied excessive biting force, occasionally resulting in false-positive collision zones. **Conclusions:** Digital occlusal analysis with the MEDIT i700 demonstrated a 107% increase in contact detection under static conditions and 119% under dynamic function, offering superior diagnostic accuracy and functional visualization compared to articulating paper.

Keywords: occlusion analysis, contact distribution, articulating paper, MEDIT i700

CLINICAL DENTAL MEDICINE

ACCURACY EVALUATION FOR DIFFERENT SCANNING STRATEGIES FOR EDENTULOUS CASES

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Background: Most scanner manufacturers recommend scanning strategies for edentulous or partially edentulous arches, but these recommendations are often not based on well-documented scientific evidence. Scanning edentulous arches is a challenge for practitioners, and various studies have shown that accuracy depends on factors such as practitioner experience, scanning strategy, and soft tissue mobility. Manufacturers do not recommend scanning strategies for edentulous arches. **Objective:** The study aims to determine the most accurate scanning strategy for the two scanners used in the study. **Material and methods:** Ten upper and lower Frasaco edentulous arches were scanned using six different scanning strategies and two scanners, Medit i600 and EVO IO Scan. A reference aid with four metallic magnetic balls was used to assess the accuracy. The obtained scans were imported in Gom Inspect, and the accuracy was determined by measuring the difference between the landmarks from the digital impressions and the standard distances the reference aid gave. GraphPad Prism software was used for statistical analysis. Mean (M) and standard deviation (SD) of differences were calculated. Statistical significance was set at $p<0,05$. **Results :** It was found that there is a statistical difference between scanning strategies in terms of accuracy and use ($p<0,05$). **Conclusions:** The study's limitations allow us to conclude that the scanning strategy is important to obtain the most accurate impression, and this must be chosen in accordance with the intraoral scanner used.

Keywords: Scnning, Edentulous, Strategy

INFLUENCE OF THE PATIENT'S HEAD AND PRACTITIONER'S POSITION ON THE ACCURACY OF THE DIGITAL IMPRESSION- IN VITRO STUDY

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Background: Intraoral scanning is becoming an increasingly common practice in dental offices, although many factors can still influence the accuracy of digital impressions. In addition to local factors such as saliva, soft tissues, and edentulous spaces, external factors can also influence the quality of digital impressions. The influence of external factors has not been intensively studied. Among the external factors that can influence this is the position of the doctor and the patient, respectively, and the patient's head. **Objective:** The study aims to determine whether the patient's head and practitioner's positions influence the accuracy of the digital impression. **Material and methods:** A phantom head with a dental chair headrest mounting system was used. The practitioner's position during scanning was in front of the patient (7 o'clock) and at 12 o'clock. The dental chair was positioned in two positions, upright and supine, with the headrest placed in two different positions. Ten digital impressions for each position were performed on a lower dentate model mounted in a phantom head. A standardized transfer aid with four steel balls was used to evaluate the accuracy of the impression. All scans were measured using a mean mesh of the transfer aid with GOM inspect. Statistical analysis was performed with GraphPad Prism software. The mean and standard deviation of the discrepancy were calculated. Statistical significance was set at $p<0,05$. **Results :** The results obtained showed differences in terms of trueness and precision both when referring to the practitioner's position and when referring to the patient's position. **Conclusions:** Within the study's limitation, external factors, such as patient and practitioner positions, are important to consider in intraoral scanning.

Keywords: Patient’s position, practitioner’s position, intraoral scanning

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POSSIBILITIES AND LIMITS IN THE TREATMENT OF DENTAL FRACTURES ELLIS CLASS II IN CHILDREN

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Background: Dental fractures represent emergencies in pediatric dentistry that require immediate attention, as

they may have various medical, aesthetic, and psychological consequences for patients, as well as potential complications. According to Ellis' classification, grade I fractures affect only the enamel, while grade II fractures involve both enamel and dentin, with the patient experiencing dentinal sensitivity or pain. **Objective:** Comparation of two different techniques for coronary restoration in Ellis class II fractures: the classical method using simple adhesive filling and the reconstruction method with a fiberglass ribbon (FREE - Fiber-Glass Ribbon Elliptical Encasement). **Material and methods:** The study was conducted in vitro on 21 extracted teeth obtained for orthodontic purposes, with induced Ellis class II coronary fractures on the lower central incisors. The initial sample was divided into two subgroups: Group A (10 teeth) with simple adhesive reconstruction Group B (11 teeth) with fiberglass ribbon reconstruction (FREE) The teeth were embedded in gypsum blocks in three positions: horizontal, oblique, and vertical. All samples were attached to a universal traction machine (in horizontal, oblique, and vertical positioning) to evaluate tensile and compressive strength (simulating the forces acting on the teeth in the oral cavity). **Results :** Restorations performed using only simple filling, particularly in the most unfavorable scenario (horizontal positioning), proved to be ineffective. These findings support the use of an elliptical circumferential fiberglass ribbon framework (FREE). The mechanical behavior of these systems does not differ from that of an intact tooth, as they adhere to the principle of reconstructing the initial architecture of the tooth. As a result, resistance is not limited by the adhesion strength or mechanical properties of the restorative material. The fiberglass ribbon absorbs and dissipates stress before it reaches the critical areas of the restorative dental reconstruction (the tooth-restoration interface). **Conclusions:** Dental injuries are the most common among all maxillofacial traumas, occurring in 22% of children up to 14 years old, more frequently in boys. The incisors, especially the central ones in the upper arch, are the most commonly affected teeth. The restoration with a fiberglass ribbon ensures excellent resistance of the tooth to masticatory forces while minimizing odontal tissue sacrifice.

Keywords: Dental fractures, Fiberglass ribbon reconstruction (FREE), Coronary restoration

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IN VITRO DIGITAL IMPRESSION – HAND-HOLD MODELS VS SIMULATOR MOUNTED MODELS

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Background: Digital impression has become a standard method in dentistry, offering benefits such as speed, increased patient comfort, and optimal integration with CAD/CAM technologies. In vitro studies play a key role in optimizing scanning techniques, but for their results to be clinically relevant, they must simulate the conditions in the oral cavity as closely as possible. **Objective:** This study aims to compare the accuracy of digital impressions performed on hand-held models without fixation with those performed on simulator-mounted models, which provide conditions closer to those in vivo. **Material and methods:** Ten Frasaco lower dentate models, in which four steel spheres were luted using a standardized transfer aid, were scanned. Scanning was performed under two conditions: the models were held in the operator's hand and mounted in the simulator. All digital and analog impressions were measured and compared with reference values. The measurements were performed with GOM Inspect software. The statistical analysis was performed to assess if there is a statistical difference between reference aid and impressions. The mean and standard deviation of discrepancy were calculated to assess the accuracy. The statistical difference was set at $p < 0.05$. **Results :** With $p<0.05$, it was demonstrated that there is a statistically significant difference between the mean values recorded by measuring the distances between the reference points provided by the metallic spheres on the hand-held and simulator-mounted models. In terms of accuracy, statistical differences were also found. **Conclusions:** Within the limits of the study, we can conclude that replicating the conditions offered by the oral environment as accurately as possible is important for in vitro studies, and this provides solid results.

Keywords: in vitro, digital impression, simulator

THE LEARNING CURVE IN INTRAORAL SCANNING – IN VITRO STUDY

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Background: Digital impression technology improves the precision and efficiency of the prosthetic workflow. The

clinician's training is important to obtain an accurate digital impression. Intraoral scanners reduce impression time, so it is very important that the operator is able to perform the scan in the shortest possible time. The number of images acquired per scan is an important parameter that can influence the quality of the impression. **Objective:** This study aims to evaluate the progress of an inexperienced clinician in digital impression in terms of speed, number of images per scan, and accuracy. **Material and methods:** An inexperienced operator (4th-year student) performed digital scans of a Frasaco model over a period of one week. Ten scans were performed daily. The operator's progress was monitored by counting the number of images captured per scan and scanning speed and accuracy. The digital models obtained were compared with each other and with a reference model, using GOM inspect software to determine whether the quality of the digital impression is superior once the scanning technique is mastered. GraphPad Prism software for statistical analysis was used, and statistical significance was set at $p<0,05$. **Results :** The results indicate a progressive improvement in clinician performance, reflected by an increase in the number of images captured per second and a reduction in the time required for a complete scan. **Conclusions:** This study underscores the crucial role of repeated practice in solidifying the skills necessary for digital impression. Monitoring scanning parameters can be a valuable tool in optimizing the learning curve for novice operators. This finding should motivate dental professionals, educators, and researchers to invest in training and development to harness the full potential of digital impression technology.

Keywords: Number of image, Scanning speed, Iinexperienced

ACCURACY OF THE DIGITAL IMPRESSION OF THE EDENTULOUS ARCHES - IN VITRO STUDY

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Background: Digital impressions are a suitable alternative to conventional ones. Digital impressions of the dentate and partial edentulous arches have been intensively researched, and now, most of these drawbacks are known. Regarding intraoral scanning of the edentulous arches, many factors are involved in the accuracy of the impression. A lack of dental landmarks can affect the accuracy of the impression, demanding additional scanning and special techniques. **Objective:** The study aims to assess the digital impression accuracy of the edentulous arches. **Material and methods:** Ten upper and lower Frasaco models with edentulous arches were used. A metallic transfer aid with four metallic spheres was used to assess the accuracy. The digital impressions were performed with two scanners, Medit i700 and EVO I.O.SCAN. All scans were compared to the reference defined by the transfer aid using measuring software. Statistical analysis was performed with GraphPad Prism software. Statistical significance was set at $p<0,05$. **Results :** The study that compared the accuracy of digital impressions of edentulous arches using two intraoral scanners found a statistically significant difference between the two scanners used ($p<0.05$) and between the digital models obtained and the reference values considered in the study. The results also showed that there is a statistical difference between the discrepancies from the reference recorded at the level of the lower and upper edentulous arch. **Conclusions:** In the limitation of the study, it can be concluded that the accuracy of the digital impression of the edentulous arches depends on the scanner used and the arch being scanned.

Keywords: Edentulous arch, Digital impression, Landmarks

ACCURACY OF THE DIGITAL IMPRESSION OF THE PARTIALLY EDENTULOUS ARCHES – IN VITRO STUDY

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Background: In fixed prosthetics, digital impressions can be an alternative to conventional impressions due to the speed of the process, patient comfort, efficient communication with the dental technician, and many other qualities of this technology. Although scanner technology has continuously improved in recent years, the impression of partially edentulous teeth is still influenced by many factors, among which are the size of the edentulous gap and its position. **Objective:** The study aims to evaluate the accuracy of the digital impression of a partially edentulous arch. **Material and methods:** Ten partially edentulous inferior Frasaco models were scanned with two scanners, Medit i700, and EVO IO Scan. The models were mounted in a phantom head with a dental chair headrest

mounting system. On the remaining teeth were luted steel spheres with the help of a standardized transfer aid. The same operator performed the scanning. After the scanning, the STL files were imported into GOM Inspect software, where the distances between the spheres were compared with those of the average mesh of the transfer aid. Statistical analysis was performed with GraphPad Prism software. Mean and standard deviation were calculated, and statistical significance was set at $p<0,05$. **Results :** The results obtained demonstrated a difference between the averages recorded before measuring the digital models made with the two scanners. Also, accuracy was proven to be influenced over long distances. **Conclusions:** The quality of the digital impression can be modified by the position and span of the edentulous spaces.

Keywords: partial edentulisn, digital impression, accuracy

EVALUATION OF INTRA-ARCH CHANGES AFTER MAXILLARY EXPANSION USING HAAS AND HYRAX EXPANDERS

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Background: Rapid maxillary expansion is an orthodontic therapeutical method used to correct transverse discrepancies of the maxilla. Although a direct impact on intra-arch dimensions can be expected. The Haas-type and the Hyrax-type expanders are two of the most used devices for this type of treatment. A comparative analysis to determine the morphological changes obtained by these types of expanders would be useful. **Objective:** The objective of this study is to analyze the intra-arch changes before and after maxillary expansion using the Haas and Hyrax-type devices. **Material and methods:** The study was conducted on a group of patients undergoing orthodontic treatment with the Haas and Hyrax-type disjunctors. Measurements were taken on intraoral images using WebCeph software, before and after maxillary expansion. The analyzed parameters included transversal measurements of the maxilla (interpremolar distance (IP), intermolar distance (IM)), and the sagittal measurements of the maxilla (sagittal dimension SS) . Statistical analysis was used to determine the differences between the two expansion methods. **Results :** The results showed that both the Haas and Hyrax expanders caused a significant increase in interpremolar and intermolar distances. Although the trends of change varied, statistical analysis did not reveal significant differences between the groups, suggesting that the variations can be attributed to individual patient factors rather than a specific effect of the type of expander used. **Conclusions:** Our study indicates that both types of expanders are effective in achieving maxillary expansion.

Keywords: Maxillary expansion, Haas expander, Hyrax expander, intra-arch changes

STANDARDS OF THE IDEAL SMILE: A DENTAL AESTHETIC APPROACH USING ARTIFICIAL INTELLIGENCE

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Background: In the era of digital dentistry under continuous scientific development, the term "ideal smile" goes beyond traditional norms. Achieving a modern ideal smile involves digital assets and incorporates advanced technologies like artificial intelligence (AI). Treating various clinical cases, a digital application offers the possibility of having an easy-to-use protocol from diagnosis to digital smile planning, showcasing the power of AI in creating predictable, personalized, and functionally aesthetic dental restorations. **Objective:** The aim of the present study was to assess and explore the modern parameters of the ideal smile and how artificial intelligence-based software can assist in the analysis of dental proportions, smile harmony, and orofacial aesthetics. Furthermore, we wanted to evaluate whether these digital tools can be truly useful in cosmetic dentistry, especially for young dentists and recent graduates like us. **Material and methods:** The SmileCloud Biometrics application was selected for its accessible user fee and intuitive interface, as well as the variety of features offered. It was used to analyse a group of 17 patients, aged between 20 and 50, based on standardized photographic protocols and facial reference measurements. By integrating AI algorithms and digital tools, each case was analysed and digitally simulated, providing patients with a realistic preview of the proposed result. **Results :** The study was conducted on a group of 17 patients, aged between 20 and 50 years, and the main motivation for which the patients presented for consultation was aesthetic (88%), and in isolated cases (12%) functional. After analysing the photographs and digital planning using the SmileCloud application, the following results were obtained: the symmetry of the facial

lines was considered appropriate in 12 patients. The smile line required minor corrections in 14 patients (82%). An important aspect of the study was the patients' reaction to the digital simulations generated with the help of AI. A significant percentage - 88% (15 patients) - expressed agreement with the proposed aesthetic plan and were impressed by the realism of the presentation. Also, 12 patients (71%) stated that the digital visualization helped them to better understand the available aesthetic options. **Conclusions:** The present study highlights variations in aesthetic preferences by age and gender and identifies discrepancies between patient wishes and modern professional aesthetic criteria. The acceptance rate of digitally generated aesthetic plans was high (88%), and most patients appreciated the visual clarity of the simulated result. These data support the usefulness of integrating AI into modern aesthetic dentistry.

Keywords: aesthetic dentistry, ideal smile, artificial intelligence

EFFECT OF XYLITOL CHEWING GUM ON SALIVARY PH AND PLAQUE INDEX IN HIGH CARIES-RISK CHILDREN

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Background: Still the most common chronic disease in children, dental cavities come from inadequate oral hygiene combined with habitual sugar intake. Preventing caries in children at high risk involves not only toothbrushing and fluoride application. A naturally occurring sugar alcohol, xylitol has shown some encouraging anti-cariogenic qualities, especially its capacity to lower bacterial load and improve salivary production. This work assesses salivary pH and plaque index in high caries-risk children after chewing xylitol-containing gum. **Objective:** Twenty children aged 6-10 were recruited from the pediatric dental clinic at George Emil Palade University. To be included, they had to be in good general health, have a dmft score of 3 or higher, and have dietary or hygiene habits that put them at risk for cavities. The exclusion criteria included ongoing orthodontic treatment, recent antibiotic use, or underlying medical conditions. **Material and methods:** The dmft score was used to assess their cavity experience, and their salivary pH and plaque index were measured at the start using established methods. The children were then instructed to chew one piece of xylitol gum (1g) three times a day after meals for four weeks, in addition to their usual oral hygiene routine. Their salivary pH and plaque index were reassessed at the end of the study. **Results :** The baseline measurements revealed a mean salivary pH of 6.20 and a plaque index of 1.50, indicating fair oral hygiene. The average dmft score was 5.8, confirming that the children were at high risk for cavities. After four weeks, the salivary pH had increased to 6.75, and the plaque index had decreased to 1.10 - both significant changes. Notably, children with higher dmft scores showed greater improvements in pH, suggesting that xylitol may be particularly beneficial for those at higher risk. Encouragingly, no adverse effects were reported, and all participants completed the study. The findings of this study are consistent with previous research on xylitol. The dmft index proved useful in identifying children at risk and valuable insight into their response to the treatment. The gum was well-tolerated and easily incorporated into their daily routines. While the study had limitations, the results are promising and suggest that further investigation is warranted. **Conclusions:** Chewing xylitol gum may be a helpful tool for kids at high risk of cavities, improving their oral health by boosting salivary pH and reducing plaque. To solidify its role in preventing tooth decay, more extensive studies are needed to verify these promising results.

Keywords: Xylitol, dmft, Salivary pH, Pediatric Dentistry

ACCURACY OF MODELS OBTAINED BY DIGITAL IMPRESSION AND BY DIGITIZATION – IN VIVO STUDY

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Background: The use of intraoral scanners has become a common practice, but they do not ensure clinically acceptable results in all clinical cases, so digitization of models obtained by conventional means is still necessary. The accuracy of virtual models obtained from the use of intraoral scanners has been and is being studied for a long time, but digitization has not. **Objective:** The aim of the in vivo study is to observe whether there are differences between virtual models obtained by intraoral scanning and those obtained by digitization.A transfer guide was used to determine the accuracy of virtual models. Four steel balls were reversibly cemented on ten

patients', intact lower dental arches using the transfer guide. The arch was scanned (Straumann Dental Wings intraoral scanner), and then the conventional impression was performed with monophasic A silicone. Following the conventional impression, plaster models were obtained and scanned using the laboratory scanner (CS.NEO 2 PRO - CAD STAR -AUSTRIA). The files obtained from the scans were transferred to the Gom Inspect dimensional control program, where measurements were made according to the transfer guide parameters. The statistical analysis was performed using the GraphPad Prism program; the parameters considered were the discrepancy and the standard deviation. The statistical significance threshold was set at $p<0.05$. **Material and methods: Results :** The discrepancies recorded at the level of the virtual models obtained through intraoral scanning largely do not show statistical differences compared to the reference; only one distance shows significant differences. In the case of digitization, similar results were recorded. **Conclusions:** Within the study's limits, it can be concluded that digitization of models represents a viable alternative in terms of accuracy for situations in which the use of intraoral scanning cannot provide clinically acceptable results.

Keywords: Digitization, intraoral scanning, conventional impression, discrepancy

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AUTOGENOUS DENTIN IN BONE REGENERATION: MYTH OR REALITY?

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Background: Bone resorption in the maxillary bones occurs following tooth extractions, dentoalveolar trauma, periapical pathologies, or periodontal disease. Autogenous bone grafts are considered the gold standard for bone regeneration due to their osteogenic, osteoinductive, and osteoconductive properties. However, harvesting these grafts carries risks and donor site morbidity, which is why autogenous dentin has emerged as a viable alternative. **Objective:** The study examines the potential of autogenous dentin as a bone graft material, highlighting its biological and clinical advantages, and compares its effectiveness to other types of grafts. **Material and methods:** A systematic literature review was conducted by searching the Scopus, PubMed, and Web of Science databases (up to February 1, 2025), using terms such as "autogenous bone graft" and "tooth-derived bone graft material." Selection criteria included the relevance of the studies and the quality of the presented data. The review examined the physical and biochemical properties, preparation processes, and clinical applicability. **Results :** Out of 563 identified articles, 30 were selected. Dentin, with its high collagen and hydroxyapatite content, exhibits osteoconductive and osteoinductive properties similar to bone. Studies report the successful use of dentin grafts in alveolar augmentations, sinus lifts, and post-extraction socket preservation, achieving outcomes comparable to conventional grafting methods. **Conclusions:** Autogenous dentin proves to be a promising material for bone grafting due to its chemical composition and effective integration. However, further studies are needed to establish its advantages and optimal usage protocols. These findings support the clinical potential of autogenous dentin as an effective option for bone regeneration in dentoalveolar surgery.

Keywords: bone graft, autogenous dentin, bone regeneration, bone augmentation

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IMPORTANCE OF DEMIRIJIAN METHOD IN AGE DETERMINATION

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Background: Dental development is an important tool for forensic odontologists due to its consistent timeline, resistance to environmental factors, and availability of detailed anatomical records **Objective:** Demirjian's method is used in forensic medicine to assess dental development; the method has an important role in assessing dental development and finding the patient's actual age **Material and methods:** In this method, observation is done in every tooth individually and dental maturation level is done according to Demirjian's method then after the corresponding alphabet from the maturation table A-H is obtained, staging is done by using self-weighting for dental staging, boys and girls have different age score. All the scores are added in the calculation and the dental age is obtained from the Demirjian's maturity conversion table for boys and girls. **Results :** This model explains 75.6% of the variation in chronological age based on dental age. The regression coefficient is 0.9852, $p<0.001$. A strong significant static relation exists between dental age and actual age **Conclusions:** This study supports using age assessment as a helpful tool in determining pediatric children's age when chronological data is unavailable, with an acceptable margin of error

Keywords: Forensic medicine, Demirjian method, age determination

PHARMACY

MEDICINAL MUSHROOMS: THERAPEUTIC PROPERTIES AND PHARMACOLOGICAL APPLICATIONS

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Background: Medicinal mushrooms have a long history of use in European countries, where they are commonly incorporated into traditional cuisine or consumed as dietary supplements and nutraceuticals. Their popularity stems from their rich composition of bioactive compounds, including polysaccharides, terpenoids, phenolic compounds, and proteins, which contribute to their therapeutic properties. Recent scientific studies have highlighted their diverse pharmacological activities, including immunomodulatory, anti-inflammatory, antioxidant, anticancer, antimicrobial, and neuroprotective effects. These findings have increased the interest in the potential of medicinal mushrooms for the development of novel functional foods and pharmaceutical applications, making them a promising area of research in modern medicine and biotechnology. **Objective:** The aim of this study was to review the recent findings regarding their biological activities with a particular focus on their implications in oncogenesis, their therapeutic benefits in diabetes management and other chronic diseases. **Material and methods:** A comprehensive and systematic search was conducted using the PubMed and ScienceDirect databases to identify relevant studies, using combinations of the following keywords: ,,medicinal mushrooms'', ,,Hericium erinaceus'', ,,Grifola fondosa'', ,,Lentinula edodes'', ,,Inonotus obliquus'', ,,Ganoderma lucidum'', and ,,Cordyceps''. **Results :** The complex composition of these medicinal mushrooms explains the numerous pharmacological effects. In particular, the specific polysaccharides (α- and β-glucans, but not only) show antitumor activity against various tumours, with notable results obtained in clinical trials. Also, clinical studies demonstrate that various medicinal mushrooms, show potential benefits in improving insulin resistance, lowering blood glucose, cholesterol, and triglycerides, and reducing risks of hypertension and metabolic complications in diabetic and hypertensive patients. **Conclusions:** This study highlights the remarkable pharmacological potential of medicinal mushrooms, emphasizing their efficacy in cancer treatment, antioxidant activity, and diabetes management. The bioactive compounds present in species such as Hericium erinaceus, Grifola frondosa (Maitake), Lentinula edodes (Shiitake), Inonotus obliquus (Chaga), Ganoderma lucidum (Reishi), and Cordyceps contribute to their diverse therapeutic benefits. Given their wide-ranging health applications, medicinal mushrooms represent a promising avenue for future research and development in pharmaceuticals, nutraceuticals, and functional foods.

Keywords: Medicinal mushrooms, bioactive compounds, oncogenesis, functional foods

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ATTITUDES OF UNIVERSITY STUDENTS TOWARDS PSYCHOACTIVE SUBSTANCE USE

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Background: In recent years, students have begun to consume psychoactive substances, affecting not only their physical and mental health but also their social behavior. This epidemic constitutes a significant public health concern, affecting students' academic performance and development. The key to effective prevention lies in understanding young people's attitudes in university environments. Due to the lack of data from studies in Romania, this work aims to fill this gap by identifying the factors influencing students' attitudes. **Objective:** Using a validated questionnaire approved by the Ethics Commission, this study aims to analyse the attitudes of UMFST George Emil Palade students towards the consumption of psychoactive substances to identify trends, psychological markers, and factors influencing perceptions. Potential differences in attitudes based on the responses obtained are also examined to identify triggers leading to consumption patterns. **Material and methods:** This observational and prospective study used a questionnaire completed by 173 university students, a number significantly higher than the initially planned sample of approximately 150 respondents, reflecting increased interest in the subject. Participation was anonymous, and the statistical analysis (descriptive and inferential) did not allow for any identification of study subjects. The objective was to identify differences in knowledge, attitudes, and behaviors related to the use of psychoactive substances. **Results :** Analysis of valid responses revealed significant exposure to psychoactive substance use among students. More than half of the respondents (52.6%) reported knowing people who regularly use psychoactive substances, with a similar proportion observed for use in social settings (54.3%), indicating a normalization of substance use in the university environment. Access to psychoactive substances is perceived as relatively easy: 57.3% of students agreed, and the remainder were

neutral or disagreed. An important aspect is the demand for better information resources: 67.6% of students indicated that the current resources available to the public are insufficient and/or of doubtful provenance. **Conclusions:** This study highlights the factors influencing students' attitudes toward psychoactive substances. Emotional and psychological fragility and peer pressure are among the factors that increase the risk of substance use. Efforts to address these issues should encourage students to participate more frequently in activities that enhance their social support and to better understand the risks associated with psychoactive substance use.

Keywords: Psychoactive substance, Substance use, Students, Attitude

PLANT GROWTH RESPONSES IN TWO OCIMUM SUBSPECIES TO POLYPHENOLIC EXTRACT TREATMENT

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Background: The *Ocimum* genus consists of subspecies with strong cross-breeding capability, making physical and chemical characterization difficult. Lately, the pharmaceutical and cosmetic industry has shifted towards traditional medicine and "bio" constituents. Therefore, influencing the growth rate of therapeutically used plants is a desirable objective. **Objective:** The objective of this study is to compare two *Ocimum* subspecies treated with a polyphenolic extract based on their germinative energy and capacity, photo-assimilating pigment concentration, biomass, and total polyphenolic concentration (TPC). **Material and methods:** Germinative energy and capacity were evaluated under controlled conditions in growth pots. The quantification of photo-assimilating pigments was conducted through laboratory analysis. Biomass assessment was performed by determining the dry weight of the aerial plant parts. Polyphenol concentrations were analyzed using UV-VIS spectrometry, with extracts obtained through ultrasonic-assisted extraction utilizing a titanium probe sonicator. **Results :** The two subspecies compared in this experiment are *Ocimum basilicum var. basilicum* (OB) and *Ocimum basilicum "Sweet Dani Lemon"* (SDL). While growing, they were treated with an aqueous polyphenolic extract obtained from the bark of red oak (*Quercus rubra*). Trays with 50 cells were used, including a control and two treated with polyphenolic extracts of 1 g/100 mL and 2 g/100 mL. While studying germinative energy and capacity, we observed an ascending trend in the treated seedlings. The 2g/100 mL concentration of polyphenolic extract had the greatest influence on the growth and development of the seedlings in both subspecies. The 1g/100mL concentration extract led to an increase in photo-assimilating pigments in both subspecies, while the 2g/100mL extract led to a decrease in pigments, even compared to the control series. Biomass was determined for both leaves and stems. No significant difference was observed regarding stem growth, but leaves were influenced: the less concentrated solution had a positive impact on the growth and development of the leaves by both the number of leaves and biomass, while the more concentrated solution led to stagnation or even inhibition of growth. TPC was also determined. For OB, the treatment led to a decrease in TPC, while for SDL both concentrations led to an increase in polyphenols, with the less concentrated extract having the greatest impact on TPC. **Conclusions:** The results highlight the impact of the polyphenolic extracts' concentration on the development of two *Ocimum* subspecies. Further research is needed in order to determine possible differences in the chemical composition of the volatile oils of treated plants and future industrial uses of the results.

Keywords: basil, polyphenols, extract, oak bark

ENHANCED EXTRACTION OF POLYPHENOLS FROM XANTHIUM STRUMARIUM L. FRUITS: A STUDY ON ULTRASOUND-ASSISTED METHOD OPTIMIZATION

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Background: Common cocklebur (*Xanthium strumarium L.*) is an invasive species used in the traditional Asian medicine, but without a use in European therapy currently, although it is high in valuable chemical compounds. **Objective:** This study aims to optimize an ultrasound-assisted extraction (UAE) method of polyphenols retrieved in the fruits of *Xanthium strumarium*. It will use a D-optimal multilevel design model with three central points and determine the total polyphenolic content (TPC) of each extract. **Material and methods:** Using MODDE 13.1 design of experiments software, three independent variables were input to plan the optimization process, each of them having three values: time (10, 20, 30 minutes), amplitude (30, 40, 50 %) and ethanolic solvent concentration

(40, 60, 80 %). The design process consists of 18 extracts, with the three central points consisting of the 20 minutes-40% amplitude-60% ethanol parameters. Each extract was realized using 0.5 grams of *Xanthii fructus* and 10 milliliters of ethanol, extracted using an ultrasonicator with a central titan probe, keeping the extracts in an ice bath the whole time. Each extract was filtered using a void pump and centrifuged at 4000 rpm afterward. TPC was determined for each extract using a standardized UV-VIS spectrometry method, utilizing Folin-Ciocâlteu and sodium carbonate as reagents. The optimized extracts' solvent was then evaporated with a rotary evaporator and subject to lyophilization for further use. **Results :** The design model was validated by analyzing the summary of fit, TPC values representing the output variables: R2 (the model fit) is 0.959, indicating a model with high significance; Q2 shows the future prediction precision, its value of 0.695 indicates a good model; the model validity higher than 0.25 suggests that there are no outliers in the tested system and its reproducibility higher than 0.8 predicts that the model can lead to the same results if reproduced in identical conditions. MODDE software indicates that the optimal extraction conditions are: 20 minutes- 30% amplitude-60% ethanol. The surface-response plot suggests that the ethanolic concentration and time had the most significant influence on TPC values, with a maximum concentration at 30% and 50% amplitude levels, the lower value is considered best to preserve the chemical compounds intact. **Conclusions:** The results highlight the efficiency of UAE in order to retrieve a high amount of polyphenols in the *Xanthii fructus* extracts with a low energy consumption and minimal waste, further research is needed for the biological usage of the extracts, such as antioxidant or antimicrobial activity.

Keywords: ultrasound, extraction, polyphenols, optimization

HERBAL PRODUCTS IN THE MANAGEMENT OF ORAL DISEASES: A SURVEY-BASED STUDY

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Background: Herbal products are increasingly popular as alternative or complementary therapies in various medical fields. Despite their widespread use, there is limited data on how frequently they are used for oral conditions and what factors influence this practice. **Objective:** This study aimed to evaluate the frequency of herbal product use in the treatment of oral conditions, to identify the most commonly used types of herbal preparations, assess the sources of information guiding their use, and explore users' perceptions regarding their efficacy in prevention and treatment of oral disease and their safety. **Material and methods:** A cross-sectional survey was conducted through an online questionnaire between December 2024 and February 2025. The questionnaire included 37 questions and was distributed without a specific target population. A total of 178 individuals participated in the study. The survey collected data on the types of oral health issues for which herbal remedies were used, the forms of phytotherapeutic products preferred, usage patterns, sources of information, and any adverse reactions experienced. **Results :** Among respondents, 48.3% reported using herbal products to manage oral conditions. The most frequently used herbal preparations included teas, tinctures, and essential oils, and the preferred species were chamomille, sage and peppermint. The most common oral health issues treated with these products were mouth ulcers (aphthous stomatitis) and gingivitis. Participants identified pharmacists (47.3%) as their primary source of information regarding the use of herbal products, followed by friends (31.1%) and physicians (20.3%). Regarding safety, 95.5% of respondents indicated that they had not experienced any adverse effects associated with the use of these herbal remedies. **Conclusions:** The study highlights a considerable prevalence of herbal product use in the management of oral conditions among the surveyed population. Herbal preparations are generally perceived as safe and effective, which may contribute to their widespread use. Pharmacists play a key role in providing information and guidance on phytotherapeutic options. These findings emphasize the importance of ensuring accurate and evidence-based information is available to both healthcare providers and the general public regarding the use of herbal products in oral health care. This work was supported by the George Emil Palade University of Medicine, Pharmacy, Science and Technology of Targu Mures, Romania, Research Grant number 163 /7/ 10.01.2023.

Keywords: phytotherapy, oral pathology, natural compounds

IMPACT OF MELDONIUM AND TRIMETAZIDINE ON OXIDATIVE STRESS AND INFLAMMATION INDUCED BY PHYSICAL EXERCISE IN RATS

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Background: Oxidative stress associated with various chronic diseases, as well as that generated by physical exercise, is currently being extensively studied in numerous research papers. Metabolic switchers such as meldonium (MLD) and trimetazidine (TMZ) are substances that can influence oxidative stress by shifting the cellular energy balance in favor of carbohydrate metabolism. **Objective:** The general objective of this study is to evaluate the influence of the mentioned metabolic switchers on oxidative stress in an animal model of reversible oxidative stress. **Material and methods:** The study included 30 young male Wistar rats, divided as follows: control group, MLD group (200 mg/kg body weight/day, administered by gavage for 8 weeks), and TMZ group (10 mg/kg body weight/day, administered by gavage for 8 weeks). The animals underwent gradual physical exercise (swimming) for 8 weeks. The determination of interleukins IL-6 and IL-1β was performed using the ELISA method. **Results :** The IL-6 levels were significantly increased in the control group (5.68 ± 1.44 pg/mL, $p < 0.05$) compared to the TMZ group (4.68 ± 0.93 pg/mL) and the MLD group (4.73 ± 0.97 pg/mL). Similarly, IL-1β levels were significantly higher in the control group (19.25 ± 3.81 pg/mL) than in the TMZ group (16.82 ± 2.45 pg/mL) and the MLD group (15.70 ± 4.69 pg/mL). The decrease in IL-6 and IL-1β levels in the treated groups suggests a potential improvement in oxidative stress induced by intense physical exercise, an aspect confirmed by previous studies on the protective role of these metabolic switchers in cellular homeostasis. The differences between the effects of MLD and TMZ were not significant, suggesting similar mechanisms of action in controlling post-exercise inflammation. **Conclusions:** The administration of meldonium and trimetazidine reduced the inflammatory response induced by physical exercise, as evidenced by the decrease in IL-6 and IL-1β levels. These findings suggest that the use of metabolic switchers may be an effective strategy for limiting oxidative stress and systemic inflammation associated with intense physical activity. This work was supported by the University of Medicine, Pharmacy, Science, and Technology "George Emil Palade" of Târgu Mures, Research Grant number 164/23/10.01.2023.

Keywords: Meldonium, Trimetazidine, Oxidative stress

ANTIBACTERIAL EFFECT, SYNERGY WITH ANTIBIOTICS, AND THERAPEUTIC APPLICATIONS OF SILVER NANOPARTICLES

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Background: The rise of antibiotic-resistant bacteria demands innovative anti-infective solutions, and silver nanoparticles (AgNPs) offer a promising approach. AgNPs stand out due to their superior antibacterial effect compared to other nanoparticles and their unique properties. Their antibacterial effect emerges from multiple mechanisms of action. AgNPs prove to be effective against a broad spectrum of bacteria, including antibiotic-resistant strains. Thus, AgNPs are widely valued for their antibacterial properties, and their utility spans various applications, including medical devices, pharmaceuticals, and cosmetics. **Objective:** This study reviews the antibacterial properties, synergistic interactions with antibiotics, and potential therapeutic applications of AgNPs using evidence from current scientific literature. **Material and methods:** Relevant studies were analyzed from PubMed, ScienceDirect, and Google Scholar using keywords such as "silver nanoparticles," "antibiotics," "antibacterial," "antimicrobial methods of AgNPs and their biomedical applications were explored. **Results :** The synthesis methods for AgNPs include physical, chemical, and biological processes, each with specific applications in the biomedical field. The antibacterial effect of AgNPs is achieved by destroying cell membranes, generating free radicals, inhibiting protein synthesis, altering DNA, and inactivating various enzymes. These simultaneous mechanisms make them potential anti-infective agents. Notably, the development of bacterial resistance to AgNPs rarely develops. A synergy has been demonstrated between AgNPs and various antibiotics. Consequently, a significant advantage of using AgNPs is their ability to enhance antibiotic efficacy, reducing the quantity of antibiotics to inhibit bacteria and the side effects of treatments. The utility of AgNPs in medicine is vast, ranging from their inclusion in prostheses and implants to prevent infections to effective disease therapies via vaccines that

incorporate AgNPs. Significant safety considerations for AgNPs involve their possible toxicity to human cells and the risk of contributing to antimicrobial resistance. Their safe and sustainable use requires careful regulation and further research. **Conclusions:** The study highlights the potential of using AgNPs and the synergistic effect between them and antibiotics, which led to reduced minimum inhibitory concentration (MIC). The uses of AgNPs in the medical field are diverse due to their proven effectiveness against pathogens. These are included in dressings and bandages for treating skin wounds, as coating agents for medical devices such as catheters and prostheses, as carriers for targeted drug delivery, and as immune modulators in vaccines. However, more studies on their stability, safety, and biocompatibility are needed. AgNPs are a promising, powerful tool in the battle against antibacterial resistance.

Keywords: silver nanoparticles, antibacterial, antibiotics, bacterial resistance

DEVELOPMENT AND PHARMACOTECHNICAL EVALUATION OF NEW IBUPROFEN HYDROGEL FORMULATIONS

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Background: Ibuprofen is a well-known nonsteroidal anti-inflammatory drug that commonly used in pain management. Topical application of hydrogels containing ibuprofen represents a viable treatment alternative for both young and elderly patients, also being suitable for those with gastric conditions that contraindicate the oral administration of this active pharmaceutical substance. **Objective:** The objective of this study was to formulate new hydrogel type formulations containing 5% ibuprofen and two colloidal substances as gel formers, respectively their pharmacotechnical evaluation. **Material and methods:** Four hydrogel formulations were obtained (F1, F2, F3, and F4) in which the ratio of gel formers was varied (Carbopol 940:HPMC E15 - 1:5, 1:2, 1:1, 2:1); glycerol (humectant), preservative solution (dispersion medium), triethanolamine (neutralizer), menthol and camphor (absorption promoters) and alcohol (co-solvent) were also added. **Results :** The pharmacotechnical analyses of the prepared gels involved visual evaluation (macro-/microscopic), pH determination (potentiometric method), rheological properties (Rheotest RV viscometer), extensiometry (Del Poso Ojeda extensiometer), texture analysis and penetrometric capacity (TPA-Texture Profile Analysis TX-700) and in vitro release study with Franz cell, synthetic membrane (Nylon membrane Filters 25 mm diameter) and phosphate buffer (pH=7.4) as acceptor medium. The quantification of ibuprofen concentration released after 8 hours was performed spectrophotometrically at 222 nm. Macro-/microscopic analysis indicated a homogeneous dispersion of the ingredients in the gel bases. The pH of the four formulations was within the pharmacopoeial range (4.5-8.5), the lowest value being for F1 (pH=5.2), and the highest being in the case of F4 (pH=6.9). Rheological analysis indicated pseudoplastic behavior for all formulations, with F4 also showing the highest viscosity (η=7931.52 cP). A higher concentration of Carbopol 940 in formulations F3 and F4 had a positively influenced spreadability. Texture profile analysis indicated that F4 showed the highest adhesiveness (3897.5 mJ), followed by F2 (3225.1 mJ), F1 (3103.1 mJ) and F3 (2196.2 mJ). Cohesion was approximately equal for all formulations, varying between 0.517 and 0.563. Penetrometry showed increasing penetration force in the order: F3 < F2 < F4 < F1. The in vitro release study indicated the highest ibuprofen release capacity for F1 (317.02μg±11.52). **Conclusions:** All the proposed formulations presented pharmacotechnical properties suitable for topical administration. Taking into consideration the better capacity of the formulation F1 to release the ibuprofen, it is proposed for the following optimization studies.

Keywords: ibuprofen, hydrogel, texture analyzer, pharmacotehnical evaluation

MODULATING IBUPROFEN HYDROGEL CHARACTERISTICS THROUGH SODIUM CARBOXYMETHYLCELLULOSE VARIATION

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Background: Ibuprofen, a nonsteroidal anti-inflammatory drug (NSAID) derived from propionic acid, is well-known for its analgesic, antipyretic, and anti-inflammatory effects. Currently, two ibuprofen concentrations - 50 mg/g and 100 mg/g - are listed for semisolid formulations in the Nomenclature of Medicines for Human Use. **Objective:** This study investigated the impact of sodium carboxymethylcellulose (CMCNa) concentration and the presence or

absence of ibuprofen on key aspects of evaluating the rheological and pharmaceutical properties of topical gels. **Material and methods:** Six formulations were developed, consisting of three blank (coded GBI8, GBI9, and GBO) and three with ibuprofen (GI8, GI9, and GIO), by varying the CMCNa concentration in the range of 3.5-4% (w/w). A concentration of 3 % (w/w) glycerol was used in GI8, GBI8, GI9 and GBI9, whereas 2.8 % (w/w) glycerol was used in GIO and GBO. Ibuprofen (5% w/w) was incorporated in the gel base using an automatic mixing device. The other substances (menthol, ethanol) and the preservative solution were added in equal amounts to all gels. The following variables were evaluated: texture profile parameters, pH, and microscopic structure. **Results :** Microscopic analysis of the GIO and GBO gels revealed that the GBO formulation exhibited a uniform structure, free of air bubbles, while the GIO formulation showed the active substance in the form of fine dispersed particles. The pH results showed a progressive increase from GI8 and GBI8, with pH 5, to the highest value recorded for GBO (6.5). According to the specialized literature, topical formulations are generally expected to have a pH between 4 and 8.5. Thus, the pH of the prepared gels is within the acceptable range. Three essential parameters were assessed during the texture profile analysis: cohesiveness, hardness and adhesiveness. The results indicated that the GBI9 formulation exhibited the highest values for cohesiveness (1.55), while for hardness and adhesiveness, GI9 (|0.35|N, 1.81N) outlined the highest values, which can be attributed to the maximum concentration of CMCNa used for these formulations. Conversely, the lowest values were recorded for the GI8 (1.23, |0.16|N, 0.8N), which contains the smallest amount of CMCNa. **Conclusions:** In summary, this study demonstrated that CMCNa concentration significantly influences the consistency and pharmacotechnical properties of ibuprofen hydrogels. By evaluating the optimal formulation identified in the previous study, it was confirmed that the obtained results align with the expected outcomes.

Keywords: Ibuprofen, Hydrogel, Sodium Carboxymethylcellulose, Texture Profile Analysis

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FORMULATION AND CHARACTERIZATION OF MUCOADHESIVE FILMS WITH MICONAZOLE FOR ORAL CANDIDIASIS

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Background: Miconazole, an imidazole derivative, is an antifungal agent with proven activity on various fungal infections, among which oral candidiasis is a recurring condition. In addition, there is growing interest in orodispersible films (ODF) as innovative drug-delivery dosage forms. **Objective:** The purpose of this study was to develop mucoadhesive preparations with miconazole destined for local delivery through the buccal mucosa. For treating the local infection, ODFs are engineered to release the active substance through complete disintegration. **Material and methods:** During formulation, the following substances were used with different roles: alcohol and distilled water (solvents), sucralose (sweetener), propylene glycol (plasticizer), hydroxypropyl methylcellulose (HPMC) (film-forming agent), Polysorbate 80 (nonionic surfactant), citric acid (salivation stimulant and taste masking agent) and the active substance, miconazole. Using different concentrations of HPMC, ranging from 9-12.5 %, four different series of films were prepared and coded: MC1, MC2, MC3, and MC4. The preparation of the films was carried out using an automatic magnetic stirrer, and the solvent casting method was used for film production. After using an ultrasonic device to eliminate air bubbles, the solution was transferred into Petri dishes with a diameter of 9.5 centimeters. The films were left to dry for 24 hours before being cut into circle forms that underwent testing. They were subjected to evaluation in terms of weight, folding endurance, pH, and gumminess. **Results :** The average weight ranged between 137.9 ± 37.01 mg and 163 ± 47.66 mg, while the thickness of the film was between 285 ± 71.40-310 ± 21.59 µm. During the folding endurance evaluation, it was observed that MC1 could be folded 12.66 ± 1.52 times before tearing. However, as the amount of HPMC increased, the folding resistance significantly decreased to 3.66 ± 1.52. The pH reached 3.41, from a minimum of 2.86 measured in 10 ml of distilled water. Regarding gumminess, in accordance with the HPMC concentration, MC1 had the lowest value of 0.05N, while MC3 had the highest of 0.18N. **Conclusions:** The study demonstrated that miconazole can be effectively incorporated into mucoadhesive films, suggesting its potential as an alternative therapeutic approach for oral candidiasis. Given this context, the excipients used in the formulation and their percentage directly impact the quality and properties of the polymeric film.

Keywords: miconazole, mucoadhesive film, oral candidiasis, HPMC

RECYCLING OF EXPIRED MEDICATIONS

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Background: Currently, pollution represents a major global issue, affecting both human health and the environment. Recycling therefore plays a crucial - if not essential - role in significantly reducing environmental pollution worldwide. Efficient waste management is vital for minimizing pollution and protecting the planet. Even more important is the proper recycling of expired medications, as careless handling of their disposal can have serious negative consequences. **Objective:** Educating and raising awareness among the population regarding the correct management of pharmaceutical waste is a fundamental element in reducing the negative impact on the environment. Thus for, public perception assessed this situation, which creates problems both at the level of our country and globally. **Material and methods:** Considering the aspects mentioned above, the main method I used was conducting a questionnaire-based evaluation in order to collect information specific to the given topic from a sample of people from different categories. Thus, I chose to survey several individuals based on criteria such as age, background, gender, and educational level in order to obtain the most conclusive results possible. **Results :** Following the survey conducted on the experimental sample of people, I obtained a total of 70 responses to the given questions, of which 54.3% were female and 45.7% male, with participants of varying ages. Additionally, 77.1% came from urban areas and 22.9% from rural areas. Despite these differences, all respondents considered it highly important to improve and pay more attention to the recycling of expired medications, mentioning the negative effects of improper disposal, such as soil or water pollution, while also taking into account the subsequent impact on human health. **Conclusions:** In conclusion, the proper recycling of expired medications is of crucial importance, as it helps protect public health and the environment by preventing soil and water contamination. Education and awareness among the population play a major role in achieving a better, cleaner, and most importantly, healthier way of living.

Keywords: medication, recycling, awareness, impact

DEVELOPMENT OF NEW LIPOSOMAL CANNABIDIOL TRANSDERMAL FILMS AND EVALUATION OF THEIR MECHANICAL PROPERTIES

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Background:
Cannabidiol (CBD) is a non-psychoactive compound derived from Cannabis sativa. It is known for its multiple therapeutic benefits, including its anti-inflammatory effect. The administration of CBD via transdermal patches in liposomes represents an innovative method of delivering this active pharmaceutical ingredient. **Objective:** The objective of this study is the development and pharmaco-technical evaluation of new transdermal film formulations containing CBD. **Material and methods:** Using the film hydration method, three liposomal dispersions (LZE1, LZE2, LZE3) were initially prepared, each containing 0.2% CBD and varying cholesterol concentrations of 0.1%, 0.15%, and 0.2%, along with 1% egg lecithin. The size of the liposomal particles was reduced by passing each dispersion six times through filter membranes (diameter < 0.2 µm) integrated into the Mini Extruder (Polar Lipids, Inc.) and then analysed using optical microscopy. The extruded dispersions (4%) were incorporated into three transdermal films based on 2.5% hydroxyethyl cellulose used as a film-forming agent, 20% polyethylene glycol as a plasticizer, and ethanol and distilled water as solvents. The transdermal films were prepared using the solvent evaporation method (at 45°C) and evaluated for their physical and mechanical properties: appearance, weight, thickness, adhesiveness, tensile strength correlated with elongation capacity, and resistance to repeated folding. **Results :** Microscopic analysis confirmed the formation of liposomal structures. Three transdermal film formulations with 9.5 cm diameter (FLZE1, FLZE2, FLZE3) were obtained, showing a uniform appearance, with thickness ranging from 0.067 to 0.073 mm and weight between 2.08 and 2.45 g. Adhesiveness testing revealed a maximum detachment force (diameter of the sample = 2.5 cm) from a flat surface between 0.04 and 0.06 N. The tensile strength test indicated that all three transdermal film formulations withstood a maximum pressure force ranging from 0.39 to 3.58 N. Under increasing tensile force, film samples measuring 3 cm in length and 2 cm in width showed elongation of 26.6% for FLZE1, 33.3% for FLZE2, and 66% for FLZE3. Additionally, all developed

dermal films resisted an average of 38 folds without showing signs of cracking. **Conclusions:** The developed transdermal films exhibit mechanical properties suitable for cutaneous administration and are proposed for further optimization in preparation for active substance release studies.

Keywords: cannabidiol, liposomes, transdermal films

TACKLING MULTIDRUG RESISTANCE IN NEPHROLOGY: A FIGHT AGAINST NOSOCOMIAL INFECTIONS

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Background: Nosocomial infections remain a significant global health concern, particularly in high-risk hospital departments like nephrology, where the growing prevalence of multidrug-resistant organisms (MDROs) complicates treatment, especially in immunocompromised and comorbid patients. With an estimated global prevalence of 7.5% in high-income countries, these infections are associated with longer hospital stays and higher treatment costs. Surgical site infections (SSI), which account for 30% of HAIs, have a global incidence of 2.5%. The financial burden is notable, with increased costs due to prolonged hospitalizations and the need for more expensive antibiotics and interventions. Effective infection prevention, rapid diagnostics, and tailored treatment strategies are essential to combat this growing issue. **Objective:** This study investigates the clinical and economic implications of healthcare-associated infections in nephrology, based on 160 clinical cases from a hospital in Brașov. Special attention is given to antibiotic resistance patterns, therapeutic adjustments, and the role of comorbidities in patient outcomes, with a comparison to the prevalence of other infection types, including respiratory, urinary, and digestive infections. **Material and methods:** Methods: A retrospective analysis was conducted, focusing on pathogen profiles, antibiotic resistance, adjustments in antibiotic therapy, cost implications, and patient outcomes. Prevention practices and hygiene measures were also assessed to determine their role in managing nosocomial infections in this setting. **Results :** Antibiotic resistance proved to be a major therapeutic challenge, frequently requiring changes in antibiotic regimens or escalation to last-line treatment options.antibiotics. Empirical therapies frequently failed due to local resistance patterns, underscoring the need for rapid diagnostics and targeted therapy. Patients with multiple comorbidities - such as chronic kidney disease, diabetes, and cardiovascular conditions - were more prone to complications, prolonged hospital stays, and higher mortality. Additionally, inadequate infection control measures contributed to the risk of transmission within the ward. The economic burden of these infections was notable, with increased costs due to extended hospitalizations, more expensive antibiotics, and additional therapeutic interventions. **Conclusions:** This study emphasizes the importance of individualized antibiotic therapy, based on resistance profiles and continuous clinical reassessment. Effective management requires adherence to stringent hygiene protocols, patient isolation when necessary, and coordinated antimicrobial stewardship. Prevention remains the cornerstone of reducing the burden of nosocomial infections, particularly in nephrology units where patients are particularly vulnerable.

Keywords: nosocomial infections, antibiotic resistance, infection prevention, nephrology

MILITARY MEDICINE

FAMILY INFLUENCE IN CHOOSING A MEDICAL CAREER

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Background: The family is the social group in which spouses and their children live together, connected by biological, spiritual, psychological and economic ties. It is formed through marriage and includes people who share their life, household and responsibilities, with mutual obligations to each other. A career is a continuous journey in a person's life, being an essential component of his or her existence that requires constant attention. "The only imperishable wealth is wisdom" (Socrates) **Objective:** The aim of the paper is to observe whether family has a direct influence on career choice. **Material and methods:** As a method of psychological investigation was used the questionnaire in anonymous "google docs" format consisting of 6 questions with general and demographic aspect and 10 questions that focused on the topic of the dissertation. The sample had as target group a number of 50 university students, (Military Medicine section), and the period of data development and completion was between 08.05.2024- 05.11.2024. **Results :** The analyzed data come from the answers provided by 50 students to the questionnaire. For the question 'It was your dream to study medicine?' 92% of respondents answered YES. In response to 'Did your family play an important role in you pursuing your dream?' the majority (62%) answered NO. When asked 'Does your family still influence you at this stage of your studies?' 48% said NO, 40% said YES, and the remaining 12% DON'T KNOW. For the question 'Do you consider that your family will influence you in your choice of residency?' 56% stated that they will NOT be influenced. **Conclusions:** The study revealed three key roles of the family in career choice: psychological support, emotional support and financial support. In addition to these three roles, there are three periods of time essential for the future career: pre-college, university and post-college.

Keywords: Career, Family, Influence, Childhood

XYLITOL, ERYTHRITOL, AND ALLULOSE: SIMPLE SWEETENERS OR POTENTIAL ALTERNATIVES TO ANTIBIOTIC THERAPY? A STUDY CONDUCTED ON CLINICAL ISOLATES

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Background: The spread of multidrug-resistant (MDR) bacteria poses a significant healthcare challenge. Overuse of antibiotics contributes to the development of antibiotic resistance, which limits treatment options. **Objective:** This study aims to investigate the antimicrobial effects of polyols (xylitol and erythritol) and a monosaccharide (allulose) on clinical isolates of Staphylococcus aureus. These substances were selected for their low toxicity and potential antimicrobial effects. **Material and methods:** Thirty clinical isolates of Staphylococcus aureus ,19 meticilino-resistent (MRSA) and 11 meticilino-sensible (MSSA), were inoculated into 96-well plates with Müller-Hinton (MH) broth 2X. The following substances were tested: xylitol, erythritol, allulose, and a combined solution of xylitol and erythritol. The concentration used started from 50% to 0.325% in distilled water. The plate had the final volume of 200 µL containing: 100 µL of tested substance and 100 µL prepared as 9990 µL of MH 2X with 10 µL of 0.5 McFarland bacterial strain. The plates were incubated at 37°C for 24 hours. Three µL from the wells showing no bacterial growth were inoculated on Sheep Blood Agar, labeled in a checkerboard pattern to assess bactericidal effect. Plates were incubated at 37°C for 24 h. Minimum Bactericidal Concentration (MBC) was determined by the position with no bacterial growth. **Results :** The most effective antimicrobial results against Staphylococcus aureus strains were observed with allulose, which inhibited bacterial growth at concentrations of 50% and 40% . Only one microbial strain showed no inhibition. Although xylitol and erythritol did not exhibit antimicrobial effects at their highest tested concentrations, their combination demonstrated synergism, with most strains showing inhibition at 40%. The synergy between xylitol and erythritol exhibits a bacteriostatic effect at concentrations between 40-50%. The surprising results are in the case of MBC for allulose, which has a bactericidal effect on 22 strains and only a bacteriostatic effect on 8 strains. **Conclusions:** This study demonstrates that allulose exhibits significant antimicrobial activity against Staphylococcus aureus both MRSA and MSSA strains, effectively inhibiting bacterial growth at concentrations of 40-50%. While xylitol and erythritol individually did not show antimicrobial effects at their highest tested concentrations, their combination displayed a synergistic bacteriostatic effect, inhibiting most strains at 40%. These findings suggest that allulose, as well as the combination of xylitol and erythritol, could be

potential alternatives or adjuncts to traditional antibiotics in combating multidrug-resistant Staphylococcus aureus.

Keywords: Xylitol, Erithritol, Allulose, Staphylococcus aureus

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MILITARY STUDENTS BETWEEN SESSION AND "STRESSION"

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Background: This study aims to highlight the manifestations of academic stress in the exams period, given the fact that it has a significant impact on students' health and well-being. **Objective:** The main aspect of this study is to focus on the issue-causing nature of stress, emphasizing that the solution stands at its roots, which are the student's thoughts. **Material and methods:** To realize this study, we developed a questionnaire following the causes of stress ("WHO?", "WHAT?", "WHY?"," WHERE?" and "WHEN?") for students at the medical institutes and we received 95 answers. **Results :** It is statistically proven that 84,2% of the respondents feel stressed in the exams period, but the majority consider that the biggest cause of it is their own way of thinking, noticing changes mostly in their sleep schedule. **Conclusions:** Based on the accumulated answers, we believe that academic stress is an influential factor for student's health issues and the main causes of it can be prevented by changing the way they perceive the exams.

Keywords: students, stress, exams, expectations

THE IMPACT OF THE TYPE OF SURGICAL INTERVENTION ON THE CLINICAL EVOLUTION OF THE PATIENT WITH ACUTE VERSUS CHRONIC CHOLECYSTITIS

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Background: Acute and chronic cholecystitis are frequently encountered in surgical practice. The present study aims to observe correlations between clinical examinations, type of surgery performed and histopathological results to provide potentially useful information for improving the approach of patients with acute and chronic cholecystitis. **Objective:** The study intends to highlight whether there is any correlation between the type of cholecystitis, the type of surgery performed, the patient's clinical evolution, and the rate of post-operative complications. **Material and methods:** The study is prospective, based on a questionnaire and analysis of the histopathological result on a sample of 31 patients who underwent cholecystectomy between December 2024 and March 2025. The sampling was done based on the cholecystectomy patients present in the III Surgery Department during the time mentioned, the patients' availability to answer questions, the spoken language and the patients' willingness to participate in the study. The questionnaire included general data about the patient(such as age, gender and background) and 25 questions that addressed the clinical condition before the operation(the condition 24 hours after the operation and the evolution at 3 weeks). **Results :** Clinical examination revealed 23 patients with chronic cholecystitis, 7 with acute cholecystitis and 1 patient with activation of chronic cholecystitis, showing suggestive symptomatology. Out of 31 patients, 29 underwent laparoscopic surgery. In one case the open surgery was performed and, in another case, the conversion from laparoscopic to open surgery was needed. The histopathologic exam found in most cases a chronic form of cholecystitis. In 4 cases, the inflammation of the bladder was acute (phlegmonous or gangrenous) and in one case BillN-2 was found, low-grade biliary intraepithelial neoplasia (a premalignant lesion). After the surgery, all the patients had a drain tube placed. The patient who underwent conversion suffered from a decompensation of hepatic cirrhosis with an unknown etiology. A complication of laparoscopic surgery was found- subhepatic bilious collection- which also had a laparoscopic resolution. **Conclusions:** The elective surgical procedure for acute or chronic cholecystitis is laparoscopic cholecystectomy. This type of intervention has fewer complications and a faster healing rate. However, in special cases, as other surgical correction required or a severe adhesion formation, open surgery may be necessary.

Keywords: Chronic cholecystitis, Acute cholecystitis, Laparoscopy, BillN-2

CARPAL TUNNEL SYNDROME AND INFLAMMATORY MARKERS IN INDIVIDUALS WITH TYPE 2 DIABETES

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Background: The prevalence of carpal tunnel syndrome (CTS) in the general population has been reported to be between 1% and 5%, with a higher occurrence in women and obese individuals. The prevalence increases among people with type 2 diabetes mellitus (T2DM) and varies between 14% and 30% in the presence of diabetic peripheral neuropathy. CTS is one of the compressive neuropathies often associated with diabetes mellitus, with biochemical factors (hyperglycemia, oxidative stress from increased oxygen-free radicals, and inflammatory status) and structural changes suspected. **Objective:** Evaluation of the role inflammatory markers in the development of carpal tunnel syndrome in patients with type 2 diabetes mellitus. **Material and methods:** We evaluated a group of 123 patients diagnosed with type 2 diabetes, 39% of whom were diagnosed with CTS through electroneurography (ENG). No differences in anthropometric indicators were evident between the two groups; there were no differences between the dominant and non-dominant hand, and 17.9% of the patients had bilateral involvement. Glucose levels at admission were higher in patients with CTS compared to those without this condition ($p = 0.001$). It is observed that the level of monocytes is increased in patients with CTS ($p = 0.011$), a finding also observed for lymphocytes ($p = 0.041$) and the triglyceride glucose index ($p = 0.027$). **Results :** The specialized literature highlights changes in the hematological profile of patients with type 2 diabetes, characterized by an increase in the number of lymphocytes, monocytes, and neutrophils compared to non-diabetic patients. Inflammatory processes play a crucial role in the development of neuropathies in type 2 diabetes, characterized by various neuropathies, including lymphocytic microvasculitis and perivasculitis, an endoneurial T-cell infiltrate in sural nerve biopsies, and increased expression of cytokines, TNF-α, and membrane attack complex components. Activated monocytes secrete proinflammatory cytokines, such as IL-6 and TNF-α, which activate other leukocytes and exacerbate inflammation. The triglyceride/glucose index has been reported to be associated with coronary heart disease in patients with type 2 diabetes, as well as with cardiovascular disease in individuals without type 2 diabetes. **Conclusions:** The data from our study highlight an association between the presence of CTS and the triglyceride/glucose index, as well as the levels of monocytes and lymphocytes, in patients with type 2 diabetes. This work was supported by George Emil Palade University of Medicine, Pharmacy, Science and Technology of Targu Mures, Research Grant number 163/8/10.01.2023.

Keywords: carpal tunnel syndrome, diabetes mellitus, inflammatory biomarkers, diabetic peripheral neuropathy

IMPLICATIONS OF COMPLICATED URINARY TRACT INFECTION IN PREGNANCY

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Background: Complicated urinary tract infections during pregnancy represent a pathology with a significant impact on the health of both the mother and the fetus. The risk factors contributing to their development can influence the progression of the patient's and the newborn's health. **Objective:** The aim of the study is to observe how the risk factors associated with urinary tract infections during pregnancy affect the health outcomes of the mother and the fetus. **Material and methods:** For this study, we conducted a retrospective, analytical, case-control observational study on a sample of 51 pregnant patients, of whom 15 had complicated urinary tract infections (UTIs). Variables such as maternal age, APGAR scores, and socio-economic factors were analyzed. **Results :** The analysis showed that young maternal age is a significant risk factor for complicated urinary tract infections ($Chi^2=6.843$, $p=0.0089$). Most patients with complicated UTIs were minors, with the age range analyzed being 13-19 years, representing 53.3% of all patients with complicated UTIs. Additionally, lower APGAR scores were observed in newborns from the group of patients with complicated urinary tract infections (U Mann-Whitney, $p=0.001$ at 1 minute and $p<0.001$ at 5 minutes), indicating a strong association between UTIs and lower APGAR scores. Furthermore, three risk factors - salary status, socio-economic status, and education level - were associated with complicated urinary tract infections during pregnancy ($p<0.05$ for all - $p=0.003$, $p=0.003$, $p=0.002$), suggesting that patients with lower socio-economic status and limited education are more likely to develop this infectious pathology. **Conclusions:** The results highlight the importance of identifying risk factors such as young

age, low socio-economic status, and limited education in the prevention and appropriate management of complicated urinary tract infections during pregnancy. This study addresses some of the risk factors that can influence or complicate a urinary tract infection during pregnancy and provides a foundation for future research.

Keywords: urinary tract infections, pregnancy risk factors, risk factors, socio-economic status

THE USE OF AI IN THE IDENTIFICATION OF BLAST-INDUCED BRAIN INJURY

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Background: Traumatic brain injuries (TBI) are some of the most common types of injuries in military settings, occurring when blast waves cause the brain to withstand rapid acceleration and deceleration forces, leading to diffuse axonal injury (DAI) and direct structural trauma. The frontal and temporal lobes are the most vulnerable because of their proximity to the skull's inner surface. Symptoms of frontal lobe damage may include decision-making and motor function deficits, whereas temporal lobe damage may result in memory loss and auditory processing disorders.Apart from neurological symptoms, blast-induced TBI can produce intracranial haemorrhaging, cerebral edema (brain tissue swelling), and hematomas (blood clots), among other acute traumatisms. These conditions, commonly caused by shearing forces and direct neural tissue damage, are life-threatening without early identification and treatment. Intracranial haemorrhages, including subdural and epidural hematomas, require urgent medical intervention due to increased intracranial pressure that compresses the brain tissue, causing neurological deterioration. Additionally, cerebral edema can cause brain structures to shift, impairing neurological function.Because of the urgency of such injuries, the process of diagnosis in combat settings becomes especially challenging. **Objective:** This study aims to analyse the main diagnostic techniques currently employed in military environments to identify blast-induced TBI and discuss the possibility of using artificial intelligence (AI) for their betterment. **Material and methods:** A review of current clinical and military literature was undertaken with emphasis on the imagistic diagnostic methods utilised for blast-induced TBI and the possibility of their improvement with AI. **Results :** The most common TBI diagnostic tools used in military settings include CT (computed tomography) scans and magnetic resonance imaging (MRI). While CT scans are skilled at detecting acute injuries, such as intracranial haemorrhages and hematomas, they have limitations in detecting mild DAI or early-stage edema. MRIs are useful in detecting soft tissue injury including mild contusions and DAI, however they have limited availability and practicality in the field.AI tools such as machine learning have shown potential to enhance diagnostic accuracy by rapidly analysing imaging data, identifying otherwise undetected injuries. Moreover, they can integrate data from numerous sources, thus presenting a better and faster diagnosis, crucial in combat. **Conclusions:** Current diagnostic methods for blast-induced TBI in military settings are suboptimal, especially for detecting mild or diffuse injuries. AI could significantly improve precision, speed, and efficiency, particularly in the identification of intracranial haemorrhage, edema, and other subtle brain trauma. Further studying AI integration in the diagnostic process is needed, for overall process optimization.

Keywords: Blast-induced TBI, Military, Imagistic tools, AI-assisted diagnosis

TP53 MUTATIONS IN CLL-TREATMENT EFFICACY AND THERAPEUTIC APPROACHES

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Background: Chronic lymphocytic leukaemia (CLL) is a haematological malignancy defined by the accumulation of defective mature B lymphocytes. Deletion 17p and *TP53* mutations are among the most relevant genetic abnormalities, associated with resistance to conventional therapies and a poor prognosis. These alterations affect DNA repair mechanisms and cell apoptosis, leading to uncontrolled proliferation of malignant cells. **Objective:** The aim of this paper is to evaluate the influence of *TP5*3 mutations and 17p deletion on the prognosis and efficacy of classic treatments in CLL, with a focus on emerging therapies that may overcome chemotherapy resistance discovered in recent years. **Material and methods:** This review integrates data from recent studies and papers, published in the last 5 years, from sources such as PubMed, Scopus and OpenScience on the role of 17p deletion and *TP53* mutations in CLL. Selection criteria included articles on targeted therapies, mechanisms of resistance and novel therapeutic approaches. **Results :** Patients with *17p* deletion or *TP53* mutations have a reduced response to conventional chemotherapy, such as treatments based on purine base analogs like Fludarabine,

Cyclophosphamide and Rituximab. Clinical trials have shown that kinase inhibitors, such as Ibrutinib and Acalabrutinib, provide a more successful management of CLL, reducing the risk of progression. Venetoclax, a BCL-2 inhibitor, has been shown to be effective in combination with Obinutuzumab, inducing significant responses even in patients with refractory CLL. Additionally, emerging therapeutic strategies, such as combinations of BTK and BCL-2 inhibitors, could further optimize the management of this pathology, as BCL-2 inhibitors are thought to function independently of the p53 pathway. There is certain evidence which suggests that patients who achieve deep remissions with combination therapies may have long periods without the need for continuous treatment. Minimal residual disease (MRD) monitoring is also becoming an important tool in guiding therapeutic decisions, allowing disruption of treatment in patients achieving a complete response. **Conclusions:** The 17p deletion and *TP53* mutations are critical factors in the prognostic classification of chronic lymphocytic leukaemia patients. New targeted therapies offer superior alternatives to classic forms of chemotherapy, increasing remission rates and reducing the risk of relapse. Early identification of these genetic abnormalities is imperative to personalise treatment and improve patient prognosis, ensuring a proper therapeutic management.

Keywords: TP53 mutations, CLL, chemotherapy

ADDRESSING THE ANTHRAX THREAT: BIOTERRORISM, PUBLIC HEALTH, AND COUNTERTERRORISM SOLUTIONS

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Background: Bioterrorism manifested through biological weapons designed to create panic, represents a public health issue with harsh consequences and unpredictable evolution. Recent WHO declarations indicate that the risk of attacks using unconventional weapons is on the rise. Anthrax is one of the most commonly used biological weapons in such attacks. To effectively counter these threats, significant gaps in preparedness must be addressed and strategies need to be improved. **Objective:** This paper seeks to highlight the severe threat caused by anthrax, analyze ongoing outbreaks, and discuss potential counterterrorism measures. **Material and methods:** A literature review was performed including scientific data, collected from the PubMed database and websites of the World Health Organisation, Center for Disease Control and Prevention Atlanta, European Center for Disease Control and Prevention, Borden Institute U.S. Army Medical Center of Excellence, European Medicines Agency and European Society of Clinical Microbiology and Infectious Diseases. **Results :** Anthrax is a severe disease caused by Bacillus anthracis, which can survive in soil through spores even for sixty years. Bacillus anthracis can be inhaled, leading to respiratory anthrax, which is the deadliest form, ingested, causing gastrointestinal anthrax or contracted through the skin, resulting in cutaneous anthrax. The Center for Disease Control and Prevention Atlanta classifies anthrax as a Category A bioterrorism agent because of its ease of dissemination, high fatality potential, and significant public health impact. It poses a risk for public panic and social disruption, needing specific public health preparedness actions. This makes anthrax a high-priority agent in bioterrorism response plans. Historically, anthrax has been used as a biological weapon, notably during World War II, but the threat still remains a concern. The most recent event happened in 2001, in the United States of America by sending contaminated letters. There is an international interest to overcome and to prevent these infections. Thus, the European Medicines Agency has elaborated comprehensive guidelines for the pathologies acquired through bioterrorism attacks, including anthrax. Furthermore, effective response to anthrax outbreaks requires well-trained personnel and adherence to the One Health principle, which approaches the interconnection of human, animal, and environmental health. **Conclusions:** Anthrax remains a significant bioterrorism threat due to its high mortality rates and potential for widespread panic. Albeit, advancements in counterterrorism show promise, ongoing research and preparedness are essential. A new coordinated strategy approaching the One Health concept and involving military, law enforcement and CBRN (chemical, biological, radiological and nuclear) operations is crucial for successful prevention and mitigation efforts of terrorism acts.

Keywords: Anthrax, Bioterrorism, Counterterrorism, Public Health

MICROSCOPIC COMBAT: PNEUMONIA OUTBREAKS IN MILITARY SETTINGS

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Background: Bacterial pathogens such as Streptococcus pneumoniae, Mycoplasma pneumoniae, Legionella pneumophila, and Chlamydia pneumoniae are known to cause pneumonia outbreaks in military contexts. Overcrowding, close contact, and environmental stressors facilitate rapid transmission, increasing the risk of bacterial infections. Therefore, numerous coexisting pathogens complicate the diagnosis and treatment process, making accurate and timely identification essential. Effective control strategies can be developed by better understanding outbreak dynamics. **Objective:** This study evaluates diagnostic methods for bacterial pneumonia in military environments, focusing on polymerase chain reaction (PCR) and pneumococcal urine antigen testing (UAT) to determine their efficiency in outbreak detection and management. **Material and methods:** A thorough search of the existing literature was conducted, consulting two databases, PubMed and Google Scholar, using Boolean queries and specific keyword associations for each of the investigated subjects: "Streptococcus pneumoniae", "pneumonia", "military personnel", "polymerase chain reaction", "diagnosis", "prevention" and "urine antigen test". Among the many types of studies, relevant findings from military camps in different climates, hospitals, and elderly care outbreaks were analyzed to identify common transmission pathways and intervention strategies. **Results :** Pneumonia outbreaks typically originate from a particular case and spread through respiratory droplets. Key contributing factors include overcrowding, poor ventilation, intense physical activity, and incomplete vaccination coverage. Clinicians first assessed respiratory symptoms and epidemiological links before selecting diagnostic tests. Early symptoms such as fever and persistent cough were frequently overlooked, delaying intervention. Respiratory samples such as sputum, nasal or throat swabs, and bronchoalveolar lavage fluid were obtained for PCR, while urine samples were collected for UAT. Blood samples were also analyzed in severe cases. In the context of upper or lower respiratory tract infections, or even influenza-like illnesses, PCR provided superior pathogen detection, particularly in cases of coinfection, enabling early pathogen-specific treatment and reducing evolution severity. Outbreaks relying solely on UAT detected S. pneumoniae efficiently but missed coinfecting pathogens, leading to incomplete treatment. The combination of these diagnostic tools improves early detection, allowing for timely intervention. Infection control measures such as vaccination, isolation, and prophylactic antibiotic administration have been shown to significantly reduce the magnitude of outbreaks. **Conclusions:** Preventing pneumonia outbreaks in military settings requires a multifaceted approach, including vaccination, rapid and precise diagnostics, and strict infection control protocols. A combined PCR-UAT strategy facilitates early detection, targeted treatment, and minimizes outbreak risks. Future research should focus on improving portable PCR technology and developing vaccines targeting multiple pathogens to strengthen pneumonia prevention in high-risk environments.

Keywords: Streptococcus pneumoniae, urinary antigen testing, polymerase chain reaction, military

THE DIGITAL SUPERSTUDENT: COULD GEMINI PASS A MICROBIOLOGY EXAM

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Background: The rapid advancement of artificial intelligence (AI) has revolutionized multiple domains, including education and scientific assessments. Google's Gemini AI demonstrates remarkable capacities in processing complex queries, analyzing data, and generating precise responses. This study explores Gemini's potential to outperform humans in microbiology exams by leveraging its vast knowledge base, speed, and accuracy. Can AI redefine academic evaluations and become a superior tool for mastering microbiology? **Objective:** This study aims to assess the completeness and accuracy of Gemini AI's responses in comparison to those given by students and a medical microbiologist in two anonymized microbiology testing scenarios **Material and methods:** Two experimental settings were designed: Students vs. Gemini, where both answered microbiology questions formulated by the medical microbiologist, and Medical microbiologist vs. Gemini, where both responded to a set of questions created by students. In each scenario, participants were provided with images of culture media, biochemical test results, and other relevant information necessary for the correct identification of bacteria.

Percentage scores were calculated based on each participant's performance. **Results :** In the Students vs. Gemini scenario, students correctly answered 70% of the microbiology questions, while Gemini achieved a 100% response rate, often providing accurate answers on the first attempt without requiring any clues. In the Medical microbiologist vs. Gemini scenario, the microbiologist correctly answered 100% of the questions, whereas Gemini responded accurately to only 50%. **Conclusions:** The current study highlights the excellent performance of Gemini AI as being better than that of human students undergoing microbiology exams, given its ability to respond to questions accurately, quickly, and with consistency. While Gemini triumphed in the students vs. Gemini scenario, it failed in the medical microbiologist vs. Gemini scenario because it could not measure up to the expertise of the specialists, thereby demonstrating the limitations of AI in specialized knowledge. This feeds into the conclusion that while AI has a potential role to play in educational tools and assessment, it should only act as an accompanying tool to the expert knowledge and not as a sole source of information. Therefore, further improvement is needed in order for AI to handle more targetted questions from a certain field with a higher accuracy.

Keywords: Artificial Intelligence, Gemini AI, Microbiology, AI vs Human

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BIOMECHANICAL ANALYSIS OF MANDIBULAR FRACTURE SUSCEPTIBILITY IN MILITARY PERSONNEL

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Background: Mandibular fractures are among the most frequent facial injuries encountered in combat, mainly due to the mandible's exposed position and its role in force transmission during impact. These injuries are influenced by the mandible's curved geometry, varying cortical thickness, and biomechanical loading pathways. The mandible exhibits distinct failure patterns depending on the magnitude, direction, and point of force application. Understanding its mechanical behavior under simulated trauma is essential for improving protective equipment, guiding surgical interventions, and developing predictive models for injury prevention in high-risk military environments. **Objective:** This pilot study aimed to evaluate the mandible's biomechanical response to trauma by identifying fracture-prone regions through finite load simulations on Cone-Beam Computed Tomography (CBCT)-derived Standard Tessellation Language (STL) models. The primary objective was determining the most vulnerable anatomical sites under varying force directions and magnitudes relevant to combat-related injuries. **Material and methods:** Twenty-five CBCT-derived mandible STL models from male military personnel (aged 18-55) with varying dental conditions were used. Meshes were preprocessed to ensure watertight geometry and uniform quality. Finite element load simulations were performed using three standardized force levels: 1000 Newtons (N) (mild trauma), 2000 N (moderate trauma), and 3000 N (severe high-energy trauma). Forces were applied to key anatomical areas: the symphyseal region (antero-posterior and latero-lateral directions), parasymphyseal, mandibular angle, and condylar regions (latero-lateral direction). Fracture risk was assessed based on von Mises stress thresholds, displacement mapping, and visual inspection of failure zones. **Results :** The condylar neck was the most frequent failure site across nearly all loading conditions. Antero-posterior forces applied to the mental region predominantly resulted in condylar neck fractures, with occasional involvement of the symphysis, particularly in models exhibiting cortical bone thinning. Similarly, latero-lateral forces directed at the mandibular body also primarily led to condylar neck failure. A notable shift in fracture location was observed only when lateral forces were applied to the mandibular angle, in which case fractures occurred predominantly in the angular region, thereby designating it as a secondary failure hotspot. Importantly, the dental status of the models did not significantly influence the location of the fracture sites, suggesting that the location and distribution of the applied force were the primary determinants of failure patterns. **Conclusions:** Finite load simulations on anatomically accurate mandibular models offer a reliable method for identifying fracture-prone regions. The condylar neck consistently emerged as the most biomechanically vulnerable site. These findings support the development of improved protective gear and surgical planning for high-risk military roles.

Keywords: Mandibular fractures, Condylar neck, Craniofacial trauma, Finite Element Analysis

SURFACE-ENHANCED RAMAN SPECTROSCOPY - AN ALTERNATIVE METHOD FOR DRUG TESTING

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Background: Drug consumption has reached high levels in recent decades, posing a major threat to society, particularly to security institutions, such as the Ministry of Defence and the Ministry of Internal Affairs. A key concern for the United States Army is drug use across war veterans suffering from PTSD, as they may turn to substances as way to cope to their psychiatric condition.This issue could also become a serious concern for the Romanian Army. Additionally, laws such as OUG 97/2024 which impose severe penalties for drivers testing positive, highlight the need for accurate drug detection methods. **Objective:** The main objective of this study is to assess the effectiveness of drug testing methods used in Romania, mainly by the Ministry of Internal Affairs. This study compares the Dräger DrugTest 5000, currently used by the Romanian Police, and urinalysis, used by the National Institute of Forensic Medicine (INML), with the more accurate Surface-enhanced Raman Spectroscopy (SERS), to determine which method is more reliable. **Material and methods:** Search of relevant articles and reports regarding drug testing was conducted, the results of which are presented below. Currently, in Romania, the Dräger DrugTest 5000 and urinalysis are the most used drug detection methods. They both rely on immunoassays that indirectly detect drugs through antibody reactions with different substances. Unfortunately, these methods can result in false positive tests because antibodies may react with other similar compounds. For example, naloxone (an antagonist at the μ-opioid receptor.) and buprenorphine (a partial agonist at the μ-opioid receptor), medications used to treat drug addiction may cross-react with the test antibodies and generate a false positive result. SERS provides a direct approach by identifying the drug molecules themselves, offering higher accuracy and reducing the possibility of false positive results. **Results :** The Dräger DrugTest 5000 and urinalysis offer quick results, but their reliance on antibody reactions can lead to false positive results. However, sample tampering remains a concern in drug testing, especially with urine samples, which could affect the accuracy of the test results. By far, SERS remains the most reliable method, as it uses saliva samples, much more easily to take and harder to tamper with. **Conclusions:** Accuracy of drug detection remains a crucial task, especially given that the Romanian Criminal Code imposes severe penalties for individuals testing positive. New techniques such as SERS, which is more reliable, are mandatory, because they may reduce the risk of false positives.

Keywords: drug testing, Surface-Enhanced Raman Spectroscopy, immunoassay, Dräger DrugTest 5000

THEORETICAL AND PRACTICAL CONSIDERATIONS REGARDING THE USE OF ARTIFICIAL INTELLIGENCE IN ONCOLOGICAL DISEASES

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Background: The introduction of artificial intelligence (AI) technological solutions especially in oncology impacts diagnosis, treatment planning, and patient follow-up. AI systems are becoming vital for enhancing precision, reducing time for diagnostic and providing personalized medical interventions. **Objective:** This research aims to explore the core principles and practical applications of artificial intelligence within oncology. We will investigate how machine learning models, particularly those using deep learning techniques, are utilized to detect, classify, and segment tumors in diagnostic images, while also evaluating their ability to predict treatment outcomes and recurrence. **Material and methods:** Our approach combines clinical case studies with computational simulations. We performed a literature review and analyzed a set of anonymized medical image files, primarily from CT and MRI scans, accompanied by relevant histopathological data. Advanced AI frameworks, like convolutional neural networks (CNNs) and transformers, were used for data processing and tumor classification and segmentations . The performance of these models was evaluated using standard metrics (accuracy, precision, recall, F1 score), along with thorough cross-validation techniques. **Results :** The developed AI models exhibited promising results in identifying key oncological features, greatly aiding the diagnostic process and decreasing variability between clinicians. Specific case studies highlighted the models' ability to produce understandable results, benefiting both physicians and researchers. **Conclusions:** The developed AI models exhibited promising results in identifying key oncological features, greatly aiding the diagnostic process and decreasing variability between clinicians. Specific

case studies highlighted the models' ability to produce understandable results, benefiting both physicians and researchers.Acknowledgement: This work was supported by the George Emil Palade University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș, Research Grant number 837/5/23.01.2025.

Keywords: artificial intelligence, oncology, tumor detection, personalized medicine, medical imaging

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AUGMENTED SCALPEL: ARTIFICIAL INTELLIGENCE AS A CATALYST FOR SURGICAL PRECISION AND INNOVATION

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Background: The integration of artificial intelligence (AI) into surgery is expanding the limits of accuracy, safety, and clinical judgment during procedures. AI blends technology and medicine is transforming surgical care, with organ identification, real-time risk prediction, and augmented reality (AR) for guidance. **Objective:** This research investigates the theoretical underpinnings and practical uses of AI in various surgical specializations. It highlights current progress, existing applications, and future directions in robot-assisted surgery, real-time data analysis, and intraoperative assistance. **Material and methods:** The study involved a thorough literature review, supplemented by clinical examples from diverse areas such as thoracic, orthopedic, vascular, and neurosurgery. Techniques of Computer vision augmented with AI decisions are used on diagnosis, surgical planning, intraoperative support, and patient results. **Results :** Many AI solutions demonstrated considerable effectiveness in predicting postsurgical complications, identifying anatomical structures, and personalizing surgical plans. In thoracic surgery, AI models surpassed physician performance in interpreting pulmonary function tests. In neurosurgery, AI-assisted navigation improved resection precision and minimized surgical risks. Machine learning enabled early detection of vascular issues and improved robotic accuracy in orthopedic interventions. **Conclusions:** In conclusion, Artificial intelligence is not replacing the surgeon but becomes more integrated into surgical practice, interdisciplinary collaboration, ethical frameworks, and ongoing education will be crucial for its responsible and successful implementation.

Keywords: artificial intelligence, surgical navigation, augmented reality, intraoperative decision-making

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POPULATION AWARENESS OF THE HEALTH IMPACT OF CARCINOGENIC AGENTS

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Background: Cancer is one of the leading causes of morbidity and mortality worldwide, determined by a combination of genetic factors, lifestyle, and exposure to risk factors. **Objective:** This study aims to analyze oncological risk factors, health-related habits, and the awareness of the public of cancer and its prevention. **Material and methods:** The study was carried out on a sample of 350 respondents who completed an online questionnaire comprising medical history, exposure to risk factors, and preventive behaviors. Descriptive and inferential statistical methods, including the Chi-Square Test, were employed for data analysis. **Results :** Of the 350 participants, 43.1% undergo annual routine medical check-ups, 32.6% only do so upon medical recommendation, and 24.3% do not undergo annual screenings at all. Regarding genetic predisposition, 41.4% reported a family history of cancer, while 58.6% did not. Additionally, 14.2% perceived their residential area as polluted, whereas 24% reported no exposure to environmental pollutants. Although the majority (93.7%) stated that they don't work in an environment with toxic substances, 6.3% confirmed occupational exposure to such conditions. Almost half of the participants (45.7%) are aware of the risks associated with ultraviolet radiation exposure and take protective measures. A diet rich in meat, processed foods, fats, and sugars was acknowledged by 75.1% of respondents, while 24.9% stated that they do not consume such foods regularly. The most frequently mentioned cancer prevention methods included a balanced diet (17.42%), limiting exposure to toxic substances (9.71%), regular medical screening (9.42%), and stress avoidance (8%). The Chi-Square Test indicated a statistically significant association ($p = 0.005$) between residing in a highly polluted area and undergoing annual medical check-ups or medically recommended screenings. Additionally, a significant correlation was identified between working in a polluted environment and the perception that the residential area is toxic ($p = 0.013$). Moreover, the association between infections with oncogenic pathogens and the perception of toxic exposure ($p <$

0.001) was also statistically significant. **Conclusions:** People who perceive their residential environment as polluted or feel exposed to toxic substances are more likely to adopt a variety of preventive measures, such as maintaining a healthy diet, staying physically active, minimizing radiation exposure, and attending regular screenings.

Keywords: toxic agents, awareness level, prevention

THE INFLUENCE OF DISINFORMATION ON PARENTS' DECISIONS REGARDING CHILDHOOD VACCINATION

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Background: Vaccination is one of the most effective public health strategies for preventing infectious diseases. However, disinformation - especially that spread through social media - can significantly impact parents' decisions regarding childhood immunization. Understanding how demographic factors, information sources, and trust levels affect these decisions is critical to combating vaccine hesitancy. **Objective:** This study aims to analyze how disinformation, the level of education, the source of information, and trust in those sources influence parents' decisions to vaccinate their children according to the national immunization schedule. **Material and methods:** An observational study was conducted based on a structured questionnaire distributed to 152 participants, all of whom had children. The survey assessed demographic characteristics (age, sex, education level, and residence), attitudes towards vaccination, trust in various information sources, and the impact of disinformation. Statistical analysis included Chi-square tests to determine associations between categorical variables such as education level, trust in sources, vaccination behavior, and perception of social media. **Results :** Among the participants, 70% believed that vaccines are safe for children, and 107 parents confirmed that their children were vaccinated according to the national schedule. There was a statistically significant association between higher education level and the likelihood of vaccinating children ($p < 0.001$). Social media was identified by 41% as the main source of disinformation. Additionally, 65% of respondents reported encountering false or contradictory information about vaccines, mostly online. Participants who considered social media to be misleading tended to rely more on official sources such as doctors and government websites ($p < 0.001$). Only 16% of participants had recently been exposed to vaccine information campaigns, highlighting a gap in public health outreach. **Conclusions:** The study shows that disinformation, particularly from social media, negatively influences vaccine confidence among parents. However, higher education levels and trust in medical professionals correlate positively with informed vaccination decisions. Educational campaigns and increased involvement of health professionals are essential in combating misinformation and promoting childhood vaccination.

Keywords: Childhood Vaccination, Disinformation, Health Education, Social Media

TRENDS IN CARDIOVASCULAR DISEASES EPIDEMIOLOGY AND PREVENTION STRATEGIES

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Background: Cardiovascular diseases represent a major health problem, being the leading cause of death both globally and nationally. Early identification of risk factors and the implementation of preventive methods in these patients can significantly reduce the number of cardiovascular-related deaths. **Objective:** The aim of the study is to analyze various risk factors, highlighting their major contribution to the development of heart diseases, as well as emphasizing the importance of preventive methods. **Material and methods:** For this study, we conducted a cohort observational study, including 1600 individuals diagnosed with various cardiac pathologies. We analyzed the risk factors leading to the onset of heart disease, the most frequently associated pathologies, as well as the main preventive methods. **Results :** The most important risk factors identified in the study were: family history, physical inactivity, alcohol consumption, and stress, with statistically significant associations ($p=0.001$) as follows: physical inactivity - ischemic heart disease (66.30%), family history and stress - aortic aneurysm (44.40% and 55.60%), and alcohol - pericarditis (33.3%). Regarding the relationship between cardiac pathology and preventive measures, the following statistically significant associations ($p=0.001$) were found: 73.4% of hypertensive patients considered a balanced and healthy diet to be the main preventive method, while most patients diagnosed with

heart failure (64.8%) considered avoiding psychosocial stress to be the most important measure. Patients with arrhythmias evaluated treatment adherence as the primary preventive measure (58.40%). The majority of patients diagnosed with heart disease also associate other pathologies. The following statistically significant relationships (p=0.001) were identified: heart failure - dyslipidemia (22.7%), hypertension - diabetes mellitus and dyslipidemia (22.1% and 26.6%), endocarditis - endocrine diseases (40%). **Conclusions:** The results highlight the major involvement of risk factors (inadequate diet, physical inactivity, alcohol, psychosocial stress) in the development of heart disease, as well as their relationship with other comorbidities of the patient. Additionally, it emphasizes the importance of applying preventive methods in these patients, as these measures lead to a significant reduction in cardiovascular-related deaths

Keywords: Cardiovascular diseases, Risk factors, Preventive measures

NEUTROPHIL-TO-LYMPHOCYTE RATIO AND PLATELET-TO-LYMPHOCYTE RATIO AND THEIR INTERRELATION WITH DEEP VEIN THROMBOSIS AND PULMONARY EMBOLISM

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Background: Deep vein thrombosis (DVT) and acute pulmonary embolism (PE) are medical emergencies with an increased short - term mortality rate. In recent years, there has been a great deal of interest in the interrelationship between inflammation and venous thromboembolism, and how this relationship can support an early diagnosis using inflammatory markers. Since DVT and PE are closely associated with inflammation, neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) have emerged as surrogate markers of inflammation thar are easily derived from complete blood count analysis. **Objective:** The aim of this study was to investigate the neutrophil-to-lymphocyte ratio and platelet-to-lymphocyte ratio in deep vein thrombosis and pulmonary embolism, respectively to assess the efficiency of these markers in the early diagnosis of DVT and PE. **Material and methods:** A retrospective study was conducted using the data of the patients admitted in the Internal Medicine Department of Mures County Clinical Hospital between January 1st 2023 and December 31st 2023. Deep vein thrombosis was diagnosed using Doppler ultrasonography, while acute embolism was confirmed by computed tomography angiography. Patients with concomitant immunosuppression and acute inflammatory diseases were excluded. DVT and PE patients were compared with a control group without acute thrombotic event, no active infections or hematologic disease. Determinations of NLR and PLR were made at admission. **Results :** A total of 76 patients were admitted for DVT or PE (n=39 males). The control group consisted in 55 patients (n=34 males). Data analysis identified no statistically significant differences between groups in terms of patients' ages (DVT/PE group 64 ± 16 years, controls 59 ± 18 years, p=0.16). NLR was significantly higher in DVT patients ($p<0.05$). PLR were not found to be significantly elevated in acute venous thromboembolism compared to control. **Conclusions:** In our patients' data analysis of NLR and PLR, only NLR was found to potentially help in the detection of acute DVT and PE.

Keywords: Deep vein thrombosis, acute pulmonary embolism, neutrophil-to-lymphocyte ratio, platelet-to-lymphocyte ratio

GENDER AND RISK FACTORS FOR PERIPHERAL ARTERY DISEASE

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Background: Peripheral artery disease (PAD) represents a significant public health challenge because of its high prevalence, functional limitations, poor prognosis and high risk of mortality. Understanding and controlling the main risk factors play an important role in preventing the disease. Some studies claim that there are differences between the risk factors based on patients' sex, but the results are inconsistent. **Objective:** The aim of this study was to analyze sex differences in association with the main risk factors in peripheral artery disease patients. **Material and methods:** A retrospective analysis was conducted using data of patients hospitalized in the Internal Medicine Department of Mures County Clinical Hospital between January 1st 2024 and December 31st 2024. The diagnosis of Peripheral Artery Disease was established based on Computed Tomography angiography and Doppler

ultrasonography. The following parameters were assessed: age, body mass index, behaviors such as smoking and alcohol consumption, systolic and diastolic blood pressure values, lipid profile parameters such as total cholesterol, triglycerides and HDL cholesterol, presence of Diabetes Mellitus and their glycaemic control, preexisting cardiovascular disease. **Results :** A total of 87 patients with peripheral artery disease were identified (n=62 male), with an average age of 70±10 years. Data analysis identified no significant differences between males and females regarding total cholesterol and triglycerides values, systolic and diastolic blood pressure measurements, age and body mass index. HDL cholesterol values were significantly lower in men ($p=0.03$). Diabetes, obesity and coronary disease showed no statistic differences between males and females. The number of smokers was significantly higher in females ($p<0.05$). **Conclusions:** Our study showed significantly higher HDL-cholesterol in women compared to men. There is an association between smoking and female gender in PAD patients. Further research is required to clarify the complex relationship between gender and risk factors for PAD.

Keywords: periphereal artery disease, risk factors, cholesterol, high prelevance

MILITARY

ENSURING EUROPEAN UNION ENERGY SECURITY THROUGH ENERGY DIVERSIFICATION IN THE CURRENT SECURITY CONTEXT

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Background: One of the main issues and challenges for national and international authorities for a long time has been the energy industry's future. It has to deal with the energy sector's huge duty to address global climate change and its concern about ensuring enough electricity for future generations. Therefore, maintaining what is usually referred to as nation's internal security depends significantly on energy strategy. **Objective:** The thesis explores at how diversifying the energy supply could improve the European Union (EU) energy safety in the current economic and geopolitical environment. The advantages of energy sources, improvements to infrastructure, and strategies adopted that decrease dependence on dangerous providers are all explored in the current research. **Material and methods:** Applying an evaluation strategy, methods of diversification including connection initiatives, Liquefied natural gas (LNG) imports, and the combination of green power sources are assessed. Case reports from previous emergencies involving energy are studied for the purpose to analyse the effects of variation on power security. **Results :** According to certain studies, the EU has made significant progress in decreasing the dependency of Russian fuels on LNG imports, strengthening the capacity of storage, and promoting the use of green energy. The European Green Agreement together with other political efforts like REPowerRU has a significant effect on the energy sector's development. **Conclusions:** Several strategies must be implemented to guarantee the long-term energy safety of the EU. With the objective to develop an environmentally friendly power structure, substantial efforts have been underway to improve technological developments, infrastructure, and energy policy.

Keywords: green energy, power structure, international suppliers

FUNDAMENTAL SCIENCES - PHARMACY

SYNTHESIS AND SPECTROSCOPIC ANALYSIS OF NOVEL FLUORESCENT OXADIAZOLE DERIVATIVES

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Background: Oxadiazoles are a class of heterocyclic compounds that have attracted attention due to their multiple applications especially in materials chemistry. Due to their superior stability, 2,5-disubstituted-1,3,4-oxadiazole derivatives are widely reported in literature as fluorescent molecules with strong emissive properties. Furthermore, salicylaldehyde motif could be used to tune the emission towards the NIR region through the process of ESIPT (*Excited-State Intramolecular Proton Transfer*) and has been widely explored in the preparation of azines, which display luminescence both in solution and solid state. **Objective:** The aim of this study is the synthesis of a library of oxadiazole derivatives decorated with salicylaldehyde motifs in order to prepare compounds with ESIPT-type luminescent properties. **Material and methods:** Starting from commercially available 4-*tert*-butylbenzoic acid and 4-hydroxybenzaldehyde we obtained the target compounds through a multi-step synthetic approach. The products were characterized by NMR spectroscopy and high-resolution mass-spectrometry (HRMS) in order to confirm the structures of the target compounds. In addition, their optical properties were analyzed through UV-Vis spectroscopy. **Results :** 4-*tert*-butylbenzohydrazide was obtained through an esterification reaction with methanol, followed by a substitution reaction with hydrazine. In order to protect the hydroxyl group, 4-hydroxybenzaldehyde was subjected to a substitution reaction with benzyl chloride. The corresponding hydrazone was synthesised through a condensation reaction, followed by an oxidative cyclisation reaction to close the oxadiazole ring. Additionally, the compound was formylated through a Duff formylation, and the obtained aldehyde was subjected to several coupling reactions in order to obtain a variety of fluorescent diazines. **Conclusions:** We have successfully obtained and characterized the target oxadiazole derivatives. Their structures were confirmed through NMR and MS spectroscopy and their optical properties were studied through UV-Vis spectroscopy.

Keywords: ESIPT, oxadiazole, fluorescence, salicylaldehyde

A NOVEL AZO-1,3,4-OXADIAZOLE DERIVATIVE: A STEPWISE SYNTHESIS AND PHOTOPHYSICAL EVALUATION

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Background: Azo-oxadiazole derivatives represent a highly promising class of compounds, combining the strong luminescent properties and broad applicability of oxadiazoles with the dynamic photoswitching capabilities of azo groups. While oxadiazoles are well-established fluorophores in optoelectronics, azo groups introduce photoisomerization, enabling precise spatiotemporal control over physicochemical properties - an essential feature for applications in photopharmacology, optical sensing, and advanced functional materials. Despite their potential, azo-oxadiazoles remain largely unexplored due to synthetic challenges, yet their unique dual functionality makes them compelling candidates for next-generation optoelectronic and sensing technologies. **Objective:** The aim of this study is to synthesize and characterize a novel azo 1,3,4-oxadiazole derivative using a five-step synthetic approach and evaluate its photophysical behavior using band-pass filtered light at various wavelenghts. **Material and methods:** Synthesis of the target compound began with the diazotization of 4-methoxyaniline, followed by $SnCl_2$ mediated reduction to the corresponding hydrazine. The hydrazine intermediate was acylated with an alkyl chloroformate to form a semicarbazide derivative, which was further subjected to a substitution reaction using hydrazine hydrate. The resulting compound was then coupled with a cyano-substituted benzoyl chloride, followed by cyclodehydration using $POCl_3$ to generate the oxadiazole ring. Ultimately, MnO_2 mediated oxidation enabled the formation of the azo functionality. The final compound and its intermediates were characterized using physical analysis (retention factor, melting point) and NMR spectroscopy. **Results :** The target compound was successfully synthesized with very good yields after purification. Structural analysis confirmed the identity of the azo-oxadiazole derivative. **Conclusions:** The proposed synthetic approach provides an efficient pathway for the development of azo-oxadiazole derivatives. Future work will focus on synthesizing a series of such compounds and exploring their photochemical properties.

Keywords: 1,3,4-Oxadiazole, azo group, optoelectronics, functional materials

POSTER - SURGICAL

RENAL COLIC TURNED INTO RENAL CRISIS: A RARE CASE OF WUNDERLICH SYNDROME

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Introduction: Angiomyolipomas are benign tumors, usually found in the kidneys, consisting of blood vessels, smooth muscle and adipose tissue. They are often asymptomatic, but in case of rupture, they can cause pain and retroperitoneal hemorrhage, a condition called Wunderlich syndrome. **Case Report:** A 41-year-old woman, with a history of chronic smoking, chronic iron-deficiency anemia and cervical tumor (in observation, treated surgically), presents with acute pain in the right flank irradiating to the right iliac fossa. Upon examination, the abdomen is tender and painful to palpation and spontaneously, Giordano's sign positive. Initially, it was believed to be a typical renal colic, but the contrast-enhanced computed tomography scan revealed a significant right perirenal retroperitoneal hematoma, with pronounced hemorrhagic densities and a corticomedullary defect in the apical-posterior region of the right kidney, measuring approximately 18 mm. A mass mainly containing fatty densities was observed, suggesting spontaneous rupture of an angiomyolipoma, a condition called Wunderlich syndrome. The labs showed normal renal function, trombocytosis and a haemoglobin level of 6,9, for which the patient was administered 2 units of red blood cell mass. She was given analgesic medication as well as tranexamic acid. She was transferred to the Urology clinic, where, due to the severe anemia, emergency surgery was needed. We opted for an open procedure, subcostal incision and total emergency nephrectomy. The biopsy confirmed the angiomyolipoma. Due to the blood loss during the operation, two red blood cell concentrate bags and two fresh frozen plasma bags were administered. The evolution was favorable, with minimal drainage and the patient was discharged with recommendations after 6 days. **Discussions :** Angiomyolipomas are found in 0.3% to 3% of the general population, more common in women than men and usually associated with tuberous slerosis complex. Wunderlich syndrome is found in 0.07% to 0.3% of the general population with angiomyolipomas accounting for 35-40% of the cases, more common in those larger than 4 cm. The management of this condition includes embolization, partial nephrectomy and in severe cases, total nephrectomy, which was the case with our patient. **Conclusions:** Given the rare occurence and the insidious progression of these tumors, particularly in the context of an anemic patient like the one presented, the potential for massive hemorrhage poses a great risk of rapid exsanguination and death. This highlights the critical need for prompt intervention and meticulous management of the case.

Keywords: Angiomyolipoma, Wunderlich Syndrome, Renal Colic, Renal Tumor

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BETWEEN BREATH AND BOWELS: ILEUS DUE TO IATROGENIC DIAPHRAGM HERNIA

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Introduction: Iatrogenic diaphragmatic hernia is a rare but serious complication that can occur following laparoscopic cholecystectomy. This condition involves the unintentional formation of a defect in the diaphragm, allowing abdominal organs to herniate into the thoracic cavity. Ileus, for example, can be a serious and urgent complication that can appear due to the obstruction of the intestine within the herniated wall, leading to complications if not treated. **Case Report:** We report a case of a 69-year-old male patient who was admitted to the Intensive Care Unit with complaints of nausea, vomiting, absence of flatus, and bowel movements for 4 days. The patient has a known history of hypertension and an open cholecystectomy performed 10 years ago. Upon clinical examination, abdominal distension without rebound, tenderness, and guarding were observed. Digital rectal examination revealed no fecal matter in the rectal vault. Considering the patient's status, it was decided that surgical intervention would be done. During exploratory laparotomy, it was discovered that the transverse colon had herniated in the right side of the thoracic cavity, resulting in an 8cm diaphragmatic hernia. Bridectomy was performed, and the transverse colon was repositioned into the abdominal cavity. The diaphragmatic defect was repaired with a prolene mesh and secured with Tucker sutures. The abdominal wall was closed in anatomical layers. The patient was monitored in the ICU for cardiac complications, and he developed postoperative arrhythmia. We admitted him to the cardiology department and treated him medically. The patient was discharged

in stable condition. He had no signs of complications in the follow-up evaluation. **Discussions :** According to the literature, surgical repair of iatrogenic diaphragmatic hernias is performed in several ways, depending on the severity and size of the injury. The patient's history of previous surgical interventions should be considered. Prolene mesh repair is favored because it can reduce recurrence rates compared to suture repair alone. Additionally, it offers enhanced structural support, particularly in cases of large or weakened diaphragmatic defects. Studies have speculated that the diaphragm could be inadvertently injured intraoperatively through contact with energy devices, such as electrocautery and ultrasonic coagulation shears, resulting in a delayed diaphragmatic hernia. **Conclusions:** This case highlights the importance of considering diaphragmatic hernia as a potential cause of ileus, especially in patients with a known history of upper abdominal surgeries. Prompt diagnosis and surgical intervention are crucial for favorable outcomes and decrease postoperative complications.

Keywords: diaphragmatic hernia, ileus, iatrogenic

STEP-BY-STEP DIAGNOSIS OF AN INGUINAL CELLULAR ANGIOFIBROMA: A RARE CASE REPORT

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Introduction: Cellular angiofibroma is a rare benign mesenchymal neoplasm characterized by a combination of spindle cells and prominent blood vessels. The tumor is typically well-circumscribed, with small sizes, occurring in the vulvovaginal and inguinoscrotal regions. **Case Report:** We present a case of a 59-year-old patient who complains of a left inguinal mass. Starting from the radiological opinion, we observed a 5×4 cm well-defined, solid mass with a heterogeneous internal structure causing surrounding tissue infiltration in the left inguinal region, suggesting LAP. The initial diagnostic approach for our patient involved fine needle aspiration. However, the sample obtained was hypocellular and non-diagnostic, providing insufficient information to determine the tumor's origin. The findings raise suspicion of malignancy, primarily suggesting mesenchymal neoplasms. The next step was Tru-Cut biopsy, performed on the mass in the left inguinal region using a 16G needle under ultrasound guidance. Based on morphological, immunohistochemical, and histochemical findings, IgG4-related disease or vasculitis is the primary consideration. We decided to excise the mass with negative surgical margins. The mass was well encapsulated and had no relation with the spermatic cord. The excised tissue measured 5.4 × 4.4 × 3.1 cm and was sent to the pathology, which was diagnosed as cellular angiofibroma. Considering the proximity to the surgical margin, we admitted the patient to the oncology department and requested the evaluation from a radiotherapy perspective. The patient didn't have any postoperative complications. **Discussions :** Cellular angiofibroma is a rare tumor of unknown origin. It usually develops in the subcutaneous tissue of the inguinoscrotal region for males, as it did in our patient's case. Preoperatively, it is very difficult to distinguish a cellular angiofibroma from a malignant tumor. The tumor's inguinal location could lead to misdiagnosis as inguinal hernia, especially if it presents as a palpable mass in the region. Both conditions can cause a lump or bulge in the inguinal area, leading to confusion in diagnosis. **Conclusions:** The diagnostic approach for tumors in the inguinal region is generally very difficult, the clinical status not being sufficient to correctly diagnose the benignity or malignancy of the mass. The diagnostic strategy should be started from a minimally invasive point of view and continued until the excision of the mass, if the result is not concrete.It's notable that rare inguinal masses can misdiagnosed with lymphadenopathies or hernias.

Keywords: cellular angiofibroma, inguinal mass, mesenchymal neoplasm

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WHEN AN ANEURYSM RUPTURES: INTERNAL RIGHT ILIAC ARTERY ANEURYSM WITH MASSIVE HEMOPERITONEUM IN A SENIOR PATIENT

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Introduction: An internal iliac artery aneurysm is a rare pathological dilatation, which carries a potentially lethal risk. In the moment of rupture, it can lead to severe hemorrhagic shock. Early diagnosis and prompt surgical intervention are crucial for patient survival. **Case Report:** We aim to highlight the challenges and surgical

management of a 69-year-old male presenting with hemorrhagic shock caused by the rupture of the right internal iliac artery, accompanied by a giant retroperitoneal hematoma extending into the prevesical and paraumbilical space. The patient, with a history of right inguinal hernia repair, reports to the emergency department with acute right flank pain radiating periumbilically, worsening since the previous day. He is transferred to the Vascular Surgery Department for emergency care. Upon admission, the patient presented leukocytosis with neutrophilia, mild anemia, elevated CRP (95.7 mg/L), altered glucose and acute renal failure. The clinical examination revealed a hypersthenic body type, warm and sweaty skin, mild hypotension, abdomen above the xipho-pubic plane distended due to excess adiposity, abdominal pain in the right flank radiating periumbilically, postoperative scar from inguinal hernia repair, reduced intestinal transit with absent bowel sounds. CT angiography elucidated the rupture of a right internal iliac artery aneurysm with a giant retroperitoneal hematoma extending into the prevesical and paraumbilical spaces. **Discussions :** The treatment involved exploratory laparotomy, adhesiolysis, and ligation of the internal iliac artery along with its branches emerging from the aneurysm. The main difficulty of the case was the challenging surgical access to the pelvic cavity, as ligating the branches in the pelvic excavation is technically demanding due to the deep and narrow surgical field. **Conclusions:** This case underscores the importance of early diagnosis and prompt intervention of an iliac artery aneurysm. The immediate surgical intervention tailored to the patient's condition can lead to favorable outcomes.

Keywords: right internal iliac artery aneurysm, giant retroperitoneal hematoma, adhesiolysis

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FROM DESPAIR TO RECOVERY: A CASE STUDY ON THE MANAGEMENT OF TREATMENT-RESISTANT CHRONIC NONBACTERIAL OSTEOMYELITIS

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Introduction: Chronic nonbacterial osteomyelitis is an inflammatory bone disorder that is usually refractory to treatment. It usually manifests with pain, swelling, and functional disability. Although the disease is generally seen in young patients, it can occur in any age. Early diagnosis and proper surgical or medical treatments may ease treatment, but the disease usually needs long-term monitoring. **Case Report:** A 31-year-old female patient presented with a complaint of distal femur pain of the left knee, which was persistent for approximately six months. Her symptoms had recently worsened over the past few months. Two biopsies were done at another hospital and the pathology was reported as "fibrous tissues." The patient visited the clinic for further evaluation in spite of ongoing pain. The biopsy samples were re-analyzed, and the results were interpreted as edema and regenerative new bone formation. Intramedullary reamerization was performed on the patient in June 2024 and pathology and culture samples were also obtained. These samples were indicative of chronic inflammation. Despite the patient's dramatic failure of pain, she was reoperated in August and December 2024 with intramedullary reamerization and debridement due to suspicion of intramedullary edema and osteomyelitis. The patient was reoperated in January 2025, under suspicion of myelodysplastic syndrome and osteomyelitis. The intramedullary canal of the left femur was reamed, and a large fibrotic tissue content was observed. The canal was lavaged thoroughly with isotonic solution and oxygenated water, after which a spacer and cement were introduced. Sterile aspiration of the knee joint was also performed, and a Jamshidi biopsy of the proximal tibia was taken. Intramedullary canal lavage was also performed via the Jamshidi biopsy needle. After these procedures, various differential diagnoses of brucellosis, tuberculosis, and osteomyelitis were explored. After ruling out all these diagnoses, the patient was diagnosed with nonbacterial multifocal osteomyelitis. The patient was initiated on prednisolone therapy, and there was a dramatic, near-complete clinical improvement. **Discussions :** The treatment of chronic nonbacterial osteomyelitis typically entails the administration of oral corticosteroids. The drugs inhibit bone inflammation by suppressing prostaglandin synthesis. Therapy typically continues for 5 to 10 days, with treatment being administered according to the relief of symptoms. **Conclusions:** Chronic nonbacterial osteomyelitis is extremely difficult to diagnose and treat, especially in treatment-resistant individuals. The absence of bacterial etiology complicates the treatment but the development of appropriate anti-inflammatory therapies is imperative to determine clinical improvement. Early diagnosis, adequate surgical intervention, and extended follow-up are necessary for favorable results.

Keywords: chronic nonbacterial osteomyelitis, intramedullary reamerization, treatment-resistant, diagnoses

TIBIAL LEIOMYOSARCOMA: A COMPLEX AND CHALLENGING CASE FOR ORTHOPEDIC SURGEONS IN THE MANAGEMENT OF RARE MALIGNANT BONE TUMORS

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Introduction: Leiomyosarcoma (LMS) is one of the most common types of soft tissue sarcoma and can manifest in various anatomical regions, including the retroperitoneum and the extremities. Primary bone leiomyosarcoma is an extremely rare and aggressive tumor, and its nonspecific clinical symptoms pose significant challenges in diagnosis and treatment. Patients typically present with pain and swelling in the affected area, but these symptoms are common in many bone pathologies, making early and accurate diagnosis difficult. **Case Report:** A 56-year-old male patient presented with chronic pain and swelling in his left ankle. The symptoms had started 3 years ago but became more pronounced in the last year. There was no history of trauma or injury.Initial radiographic evaluation revealed a lytic intramedullary bone lesion in the distal tibia. A biopsy performed in November 2022 confirmed the diagnosis of a malignant mesenchymal tumor compatible with leiomyosarcoma.Subsequent follow-up revealed inflammation and suppuration in the surrounding soft tissues, with slight progression in the size of the tumor. Based on these findings, surgery was planned, and in April 2023, the first operation was performed. After tumor excision, cement was applied to the distal tibia and ankle for stabilization, with Kirschner wires placed to secure the fixation.In May 2024, the patient underwent a second surgery involving the placement of an Ilizarov external fixator. The fixator was secured with a ring system, and the previously placed cement was removed. Osteotomy was then performed at the proximal metaphysis of the tibia, ensuring proper alignment for healing. The patient was followed up with the Ilizarov for a period, after which the fixator was removed. Subsequently, the patient was followed with a short leg splint. Pin site dressing and wound care were performed, and the patient was able to mobilize without support. The patient has been living pain-free afterwards. **Discussions :** The optimal treatment for bone leiomyosarcoma remains under investigation. However, the mainstay of current treatment approaches is tumor excision. In some cases, amputation may be considered, though this is generally reserved for last resort scenarios. Conservative surgical techniques offer better survival rates compared to radical surgery for bone leiomyosarcoma. **Conclusions:** This case report highlights the importance of individualized treatment protocols in managing rare malignancies such as bone leiomyosarcoma. As medical research progresses, identifying the most effective treatment strategies for these patients will be crucial in improving clinical outcomes and long-term prognosis.

Keywords: leiomyosarcoma, biopsy, bone tumor, tibia

PEDIATRIC HIGH-GRADE GLIOMA: DIAGNOSTIC IMAGING AND SURGICAL RESECTION IN A RARE CASE

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Introduction: High-grade gliomas, particularly glioblastomas, are characterized by rapid progression and poor prognosis. Although they are predominantly observed in adults, rare pediatric cases present complex diagnostic and therapeutic challenges. This presentation discusses the case of a 14-year-old patient diagnosed with an IDH-wildtype, WHO grade 4 glioma, emphasizing the multidisciplinary approach employed in both diagnosis and surgical management. **Case Report:** The patient presented with acute-onset headaches and mild left-sided motor weakness. Neurological assessment revealed signs of intracranial hypertension and a left-sided pyramidal syndrome. MRI of the brain identified a right frontal intra-axial mass with cystic components, heterogeneous signal characteristics, and ring-enhancing borders. Magnetic Resonance Spectroscopy revealed a significant choline peak with a Choline/NAA ratio, suggestive of a high-grade malignancy. Diffusion tensor imaging-based tractography showed displacement of motor fibers, which played a crucial role in preoperative planning. **Discussions :** Although glioblastoma is primarily an adult-onset tumor, this case underscores its potential occurrence in pediatric patients. Prompt recognition, comprehensive imaging, and maximal safe resection remain critical in improving clinical outcomes. The integration of advanced imaging techniques - such as MR spectroscopy

and DTI tractography - proved invaluable in devising a tailored surgical approach, particularly given the tumor's proximity to eloquent motor pathways. **Conclusions:** This rare case of pediatric IDH-wildtype glioblastoma highlights the significance of early diagnosis, state-of-the-art imaging, and meticulous surgical planning in the treatment of high-grade brain tumors in children. Despite the guarded prognosis, personalized and proactive intervention can contribute to improved neurological function and quality of life

Keywords: glioblastoma, spectroscopy, pediatric, tractography

CHALLENGES IN MANAGING ACUTE SUBDURAL HEMATOMA: FROM SURGICAL EVACUATION TO CONTROLLING MALIGNANT BRAIN EDEMA: CASE REPORT

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Introduction: Acute subdural hematomas (ASDH) are neurosurgical emergencies resulting from blood accumulation in the subdural space that can lead to elevated intracranial pressure (ICP) and mass effect, usually due to traumatic brain injury (TBI). Often, it's necessary to perform prompt surgical intervention. Decompressive craniectomy (DC) is performed with the goal of decreasing ICP by removing a large portion of the skull, allowing the brain to expand. Malignant brain swelling, remains an important complication following DC, often leading to debilitating neurological deficits. **Case Report:** A 48-year-old male presented to the emergency department with a cranio-cerebral injury, exhibiting a Glasgow Coma Scale (GCS) score of 8. A cranial CT scan revealed a large acute subdural hematoma (ASDH) in the right hemisphere with significant mass effect. He was subsequently transferred to the neurosurgery department in Târgu Mureș, where his neurological condition deteriorated, and his GCS score dropped to 5. The CT scan showed worsening mass effect and an increased hematoma volume. A frontal craniotomy was performed to evacuate the hematoma, during which brain herniation was noted. A follow-up CT scan confirmed successful hematoma removal but revealed a new ischemic stroke in the right hemisphere, resulting in malignant cerebral edema. A decompressive craniectomy was then conducted, as the brain exhibited critical swelling, necessitating the resection of the right cerebral hemisphere. Post-surgery, the patient displayed left-sided hemiplegia and maintained a GCS score of 5 before being transferred back to the neurosurgery department in Alba Iulia. **Discussions :** This case emphasizes the difficulties associated with managing ASDH. The initial decline in GCS during transfer highlights the importance of rapid intervention in TBI cases. The phenomenon of malignant brain swelling, can lead to unfavorable outcomes, including severe neurological deficits and even death. The best strategies to tackle malignant edema include surgical evacuation of the hematoma and aggressive postoperative medical treatment of ICP. The postoperative ischemic stroke further complicated the clinical course of the patient. A number of reasons, such as vasospasm, direct vascular damage, or reduced cerebral perfusion brought on by high ICP, can be the primary cause of cerebral ischaemia after ASDH evacuation. **Conclusions:** When malignant cerebral edema complicates the therapy of ASDH, prompt surgical intervention and a multidisciplinary approach are needed. In these situations, the prognosis is still dire, which emphasizes the necessity of continuing research on neuroprotective techniques and optimal management procedures in order to enhance patient outcomes.

Keywords: Acute subdural hematoma, Malignant brain edema, Decompressive craniectomy, Ischemic stroke

SURGICAL MANAGEMENT OF INFECTED VASCULAR PATCH FOLLOWING FEMORAL ENDARTERECTOMY: CASE REPORT AND CLINICAL PERSPECTIVES

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Introduction: Peripheral artery disease (PAD) constitutes a substantial contributor to morbidity, especially among patients with cardiovascular conditions. Severe limb ischemia necessitates prompt surgical intervention to maintain limb viability. Postoperative complications, such as dehiscence and local infections, persist as concerns that necessitate vigilant monitoring and timely intervention. **Case Report:** We present a case involving a 65-year-old male patient who has been diagnosed with stage IV Fontaine with a history of smoking, alcohol consumption, and cardiac diseases. The patient was admitted for acute ischemia of the right lower limb, where a femoral trifurcation and right popliteal artery segment P1 endarterectomy was performed, followed by widening angioplasty with an

ECM patch at the femoral trifurcation and right popliteal artery. The evolution was favorable, and the patient was discharged on day five post-operator. However, approximately two weeks later, the patient returned urgently with active bleeding from the right inguinal postoperative wound, accompanied by pain and the presence of a pseudotumoral formation. A surgical intervention was carried out, during which a hematoma was evacuated, and local hemostasis was achieved. Seven weeks after discharge, the patient presented at the outpatient clinic for a follow-up, revealing dehiscence of the right inguinal wound at the upper pole, while at the lower pole, a cutaneous fistula with sero-purulent secretions and signs consistent with Celsus' criteria were observed. It was decided to readmit the patient, initiate empirical antibiotic treatment, and subsequently perform surgery to explant the MEC patch, which was replaced with a venous patch harvested from the great saphenous vein. The patient was discharged ten days post-operatively without any signs of local infection. At subsequent outpatient follow-ups, the surgical wounds showed appropriate granulation, with the patient reporting no local pain or signs of ischemia in the right lower limb. **Discussions :** This case addressed the complexities associated with managing severe PAD and the potential limitations of utilizing the ECM patch in regions affected by infection or in anatomically challenging areas. The timely identification of complications related to lesions, accompanied by prompt surgical intervention and appropriate antibiotic therapy, is essential for maintaining limb function. The decision to transition to a venous patch effectively mitigated the risk of infection and facilitated satisfactory healing of the vessel, underscoring the significance of tailored patient care. **Conclusions:** Postoperative monitoring and prompt surgical revisions are crucial for preventing significant complications in PAD. Tailored treatment strategies can ensure proper healing and limb preservation achieved.

Keywords: vascular patch, great saphenous vein, endarterectomy, severe limb ischemia

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REBUILDING FOUNDATIONS: ALT FLAP ÎN CALCANEAL RHABDOMYOSARCOMA

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Introduction: Spindle cell rhabdomyosarcoma is a rare type of cancer that originates in the skeletal muscle tissue, which is responsible for voluntary movements. It can affect people of all ages, but the characteristics of this cancer can vary from children to adults. **Case Report:** This case report is based on an 8-month-old male patient with no known genetic syndrome or systematic diseases. At the time that routine tests were conducted immediately after birth, the patient developed leakage-like bleeding and swelling in the heel area when blood was drawn from the heel. An ultrasound examination revealed a hemangioma. After reducing the lesion, the patient underwent debridement of the right calcaneal area at an external center. During subsequent follow-ups, an excisional biopsy was performed due to growth in the lesion. The result came back as "infantile fibrosarcoma". The patient has developed new lesions in the same area. The orthopedics department evaluated him, and a new biopsy was taken considering the possibility of recurrence. After the biopsy resulted in "spindle cell rhabdomyosarcoma", the patient was evaluated by pediatric oncology and received 6 months of chemotherapy. After the excision of a right calcaneal tumor with wide margins by the orthopedic team, the plastic surgery team was involved. A free anterolateral thigh fasciocutaneous flap from the left thigh, elevated to include a 7x5 cm skin island based on two perforators from the descending branch of the lateral circumflex femoral artery, was anastomosed to the right plantaris medialis artery and accompanying vein to repair the defect in the right calcaneal region. Post-operative pathology report of the excision material resulted as: "Diagnosis: 1) Malignant mesenchymal tumor, consistent with spindle cell rhabdomyosarcoma, right heel, excision 2) Secondary changes to treatment: necrosis (40%), dystrophic calcification, and maturation The bone, lateral and deep surgical margins are tumor free. **Discussions :** The treatment of rhabdomyosarcoma requires a complex multidisciplinary approach, individually adapted for each patient. The therapeutic strategy is based on the combination of multiple modalities of treatment to maximize the chances of healing and minimize the effects in the long term. **Conclusions:** Although the challenges are significant, the progress in diagnosis and treatment has considerably improved the patient perspective. Integrated therapeutic approaches that combine surgery, chemotherapy, and radiotherapy offer the best chances of recovery, especially when the disease is detected early.

Keywords: spindle cell rhabdomyosarcoma, dystrophic calcification, calcaneal tumor

THE CHALLENGING JOURNEY OF A NEWBORN: A CASE OF INTESTINAL ATRESIA COMPLICATED WITH EVISCERATION

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Introduction: Intestinal atresia is a congenital obstruction of the intestine due to an interruption in the continuity of the bowel lumen. It results from in utero vascular compromise, leading to ischemic necrosis and resorption of a segment of the intestine. **Case Report:** The male patient was born via cesarean section on time, at a Secondary Hospital. At 24 hours of life he presented multiple meconium-stained emesis. Abdominal X-ray revealed small intestinal and dilation therefore, he was referred to the Neonatology Department Targu Mureș for further medical care and evaluation. Clinical examination showed a distended abdomen and an altered general state, and a weight of 3300 g. Irrigography demonstrated microcolon, suggesting intestinal atresia. Surgery was performed through median laparotomy, type II intestinal atresia was confirmed and termino-lateral anastomosis was performed. Postoperatively, at the neonatal intensive care unit he received antibiotic therapy and further specialized care with gradual initiation of oral alimentation. He was discharged in good general condition. Shortly after the patient was readmitted at the Secondary Hospital with regurgitation and weight loss to 2990 g. An abdominal X-ray and clinical evaluation with altered general state suggested intestinal occlusion. In Targu Mureș a second median laparotomy was performed, which revealed adhesions at the small intestine and anastomosis site without complication. Additionally severe protein-caloric malnutrition was diagnosed. During the postoperative period, the patient experienced evisceration of the small bowel on two occasions requiring further surgeries. Treatment led to restored intestinal transit and a good general state, antibiotic therapy was discontinued, and his feeding progressed. He was discharged in good general condition and a weight of 4010 g. **Discussions :** The case underscores the significance of managing intestinal atresia with early diagnosis, attentive postoperative care. Complications, including evisceration, intestinal adhesions and occlusion, as well as severe malnutrition, can contribute to a prolonged recovery process. **Conclusions:** Despite the early diagnosis of intestinal atresia and a successful, patent anastomosis, complications impeded the healing process and altered its progression, transforming the case from a simple intestinal atresia to a highly complex one.

Keywords: Intestinal atresia, Evisceration, Malnutrition

NAVIGATING THE DILEMMA BETWEEN CONSERVATIVE AND SURGICAL MANAGEMENT IN A NON-TRAUMATIC VITREOUS HEMORRHAGE CASE

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Introduction: Non-traumatic vitreous hemorrhage (VH) is a medical condition which involves the loss of vision caused by the rupture of the retinal or uveal vessels. This illness can have many starting points such as diabetic retinopathy, vascular proliferation, age-related macular degeneration , Terson syndrome, as well as the retinal tear.There is a dilemma in VH: should we approach a conservative treatment or a surgical one? **Case Report:** This case presents a 57 year-old-woman who was admitted to the Ophthalmology Clinic of Cluj-Napoca after she claimed that she was slowly losing vision on the right eye that has started 3 weeks ago. Medical history reveals that she suffers from type II diabetes mellitus, high blood pressure (HBP), ischemic heart disease and grade II obesity. She takes chronic treatment with anticoagulants and medication for HBP. Ophthalmological examination revealed OD with discrete cortical opacities and unassessable retina due to VH. OS had a PC-IOL and a normal posterior segment. In order to determine the cause of vision loss in OD, an ocular ultrasound was done which revealed no other lesions, apart from the VH.. This condition may have occured in association with the comorbidities of the pacient: diabetic retinopathy, HBP-related-retinal vein oclusion or the anticoagulant treatment. Given the importance of recovering vision and revealing the cause of VH as quickly as possible, pars plana vitrectomy was carried out. Intraoperatively, a retinal break was discovered which was treated with cryotherapy and air injection. **Discussions :** According to the literature, the most common options of treatment for VH are: observation or surgical intervention- pars plana vitrectomy[3]. In this case, the surgical management was used along with cryotheraphy in order to eliminate the risk of retinal detachment which was certain in the presence of a retinal break. **Conclusions:** VH is a sign, not a diagnosis, therefore it is important to determine the cause in order

to get the best treatment. Retinal break must be always taken into account as a possible cause of VH, even in patients with other apparent risk factors. Most importantly, the treatment must be adapted to the patient's features.

Keywords: Non-traumatic vitreous hemorrhage, pars plana vitrectomy, cryotheraphy

THE MANAGEMENT OF AN OPEN AND COMMINUTED FRACTURE FOLLOWING A CAR ACCIDENT

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Introduction: An open fracture is one of the most challenging procedures an orthopedic surgeon can menage, due to its complications and severity. **Case Report:** A 72-year-old patient is admitted to the Emergency Room with a double fracture following a car accident and also with a gleno-humeral dislocation. The fracture was located at the distal epiphysis of the tibia and fibula, with severe comminution. The lead surgeon opted for external fixation, with the patient under general anesthesia. This type of fracture requires IV antibiotics and urgent irrigation and debridement of the area with six liters of saline and betadine. The fibular fracture was handled using a intramedullary k-wire, through a central approached on the tip of the external malleolus of the fibula. The orthopedic surgeon placed two transosseous Schanz pins through the medial tibial diaphysis, a transosseous Schanz pin perpendicular to the axis of the two pins already placed in the tibia through the calcaneus, and another Schanz pin through the 1st metatarsal for additional support. Postoperatively, areas of necrosis were identified around the edges of the wound. Plastic surgeons intervened and placed a rotational flap of the soleus muscle over the area of necrosis. The gleno-humeral dislocation was reduced during the surgical procedure with the patient in dorsal decubitus. **Discussions :** This case presentation aims to emphasize the significance of time, treatment and pressure management, considering all the possible postoperative complications that can occur. **Conclusions:** The treatment of choice for this case had to take in consideration different types of osteosynthesis to prevent possible post-operative infection alongside good fixation until the condition of the patient improved.

Keywords: osteosynthesis, external fixation, fractured tibia and fibula, open fracture

SEPTORHINOPLASTY FOR THE CORRECTION OF NASAL AND SEPTAL DEVIATION: A STRUCTURAL RHINOPLASTY APPROACH

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Introduction: Whether congenital or post-traumatic, a deviated nose causes major functional disadvantages in addition to aesthetic problems. Conventional methods frequently fail to address both internal valve insufficiency and septal deviation at the same time, leading to less than ideal results. **Case Report:** To realign the nasal septum for correcting nasal vault deviations, we used a structural rhinoplasty approach in this study, specifically the septorhinoplasty. In contrast to preservation rhinoplasty, our approach emphasizes whole nasal framework repair. In order to optimize internal valve function and restore nasal physiology, patients who presented with both nasal and septal deviation were chosen for surgery. **Discussions :** Our method takes into account a deviated nose functional as well as aesthetic qualities. A thorough correction of the nasal vaults was made possible by the structural rhinoplasty approach, which improved airflow dynamics and improved aesthetics. The technical details of the process, the significance of treating internal valve insufficiency, and the relative advantages over preservation procedures are the main topics of debate. **Conclusions:** In conclusion, individuals who have both nasal and septal abnormalities can find a permanent treatment with septorhinoplasty utilizing structural rhinoplasty. This method offers a balanced solution to both functional and aesthetic issues by completely reconstructing the nasal framework, which not only corrects external defects but also greatly improves nasal function.

Keywords: septorinoplasty, septal deviation, valve insufficiency

PRESERVATION OF NIPPLE-AREOLA COMPLEX VASCULARIZATION IN MASTOPEXY: A SUPERIOR-MEDIAL PEDICLE APPROACH

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Introduction: Maintaining the vascularization of the nipple-areola complex (NAC), which is crucial for retaining tissue viability, is a major difficulty during mastopexy treatments. To guarantee that the vascular supply to the areola is not impaired, special attention must be paid to the transposition of breast tissue. This study explores a surgical technique that prioritizes the vital preservation of the areolar blood supply while simultaneously protecting the breast's vascular network. **Case Report:** To preserve strong vascularization of the breast and the NAC during mastopexy, we used a superior-medial pedicle method. In order to retain the main artery branches supplying the areola during tissue transplantation, the method involves meticulous anatomical design. In order to increase the volume of the breast's upper pole and improve both function and appearance, allograft tissue is carefully moved. **Discussions :** By maintaining the complex circulatory network that is essential to the areola's survival, the superior-medial pedicle technique provides a stable treatment. This method reduces the chance of ischemia by preserving sufficient blood flow even when there is significant tissue reorganization. Additionally, the deliberate translocation of autologous tissue gives the breast's upper pole vital volume while also helping to maintain vascular integrity. Achieving the best surgical results requires a combined focus on volume enhancement and vascular preservation. **Conclusions:** The vascularization of the nipple-areola complex is successfully maintained by using a superior-medial pedicle during mastopexy, ensuring the breast's functional integrity and aesthetic appeal. Furthermore, the superior pole can be increased by carefully placing allograft tissue, highlighting the significance of a thorough strategy that includes into account both volumetric and vascular requirements in breast surgery.

Keywords: vascularization of the breast, mastopexy, allograft tissue

SURGICAL APPROACH TO RECURRENT MESENTERIC TUMOR: A CASE REPORT AND CLINICAL CONSIDERATIONS

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Introduction: Mesenteric tumors are rare and consist of a heterogeneous group of lesions . Masses may arise from any of the mesenteric components : peritoneum , lymphatic tissue , fat and connective tissue . Cellular proliferation can also arise from infectious or inflammatory processes . **Case Report:** In this paper , we present a case of an 43 years old male pacient who have had segmental enterectomy , ileostomy for invasive mesenteric base tumor in the last ileal loop and iron deficiency anemia , presented to our service with an appointment with the following clinical symptoms : diffuse abdominal pain , intestinal transit disorders and severe abdominal bloating . The pacient related abdominal pain , intestinal transit disorders about 2-3 months ago , symptoms progressively worsening . Six months ago the pacient was operated in another hospital. At the imaging investigations it was thought it is a reclapse . Based on the anamnesis , local and general clinical examination , and laboratory tests , the patient was admitted with the diagnosis of recurrent mesenteric base tumor operated for specialized treatment . The surgery was performed under general anesthesia with IOT and the following were performed : exploratory laparotomy , extended right hemicolectomy with terminal ileostomy , Douglas and subhepatic drainage for the intraoperative diagnosis of abcedate and necrotic tumor of the mesenterium , ileon , ascendent colon , extended adhesive syndrome . The histopathologic diagnosis shows an intestinal block with adhesions, a termino-lateral anastomosis, and no mucosal lesions, but multiple necrotic foci and abscesses in the adipose and mesenteric tissue. Two months later, an MRI reveals diffuse hepatic steatosis, an irregular area in segment II (5.4x4 cm) with increased T2 signal and satellite nodules, and a subcortical area in segment VI (2.2x1.3 cm) with capsular retraction. No bile duct dilation is seen. **Discussions :** Mesenteric tumors, either solid or cystic, can be benign or malignant and are often found incidentally. Diagnosis may involve imaging or biopsy. Treatment ranges from observation to surgery. Benign tumors may be treated with enucleation, while malignant ones require resection, with careful preoperative evaluation to avoid bowel removal and potential insufficiency. **Conclusions:** Pacient

treatment included surgical interventions for mesenteric tumors and associated lesions . Surgery will be the first line treatment , and post-operatory monitoring is essential for management of complications and live changes.

Keywords: Mesenteric tumor, Intestinal transit disorder, Subhepatic drainage

MINIMALLY INVASIVE MANAGEMENT OF A TRAUMATIC RENAL INJURY IN A 17-YEAR-OLD BOY

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Introduction: The renal contusion ranges from minor renal parenchyma damage to severe vascular or parenchymal disruption with extension of the active hemorrhage to peritoneum. It accounts for a small percentage of all trauma cases, with a male predominance and there are 5 grades of severity from minor subcapsular hematomas (Grade 1) to complete renal avulsion (Grade 5). The management is based on conservative treatment for low-grade injuries, while surgical treatment with high-grade lesions requiring renal repair or nephrectomy. Here is reported a case of renal contusion treated at our clinic. **Case Report:** A 17-year-old boy had severe right sided abdominal pain following traumatic injury during football match and continued his activities despite the pain, which progressively worsened over the following days. At the 3rd day following the injury he presented to the ER with abdominal tenderness and guarding on the right side. No associated respiratory, cardiovascular or urinary tract abnormalities but elevated blood pressure and a slight tachycardia. **Discussions :** Emergency ultrasound and CT scan revealed severe right lower renal pole contusion with significant perirenal hematoma (Grade III renal injury) with a caudal extension into the inguinal region. An active bleeding from a ventral medio-renal vessel was identified, the main kidney vessels were intact. CBC showed decreased hemoglobin level 8.67 and a hematocrit of 24.7. The patient was stabilized and received one unite of erythrocyte mass and one unit of plasma. After twelve hours of admission the CT scan was repeated and active bleeding was still present, CBC results were relatively stable. The case was presented to the interventional radiology team and an endovascular approach was performed. The extravasation of contrast material was identified from 2 segmental medio-renal arterial branches. The vessels were closed using platinum coils, and the bleeding was stopped. Postoperatively, to prevent any infections, antibiotic treatment with Zolinef (2x1 daily for 13 days) and metronidazole (3x500 mg daily for 8 days) was administered. Several blood tests and ultrasound studies showed the stabilization of the hematoma with increasing Hb and hematocrit levels to normal. The patient was discharged at 13 days. **Conclusions:** The nonoperative management of high-grade renal injuries is a contentious issue in pediatric trauma surgery. This case illustrates a successful, minimally invasive approach to treating a traumatic renal injury in an adolescent who presented later, making the decision-making process even more challenging.

Keywords: III grade renal contusion, Pediatric surgery, minimally invasive management

VASCULAR CONSTRUCTION METHODS FOLLOWING TRAUMA WITH INJURY TO THE LEFT POPLITEAL ARTERY AND VEIN, ACUTE LEFT LOWER LIMB ISCHEMIA, COMPARTMENT SYNDROME

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Introduction: Popliteal vascular trauma remains a challenging entity, and carries the greatest risk of limb loss among the lower extremity vascular injuries. We aim at describing our experience with such complex injuries, with associated patterns of injury, diagnostic and therapeutic challenges, and outcomes. **Case Report:** In this paper we present the case of a 21 year old male patient who came to the emergency department on 19.12.2024 with the diagnosis of hemorrhagic shock, bicycle fall injury, left popliteal artery and vein injury, acute ischemia left lower limb and compartment syndrome, presenting active bleeding, intense pain at rest, sensitivity disorders in the calf and left leg, impossibility of mobilization, apathy, later being admitted under emergency conditions to Vascular Surgery. Clinical examination, Angio CT and X-ray left lower limb was performed. In urgent surgical intervention the left popliteal artery and vein was reconstructed with Goretex synthetic material prothesis, diameter 5mm. Postoperatively, he was transferred to the ICU. Treatment for volume rebalancing, hydro-electrolytic, anticoagulation, diuretic, antibiotic therapy, analgesia were initiated. The patient presented unfavorable evolution

with cold, ischemic skin of the left lower limb, without popliteal and distal pulse. After an angio-CT of lower limb was performed, a reintervention has been done, popliteal artery and vein reconstruction with autologous inverted saphenous vein. Bacteriological examination was performed, antibiotic treatment was modified according to the antibiogram. Plastic Surgery performed a chemical wound cleansing and excisional debridement of devitalized tissue on 22.12.2024, 11.01.2025 and Vivano dressing repeatedly (24.12.2024), then a skin coverage with skin graft (harvested from antero-external surface of the right thigh) on 26.12.2024, 23.01.2025, Vivano dressing. On 13.01.25 he presented moderate hematuria, but after urologic consult showing no UTI or other urinary complaints. The patient received anticoagulant, anti-pain, anti-emetic, diuretic, antibiotic (Meronem 2x1/day, 24.12.24-27.01.25, Colistin 3x3ml, 01.01.25-27.01.25), and hydro-electrolytic, volemic rehabilitation treatment. During hospitalization the patient presented good general state, the evolution being favorable. Also he presented pulses to the distal part, warm skin, no signs of ischemia, sensitivity and mobility disorders, immobilized limb. **Discussions :** Operative management of traumatic popliteal vascular injuries continues to evolve. Traumatic popliteal artery injuries have been associated with the greatest risk of limb loss of all peripheral vascular injuries, with amputation rates of 10% to 15%. **Conclusions:** The rapid diagnosis and treatment of patients with traumatic vascular injuries increases the percentage of positive results, often requiring a multidisciplinary approach.

Keywords: popliteal artery, popliteal vein, vascular injury, compartment syndrome

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FROM CHILDHOOD TO WOMANHOOD: OVERCOMING A SILENT STRUGGLE WITH URINARY INCONTINENCE

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Introduction: Urinary incontinence affects approximately 1-9% of women and 2-15% of men, with higher prevalence in older populations and individuals with comorbidities. It can have either a functional or anatomical etiology; therefore, further investigations are necessary to determine the exact cause. This condition often leads to recurrent urinary tract infections and psychological distress. It significantly impacts self-esteem, social interactions, and intimate relationships, frequently causing anxiety about incontinence during sexual activity. **Case Report:** A 15-year-old female patient presented with lifelong urinary incontinence, previously managed with diapers. As she matured and entered marriage, she experienced increasing distress, particularly regarding intimacy, prompting her to seek medical evaluation. Imaging studies revealed congenital pyeloureteral duplication in the right superior kidney pole, with ectopic ureteral termination in the vagina. Surgical options vary depending on renal function and anatomical considerations. Pyeloureterostomy involves connecting the affected ureter to the normal one near the renal calyces, while heminephrectomy is considered if the affected renal pole is non-functional or severely damaged. In this case, ureteroureterostomy was selected as the preferred approach. Currently, a JJ stent has been placed in the ureter of the lower kidney pole, as cystoscopy confirmed the presence of a stenosis. This step aims to assess the ureter's drainage capacity. Once adequate urine flow is confirmed, an end-to-side anastomosis will be performed. The procedure will be performed through a minimally invasive incision, similar to an appendectomy, allowing direct access to the ureter for anastomosis. This approach avoids the need for bladder reimplantation, thereby reducing surgical risks such as vesicoureteral reflux and postoperative bladder dysfunction. **Discussions :** Ureteral duplication occurs in approximately 0.7% of the population, while an ectopic ureter terminating in the vagina is even rarer, accounting for less than 1% of all ureteral duplication cases. Left untreated, this condition can lead to recurrent urinary tract infections, renal impairment, and chronic kidney disease. Surgical intervention is essential to restore urinary continence, prevent complications, and improve the patient's quality of life. **Conclusions:** This case highlights the importance of early recognition and surgical intervention in rare conditions such as ureteral duplication with ectopic ureteral termination. Timely surgical management can restore urinary continence, preserve renal function, and significantly improve psychological well-being. Following the procedure, the patient no longer required diapers and was able to fully engage in daily and social activities without distress. The resolution of incontinence alleviated anxiety surrounding intimate relationships, allowing her to regain confidence and emotional well-being.

Keywords: Ureteral duplication, Urinary incontinence, Ureteroureterostomy, Pediatric urology

TERMINAL ILEITIS WITH REACTIVE APPENDICITIS IN A POST-HYSTERECTOMY PATIENT: A SURGICAL CHALLENGE

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Introduction: Reactive appendicitis, often triggered by terminal ileitis, exemplifies the complex interplay between adjacent gastrointestinal structures. This condition emphasizes the necessity of discerning underlying etiologies in cases presenting with right lower quadrant pain, which might initially suggest classic appendicitis. Terminal ileitis, particularly when related to conditions like Crohn's disease or infectious agents, can precipitate inflammation of the appendix. Understanding this linkage is vital for accurate diagnosis and avoiding unnecessary surgical interventions, particularly in patients with a history of abdominal surgery where the risk of adhesive syndromes is significant. **Case Report:** We present the case of a 65-year-old patient with multiple gynecologic interventions, total hysterectomy with bilateral anexectomy, who subsequently developed a terminal ileitis treated conservatively. The patient presents to the Emergency Department one week later with diffuse, severe abdominal pain, and certain signs of peritoneal irritation with acute surgical abdomen. Considering the presented symptoms, an abdominopelvic CT scan was performed revealing an inclaved appendix in an adherent conglomerate with suspicion of acute appendicitis. Inflammatory changes were also seen in the terminal ileum, suggesting the persistence of the preexisting inflammatory process. Given the patient's multiple history of pelvic surgery caution was taken when applying surgical laparoscopic exploration. Two trocars were placed in the patient's right flank and right fossa after initial exploration via the periumbilical port. Adeziolisis was performed with a successful retrograde appendectomy. Postoperative antibiotic treatment was applied with discharge on day five. **Discussions :** For acute appendicitis and extensive adhesive syndromes, open surgical techniques seem to be the optimal approach to create wider access and facilitate the management of possible complications. In this case, terminal ileitis also represented a challenge. However, laparoscopic techniques may be considered in selected patients, as they are less invasive and offer a much shorter recovery time. **Conclusions:** Adhesive syndromes are commonly seen in patients with a history of gynecologic surgery, requiring careful evaluation in the differential diagnosis of acute abdominal pain. The decision of surgical strategy should be individually adapted to each case, considering the complexity of adhesions and the risk of intraoperative complications also due to the local inflammation caused by the terminal ileitis.

Keywords: terminal ileitis, appendicitis, laparoscopic appendicectomy, adhesive syndrome

MINIMALLY INVASIVE, MAXIMALLY EFFECTIVE: A RARE CASE OF LOCALLY ADVANCED BLADDER CANCER SUCCESSFULLY MANAGED WITH MINIMALLY INVASIVE SURGERY

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Introduction: Bladder cancer ranks as the ninth most commonly diagnosed cancer globally, with the highest incidence rates found among men in Southern and Western Europe and is increasingly observed in younger populations.This type of cancer can be classified into two categories: non-muscle-invasive bladder cancer and muscle-invasive bladder cancer, each requiring different therapeutic approaches due to their significantly different levels of severity and progression, which can be debilitating and traumatising, so, modern methods should be identified and applied in order to minimize patient trauma. **Case Report:** A 42 y/o male presented with painless hematuria and, following a urological examination, was initially diagnosed with a non-muscle invasive urothelial bladder cancer which was treated as the first instinct with multiple TUR-BT (Transurethral Resection of Bladder Tumor) procedures, and intravesical chemotherapy (Farmorubicina) from 2012 until 2019. The patient was under continuous surveillance through cystoscopies all this period; however, a prolonged absence from follow-up from 2021 until 2023 led to a nonspecific progression of the disease with the development of T4a prostate infiltration, positive lymph nodes, and a high-grade urothelial tumor in the renal pelvis, due to less known reasons, a fact observed in April 2024 through a TUR-BT, despite the absence of any tumor signs in the 2023 cystoscopy. This makes the case particularly unique. The delay in monitoring, further complicated by underlying alcoholic cirrhosis, contributed to the advanced stage at the time of re-evaluation. All things considered, the patient underwent

neoadjuvant chemotherapy, in order to be able to reduce the tumour, and a combined surgical approach which consisted in 3D laparoscopic nephro-ureterectomy, radical cystectomy and abdomino-pelvic lymph node dissection, all performed in one session. The postoperative histopathology results showed no malignancy neither in the bladder nor in the lymph nodes, but the left kidney was positive. **Discussions :** Due to advancements in oncology and surgical technology, this patient was able to receive curative treatment even in an locally advanced stage. Such cases of complete bladder response are quite rare, and minimally invasive surgical approach is worth considering, because it offers multiple benefits compared to open surgery without compromising oncologic safety. Additionally, liver cirrhosis would have caused significant challenges in the case of open surgery, due to wound healing deficiency. However, the patient's young age contributed to postoperative recovery. **Conclusions:** Minimally invasive multidisciplinary treatments can be successfully applied even in complex cases of locoregional tumours.

Keywords: bladder cancer,, TUR-BT,, alcoholic cirrhosis,, combined surgical approach

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CASE REPORT ABSTRACT: GENITAL PROLAPSE

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Introduction: Genital prolapse with an elongation of the Colon combined with a Cystocele, Rectocele, or Enterocele accompanied by intermittent urine retention is described as a complex, multifaceted pelvic floor disorder. Patients with rectal prolapse have a risk of 21-34% of concurrent pelvic organ prolapse. The condition arises due to a wide range of risk factors and etiology. Understanding the underlying signs, symptoms, and causes is crucial for a diagnosis and effective treatment and management. This case report aims to illustrate a multidisciplinary surgical approach to treat a 59-year-old patient diagnosed with concurrent stage III pelvic organ prolapse, and a grade V rectal prolapse using a self-fixating mesh. **Case Report:** Patient Anamnesis: : A 59-year-old female was admitted to Surgery Clinic 1 of the Emergency Clinical County Hospital of Târgu Mureș where she was diagnosed with concurrent stage III pelvic organ prolapse, a grade V rectal prolapse, enterocele, cystocele, and intermittent urine retention. After preoperative preparation, the patient underwent a multidisciplinary surgical procedure involving two general surgeons and a gynecologist. Under general anesthesia an Exploratory Laparotomy, Wiart Extracapsular Total Hysterectomy with Bilateral Adnexectomy, Douglasectomy, Posterior Colpectomy, Sacrocolpopexy and Rectopexy with Pro-GripTM Self-Fixating Mesh, Double Drainage of the Sacral Excavation, Monoplan Laparography, Intradermic-Dermic Skin Suture. The postoperative evolution was surgically uneventful with patient discharge after 7 days of hospitalization. One year follow-up there were no signs of recurrence. **Discussions :** With this case report, we highlighted the importance of the different surgical steps with which this diagnosis is treated. As this was an advanced case, we intended to explicitly highlight the importance of obeying the surgical intervention to completely and correctly recover the patient. **Conclusions:** Combined rectal and vaginal prolapse causes significant patient distress, and a multidisciplinary surgical approach utilizing a self-fixating mesh is safe and effective. In the described case, the correct diagnosis and management resulted in the patient's successful surgical treatment.

Keywords: Pelvic organ prolapse, Sacrocolpopexy, Rectal prolapse, Rectopexy

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COMPREHENSIVE TREATMENT OF NECROTIZING FASCIITIS IN UNCONTROLLED DIABETES: A CASE REPORT

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Introduction: Phlegmon is an acute, diffuse inflammation of the subcutaneous tissue without a tendency to limit which is complicated by necrosis of the affected tissues. It does not tend to limit and in rare cases based on the anatomical location, it can lead to severe necrotizing fasciitis. The most important factor favoring the occurrence of this pathology is uncontrolled diabetes mellitus. **Case Report:** We present the case of a 58-year-old patient, with a history of undiagnosed and uncontrolled type II diabetes, who presented to the UPU SMURD Târgu-Mureș complaining of pain in the right lower limb. Clinical and paraclinical examination revealed the presence of a left

gambier phlegmon, in a septic context. The patient was urgently hospitalized and underwent emergency surgery. A large incision was performed to evacuate the purulent collections and an extensive necrotizing fasciitis was observed exte. The surgical intervention continued with debridement and rigorous excision of the necrotic tissues to limit the infectious process and prevent its extension, by ensuring efficient drainage of the remaining cavities. Over the next three weeks, antibiotic treatment is instituted, associated with periodic dressing changes to ensure a favorable healing process and prevent local complications. Subsequently, to close the tissue defect, a skin graft was applied, based on per secundum granulation, to restore skin integrity and promote optimal healing of the affected area. No further complications were reported. **Discussions :** Early recognition and reporting of lower limb complications in diabetic patients is crucial due to the 25% risk of major amputation and limb-threatening infections. Neuropathy requires complete healing, while altered host defense requires antibiotic knowledge and proper surgical principles. Patient education is essential for successful management of diabetic foot-related problems. Early treatment can reduce the risk of amputation ensuring a high quality of life standard for the patient. **Conclusions:** Due to the immediate institution of appropriate antibiotic therapy and rigorous surgical debridement, the patient had a favorable response to treatment, which allowed control of the infection and prevented the need for amputation.

Keywords: diabetic foot, necrotizing fasciitis, skin graft, phlegmon

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THE FRAGILE FOUNDATION: MANAGING A COMPLEX ANKLE FRACTURE

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Introduction: A bimalleolar fracture and a posterior tibial pillar fracture associated with a tibio-astragral subluxation represents a complex injury with important impact on the stability and biomechanics of the ankle joint and lower limb. The most common cases are in elderly women subjected to low energy trauma and in young, middle-aged men subjected to high energy trauma. **Case Report:** We present a 62 years old patient with the following personal pathologic history: osteoporosis, hypertension, patella fracture operated with subsequent osteosynthesis mass extraction. She presented to the emergency department complaining of intense pain in the left ankle, marked edema and inability to support the left lower limb, following a fall from the same level. The clinical diagnosis is based on the signs present on objective examination and supported by imaging investigations which revealed a bimalleolar fracture of the left ankle, posterior tibial pillar fracture and tibio tal talar subluxation. In the emergency room, the subluxation and the fracture were reduced by orthopedic maneuvers, dressing with Rivanol antiseptic solution and immobilization in a femoral-podal splint. After informed consent it was decided to hospitalization in the orthopedic ward at the decision of the attending physician. After an adequate preoperative and anesthesiological preparation, surgery is performed: reduction of the fracture on open focus by lateral approach with an incision of about 10 cm on the left external malleolus and fibula and osteosynthesis with anatomic titanium plate and screws; reduction of the fracture of the internal malleolus on open focus and osteosynthesis with a kircshner broach and a traction screw. The affected left lower extremity is immobilized in a gambiero-podal splint, which, depending on the evolution, will be kept for 4-6 weeks. Postoperatively the evolution is favorable, the patient is discharged after a few days with specialized recommendations. **Discussions :** This case highlights the surgical treatment that is the gold standard for most bimalleolar and posterior tibial pilon fractures associated with joint instability. Surgical intervention aims to restore the anatomy of the joint and prevent chronic instability, vicious healing and other post-traumatic complications associated with osteoporosis from a personal pathologic history. **Conclusions:** In this case we evaluate the open surgery approach of ankle injury to prevent both long-term complications as well as post-traumatic osteoarthritis and joint instability. Factors such as advancing age required a strategy that included the use of appropriate fixation methods and early initiation of a rehabilitation protocol.

Keywords: bimalleolar fracture, subluxation, trauma, osteoporosis

IATROGENIC PREMATURE CAESAREAN DELIVERY IN ACUTE MYELOMONOCYTIC LEUKEMIA

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Introduction: Acute Myelomonocytic Leukemia (AML) is a rare subtype of acute myeloid leukemia characterized by the rapid proliferation of both myeloid and monocytic cells in bone marrow and blood. It is extremely rare in pregnancy, which makes it difficult to manage due to the limited use of chemotherapy agents and also because managing maternal complications, such as thrombocytopenia and infections, require a careful and multidisciplinary approach. **Case Report:** A 38-year old IVG IVP patient with an evolutive 11 weeks pregnancy presented nausea and vomiting to the obstetrics department and was initially interpreted as and managed as hyperemesis gravidarum. Upon arrival of her blood tests, she was referred to hematology, who diagnosed the patient with AML. Given the potential worsening of the disease during pregnancy, the potential vertical transmission and the impossibility to employ standard medications while pregnant, the patient was counseled to terminate pregnancy, but she repeatedly refused. She was then followed-up in hematology under Azacytidine therapy, constant monitoring of blood tests and recurrent transfusions. At 28 weeks, a gestational diabetes mellitus was diagnosed and insulin treatment was commenced. At 34 weeks of gestation, given the risk of a leukemic crisis and the normally developed fetus, the multidisciplinary team of hematologists, obstetricians and neonatologists decided for delivery. In the context of thrombocytopenia and the need to prepare blood products for the peripartum care, an elective Caesarean section was scheduled which resulted in a 2200g newborn with a 1, 5 and 10 minutes Apgar score of 10. The postpartum course was uneventful and the patient was discharged in the 4th day postpartum under anticoagulation to continue hematologic follow-up. **Discussions :** This case underscores the difficult decision-making process surrounding the timing of delivery in a patient with Acute Myelomonocytic Leukemia during pregnancy. Given the rapid progression of AML, the risk of maternal deterioration and the potential for a leukemic crisis, early delivery was deemed necessary at 34 weeks of gestation. Furthermore, Caesarean delivery was the best option given the fact that the patient's significant thrombocytopenia and leucocytosis posed an increased risk of hemorrhage and infections during vaginal delivery. **Conclusions:** For this case, the best approach was to do a premature Caesarean delivery, considering the high risk of developing blast crisis, aided by the normal fetal development at 34 weeks.

Keywords: acuteleukemia, obstetrics, prematurecaesareandelivery

LEFT ATRIAL MYXOMA UNMASKED BY ACUTE ISCHEMIC STROKE: A CASE REPORT AND PERIOPERATIVE CONSIDERATIONS

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Introduction: Atrial Myxoma is the most prevalent primary benign tumor of the heart with over 70% originating from the left atrium. It can occur sporadically, and typically emerges from the interatrial septum, often causing intermittent obstruction of the mitral valve due to its mobility. Despite its non-malignant histopathology, the strategic intracardiac placement has significant clinical implications, as the tumor's friability frequently results in systemic embolization, posing substantial risks to cerebral or peripheral arterial territories. **Case Report:** We report the case of a 51 year old female patient diagnosed with grade 2 hypertension and dyslipidemia who presented to the emergency department with headache, dizziness and peripheral visual deficit. She was admitted to the neurology department, where a computed tomography scan revealed a vertebrobasilar ischemic stroke with a hypodense lesion in the thalamic region. Neurological and otorhinolaryngology examinations showed central vestibular syndrome and subtle facial asymmetry. Echocardiography identified a left atrial myxoma associated with severe functional mitral stenosis. Following initial findings, a transesophageal echocardiography (TEE) was performed for detailed preoperative assessment, revealing a round tumor-like formation with irregular contour, 5x3 cm in size, and with a broad implantation base at the interatrial septum, protruding into the mitral valve during diastole. Surgical excision was performed via median sternotomy under cardiopulmonary bypass. The myxoma was exposed through a right atriotomy and interatrial septotomy, allowing precise tumor resection and septal

reconstruction. Sinus rhythm and cardiac function were successfully restored following tumor removal. Postoperative TEE confirmed absence of residual formations. The patient had an uneventful postoperative recovery, without new neurological symptoms or deficits beyond those identified preoperatively. She experienced significant neurological improvement alongside cardiovascular recovery, with marked remission of her initial symptoms. **Discussions :** Various clinical manifestations associated with cardiac myxomas have been documented in the literature. Cardiac tumors may manifest through diverse clinical scenarios including systemic embolization, intracardiac obstruction, or constitutional symptoms, influenced by their anatomical location and physical characteristics. Echocardiography serves as a non-invasive imaging modality, with TEE providing superior diagnostic accuracy for detailed assessment, precise characterization of tumor morphology, and attachment sites. Surgical resection of cardiac myxomas is associated with low mortality and excellent prognostic outcomes. **Conclusions:** Atrial myxoma is a sporadic benign cardiac tumor and a rare cause of ischemic stroke due to embolus migration requiring prompt surgical intervention to prevent further embolic complications and recurrence.

Keywords: atrial myxoma, ischemic stroke, surgical intervention

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CHALLENGES IN A MAJOR BURN INJURY CAUSED BY AN EXPLOSION: A CASE REPORT

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Introduction: Burns can be major life-threatening injuries. Skin grafting is a fundamental principle for reconstructive surgical interventions in case of a major burn injury. This case highlights how early intervention and patient stabilization, surgical planning and infection control is crucial in the management of major burns. **Case Report:** A 61-year-old patient presented to the emergency department due to extensive burns caused by an explosion at his workplace. The patient suffered Grade IIA, IIB and III burns on the ears bilaterally, frontal region of the head, posterior side of neck, right and left arm, left flank, left hemithorax and on the back, which takes up 22% of total body surface area. Surgical treatment of a major burn requires sequential interventions. Initially, debridement took place. 3 days later the first necrectomy was performed on the posterior cervical region and posterior thorax, these regions got covered with split-thickness skin grafts. Massive diffuse bleeding occurred throughout operations. Due to low hemoglobin levels and persistent anemia the patient received transfusions several times during hospital stay. Regardless of the use of antiseptic dressings and frequent lavage with antiseptic solutions, the patient acquired an infection with Acinetobacter baumannii, then with Pseudomonas aeruginosa. Despite these complications, the sequential skin graftings were successful and showed progressive healing. 90% graft integration was achieved by day 40. **Discussions :** The burn from an explosion causes extensive tissue damage. Split-thickness and full-thickness burns are treated surgically, with necrotomies, debridement and skin grafting. The skin is a protective barrier, and its loss causes hemodynamic and electrolyte imbalance, massive hemorrhage and increased susceptibility to infections. Infection related skin graft loss is a main complication in burn surgeries and the outcome of skin grafting is highly dependent on infection control. Antibiotic therapy should be administered in a confirmed bacterial infection of the graft. Hemorrhage and anemia further complicate the healing, which highlights the fact that severe burn cases might need additional support with blood products. **Conclusions:** This case presents the complexity of the management of a major burn case. Skin grafting provides replacement of the damaged skin, although complications may occur despite a precise surgical planning. A possible infection adversely influences the graft take, however with good infection control satisfactory graft take can be achieved.

Keywords: burns, skin graft, infection

SURGICAL MANAGEMENT OF LATERO-CERVICAL TUMOR WITH INVASION OF THE SCM AND CAROTID ARTERY

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Introduction: The surgical management of advanced latero-cervical malignancies that involve the carotid artery remains a subject of debate, as it elevates the risk of morbidity and mortality while compromising survival outcomes. **Case Report:** We present a case of a 71-year-old male patient with a history of right cervical

lymphadenopathy, electrolyte imbalances, and arterial hypertension, presented to the Vascular Surgery Department of Mureș County Emergency Clinical Hospital with the indication of tumor resection. Following adequate preoperative preparation, the excision of the left lateral cervical tumor was carried out. During the surgical procedure, owing to the tumor's invasion of the left internal jugular vein, it is necessary to sacrifice the vein without reconstruction, considering the viability of the external jugular vein. A microscopic examination of the histopathological sample indicated the presence of a cutaneous fragment lined by stratified squamous keratinized epithelium, exhibiting focal orthokeratotic hyperkeratosis. In the deep dermis, a well-defined, non-encapsulated tumor proliferation was noted, which corresponds to a poorly differentiated non-keratinizing squamous cell carcinoma. The tumor was characterized by sheets and clusters of tumor cells exhibiting significant cyto-nuclear atypia, unclear cell borders, minimal cytoplasm, and large, oval hyperchromatic nuclei, some appearing monstrous, with noticeable nucleoli and an absence of keratin pearl formation. Numerous typical and atypical mitotic figures were observed. Extensive necrotic areas were present, along with zones of stromal retraction, congested blood vessels, regions showing hemorrhagic infiltration, and a dense polymorphous inflammatory infiltrate. The histopathological diagnosis indicates lymph node metastases of poorly differentiated non-keratinizing squamous cell carcinoma located in the left lateral cervical region. **Discussions :** Recurrences of latero-cervical tumors are frequently observed, and the radical excision of advanced tumors impacting the carotid artery is increasingly prevalent. Numerous carotid procedures, including tumor peeling, ligation, and resection with subsequent reconstruction, have been recorded, exhibiting variations in survival rates, morbidity, and mortality outcomes. **Conclusions:** A bold approach to surgically treat advanced tumors impacting the carotid artery may improve survival rates. However, it requires meticulous case selection and consideration of potential complications to optimize patient outcomes.

Keywords: latero-cervical malignancies, carotid artery, tumor resection, non-keratinizing squamous cell carcinoma

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THE ROLE OF SUBTOTAL COLECTOMY IN MANAGING EMERGENCY INTESTINAL OBSTRUCTIONS: INSIGHTS FROM A HIGH-RISK CASE

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Introduction: Subtotal colectomy is a complex surgical procedure that involves removing most of the colon and creating an anastomosis between the remaining parts to stabilize the patient. It is performed in emergencies where patients present with life-threatening conditions or complications. **Case Report:** We present the case of a 47-year-old patient diagnosed with schizophrenia, presenting with abdominal pain and abdominal distention in the UPU Smurd Emergency department. Thorough clinical examination and imaging studies (Abdominal CT) revealed a complete stenotic tumor on the sigmoid colon with retrograde critical distension confirming the intestinal occlusion diagnosis. Surgical treatment involved a subtotal colectomy with a manual ileo-sigmoid anastomosis. The patient required three days of ICU treatment and the postoperative care was uneventful with discharge on day ten postoperative. Histopathological examination revealed high-grade colon adenocarcinoma. **Discussions :** Choosing a subtotal colectomy involves balancing the immediate needs to resolve the obstruction and prevent severe complications with the long-term gastrointestinal function of the patient. The decision typically involves a multidisciplinary approach, considering the patient's overall health, the cause of the obstruction, and the condition of the bowel. **Conclusions:** While some studies consider subtotal colectomy in the management of intestinal occlusions to be a matter of controversy, this case highlights its importance as a surgical intervention, as it led to a successful outcome, even in complexes cases such as this one.

Keywords: Intestinal occlusion, Sigmoid tumor, Subtotal colectomy, Psychiatric patient

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A SLIPPED CAPITAL FEMORAL EPIPHYSIS CASE IN A PATIENT WITH GROWTH HORMONE DEFICIENCY

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Introduction: Slipped capital femoral epiphysis (SCFE) is a hip disorder, defined by the migration of the proximal

femur's epiphysis in a posteroinferior direction. The patients present with various medical complain. They are controversies regarding the ideal surgical procedure used for correction. **Case Report:** A seventeen-year-old male presents with progressive lower limb pain with antalgic gait. During the physical examination, there is restricted abduction and internal rotation of the hip. The imagistic investigations reveal an enlargement of the right femoral physis, with irregular joint surfaces because of bone erosions and subchondral cysts, with osteosclerotic changes. The results are consistent with the slipped capital femoral epiphysis. The treatment consisted in the reduction of epiphyseal separation and osteosynthesis with a minimally invasive procedure. Under radiological guidance a cannulated compaction screw in placed to make the contention. **Discussions :** In SCFE cases, patients often present with a history of hip, thigh and knee pain. However, two years ago, he was diagnosed with growth hormone deficiency, for which he was prescribed a substitute. This particularity has been proven to significantly increase the risk of slipped capital femoral epiphysis. **Conclusions:** Slipped capital femoral epiphysis patients are often adolescents with a history of minor trauma, obesity or hormonal imbalances. The treatment can be minimally invasive in majority of cases. This case further emphasises the correlation between growth hormone deficiency and epiphysiolysis.

Keywords: Slipped capital femoral epiphysis, growth hormone deficiency, reduction of epiphyseal separation, epiphysiolysis

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HIGH-RISK PATIENT UNAWARE OF ONCOLOGICAL DISEASE DISCOVERED BY PERTROCHANTERIC FRACTURE

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Introduction: Pertrochanteric fractures occur at the proximal head of the femur, extracapsular, involving the greater and lesser trochanters, characterized by accute blood loss. They account for 50% of hip fractures which are one of the most common orthopedic injury. After surgery they have a relatively high mortality rate, especially when surgery is delayed, varying from 20% to 40% due to trombembolic events and infections. **Case Report:** We present the case of a 75 y/o female patient suffering from a proximal femur fracture which uncovered many comorbidities after further investigations. The patient presents herself to the emergency department following a fall from ground level accusing of pain and loss of function in her lower right limb. Clinical inspection reveals external rotation and shortening of the same limb. The female had no prior medical history, declaring herself not a smoker nor a drinker. Anteroposterior pelvic radiography and CT revealed pertrochanteric pathologic fracture, ascension of the greater trochanter with multiple osteolytic lesions around the injury which indicate a secondary bone cancer. The CT also showed spinal metastasis at T11 and L2 level. Blood tests unveiled grade 3 Anemia (6.70 g/dL). Tumor marker dosage showed very high levels of Ca125 - ovarian cancer; Ca15-3 - breast cancer; Ca19-9 - pancreatic cancer; CEA - Colorectal cancer. **Discussions :** After receiving multiple blood transfusions which raised her hemoglobin levels the patient underwent intramedullary nailing palliative operation with Gamma3 long nail which fixates unstable fractures better. Biopsy of the pathological bone where sent for histopathological assessment in order to discover the primary tumor. **Conclusions:** Pathologic fractures are usually caused by metastasis. Therefore, proper investigations and diagnostic are crucial to enhance the outcome of the disease. Although this patient is suffering from metastatic cancer she didn't identify any issues regarding her health so that is why we should emphasize on regular medical check-ups.

Keywords: fracture, metastasis, unstable, pertrochanteric

CHALLENGES IN THE MANAGEMENT OF TOTAL HIP ARTHROPLASTY COMPLICATIONS IN A MORBIDLY OBESE PATIENT WITH COXARTHROSIS: XDR PSEUDOMONAS AERUGINOSA INFECTION AND VANCOUVER B3 PERIPROSTHETIC FRACTURE

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Introduction: Morbid obesity, defined by a body mass index(BMI) exceeding 40, is a significant risk factor for cardiovascular diseases, type 2 diabetes, and musculoskeletal disorders. The Musculoskeletal effects are mostly

associated with degenerative ostheoarthritis(OA) of the hip joint(Coxarthrosis) and knee joint (Gonarthrosis), due to increased joint stress and systemic inflammation. These are characterized by joint pain, stiffness, and locomotor restriction. **Case Report:** We present a 58 year-old-patient, with morbid obesity(BMI=41,02), multiple cardiovascular comorbidities, anxiety-depressive disorder, and left hip osteoarthritis, who underwent total hip arthroplasty(THA) with cemented Taperloc Trilogy Complete Hip Prosthesis. Six weeks postoperatively, the patient experienced a dislocation of the prosthesis, which led to a revision surgery. The acetabular component and femoral head were replaced with an Exeter X3 48/28mm revision cup and an XXL prosthesis head, along with the repositioning of the femoral component. On January 13, 2025, the patient returned with severe pain and functional impairment at the level of the operated limb, and radiological examinations revealed a Vancouver B3 periprosthetic femoral fracture with massive displacement of the femoral stem. The fracture was treated by another revision arthroplasty with a longer femoral stem for enhanced stability, and internal fixation with cables and screws. Postoperatively, on seventh day, the patient developed purulent wound drainage, prompting wound lavage. Microbiological analysis confirmed an infection with Pseudomonas aeruginosa XDR(extensively drug-resistant) sensitive only to Polymixin E (Colistin) **Discussions :** This case highlights the challenges of managing THA complications in a morbidly obese patient. The initial dislocation and subsequent revision surgery complicated by a Vancouver B3 Femoral Fracture required careful surgical intervention, including internal fixation and more stable implant. The postoperative course was further complicated by a difficult-to-treat Pseudomonas aeruginosa XDR infection, highlighting the importance of asepsis and antisepsis and surgical wound management , particularly in multiple hospitalized, high-risk patients. The Multidisciplinary approach to managing this case including orthopedic, infectious disease, and rehabilitation expertise, was crucial in optimizing patient outcomes, infection control and to ensure a favorable postoperative course. **Conclusions:** Patients with morbid obesity have a higher prevalence of postoperative complications following THA and revision surgeries . Obesity increases mechanical stress on the prosthesis and promotes systemic inflammation, leading to complications such as aseptic loosening, infections and periprosthetic fractures.

Keywords: Morbid Obesity, Total Hip Arthroplasty, Vancouver B3 Periprosthetic Fracture, XDR Pseudomonas aeruginosa

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"REVISION" OF AUSTIN MOORE HEMIARTHROPLASTY WITH A CEMENTED BIPOLAR HEMIARTHROPLASTY IN A RARE CASE OF SIMULTANEOUS VANCOUVER TYPE A(L) AND A(G) PERIPROSTHETIC FRACTURE

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Introduction: Periprosthetic hip fractures are complications after hip arthroplasty, in elderly patients with osteoporotic changes. The Vancouver classification system categorizes these fractures by location, stability of the implant, and bone quality. Type A fractures affect the trochanteric region, with A(G) involving the greater trochanter and A(L) the lesser trochanter. Type B fractures occur around or just below the stem, while type C fractures are well below the stem. This case report shows a rare appearance of simultaneous Vancouver type A(G) and A(L) fractures in a patient with a prior unipolar hemiarthroplasty (Austin Moore), exchanged with a cemented bipolar prosthesis. **Case Report:** An 87-year-old female with hypertension and chronic ischemic heart disease presented with a periprosthetic left hip fracture. Radiographs confirmed fractures of both the greater and lesser trochanters, corresponding to Vancouver types A(G) and A(L). She had a previously implanted Austin Moore prosthesis. Due to the fracture pattern and bone stability concerns, a cemented bipolar endoprosthesis was implanted after removing the Austin Moore prosthesis. Cerclage wiring was used for additional stabilization. The procedure was performed under lumbar spinal anesthesia. Postoperatively, the wound healed without complications. The patient followed a rehabilitation program, initially using a walker and progressing to a single crutch after six weeks. **Discussions :** Simultaneous Vancouver type A(G) and A(L) fractures are rare and pose challenges due to compromised abductor mechanism and poor bone stock. In this case, inadequate metaphyseal bone quality required careful surgical planning. Revising the Austin Moore prosthesis to a cemented bipolar endoprosthesis improved joint stability. Addressing poor bone quality is crucial in hip arthroplasty. Cemented stems offer immediate stability in osteoporotic bone, while cerclage wiring secures bone fragments. In severe cases, structural allografts or modular implants may help restore bone integrity and limb alignment. **Conclusions:** This case highlights the complexity of managing periprosthetic fractures involving both trochanters in an elderly patient with poor bone quality. The use of a cemented bipolar endoprosthesis and cerclage wiring ensured stable fixation and improved outcomes.

Keywords: Periprosthetic fracture, Vancouver classification, Austin Moore Hemiarthroplasty, Bipolar

Hemiarthroplasty

PELVIC ABSCESS CAUSED BY A MALIGNANT TERATOMA

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Introduction: Teratomas represents tumors with various locations. Usually, they are benign but from their cells sometimes develops very aggressive squamous carcinomas. **Case Report:** We present the case of a female patient, 67 years old, who presented in the emergency service for abdominal pain, fever and bowel occlusion signs. The CT scan revealed a tumor located in the lesser pelvis which didn't belong to any related organs and with fluid inside. After a median laparotomy we discovered a tumor with a major collection of puss located in between the uterus and rectum with their apparent invasion. We performed the removal of the tumor together with a hysterectomy, bilateral anexectomy and Hartmann I procedure. The postoperative course was favorable with the discharge in day 10 after surgery. The microscopic examination revealed a very aggressive squamous carcinoma without remaining cells on the resected borders. After week 6 the patient was presented again with bowel occlusion signs. After relaparotomy, it was discovered a recurrent tumor invading the ileum and mesentery. It was performed ileun resection with ileostomy. After discharge the patient started the chemotherapy with no imagistic signs of reccurence after 2 months. **Discussions :** This case is notable for the rare malignant transformation of a pelvic teratoma into an aggressive squamous carcinoma, presenting with abscess formation and bowel occlusion, requiring complex surgical intervention and multidisciplinary management, with rapid recurrence despite initial successful resection, highlighting the tumor's aggressive nature and the need for vigilant postoperative monitoring and systemic therapy. **Conclusions:** The malignant teratoma presents a very aggressive evolution with fast and high rate of recurrence which requires a multidisciplinary approach.

Keywords: Malignant Teratoma, Pelvic Abscess, Squamous Carcinoma, Recurrence

SURGICAL MANAGEMENT IN TONGUE CARCINOMA

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Introduction: The patient presented with advanced, moderately differentiated squamous cell carcinoma of the tongue and buccal floor, with cervical lymphadenopathy (cT4aN1Mx). Symptoms included a fixed tongue, severe swallowing and speech difficulties, and significant throbbing pain in the left hemitongue. Surgical management involved a modified glossectomy with selective bilateral supraclavicular lymphadenectomy via a lip-split mandibulotomy. **Case Report:** A 52-year-old male with a history of chronic tobacco use was admitted to the Oral and Maxillofacial Surgery Clinic at Spitalul Clinic Județean de Urgență, Târgu Mureș, on October 8, 2024, with malignant tumors of the left tongue and lateral floor of the mouth. On October 9, he underwent a median mandibulotomy, subtotal glossectomy, pelvectomy, and reconstruction with a pectoral muscle-cutaneous flap. Postoperatively, he was stable in the ICU, with normal vital signs and negative microbiological results. He received standard postoperative care, including vital support, antibiotics, and analgesics. Following clinical improvement, he was transferred to the Oral and Maxillofacial Surgery section on October 12, 2024. **Discussions :** This case is notable for synchronous malignant tumors in the left tongue and lateral floor of the mouth, presenting significant surgical and reconstructive challenges. The patient's chronic tobacco use likely contributed to cancer development. The complex surgical approach, including median mandibulotomy, subtotal glossectomy, and pectoral flap reconstruction, highlights the expertise required in Oral and Maxillofacial (OMF) surgery. The case underscores the need for multidisciplinary management, focusing on long-term rehabilitation, oncological follow-up, and comprehensive care for complex head and neck cancers. **Conclusions:** The patient underwent extensive and traumatic surgery, including median mandibulotomy, subtotal glossectomy, and pectoral flap reconstruction. Such procedures impact not only physical function but also emotional well-being due to the facial region's role in speech, swallowing, and appearance. Despite the challenges, the surgery successfully aimed for cancer removal and functional restoration. The uneventful postoperative course reflected effective perioperative care. This case highlights the traumatic nature of facial cancer surgery and emphasizes the importance of a multidisciplinary

approach, combining surgical expertise and postoperative rehabilitation to optimize the patient's quality of life.

Keywords: Facial Cancer, Mandibulotomy, Reconstruction

APPENDIX AUTOAMPUTATION - BETWEEN IMAGING AND CLINICAL PRACTICE

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Introduction: Autoamputation of the appendix is an exceedingly rare event, often resulting from chronic inflammation, ischemia, or perforated appendicitis. This phenomenon can lead to diagnostic challenges, particularly when the appendix is absent during surgery. We present the case of appendiceal autoamputation diagnosed incidentally during emergency surgery for a large right pericolic abscess. **Case Report:** A 69-year-old female presented with abdominal pain that began on December 21, accompanied by nausea and intermittent vomiting. She had no history of self- medication and was admitted to the emergency department on December 26. Imaging revealed a right pericolic abscess (~10 cm in diameter), which was identified via CT scan as secondary to perforated appendicitis. Emergency open surgery was performed, revealing an isolated right pericolic abscess. However, no appendix-like structure was found upon careful examination and mobilization of the right colon. No colonic fistula was present, leading to the diagnosis of appendiceal autoamputation. The collection was drained, and two drainage tubes were placed. The postoperative course was uneventful, with normalization of laboratory findings under antibiotic therapy. The patient was discharged on postoperative day seven with one drain tube still in place due to continued secretions (>100 ml/day). During follow-up, a repeat CT scan revealed an appendix-like structure in the right flank, though the patient remained asymptomatic. The drain tube was subsequently removed. However, she later developed right calf pain with a positive Homans sign.Emergency Doppler ultrasound confirmed deep vein thrombosis (DVT), requiring hospital readmission for anticoagulation therapy. Twenty days after the initial surgery, another CT scan showed no abscess but persistent presence of the appendix-like structure. The patient was discharged without abdominal symptoms. **Discussions :** Appendiceal autoamputation is rare and can lead to diagnostic confusion when the appendix is absent during surgery. It may be attributed to chronic ischemia or severe inflammation. This case was further complicated by postoperative DVT, emphasizing the importance of vigilance in high-risk patients. **Conclusions:** This case highlights the diagnostic challenges of appendiceal autoamputation and the importance of considering it in patients with unexplained pericolic abscesses. Additionally, it underscores the need for close postoperative monitoring for complications such as DVT to ensure optimal patient outcomes.

Keywords: Appendix autoamputation, Acute abdomen, pericolic abscess

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GUSTILO-ANDERSON 3B OPEN FRACTURE AND DEBRIDED WOUND OF THE RIGHT LEG- A CASE REPORT

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Introduction: Gustilo-Anderson 3B open fractures represent a major surgical and recovery challenge, requiring multidisciplinary interventions to prevent complications and ensure optimal healing. We present the case of a patient who sustained a severe trauma due to a fall from a height, resulting in a complex open fracture of the right leg and an extensive debrided wound. **Case Report:** A 68-year-old patient presented as an emergency to the UPU-SMURD service with an open fracture of the right tibia and fibula, classified as Gustilo-Anderson 3B, accompanied by an anteromedial debrided wound of the leg. Due to the severity of the injuries, an emergency surgical intervention was performed by a multidisciplinary team. The first procedure involved the excision of devitalized tissues and fasciotomy of the posterior internal compartment of the right leg. Open reduction of the fracture was performed, followed by centromedullary osteosynthesis using a proximally and distally locked Stryker system under intraoperative radiological guidance. Sterile dressings were applied, and the limb was immobilized in a below-knee plaster splint (ATG G-P). After eight days, the patient underwent a second surgical intervention in collaboration with plastic surgery, addressing the affected tissues and performing layered sutures. Immobilization of the right lower limb in ATG G-P was maintained. **Discussions :** Postoperatively, the patient's evolution was favorable, with hemodynamic and respiratory stability and no fever. Pain symptoms decreased, and surgical

wounds showed favorable healing without signs of inflammation or pathological secretions. The patient was discharged in an improved condition with recommendations for functional recovery. **Conclusions:** Gustilo-Anderson 3B open fractures represent a major orthopedic emergency, characterized by extensive soft tissue damage and an increased risk of infection and vascular complications. Managing these cases requires a multidisciplinary approach, combining orthopedic and plastic surgery to ensure both bone stability and tissue viability.

Keywords: Debridement, Gustilo-Anderson 3B, Multidisciplinary approach, Stryker system

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ACUTE MESENTERIC ISCHEMIA - THE VALUE OF SURGICAL MANAGEMENT - CASE PRESENTATION

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Introduction: Acute mesenteric ischemia is a life-threatening vascular emergency caused by inadequate intestinal blood flow, often leading to necrosis and multi-organ failure. The overall short-term mortality rate is 59.6%, decreasing from 68.7% before 2000 to 55.0% in recent studies . Among patients aged 80 and older undergoing emergency colorectal resections, the 30-day mortality rate is 25.2%-25.3% (2,3). These statistics highlight the exceptionally rare survival of a 91-year-old patient following subtotal enterectomy and right hemicolectomy, emphasizing the challenges of managing high-risk cases. **Case Report: Patient Presentation** A 91-year-old female with atrial fibrillation, hypertension, chronic respiratory insufficiency, and prior major surgeries, including a right mastectomy, presented with 18 hours of worsening abdominal pain. Examination revealed diffuse tenderness, absent bowel sounds, and metabolic acidosis.**Diagnostic Imaging & Initial Management** A contrast-enhanced CT showed: Complete occlusion of the superior mesenteric artery. Splenic and renal infarctions. No bowel perforation. Urgent surgery was advised, but the patient initially refused. She was managed with heparin, electrolyte correction, and monitoring. After six days, worsening symptoms led to surgical consent. **Surgical Findings & Procedure** Laparotomy revealed ischemic necrosis of 90% of the small intestine and right colon. Surgery included: Subtotal enterectomy. Extended right hemicolectomy. Jejuno-colic anastomosis. Cholecystectomy. **Discussions : Postoperative Course and Challenges**The patient was successfully extubated despite chronic respiratory insufficiency. A postoperative day three CT scan showed no new ischemic changes. Oxygen therapy was required throughout hospitalization. Bowel function resumed on day six; the nasogastric tube and drains were removed on day five. The patient was discharged on day ten, an unexpected favorable outcome given the extent of resection and comorbidities. **Case Significance** This case highlights the survival of a nonagenarian after extensive bowel resection, a scenario with a typically poor prognosis due to risks like septic shock and multi-organ failure. Contributing factors included: Preoperative anticoagulation, electrolyte correction, and monitoring. Meticulous surgical techniques. Effective postoperative care, including oxygen support and infection control. Absence of bowel perforation, reducing sepsis risk. **Conclusions:** Acute mesenteric ischemia is a highly fatal condition, particularly in elderly patients, causing prompt surgical intervention. Delayed surgery significantly worsens prognosis, leading to extensive bowel necrosis and increased mortality. This case shows that age alone should not be a contraindication to life-saving surgery. A well-coordinated perioperative approach, including early anticoagulation, vigilant monitoring, and prompt surgical intervention, can yield unexpectedly positive outcomes even in very elderly patients.

Keywords: Acute Mesenteric Ischemia, Nonagenarian Surgery, Superior Mesenteric Artery Occlusion, Elderly Female Patient

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COMPLEX SEQUELAE FOLLOWING A SELF-INFLICTED TRAUMA OF THE LEFT MID-PALMAR REGION: MANAGEMENT THROUGH TWO STEP SURGICAL APPROACH

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Introduction: We present the case of a 38-year-old male, with a contused wound in the mid-palmar region, ulnar border of the left hand provoked by an angle grinder. Trauma-associated potential complications include: neuromas, damage with loss of sensation and motor function, increase in the risk of supra-infection and delay in

the healing of the wound. **Case Report:** As a consequence of the cutting trauma, the patient developed comminuted open fractures with displacement of the 4th and 5th metacarpal bones. The cutting trauma causes injury to the flexor digitorum profundus (FDP), flexor digitorum superficialis (FDS), and tendon sheath of fingers III, IV, and V. Injuries to the interosseous artery between fingers III and IV, to the common digital nerves of fingers III, IV, V, and to the hypothenar and interosseous muscles was also detected. The patient underwent surgical intervention targeting extensive soft tissue, tendon, nerve, vascular, and skeletal damage. The complex reconstructive surgery included wound debridement, fracture stabilization with osteosynthesis of the 4th and 5th metacarpals and soft tissue reconstruction, using skin flaps. Essential interventions were made with tenorrhaphy for flexor and extensor tendon repairs, partial flexor tendon excision, carpal tunnel release, and neurorrhaphy of the common digital nerves III-IV. Mandatory as well, was for the patient, a vascular repair with arteriorraphy of the interosseous artery, flap repositioning, and final wound closure with fixed skin suturing and immobilization of the hand. **Discussions :** The patient had to face complex sequelae, including palmar scar contracture with joint stiffness along with post-traumatic neuromas of digital nerves of fingers II-IV. Ultimately, a second surgery, was required to address these complications which consisted of skin incision along the old post-operative scar in the palmar region, creating a skin flap. While the dissection progresses, a fibrous scar block is revealed involving the flexor tendons and neurovascular bundle of finger II, III, IV, V. The surgery proceeded with excision of the scar block and neurolysis of median and ulnar nerve followed by neurolysis of the common digital nerves, which present neuromas. Thereafter, tenolysis of the FDP tendons was performed. Drain was removed at 4 days postoperatively with favorable evolution, clean wounds and healing in progress. **Conclusions:** It is important to consider that the palmar region is an area rich in muscles, tendons, nerves and vessels where injury can impair the hand function especially if the trauma is caused by a high-energy tool that produces very extensive damage.

Keywords: contusedwound, skinincision, neuromas, neurolysis

NAVIGATING HOSPITAL LIFE AFTER STOMACH CANCER DIAGNOSIS AND SO FORTH

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Introduction: A cancer diagnosis is a life-changing event impacting the life of the patient and his family. Cancer is the second cause of death worldwide, accounting for nearly 10 million deaths in 2020. With an alarming 1.09 million cases, stomach cancer is ranking as the fourth leading cause of cancer-related deaths worldwide. Treatment options for cancer are still developing as of novel: chemo, radio-therapy and surgery are the first steps in the treatment, but we must also focus on surgical trauma rescue after complication and pre-habilitation in terms of enhancing recovery. The survivorship and quality of life are the main targets in the treatment plan we try to achieve. Adenocarcinoma of the stomach is divided into two main classes, depending on where it forms in the stomach: Gastric cardia cancer and Non-cardia gastric cancer. **Case Report:** We present a 61-year-old debilitated male patient with paraneoplastic anemia and moderate thrombocytopenia. Diagnosticated in November 2024 with gastic adenocarcinoma which was chemo trated. The patient was admited in our department after chemo therapy to enhance surgery-treatment, with the additional complaints: weight loss of 20 kg over a month and a half, epigastric pain, feeding difficulties and meteorism. After an appropriate preoperative care in the 10th of March, Total gastrectomy with transmesocolic T-L mechanical esojejunostomy on a Roux-en-Y limb was performed. After surgery, the patient attended 3 days in the ICU where he has received the optimal care. In the second post-operatory day he has developed a post-platelet transfusion skin rash which regressed in the next day without any others complications. Therefore, the evolution was appropriate with continuous optimal treatment and care in terms of rehabilitation. **Discussions :** Comorbidities like: severe anemia, thrombocytopenia, type 2 diabetes and hypoproteinemia can complicate the surgical intervention and the hole process of recovery , but in our case the surgery was performed with success and without severe post-operatory complications. **Conclusions:** In conclusion, pre-operative care, surgery and post-operative care imply multidisciplinary involvement to facilitate an easy recovery and maintain long term quality of life.

Keywords: Gastric adenocarcinoma, Surgery, Chemo therapy, Post-operative care

CONTROVERSY IN RECTAL CANCER TREATMENT- STILL ON DEBATE

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Introduction: According to WHO, rectal cancer is the second leading cause of cancer-related deaths worldwide. In 2020, more than 1.9 million new cases of colorectal cancer and more than 930.000 deaths due to colorectal cancer were estimated to have occurred worldwide.[1] Colorectal cancer is a multifactorial disease can also be called colon or rectal cancer, depending on where they start. The survival rate is truly corelated with the socio-economic state of the country, and outcomes can vary from a country to another, with early diagnosis, treatment options, facilities and public knowledge playing the key role. **Case Report:** We present a 64-year-old male patient with the following comorbidities: Chronic hepatic cirrhosis (CHC), Hepatitis C Virus infection (HCV) and Anemia. In February 2024 Moderately Differentiated Conventional Rectal Adenocarcinoma (G2) was discovered which for was chemo-radio treated. After chemo-radio therapy the patient is admitted in our department for a scheduled basis surgery-treatment. On the 10th of March, Abdominoperineal resection of the rectum (Miles' technique) with total colostomy was performed successfully. The time of intervention was 180 minutes. After the surgery, the patient attended 1 day in the ICU where he has received the optimal care without any complications. **Discussions :** It is well known that locally advanced rectal cancer carries a high risk of local and distant recurrence when treated with surgical resection alone. Multiple treatment strategies have been studied in terms to improve survival rate in rectal cancer. There are three primary strategies: (1) pre-operative long course radio therapy combined with chemotherapy; (2) pre-operative short course radiotherapy followed by post-operative chemotherapy (3) neoadjuvant therapy followed by chemo-radio therapy without surgical approach.[2] **Conclusions:** In our case, the patient was treated following the first treatment strategy (1). We have to specify that the treatment plan can be different between countries, depending on the socio-economic development, access to medical facilities and patient medical knowledge.

Keywords: Rectal Cancer, Chemotherapy, Surgery-treatment, Treatment strategy

THE SURGICAL MANAGEMENT OF COMPLEX LOWER LIMB FRACTURES: A CASE REPORT

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Introduction: Complex lower limb fractures present a significant challenge both in surgical management and the recovery process. Malleolar fractures of the ankle are among the most common lower limb fractures. While some fractures require only immobilization and pain management, others necessitate surgical intervention to reposition and stabilize the fractured bones. **Case Report:** This case report describes a right bimalleolar fracture classified as Gustilo-Anderson II, associated with a distal tibial epi-metaan-diaphyseal fracture on the left side and a left external malleolus fracture in a 53-year-old patient following a fall from the same level. In the emergency department, after clinical and radiological assessment, a chemical wound debridement was performed, followed by the reduction of the right bimalleolar fracture and immobilization of the lower limbs in plaster splints. Subsequently, surgical intervention was performed, aiming for the reduction of the right bimalleolar fracture using screw osteosynthesis and a Kirschner wire. Additionally, reduction of the left external malleolar fracture was achieved through osteosynthesis with a plate and screws under fluoroscopic guidance (RTG-TV), along with the reduction of the left distal tibial epi-metaan-diaphyseal fracture using plate osteosynthesis and an interfragmentary screw under RTG-TV control. **Discussions :** This case follows the stepwise management approach for trauma patients, aligning with existing literature on lower limb trauma. It highlights the importance of early surgical intervention and progressive rehabilitation. Early mobilization combined with progressive weight-bearing is essential for functional recovery, significantly reducing the risks of pseudoarthrosis and deep vein thrombosis. **Conclusions:** Most malleolar fractures require surgical intervention to ensure precise ankle stabilization and optimal functional recovery. Early immobilization, well-executed osteosynthesis, and progressive rehabilitation are crucial for a favorable outcome.

Keywords: bimalleolar fracture, osteosynthesis, epi-meta-diaphyseal fracture, plaster splints

THE ROLE OF ICA-ECA ANASTOMOSES IN THE MANAGEMENT OF CEREBROVASCULAR PATHOLOGIES

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Introduction: Anastomosis between the Internal Carotid Artery(ICA) and the External Carotid Artery(ECA) provides many benefits, most of them during pathologies such as stenosis,ischemia or thromboembolism of the ICA.The collaterals created,thus giving us extra time very much needed for an intervention such as angioplasty and revascularization,having more chances to preserve the affected brain tissue. A great example of such anastomosis could be between the ophthalmic branch, the final branch of the ICA,passing through the ophthalmic nerve channel branching into the lacrimal,supraorbital and supratrochlear artery.It's function relays on supplying blood to the eyeball and the orbital region. The Opht. artery has many connections with the ECA via branches of the facial artery. **Case Report:** Embolizations of the ECA gained lately more importance due to the endovascular treatment of dural arteriovenous fistulas,caused by trauma ,surgical procedures,tumors or congenital could cause high blood pressure into the subdural veins with risks of edema,strokes,cranial hypertension or trombofilia.Thus being knowledgeable about the anatomical variations of the vascularisation and the right materials that we could make use of we could lower the chances of complications such as during the procedure. **Discussions :** Embolisations within the orbital region are mainly for the ophthalmic artery which supplies the central retinal artery and could cause blindness of the patient.Anatomically the central retinal artery originates closely to the posterior ciliary arteries.Thus we could make use of the the choroidal blush of the ciliary artery seen from a lateral view of the angiography.The choroidal blush could be seen during the first stages of the angiography with florecentin or iod. The absence of the blush could only emphasize a choroidal lack of perfusion correlated with the arteriovenous dural fistula in which blood from ECA or dural arteries is redistributed to dural veins .Knowing the vascular territories that supply the eye, could help us in diagnosing it's vascular pathology and the treatment plan. **Conclusions:** Transarterial embolisation of ECA is a very important technique of treating tumors or arteriovenous shunts of the head and neck region.Due to embryological and anatomical differentiation we must know firstly the anatomical variation and take into account it's

Keywords: Ophthalmic Artery, choroidal blush, arteriovenous fistula, Transarterial embolisation of ECA

BILATERAL URETEROCELE IN AN ADULT MALE: A RARE PRESENTATION.

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Introduction: Ureterocele is a congenital abnormality of the distal ureter; which opens inside the bladder forming a sac-like pouch. In this case presentation we are going to take a closer look into diagnosis, symptoms, complications and surgical treatment of a sphincterostenotic bilateral ureterocele through the medical scenario of a patient who referred to the urology clinic. **Case Report:** A 41-year-old male patient presented to the urology clinic for further investigations after developing colicky pain and macroscopic hematuria. In his past medical history, a contrast-enhanced CT scan of abdomen and pelvis performed in September 2024, demonstrated renal microlithiasis and right ureteral lithiasis, associated with bilateral dilation of the terminal ureter. At patient admission, intravenous urography showed the "cobra head sign". After gathering all this information, cystoscopic transurethral puncture with endoscopic approach was the chosen surgical method. **Discussions :** Ureterocele is a common congenital malformation found in girls with duplex collecting system on prenatal ultrasound and most of them are operated in utero. Its usual symptoms are: UTIs, fever, back pain, lithiasis, hematuria, and vesico-ureteral reflux. The peculiarity of this case is that the patient is a 41-year-old man who presented only with macroscopic hematuria, colicky pain as symptoms and microlithiasis as complication. Important feature was the "cobra head sign": a dilatation of the distal ureter, surrounded by a thin lucent line seen during the excretory phase of intravenous urography, indicative for adult-type ureterocele. The main steps of surgical approach are: identification of the ureteral openings; catheterisation of the left ureter with an ureteral catheter and a hydrophilic guidewire; incision at the level of the meatus; identification and extraction of the small stones with ureteroscope;

positioning of a "double J" stent. Laser lithotripsy was necessary to extract all the stone fragments. The same approach was used on the right side. At the end of the procedure, an uretrovescical catheter was placed. **Conclusions:** The patient was discharged with analgesics and antibiotic prophylaxis for 5 days, without subjective symptoms. The last ultrasound performed didn't show any signs of hydronephrosis nor lithiasis images.

Keywords: Bilateral ureterocele, Cobra head sign, Lithotripsy, Cystoscopic transurethral puncture

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SURGICAL MANAGEMENT OF DUPUYTREN'S CONTRACTURE IN A DIABETIC PATIENT: A CASE REPORT

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Introduction: Dupuytren's disease is a progressive fibroproliferative disorder of the palmar fascia, characterized by the formation of fibrotic nodules and cords, leading to flexion contractures of the fingers. While its exact etiology remains unclear, the disease is strongly associated with metabolic disorders, including diabetes mellitus, which is recognized as an independent risk factor for its development and progression. Additional risk factors include trauma, smoking, and alcohol consumption. **Case Report:** We report the case of a 52-year-old male with a 17-year history of insulin-dependent type 1 diabetes mellitus presented with progressive flexion contracture of the fifth digit of the right hand. The patient was a chronic smoker and occasional alcohol consumer. The initial palmar induration emerged seven years prior following a crush injury, with gradual fibrotic progression. Over the past six months, the contracture worsened, with the development of a fibrous cord affecting the proximal interphalangeal (PIP) and metacarpophalangeal (MCP) joints. Clinical examination revealed Dupuytren's contracture involving rays 3, 4, and 5, with significant impairment of digital extension. Given the functional limitations, a surgical approach was indicated. The patient underwent partial fasciectomy involving the third, fourth, and fifth rays under regional anesthesia. Intraoperatively, fibrotic cords were meticulously excised while preserving neurovascular structures. Postoperatively, the patient demonstrated a marked improvement in both active and passive extension of the fifth digit at the PIP and MCP joints. The surgical site healed without complications, and early rehabilitation was initiated to optimize functional recovery. **Discussions :** The association between diabetes mellitus and Dupuytren's disease is well-documented, with diabetic patients exhibiting a higher prevalence and a more aggressive disease course. Chronic hyperglycemia leads to increased fibroblast activity, excessive extracellular matrix deposition, and reduced collagen degradation, contributing to fibrosis. Additionally, microvascular complications in diabetes may exacerbate ischemic stress in the palmar fascia, further promoting disease progression. In this case, a prior traumatic insult likely acted as a catalyst, accelerating fibrotic remodeling. Surgical intervention remains the mainstay of treatment in advanced cases, particularly when contractures compromise hand function. However, diabetic patients are at increased risk for postoperative complications, including impaired wound healing and recurrence. The present case underscores the importance of meticulous surgical technique and structured postoperative rehabilitation to enhance functional outcomes. **Conclusions:** This case highlights the complex interplay between long-standing type 1 diabetes mellitus and Dupuytren's disease, illustrating the potential role of trauma as a disease-modifying factor. Partial fasciectomy was effective in improving digital extension and hand function.

Keywords: Dupuytren disease, fasciectomy, Diabetes mellitus, fibroblast

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COMPLEX MANAGEMENT OF A BIFOCAL FEMUR FRACTURE WITH DELAYED CONSOLIDATION AND MIGRATION OF OSTEOSYNTHESIS MATERIAL

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Introduction: Bifocal femur fractures pose significant therapeutic challenges, often requiring complex surgical approaches. In the presented case, postoperative evolution was complicated by delayed consolidation and migration of the osteosynthesis material, necessitating surgical reintervention. The particularity of this case lies in the complexity of the fracture which was caused by a high-energy crush injury, and the need for a multi-step surgical approach to restore stability and promote bone healing. **Case Report:** We present a 42-year-old male patient with a history of bifocal femur fracture caused by a crush injury and initially operated on in July 2023 and

presented in November 2023 with progressive pain and limited mobility of the right lower limb. Clinical and imaging evaluations revealed delayed diaphyseal consolidation and migration of the intramedullary nail. It was performed a surgical revision, involving an extensive 30 cm lateral thigh incision, fracture site debridement, removal of fibrotic tissue, partial decortication, and periosteal stripping. The fracture was reduced under direct visualization and fixed using an anatomical plate with five monocortical transcondylar screws, three bicortical diaphyseal screws, and three multi-filament orthopedic cables for additional stabilization. The defect site was augmented with a bone substitute to enhance osteointegration. Postoperative evolution was gradually favorable and required an extended rehabilitation protocol and thromboprophylaxis. However, some postoperative complications occurred, including secondary anemia requiring iron supplementation and allergic skin reactions (pruritic papules at the lateral thigh and cubital fossa due to contact urticaria from fixation materials and dressings). **Discussions :** Factors contributing to delayed consolidation included the severity of the trauma, the migration of the osteosynthesis material, and the patient's biological status. The use of bone substitute, and multiple stabilization methods were crucial for patient prognosis. The particularity of this case lies in the failure of healing following the first intervention and the need for a complex revision surgery, as well as combining multiple fixation methods and biological augmentation to ensure proper healing. Managing postoperative complications, including, secondary anemia, and contact urticaria, required a multidisciplinary approach. Comparison with existing literature emphasizes the need for close postoperative monitoring and early surgical intervention in cases of implant failure. **Conclusions:** Managing bifocal femur fractures requires an individualized therapeutic strategy. This case highlights the importance of optimizing healing by combining mechanical stability with biological augmentation. Careful postoperative supervision and timely intervention in case of complications are essential for achieving optimal functional outcomes.

Keywords: bifocal femur fracture, delayed consolidation, osteosynthesis material migration, surgical revision

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COMPLICATIONS OF ARTERIOVENOUS GRAFTS IN DIALYSIS ACCESS: SURGICAL MANAGEMENT

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Introduction: For patients diagnosed with end-stage kidney disease (ESKD) who are not candidates for the creation of an arteriovenous fistula (AVF), the arteriovenous graft (AVG) represents the subsequent option for vascular access for dialysis. This alternative exhibits a reduced risk of infections and associated comorbidities compared to using a central venous catheter (CVC) for dialysis. **Case Report:** We present a 38-year-old patient diagnosed with type I diabetes mellitus and peripheral arterial disease (PAD), who is undergoing hemodialysis through a temporary right jugular CVC. A brachio-cephalic AVF (BC-AVF) was initially created on the non-dominant upper limb; however, it thrombosed in under a year. Later, another BC-AVF was made on the dominant upper limb, but it resulted in steal syndrome and required ligation. Meanwhile, the jugular CVC was also thrombosed, leading to a left femoral CVC placement. During the follow-up, he developed an infection with Clostridium-Difficile. The blood cultures obtained from the femoral CVC tested positive, necessitating its removal and the subsequent placement of a right femoral CVC. Upon consideration for the placement of a tunneled CVC, computed tomographic angiography indicated occlusion of the right subclavian and bilateral jugular veins. Consequently, we opted to carry out a brachio-axillary AVG using an 8 mm Goretex prosthesis. Initially, there was good flow and favorable progress during the first four weeks. However, the patient later presented to the emergency department with septic symptoms, including fever, leukocytosis, and an infection linked to the right femoral CVC. Therefore, we will extract the femoral CVC along with the Goretex prosthesis, perform primary venoraphy on the axillary vein, reconstruct the brachial artery, and insert a new left subclavian CVC. **Discussions :** If AVF cannot be performed, AVG remains a suitable medium-term option. However, for patients with low immunity and high infection risk, the long-term effectiveness of AVG is limited. Unfortunately, in the present case, we could not create an AVF in the lower limb due to PAD. This research was funded by George Emil Palade UMFST of Targu Mureș, Romania, grant number 170/3/09.01.2024. **Conclusions:** When considering the best choice for the patient, an AVG, it is imperative to ensure that the patient's short-term risk of infection remains minimal. In situations where the placement of an alternative CVC is impractical, and the direct implantation of a CVC into either the inferior or superior vena cava is deemed a considerable surgical undertaking, the AVG becomes the preferred choice.

Keywords: Arteriovenous graft, AVG, Vascular Access, Dialysis

SURGICAL MANAGEMENT OF COMPLEX PERIMEMBRANOUS VENTRICULAR SEPTAL DEFECT WITH VALVULAR AND MUSCULAR INVOLVEMENT – A CASE REPORT

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Introduction: A ventricular septal defect (VSD), most commonly located in the perimembranous area, results from incomplete formation of the ventricular septum's membranous portion. This anatomical region, adjacent to the anteroseptal commissure of the tricuspid valve, typically completes development between days 38-45 of gestation. Such a defect allows persistent left-to-right shunting, leading to significant hemodynamic consequences, including progressive right ventricular overload, maladaptive cardiac remodeling, valvular dysfunction, pulmonary hypertension, and ultimately congestive heart failure if left untreated. The significance of this particular case derives from the complexity introduced by concurrent valvular insufficiencies and muscular anomalies, necessitating individualized surgical management. **Case Report:** We report the case of a 31-year-old female patient diagnosed with congenital perimembranous VSD presenting with marked exertional dyspnea and fatigability corresponding clinically to New York Heart Association (NYHA) functional class II. Echocardiographic evaluation revealed a significant perimembranous VSD with predominant left-to-right shunt, secondary right ventricular hypertrophy, and associated tricuspid regurgitation. Surgical correction was performed through standard median sternotomy, employing total cardiopulmonary bypass, via a right atriotomy combined with a trans-tricuspid valve approach. Direct suture closure of the defect was combined with targeted myomectomy by resection of aberrant muscular trabeculae obstructing the right ventricular outflow tract, and commisural tricuspid valve correction. The postoperative evolution was favorable, except for a transient right bundle branch block, with progressive clinical and echocardiographic recovery observed under close hemodynamic monitoring. The patient was discharged with appropriate pharmacologic therapy to optimize long-term cardiac function. **Discussions :** Management of perimembranous VSD, particularly when accompanied by significant valvular pathology, requires careful assessment and timely surgical intervention, to prevent irreversible myocardial remodeling and secondary pulmonar vascular disease. Echocardiography remains essential in guiding therapeutic decision-making, delineating anatomical and functional defect characteristics. Recent evidence consistently supports early surgical intervention to reduce the risk of ventricular remodeling, pulmonary hypertension, and heart failure progression. In this particular case, extensive valvular and muscular involvement mandated a tailored surgical strategy aimed for restoring physiological ventricular geometry for improving overall cardiac performance. **Conclusions:** Surgical management of adult patients with complex perimembranous VSD associated valvular dysfunction poses significant clinical and surgical challenges, demanding an individualized therapeutic approach. This report highlights the value of early multidisciplinary intervention, precise echocardiographic characterization, and tailored surgical techniques, which collectively contribute to favorable clinical outcomes and effective prevention of progressive pathological cardiac remodeling.

Keywords: Perimembranous ventricular septal defect,, cardiac remodeling,, targeted myomectomy,, tricuspid regurgitation

INFECTED RUPTURED BRACHIAL ARTERY PSEUDOANEURYSM AFTER AVF LIGATION FOR STEAL SYNDROME: SURGICAL APPROACH AND CLINICAL OUTCOME

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Introduction: Brachial-cephalic arteriovenous fistula (BC-AVF) exhibits good long-term patency, superior to other AVFs. However, its arterial flow drains solely into the cephalic vein, increasing the risk of aneurysmal development over time. Furthermore, anastomosis with the brachial artery increases the risk of steal syndrome, especially in diabetic patients who present atherosclerotic lesions in the distal artery of the upper limb. **Case Report:** We present a clinical case involving a patient undergoing hemodialysis through a radio-cephalic arteriovenous fistula (RC-AVF) for a duration exceeding 17 years. The patient exhibited aneurysmal changes as well as skin necrosis at the puncture sites. Initially, the aneurysmal portion of the RC-AVF was excised, and a BC-AVF was created on the

same upper limb. Throughout the follow-up period, the patient developed steal syndrome linked to the BC-AVF, further complicated by skin necrosis at the distal phalanx of the second finger of the left upper limb. Consequently, it was determined that the BC-AVF should be ligated, and a new fistula on the contralateral arm should be created. Six months postoperatively, the patient presented to the emergency department with an infected, ruptured pseudoaneurysm at the remaining stump of the BC-AVF anastomosis. Emergency surgery was conducted, excluding the pseudo-aneurysmal segment and the brachial artery at the level of the anastomosis, followed by reconstruction of the brachial artery using an autologous venous graft harvested from the basilic vein. The patient was discharged on the third postoperative day, presenting no complaints and with surgical wounds in healing. **Discussions :** Regarding the steal syndrome linked to AVF, both the banding and ligation of the AVF serve as effective remedial options. Conversely, in patients exhibiting trophic lesions, the European Society of Vascular Surgery guidelines advocate for ligating the AVF and establishing a new vascular access for dialysis. Ligation must occur immediately following the anastomosis to mitigate the risk of pseudoaneurysm development. **Conclusions:** The formation of a pseudoaneurysm at the AVF anastomosis ligature stump carries a substantial risk of rupture. Regrettably, the surgical exploration of the brachial artery during BC-AVF, along with the subsequent examination of the anastomosis at the time of ligation, results in notable local fibrosis, complicating the surgical procedure. The "en bloc" anastomosis excision and subsequent reconstruction of the brachial artery is considered a safe procedure, demonstrating favorable long-term patency outcomes.

Keywords: Arteriovenous fistula, Steal syndrome, Vascular Access, Dialysis

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PRIMARY CYTOREDUCTION SURGERY IN PERITONEAL CARCINOMATOSIS: A CASE REPORT ON THE DERACO TECHNIQUE

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Introduction: Peritoneal carcinomatosis is a rare and aggressive neoplasm that originates within the peritoneum. It often lacks a discernible primary tumor site, is deemed to have a highly lethal prognosis, offers limited therapeutic options, and is associated with a grim outlook. The incidence of primary peritoneal cancer is noted to be less than 7 cases per million annually, with a higher prevalence observed in postmenopausal women. The Deraco technique is regarded as an advanced surgical intervention utilized in managing peritoneal carcinomatosis. This method represents a cytoreductive surgery, which includes peritonectomy and the excision of affected organs or tissues, ensuring that no tumor nodule exceeding 2.5 mm remains post-procedure. **Case Report:** : A sixty-six-year-old female patient presents with severe ascites and a potential diagnosis of peritoneal carcinomatosis. A total of 9.5 liters of ascitic fluid was evacuated, after which an exploratory laparoscopy was performed. This procedure uncovered extensive peritoneal carcinomatosis, characterized by tumors located in various regions, an omental cake, deposits observed on both the parietal and diaphragmatic peritoneum, multiple small nodular lesions measuring less than 5 millimeters, and adhesions to the small intestine, stomach, and liver capsule. Given the Peritoneal Cancer Index (PCI) and Fagotti score, it was decided that a cytoreductive surgery (DERACO) would be conducted, entailing a median xipho-pubic laparotomy alongside bilateral diaphragmatic peritonectomy, multiple tumorectomies, a complete omentectomy due to the infiltration of the tumor and a peritonectomy of the Morris's Pouch. In order to access the affected regions, the hepatic ligaments were necessary to section to facilitate the mobilization of the liver. **Discussions :** This procedure aims to surgically remove all visible tumors from the peritoneal layers, the "completeness of cytoreduction" score (CCR) was utilized, assigning it a CCR1, which indicates minor disease as the residual lesions measured smaller than 2.5 millimeters post-surgery. **Conclusions:** This technique needs to be meticulously done to avoid any possible complications, followed by a multi-disciplinary collaboration, and it has led to a considerable evolution in the management of peritoneal carcinomatosis in recent years, and it is thought to improve patient prognosis from two months to up to sixty months, when used in conjunction with chemotherapy.

Keywords: Deraco technique, , cytoreductive surgery, primary peritoneal carcinomatosis, chemotherapy.

MANAGEMENT OF A JUPITER AND MEHNE TYPE “H” DISTAL HUMERUS FRACTURE: A CASE REPORT

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Introduction: Intercondylar distal humers fractures pose significant management challenge due to their comminution and displacement by the unopposed muscle pull of the flexor mass (medial epicondyle) and extensor mass (lateral epicondyle). The complex anatomy and intra-articular involvement of these fractures mandates a precise reduction to avoid complications such as secondary arthritis and elbow stiffness. **Case Report:** On November 30 2024, a male patient (41 years of age) presented himself in critical condition, following a fall from height (approx. 2m). Physical examination revealed ecchymosis, immobility and strong pain in the left forearm and elbow region. X-ray imaging confirmed the diagnosis of a: comminuted two-column distal hummers fracture with the trochlea as a free fragment ("H" type according to the Jupiter and Mehne classification). The primary goal of the treatment is anatomical reduction and stable fixation to restore function and prevent complications. Surgical intervention involved a chevron transverse osteotomy of the olecranon with open reduction to enhances joint surface vascularity, and dual-column plate osteosynthesis of the distal humerus. Additionally, the osteosynthesis of the olecranon osteotomy was stabilized using the figure of eight technique and while the ulnar nerve was mobilized from the cubital tunnel and released by partial incision of the flexor carpi ulnaris to prevent neuropathy. Postoperatively, the affected upper limb was immobilized in a cast with the forearm in neutral position and elbow flexed at 70 degrees for soft tissue support. The patient's postoperative course was favourable. **Discussions :** Intercondylar fractures of the distal humerus are often caused by high-energy trauma, such as fall from hight. When the elbow is bent more then 90°, the olecranon can wedge between the condyles, which leads to fractures like this case presents. A common complication with these fractures is avascular necrosis (AVN) of the trochlea, which occurs due to the limited blood supply of particularly this area. If the blood vessels are damaged, joint misalignment, pain, and decreased movement can occur. Surgical approaches vary, with olecranon osteotomy providing good access but carrying risks like nerve injury. Other approaches focus on preserving muscle function while ensuring proper exposure like the triceps-sparing or triceps-reflecting approaches. **Conclusions:** Managing intercondylar distal humerus fractures requires detailed planning and execution. AVN of the trochlea remains a concern, making vascular preservation crucial. Early mobilization is essential to prevent stiffness, targeting a range of 30 to 130 degrees. In this case, timely intervention and rehabilitation led to a favorable outcome.

Keywords: olecranon osteotomy, distal humerus fracture, "H" type fracture

A RARE CASE OF SPINAL CORD CAVERNOMA RUPTURE: RARELY SEEN, SELDOM REPORTED

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Introduction: Familial spinal cord cavernomas are a form of vascular malformations characterized by multiple lesions in the central nervous system. They are associated with specific genetic mutations (KRIT1-CCM1; malcavern-CCM2; PDCD10-CCM3) in genes involved in maintaining vascular integrity. The rupture of spinal cord cavernoma is an exceptionally rare event, with extremly few cases reported in the specialized literature, to the point that they are scarcely documented. **Case Report:** A 65-year-old patient, known to have arterial hypertension and diabetes mellitus, presented with bilateral paresthesia and decreased muscle strength in the lower limbs one month before admission to the neurosurgery department. Cranial-CT revealed an expansive process in the right frontal periventricular and left parietal regions, while dorsal spinal-CT showed hyperdensity at the T3-T6 level. MRI confirmed multiple arteriovenous malformations, displaying characteristics of cavernomas, located diffusely in the supra- and infratentorial regions, as well as a lesion with cavernoma characteristics in the dorsal spinal cord. Physical examination revealed a GCS 15; paraplegia; hypoesthesia at T6; and bilateral Babinski sign. The final diagnoses relevant to this case are: Spinal cord hematoma T3-T6 post-rupture of spinal cord cavernoma at T4 operated upon; Multiple supra- and infratentorial cavernomas; Familial medullary form under observation; Paraplegia; Urinary retention; Hypoesthesia with sensitivity level at T6. The patient's worsening clinical state led to the necessity of surgical treatment. The surgical intervention consisted of T4-T5 laminectomy, durotomy, dissection

of the subarachnoid space, myelotomy, evacuation of the spinal cord hematoma and spinal cord cavernoma, followed by spinal cord decompression and dural closure at the end. Post surgery, neurological recovery was favorable without further complications. **Discussions :** This case highligts the progressive dynamics and severity of cavernomas, which can lead to critical neurological events. Of particular note is the extremly rare occurrence of ruptured spinal cord cavernomas. Due to the rarity of those occurances, there is no established standard treatment protocol, so management often relies on individualized approaches based on clinincal judgment. In this case, urgent surgical intervention was deemed necessary to prevent irreversible damage. MRI monitoring every 6 months and physical therapy to improve functional prognosis is recommended, but long-term effectiveness is uncertain given the lack of precedent for such rare cases. **Conclusions:** Although the initial state presented severe complications from spinal cord cavernomas, rapid intervention prevented permanent disability. This case underscores the importance of early diagnosis and multidisciplinary management of the cavernomas in CNS, particularly in the rare but critical event of spinal cord cavernoma rupture.

Keywords: Cavernomas, Rupture of cavernoma, Paraplegia, CNS pathology

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FROM CHALLENGE TO SUCCESS: SURGICAL MANAGEMENT OF A GIANT OMPHALOCELE

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Introduction: Omphalocele is a congenital abdominal wall defect characterized by the herniation of abdominal viscera, including the intestines, liver, bladder, stomach, ovary, and testis due to the failure of the viscera to return to the abdominal cavity during fetal development, rather than a defect in body wall closure or migration. The herniated organs are contained within a three-layered membranous sac composed of the amnion, Wharton's jelly, and peritoneum. This anomaly is classified based on size, with "giant omphalocele" referring to defects larger than 5 cm or those containing the liver. The defect is typically located in the mid-abdominal or central region. Omphalocele has a relatively high incidence of associated anomalies, whose severity and number significantly influence the prognosis and overall outcomes. Treatment strategies range from immediate surgical closure to staged repair or conservative approaches, especially in cases of giant omphalocele or severe pulmonary hypoplasia. **Case Report:** We report the case of a female neonate, birth weight 3180 g, delivered at term via cesarean section, with a prenatal suspicion of omphalocele. Postnatally, the newborn was transferred to the Neonatal Intensive Care Unit for further evaluation. On clinical examination, an abdominal wall defect is observed, characterized by the herniation of abdominal viscera, including the intestines and liver, enclosed in a thin membranous sac, with the umbilical cord centrally inserted at the defect site. The echocardiographic assessment identified an ostium secundum atrial septal defect (ASD) with a predominantly left-to-right bidirectional shunt and mild mitral regurgitation. Excision of the sac was performed, through median incisions above and below the abdominal wall defect, reduction of the herniated organs, appendectomy, and primary closure of the abdominal wall. At 48 hours post-surgery, enteral feeding was initiated. Postoperative evolution is good. **Discussions :** This case of giant omphalocele was notable for the successful primary closure without significant respiratory compromise and abdominal compartment syndrome despite the large herniated content. Postoperatively, the patient recovered without complications, demonstrating a good outcome despite the typical challenges of giant omphaloceles. **Conclusions:** In conclusion, this case underscores the importance of a multidisciplinary approach in managing neonates with giant omphalocele, particularly in the presence of associated anomalies. Successful surgical planning and execution, along with careful perioperative stabilization and early enteral feeding initiation highlight the role of tailored care in improving outcomes for congenital abdominal wall defects.

Keywords: omphalocele, pulmonary hypoplasia, ostium secundum, Wharton's jelly

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UNRAVELING THE PUZZLE: PEDIATRIC BRAINSTEM CAVERNOMA AND NEUROSURGICAL DECISION-MAKING

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Introduction: Cerebral cavernous malformations (CCMs) are very unusual **vascular deformities** consisting of a **tumor-like appearance**

alongside the major vascular paths, more specifically those within the CNS. Their cause is attributed to being either **sporadical** (80% of cases, the main genes thought to be involved are MAP3K3 and PIK3CA), or **familial** (20%), with an autosomal recessive way of inheritance. **Case Report:** A **12-year-old female patient** presents at the clinic, with the main complaint of cephalalgia, dizziness, nausea and paleness. The onset has been 4 years ago, without alleviation. The neurological exam shows the following results: patient is fully conscious, compliant, with a GCS of 15, shows no signs of meningeal irritation, cranial nerves unaffected, both Babinski and Romberg tests are negative, echolalia and eupraxia present. **MRI exam** highly suggests an **exophitic tumoral formation at the level of the pons**. A **retromastoid craniotomy** is performed, using a retrosigmoid approach. The **total ablation** of the vascular deformity, significantly indicated for a CCM, is carried out. Postoperatively, the patient is transferred to the ICU critical unit for continuous monitoring. Moreover, she is then moved to the neurosurgery clinic, where she is given analgesics, antibiotics, anti-emetics and last but not least, intracranial pressure-lowering agents. Another neurological exam is performed, showcasing small **signs of right upper limb monoparesis**, ULS(upper-limb-strength): 4-/5 and **postoperative vestibulopathy**. **Discussions : Pediatric CCMs** are generally **more common** and present with a **higher risk of bleeding**, which frequently raises the question regarding the use of a surgical or conservative approach. Furthermore, **brainstem cavernomas** are generally regarded as **more aggressive** with a higher risk of **postoperative comorbidities**, although **surgical treatment** still has a better outcome **(fatality rate of about 1.3%)** compared to the **conservative** route **(2.9%)**.Unfortunately, there is **no extensive data** on pediatric CCMs, the best course of action being patient adaptive treatment. **In this particular case**, even though the vascular deformity was of considerable size and in close contact with the brainstem, fortunately, **the prognostic indicates a favorable outcome**. **Conclusions:** To summarize, CCMs are rare vascular deformities, more apparent and often symptomatic in the pediatric population. Due to lack of extensive studies regarding this issue, there isn't a general consensus, although brain stem variants are generally considered to be of higher risk for postoperative deterioration. **Therefore, the approach for treatment can be either a surgical or a conservative one, the final choice needing a thorough weighing of risk/reward ratio before being made.**

Keywords: Cerebral Cavernous Malformation, Pediatric, Brainstem, Retromastoid Craniotomy

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THE NEED FOR ETHMOIDECTOMY IN NASAL OBSTRUCTION SURGERY ASSOCIATED WITH HEADACHES

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Introduction: There are many surgical interventions to help patients breath better including nasal septoplasty and improvement of nasal airflow through turbinate size reduction without approaching the sinus structures. If the patient experiences pressure or neuralgic headaches, ethmoidectomy is recommended. The suspicion of ethmoid involvement is determined after the first examination when the patient complains of nasal obstruction but also of intermittent headaches. In this case, the patient has an indication for nasal unblocking surgery(septoplasty and turbinate reduction) and to investigate the headaches, a sinus CT scan is required. **Case Report:** A 32-year-old patient presented with nasal obstruction. After a nasal endoscopic examination, surgery is indicated to unblock the nasal passage(septoplasty and turbinate reduction). The patient also complains of intermittent headaches, requiring a sinus CT scan. The tomography confirms blockage of the middle meatus with thickening of the sinus mucosa in the ethmoidal cells bilaterally. Such sinus changes occur when the ethmoid cells cannot aerate and drain and can cause headaches. Ethmoidectomy is recommended to stop the headaches and gain sinus breathing space larger than the nasal cavity allows. Under general anesthesia, turbinate reduction, bilateral enlargement of the middle meatus, ethmoidectomy with sphenoidotomy, middle antrostomy and septoplasty are performed. The patient is discharged the next day after nasal package removal, returns for checkup in 5 days for crust removal. All sinus area is fully healed in 6 weeks. The patient no longer complains of headaches and breathes well. **Discussions :** Recent literature attests to the link between nasal anatomic deformity, sinus blockade, and chronic headache. Farmer et al. (2018) demonstrated that headaches from mucosal contact or blocked sinuses could be relieved through functional nasal surgery. Liu et al. (2021) reported that lack of drainage during ethmoidectomy would result in mucoceles, attesting to the need for thorough clearance. CT confirmed ethmoidal obstruction. Ethmoidectomy was central to symptom resolution, demonstrating the value of customized surgical planning when

obstruction and headache occur together. **Conclusions:** If sinus blockage is suspected during the first examination when the nasal obstruction associated with headaches are the major complaints, standard surgeries (septoplasty and reduction of the turbinate) will not fully resolve the symptoms. A preoperative sinus CT scan is necessary followed by the unblocking of the middle meatus and the ethmoidectomy.

Keywords: headaches, nasal obstruction, ethmoidectomy

SOFT TISSUE SARCOMA IN THE GLUTEAL REGION: A CASE REPORT AND SURGICAL MANAGEMENT

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Introduction: Soft tissue sarcoma is a rare type of malignant tumor that develops from connective tissue, including muscles, blood vessels, fat, nerves, tendons, and synovial tissue. These tumors can occur anywhere in the body, but are more common in the limbs and trunk. **Case Report:** We present the case of a 68-year-old patient with a history of radical cystectomy following an infiltrative bladder tumor and cutaneous ureterostomy with a "teava de pusca" technique. Ultrasound revealed bilateral grade I hydronephrosis. The patient was admitted for surgical treatment, undergoing bilateral ureteral stent exchange ("Mono J"). Post-procedural evolution was favorable. In the recent medical history, the patient reported the appearance of a mass in the gluteal region and weight loss. On local examination, an elastic, painful mass was palpated. CT imaging identified an oval-shaped, moderately well-defined mass located at the postero-superior iliac spine. The diagnosis was established based on a native and contrast-enhanced pelvic MRI, which revealed a relatively well-defined heterogeneous mass, developed in the gluteus maximus muscle on the left side, measuring 8.9/7.3/5.4 cm, with a peripheral tissue component and an internal myxoid component, non-deficient, suggesting a soft tissue sarcoma. Urological consultation did not detect a possible recurrence of the bladder neoplasm. The surgical treatment involved excision of the sarcoma with double aspirative drainage. In this case, after chemical preparation of the surgical field, under spinal anesthesia, an incision in the shape of an "S" was made, centered on the tumor mass in the left gluteal region. The subcutaneous tissue was dissected. Upon exploration, a hard mass was identified and excised. A posterior recovery was performed. The excised specimens were sent for histopathological examination. Hemostasis was controlled, and lavage was performed. Double subcutaneous drainage was placed, followed by subcutaneous suturing and skin suturing. A dressing was applied. **Discussions :** Sarcomas are mesenchymal tumors and can be classified into different types: soft tissue sarcomas and primary bone sarcomas. The therapeutic approach depends on the type of sarcoma. In this case, an excision of the tumor mass in healthy tissue was performed, followed by a careful histopathological evaluation to determine the resection margin and possible local invasions. **Conclusions:** Sarcoma treatment is multimodal: surgery is the primary approach, chemotherapy is used for high-risk cases, and radiotherapy helps reduce local recurrence, especially when surgical margins are incomplete or if tumor removal is insufficient.

Keywords: Sarcomas, Malignant tumor, Mono J, Surgical treatment

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SURGICAL MANAGEMENT OF HEPATIC HYDATID CYST USING THE MABIT-LAGROT PROCEDURE: A CASE REPORT

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Introduction: The hydatid cyst is a benign formation of parasitic origin, caused by infestation with the larvae of Echinococcus granulosus or Echinococcus multilocularis. This condition is a zoonotic parasitic disease transmitted from animals to humans. The Mabit-Lagrot procedure, using hypertonic saline, is a complex surgical technique aimed at eliminating the hydatid cyst. **Case Report:** The case of a 72-year-old patient with a history of cholelithiasis and controlled cardiovascular disease is presented. During a cardiological consultation, a hepatic tumor was detected, and a surgical consultation was recommended. The patient presented with abdominal pain in the right hypochondrium, nausea, and digestive discomfort. Abdominal ultrasound revealed a voluminous cystic formation (140/85/108 millimeters), multilocular, with impure content, located in the left hepatic lobe. Abdomino-pelvic CT with contrast confirmed the cystic lesion, suggesting an active hydatid cyst. Therapeutic recommendations included the administration of Fortifikat Forte for 14 days, followed by specialized surgical

treatment. The procedure involved exploratory laparotomy, followed by chisto-perichystectomy using the Mabit-Lagrot technique and classic cholecystectomy. The incision was made in the xiphoid-subumbilical area. The peritoneal cavity was entered and isolated. The supramesocolic area was explored, and a hard cystic formation with a thickened wall, subcapsular, measuring 10x5 centimeters, was identified in the left hepatic lobe. The left perihepatic hypochondrium was isolated with compresses soaked in hypertonic solution. The cystic formation was opened, and clear, transparent content was evacuated. The germinal membrane was completely removed. The hydatid cyst was operculated, and chisto-perichystectomy was performed. The resected specimens were sent for histopathological examination. Abundant lavage with hypertonic solution was performed in the remaining cystic cavity, followed by thorough cleaning with hydrogen peroxide. Hepatic hemostasis and peritoneal lavage were carried out. Monoplan laparorrhaphy and separate skin sutures were performed. **Discussions :** The Mabit-Lagrot technique is used in the surgical treatment of hepatic hydatid cysts. It involves percutaneous aspiration of the cyst to reduce pressure and the risk of rupture, followed by the injection of a sterilizing solution to eliminate any remaining parasites. After opening the cyst, hypertonic saline solution is instilled into the cystic cavity, causing contraction of the cyst wall. This technique helps reduce the risk of secondary infections and improves long-term outcomes. **Conclusions:** The Mabit-Lagrot procedure was a pioneering method in the management of hepatic hydatid cysts, offering an innovative approach for cyst aspiration and parasite control. Although largely replaced today, it played a key role in the evolution of hydatid disease treatment.

Keywords: Mabit-Lagrot procedure, Hepatic hydatid cysts, Hypertonic solution, Monoplan laparorrhaphy

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METACHRONOUS RENAL CELL CARCINOMA IN A PATIENT WITH A HISTORY OF THYROID CANCER: A CASE REPORT

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Introduction: The probability of developing malignant tumors remains indeterminate, as it is influenced by many factors, including genetics and environmental components. To assess the prevalence and distribution of tumors, epidemiological data provide robust estimates of incidence rates. According to GLOBOCAN, thyroid cancer has an age-standardized incidence rate of 9.1 per 100,000 people annually, whereas kidney cancer has an incidence rate of 4.4 cases per 100,000. This case report highlights the importance of long-term surveillance for multiple malignancies and potential genetic and environmental risk factors contributing to metachronous cancers. **Case Report:** A 50-year-old male presented to the Urology Department after a routine check-up in internal medicine detected an ultrasonographic abnormality in the left kidney. A contrast-enhanced MRI revealed a 60 × 70 × 70 mm solid, irregular, and infiltrative mass in the upper pole, extending into the renal sinus with contrast enhancement, classified as cT1bN0M0 renal cell carcinoma. The patient denied experiencing any associated symptoms, including haematuria, pain or weight loss. His clinical history includes mitral valve insufficiency and hypothyroidism following a total thyroidectomy for follicular-papillary thyroid carcinoma with metastases to mediastinal and pulmonary lymph nodes in 2014. He was treated with radioiodine therapy (I-131), with no evidence of recurrence. His current medication includes Euthyrox 100 mcg daily. **Discussions :** While T1b renal tumors (4-7 cm) are often managed with partial nephrectomy, this case presented a highly complex surgical challenge, as reflected by its RENAL score of 10-11 and PADUA score of 15. The tumor's predominantly endophytic growth, direct renal sinus involvement, and size approaching the T2 classification threshold significantly increased the difficulty of achieving complete resection with a partial nephrectomy. Given these factors, a laparoscopic total left nephrectomy was performed to ensure complete tumor removal and optimize patient outcomes. The patient's preoperative risk was classified as ASA 2. The procedure and postoperative course were uneventful, with no complications. Recovery was favorable, with the patient maintaining a stable general condition, afebrile status, and hemodynamic and respiratory stability. Postoperative follow-up was normal, allowing discharge on postoperative day three. **Conclusions:** Discovery of a metachronous second primary tumor should initiate a sequence of evaluations, including screenings for genetic mutations and hereditary syndromes. Mutations in tumor suppressor genes may offer an explanation. Conditions such as Birt-Hogg-Dubé syndrome may explain the involvement of both thyroid and renal carcinomas, necessitating a multidisciplinary approach. Regular check-ups played an important role in early detection of malignancy, enabling in time intervention and preventing metastasis.

Keywords: Metachronous Malignancy, Follicular-Papillary Carcinoma, Renal Cell Carcinoma, Total Nephrectomy

MANAGEMENT OF AN OPEN GALEAZZI FRACTURE WITH VOLAR LUXATION: SURGICAL APPROACH AND MULTIDISCIPLINARY MANAGEMENT

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Introduction: The Galeazzi fracture is a rare traumatic injury with an incidence of 3% in all forearm fractures. This type of fracture typically occurs from high-energy trauma when the forearm is positioned in extension an hyperpronation. The concequences of this injury is characterized by a fracture of the middle or distal segment of the radius, accompanied by dorsal or volar luxation of the distal radioulnar joint. The volar luxation of the distal ulna is an extremely rare subvariant. **Case Report:** A 29-year-old patient with no medical history presents to the emergency department with an right upper limb trauma, resulting from a motorcycle accident. Clinical examination reveals an open volar luxation of the distal ulna and axial deviation of the forearm, associated with loss of tactile sensation and motor function in the 4th and 5th fingers, increasing suspicion of an ulnar nerve injury. An X-ray of the forearm shows a distal comminuted fracture of the radius with volar luxation of the radioulnar joint. The fracture was treated through open reduction and internal fixation (ORIF), which involved excision of necrotic tissue, wound debridement, realignment, and stabilization of the bone segments by placing a radial reconstruction plate and securing it with six cortical screws. As a further step of the surgery, a plastic surgery performed an anastomosis of the ulnar artery and reconstruction of the ulnar nerve axis, with partial wound closure. **Discussions :** The particularity of this case is the presence of a Galeazzi fracture, with volar luxation of the ulnar head, an extremely rare variant, associated with ulnar nerve damage. It also highlights the challenges posed by an open fracture and the importance of a multidisciplinary approach in restoring bone integrity, preventing infections, and reconstructing vascular and nerve structures. Surgical intervention, including open reduction and internal fixation (ORIF), with nerve and artery repair, is essential for functional recovery and to reduce the risk of long-term complications. **Conclusions:** Managing an open injury with a Galeazzi fracture can be challenging due to the high risk of infections and loss of motor function, requiring a multidisciplinary approach to promote wound healing and maximize functional recovery.

Keywords: Galeazzi fracture, volar luxation, open wound, reconstruction plate

SURGICAL MANAGEMENT OF SUBTROCHANTERIC FEMURE FRACTURE IN PATIENT WITH OSTEOGENESIS IMPERFECTA

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Introduction: Subtrochanteric femur fractures are serious injuries located between the lesser trochanter and up to 5 cm bellow it.They generally occur in serious trauma or on a pathological bone such as in Osteogenesis Imperfecta. Osteogenesis Imperfecta is a genetic disease of the connective tissue that occurs due to of poorly formed type 1 collagen , one of the main components of the bone matrix . The weaker bone matrix is susceptible to micro-damage and micro-fractures with consecutive bone healing and remodelling causing thicker denser bone on the primary fracture site . In the other sites the cortical of the bone is thinner further reducing bone strength. **Case Report:** We present a 25 year old patient with osteogenesis imperfecta who has presented to the emergency department accusing violent pain right bellow the coxofemural joint, after a traumatic event associated with functional impairment . Typical the limb was held in abduction and external rotation . Radiological examination revealed a transverse subtrochanteric femur fracture. **Discussions :** Treating a ST femur fracture in a patient with Osteogenesis Imperfecta presents significant challenges . During the surgery the main difficulty we can encounter are caused by the altered bone quality with narrow medullary canal and smaller skeletal structure . The abnormal bone formation can lead to a higher density and greater mineralise bone at the fracture site which can cause difficulties in the preparation at the femoral canal . Also the abnormal bone formation can effect the healing process . Another challenge in the surgical treatment of the patient with osteogenesis imperfecta is caused by the short neck and low mobility which can cause difficult intubation in case of general anaesthesia. Taking in consideration the local anatomic and structural differences we must consider multiple options for the surgical

treatment these could include : intramedullary nails and open reduction and internal fixation with locking screws . Because of better biomechanical properties and more anatomic fixation we choose open reduction and internal fixation with femural intramedullary nails - Trauson System - with cervicocephalic proximal screws and one distal dynamic screw. Our goal was a strong anatomical fixation with good inter-fragmentary fixation. **Conclusions:** The surgical treatment of the ST fractures in patients with Osteogenesis Imperfecta presents many risks starting from the anesthesia difficulties to choosing the best surgical technique .

Keywords: Subtrochanteric femure fracture, Osteogenesis Imperfecta, osteosynthesis, Challenges

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MANAGEMENT OF NECROTIZING FASCIITIS IN THE UPPER LIMB: A CASE REPORT ON SURGICAL AND CRITICAL CARE CHALLENGES

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Introduction: Necrotizing fasciitis (NF) is rapidly progressing soft tissue infection characterized by extensive tissue necrosis, systemic toxicity, and high mortality rates,due to its severity, if not promptly treated. It can often present with non-specific symptoms in the early stages, making early diagnosis challenging. NF is commonly caused by polymicrobial infections, including Streptococcus pyogenes, and requires aggressive surgical interventions combined with targeted antibiotic therapy. This case highlights the complexities in managing NF in an elderly patient with multiple comorbidities, including hypertension, ventricular tachycardia, and acute kidney injury. **Case Report:** A 64-year-old woman presented to the emergency department with severe pain, erythema, and swelling in her left upper limb, which is accompanied by systemic symptoms. Initial clinical and imaging assessments suggested necrotizing fasciitis, necessitating urgent surgical intervention. The patient underwent multiple debridements, starting with wide excision of necrotic tissues and local wound management. Bacteriological examination identified Streptococcus pyogenes, which was treated with intravenous penicillin and clindamycin. Despite initial improvement, subsequent cultures revealed Enterobacter hormaechei and Acinetobacter baumannii XDR, necessitating antibiotic regimen adjustments to include colistin. Postoperatively, the patient experienced ventricular tachycardia as a complication of anesthesia, requiring electrical cardioversion and intensive cardiac management with beta-blockers, antiarrhythmic drugs, and prophylactic anticoagulation. Further complications included acute kidney injury due to prerenal mechanisms, managed through fluid resuscitation and nephrology consultation. Following serial debridements and infection control, the patient underwent split-thickness skin grafting from the left thigh to facilitate wound closure. The postoperative course was favorable, with successful graft integration and no signs of recurrent infection. **Discussions :** This case illustrates the multifactorial challenges of managing NF, emphasizing the need for early recognition, rapid surgical intervention, and a patient-oriented antimicrobial strategy. The presence of multidrug-resistant bacteria complicated treatment, underscoring the importance of dynamic antibiotic stewardship. The patient's cardiovascular and renal complications required multidisciplinary care, highlighting the interplay between infection, systemic inflammation, and preexisting comorbidities. **Conclusions:** Successful NF management relies on early diagnosis, aggressive surgical debridement, and a coordinated multidisciplinary approach. The case underscores the critical role of infectious disease specialists, intensivists, surgeons, and nephrologists in optimizing patient outcomes. Timely interventions, vigilant monitoring, and targeted therapy remain cornerstones in the treatment of necrotizing fasciitis, particularly in complex and high-risk patients.

Keywords: Necrotizing Fascitis, Surgical Debridement, Infection

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SPONTANEOUS PNEUMOTHORAX IN A SEVERE ASTHMA EXACERBATION: A DIAGNOSTIC CHALLENGE

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Introduction: Spontaneous pneumothorax is a rare but potentially life-threatening complication of severe asthma, often misdiagnosed as an exacerbation. In patients with chronic corticosteroid use and emphysematous bullae, the risk is higher, and misdiagnosis can delay appropriate life-saving treatment. Early recognition is crucial to prevent severe hemodynamic compromise. **Case Report:** A 59-year-old male known with hypertension and asthma on

chronic Medrol (32 mg/day) called emergency services for dyspnea, fatigue, and atypical chest pain. On arrival at around 11:45, he was alert (GCS 15) but tachycardic (122 bpm), hypertensive (211/138 mmHg), hypoxic (SpO 90%), and dyspneic with wheezing and diminished breath sounds. ECG showed sinus tachycardia without ischemic changes. Blood work revealed leukocytosis with increased neutrophils, lymphocytes, and monocytes, hyperglycemia, and respiratory acidosis. Initial treatment included Ventolin nebulizations, furosemide, morphine, nitroglycerin, and hydrocortisone. Despite repeated Ventolin nebulizations and a bolus dose of hydrocortisone, the respiratory rate had increased to 38/min, but BP improved to 140/110 mmHg, and SpO rose to 98%. However, the patient remained dyspneic and required further treatment including non-invasive ventilation. Due to the persistent symptomology and chest pain, he required further investigations. A CT scan revealed a left-sided pneumothorax measuring approximately 42 mm, along with bilateral emphysematous bullae, confirming the diagnosis of spontaneous pneumothorax due to ruptured bullae. This prompted the decision to put the patient under analgosedation to perform chest drainage. **Discussions :** This case underscores the importance of considering spontaneous pneumothorax in asthmatic patients, particularly those on chronic corticosteroid therapy. The initial presentation mimicked an asthma exacerbation with air trapping and respiratory acidosis, leading to bronchodilator and diuretic therapy. However, persistent symptoms despite treatment warranted further investigation. Pneumothorax can cause tension physiology, mimicking myocardial infarction or pulmonary embolism. In patients with emphysematous bullae, spontaneous rupture may occur even without significant trauma. Early recognition and appropriate management are essential to prevent deterioration. **Conclusions:** Spontaneous pneumothorax should be considered in asthmatic patients with persistent dyspnea and chest pain despite standard therapy. Chronic corticosteroid use may predispose to emphysematous bullae and increase the risk of pneumothorax. Timely diagnosis and intervention are crucial in preventing hemodynamic collapse and improving patient outcomes.

Keywords: Spontaneous Pneumothorax, Asthma Exacerbation, Chronic Corticosteroid Use

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ROTATIONPLASTY IN THE MANAGEMENT OF PEDIATRIC OSTEOSARCOMA - OVERCOMING SURGICAL CHALLENGES AND COMPLICATIONS

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Introduction: Osteosarcoma is a common malignant bone tumor in children that often requires multidisciplinary teamwork and aggressive surgical interventions. Rotationplasty, or Borggreve-Van Ness surgery is a life- and limb-saving surgical procedure for patients suffering from femoral bone osteosarcoma. It involves tumor resection around the knee, limb shortening, and a 180-degree foot rotation to give the ankle the function of a neo-knee. Our patient's unique story highlights the complexity of limb-salvage operations, the determination of young patients, and the significance of advanced grafting methods in addressing complications. **Case Report:** We present the journey of an 8-year-old boy who was admitted to the Orthopedics Hospital at Semmelweis University due to severe left knee joint pain and reduced mobility lasting a month. Imaging revealed a distal femur lesion with cortical destruction, and biopsy confirmed osteosarcoma. The surgical procedure includes the resection of the affected femur and knee joint while a vascular anastomosis is made, and the neural structures are preserved to maintain sensory and motor function in the limb. Post-amputation, 180 degrees of tibial rotation is performed, and the foot is reattached at knee level to ensure stability. However, the patient encountered post-surgical complications, such as an ankle joint fracture, which was treated conservatively without further complications despite conventional casting being unsafe due to compartment syndrome risk. Unfortunately, the healing process was disrupted by false joint formation, which required a revision surgery. The original plate was replaced by a fibula allograft, which, over time was absorbed, forming a new pseudo-joint. Finally, it was managed by an intramedullary nail. Neobone, a synthetic bone substitute increased graft vascularization and colonization by bone cells. Finally, the patient was discharged without any postoperative complications. **Discussions :** Rotationplasty is a highly skilled surgical procedure for pediatric patients who require significant bone removal. The particularity of this case is the patient's growth consideration, which requires careful preoperative estimation of the precise amount of remaining bone growth. Pediatric osteosarcoma treatment faces challenges in managing complications like fractures and pseudarthrosis. Children tend to adapt well despite initial psychological and aesthetic concerns, demonstrating remarkable resilience and quickly achieving functional independence. **Conclusions:** This case shows the complexity of treating distal femur osteosarcoma in pediatric patients, the role of reconstructive innovations, and the adaptability afforded through rotationplasty. Despite many surgical interventions and complications, our patient

has shown meaningful recovery, embracing his novel limb configuration with resolve. His case demonstrates medical improvements and human resilience in overcoming adversity.

Keywords: rotationplasty, osteosarcoma, pseudoarthrosis, fibula allograft

MANAGEMENT OF RECURRENT ASEPTIC LOOSENING IN REVISION TOTAL HIP ARTHROPLASTY: A CASE REPORT

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Introduction: Total hip arthroplasty (rTHA) revision is a standard yet complex medical procedure that requires careful preoperative planning in the management of the complications of primary arthroplasty, especially in elderly patients. Long-term complications, such as aseptic loosening can indicate revision surgeries. Bone loss poses a significant challenge in assessing implant needs; therefore, reliable and universally accepted classifications, such as Paprosky, are necessary. **Case Report:** We present the case of an 83-year-old woman who was treated at the Orthopedics Clinic at Semmelweis University in 2009 when she received her initial cemented left hip arthroplasty because of her osteoarthritis. In 2016, a revision total hip arthroplasty occurred because of aseptic loosening of the acetabular component, which is a common indication of rTHA. Sixteen years after the initial surgery, she presented to the hospital with a recurrent aseptic loosening, classified as a Paprosky Type 3 defect, indicating significant bone loss. To tackle this issue, a cup and cage system with a dual mobility liner and an Arcos Modular stem were installed, characterized by a unique fixation pattern. This system stabilizes within the diaphysis and utilizes lamellas to inhibit rotational motion. During the operation, a complication arose, and there was a longitudinal fracture in the femur. Because of the length of the fracture, only cerclage wiring could be used for stabilization. As a result, the patient was put on three months of touch-down weight-bearing to facilitate adequate healing. Imaging after surgery verified that the position of the implant was stable. **Discussions :** Dealing with significant acetabular bone loss in revision hip arthroplasty necessitates sophisticated fixation methods. The integration of a cup and cage system with a dual mobility liner offers improved stability in Paprosky Type 3 defects, lowering the chances of dislocation and implant failure. Nevertheless, the heightened intricacy of these procedures elevates the risk of intraoperative issues, such as fractures. In this situation, cerclage wiring was the sole viable stabilization technique, requiring a prolonged duration of limited weight-bearing to facilitate recovery. **Conclusions:** This case underscores the challenges of revision hip arthroplasty in elderly patients with significant bone loss. The use of a cup and cage system with a dual mobility liner offers a promising solution for restoring stability in severe acetabular defects. However, intraoperative fractures remain a potential complication, requiring careful surgical planning and prolonged rehabilitation. Long-term follow-up is essential to evaluate implant survival and functional recovery.

Keywords: Paprosky classification, aseptic loosening, cup and cage, femur fracture

SEVERE ROAD TRAFFIC TRAUMA: SURGICAL MANAGEMENT AND RECOVERY OF COMPLEX LOWER LIMB FRACTURES

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Introduction: Road traffic accidents are very common and represent the type of trauma with the highest impact force, potentially causing multiple fractures. One frequently encountered fracture in road traffic accidents is the tibial epimetaphyseal fracture, which affects the transition area between the epiphysis and the metaphysis of the tibia. This fracture is also commonly seen in pediatric patients, and the lack of appropriate treatment can lead to post-traumatic osteoarthritis or compartment syndrome. **Case Report:** The 33-year-old female patient, involved in a road traffic accident, arrives at the UPU SMURD with an open patella fracture in the right lower limb, an epimetaphyseal tibial fracture, and a suprasindesmotic fibular fracture in the left lower limb, along with abrasions. Emergency intervention is performed for fracture reduction and osteosynthesis with plates and screws at the fibula level, as well as patella osteosynthesis using Ti-Cron 5 sutures. One month later, the patient returns for a follow-up, and an anterior tibio-astragalian dislocation is observed in the left ankle. This requires surgical reintervention for dislocation reduction and stabilization with Kirschner wires. However, intraoperatively, marked comminution and

a defect were found at the anterior tibial plafond and on the internal malleolus, necessitating the addition of a bone substitute. **Discussions :** At the time of discharge, the patient's general condition was improved, hemodynamically stable, with no signs of infection or other major complications. She was advised to follow a strict rehabilitation program, which should include physiotherapy and, most importantly, to avoid bearing weight on the left lower limb for a specified period. The patient is discharged with a plaster splint extending from the calf to the foot and is scheduled to return to the orthopedic department for reevaluation and removal of the Kirschner wires. **Conclusions:** In other words, road traffic accidents cause multiple fractures that require different treatment plans. Patella fractures require physiotherapy to prevent severe and bothersome limitations at the knee level, while epimetaphyseal tibial fractures can be comminuted and involve the anterior plafond. In this case, the risk is quite high, and recovery is quite lengthy due to the fact that these are unstable fractures.

Keywords: Tibial epimetaphyseal fracture, Patella fracture, Osteosynthesis, Rehabilitation

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AUTOLOGOUS BASILIC VEIN GRAFT AS A VIABLE OPTION FOR BRACHIAL ARTERY RECONSTRUCTION IN VASCULAR TRAUMA: A CASE REPORT WITH MID-TERM PATENCY OUTCOME

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Introduction: Vascular trauma is a significant cause of morbidity and mortality globally, accounting for about 2-5% of all trauma admissions. Over 40% of civilian vascular injuries occur in the extremities, followed by injuries to the torso and neck. Arterial injuries are frequently encountered in orthopedic trauma, in which fractured bones may directly lacerate blood vessels. **Case Report:** We describe a 50-year-old patient who was urgently transferred to the Vascular Surgery Department of SCJU Targu Mures due to acute right upper limb ischemia. The patient exhibited impaired mobility and sensitivity and was diagnosed with brachial artery occlusion, which began three days ago after falling from a height of 2.5 meters, resulting in an elbow dislocation. Following the pre-operative ultrasound evaluation, a substantial hematoma was identified in the brachial region, accompanied by a discontinuity of the brachial artery. Surgical intervention was undertaken to explore both the proximal and distal ends of the brachial artery, which had been completely sectioned as a result of trauma. The decision has been made to reconstruct the brachial artery through the interposition of a venous graft harvested from the basilic vein, utilizing end-to-end anastomoses. Considering the integrity of the cubital and cephalic veins, the stump of the brachial veins is ligated. Following the operation, the patient demonstrates the restoration of mobility and sensitivity, with palpable pulses in both the radial and ulnar arteries. At a six-month follow-up evaluation, the ultrasound examination confirms the venous graft is patent, showing no signs of intimal hyperplasia. **Discussions :** Based on our clinical experience, the primary proximal anastomosis between the proximal stump of the brachial artery and the distal stump of the basilic vein, performed without harvesting the basilic vein graft, aims to reduce the vasoconstriction induced by surgical dissection. Furthermore, the initial establishment of an arteriovenous fistula facilitates the identification of any localized dilatations within the venous graft. The primary choice is to use autologous vein grafts near the injured artery, which minimizes the risk of complications related to the grafting site. **Conclusions:** The basilic vein is a suitable choice, offering excellent medium-term patency. Its diameter closely matches the diameter of the brachial artery and has a higher-quality venous wall than the cephalic vein. Additionally, given its anatomical proximity, the basilic vein can be harvested using the same incision approach.

Keywords: Vascular Trauma, Vein graft, arterial reconstruction, Vascular surgery

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CHALLENGES AND OUTCOMES OF EMERGENCY THYROIDECTOMY IN SEVERE TRACHEAL COMPRESSION

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Introduction: An emergency thyroidectomy is a critical surgical procedure performed to address acute complications arising from thyroid disorders, such as airway obstruction, significant bleeding from a ruptured thyroid gland, or severe thyrotoxicosis that does not respond to medical management. This operation requires immediate intervention to prevent life-threatening consequences and stabilize the patient. **Case Report:** We

present a case of an 85-year-old female patient who presents to the emergency department with acute respiratory insufficiency. The clinical examination revealed a large mobile tumor with bilateral compression signs on the neck vessels. The personal pathological history indicated that a thyroid nodule was diagnosed 40 years ago with no surgical treatment. The CT scan reveals a large thyroid-origin tumor with tracheal left lateralization and severe compression. The patient was admitted for emergency surgery and a total monobloc thyroidectomy was performed. Due to the massive compression a tracheostomy was also necessary to prevent tracheal collapse. Ten days of ICU treatment and monitoring were required. A CT brain scan revealed no early damage to the cortex and no early postoperative complications were reported. **Discussions :** The emergency thyroidectomy procedure, in this case, was performed out of necessity due to the size and compressive characteristics of the tumor, which can cause hypoxia and lead to brain damage. The challenging part of the surgery is the short-term complications - and damage to the local anatomical structures. Also experienced ICU and anesthesia management is required due to the complexity of intubation in such cases. **Conclusions:** Emergency thyroidectomy surgery is rare in emergency settings. A comprehensive evaluation is required to offer the best solution to manage acute respiratory insufficiency effectively and with a lower risk for the patient.

Keywords: Emergency Thyroidectomy, Tracheal Compression, Respiratory Insufficiency, Airway Management

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POPLITEAL OSTEOCHONDROMA AS A RARE CAUSE OF KNEE PAIN, LIMITED MOBILITY, AND POTENTIAL VASCULAR COMPLICATIONS

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Introduction: Exostosis is a non-neoplastic bone growth that predominantly affects long bones including the femur and tibia. It manifests in various anatomical regions and is often attributed to genetic predisposition, mechanical stress or idiopathic etiologies. In instances where both bone and cartilage are involved in the growth, the lesion is classified as an osteochondroma. The occurrence in popliteal fossa is rare and is posing unique therapeutic challenges due to potential neurovascular involvement. **Case Report:** A 31-year-old male presented to our Orthopedics and Traumatology department with moderate knee pain, reduced mobility and stiffness in the left knee. The symptoms had a sudden onset and progressively impaired knee function. The patient had no significant comorbidities. The patient reported an inability to ambulate for more than one hour without experiencing significant knee pain and fatigue, requiring intermittent rest to alleviate symptoms. Upon clinical examination a restricted terminal knee extension, with a deficit of 15 ° was detected. Following treatment with NSAIDs, there was a slight reduction in pain, but persistent limited ROM limitation. A lateral-view X-ray revealed a pedunculated bony outgrowth arising from the posterior distal femur extending into the popliteal region. The lesion exhibited a continuous cortex and medullary cavity in continuity with the femur, consistent with the characteristic growth pattern of an osteochondroma. No signs of periosteal reaction, cortical disruption, or malignant transformation were observed. Further assessment with MRI was recommended to evaluate cartilage involvement and potential neurovascular compression. Although surgical excision was considered, it was not immediately indicated due to the lesion anatomical location and the relatively mild impact on the patient daily activities. **Discussions :** Popliteal exostosis is often associated with osteochondroma. Its rarity and anatomical proximity to neurovascular structures present significant challenges in treatment and surgical management. Mass effect may lead to popliteal artery/vein compression, increasing the risk of deep vein thrombosis or peroneal nerve involvement, causing neuropathic symptoms. Management depends on symptom severity - mild cases are monitored, whereas surgical excision is indicated for significant compression. Additionally, the patient reported a minor exostotic lesion on the forearm; however, the absence of radiological imaging precluded further evaluation. **Conclusions:** This case emphasizes the importance of early diagnosis. Prompt recognition and intervention are essential to prevent further complications, especially in symptomatic patients. A multidisciplinary approach that involves orthopedic specialists and vascular surgeons is necessary to ensure optimal patient outcomes. The postoperative prognosis is generally favorable with a low recurrence rate and significant improvement in symptoms.

Keywords: popliteal exostosis, osteochondroma, neurovascular compression

CONGENITAL MEGACOLON IN LATE CHILDHOOD: CLINICAL CHALLENGES AND SURGICAL APPROACH

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Introduction: Congenital megacolon, also known as Hirschsprung's disease, is a condition characterized by the absence of enteric ganglion cells in the wall of the large intestine, most commonly affecting the rectum and sigmoid colon. This anomaly results in the lack of peristalsis and subsequent accumulation of fecal matter. The disease typically manifests from birth, and a diagnosis established after the age of one year is considered delayed, potentially leading to severe complications including malnutrition, recurrent infections, and delays in physical and mental development. The gold standard for diagnosis is rectal biopsy, and early detection of the pathology is crucial for optimal patient outcomes. **Case Report:** We present the case of an 8-year-old female patient with a history of chronic constipation, previously investigated in multiple medical centers both abroad and in the country. Since birth, she exhibited episodic vomiting, abdominal distension, and absence of intestinal transit, suggestive of Hirschsprung's disease. She presented to the emergency department with signs of suspected intestinal obstruction. Clinical examination and imaging studies raised suspicion of an acute surgical abdomen, prompting her admission to the Emergency County Hospital Târgu Mureș. Abdominal X-ray revealed marked aerocolia in the transverse and descending colon. Computed tomography confirmed the presence of a megadolichocolon. The patient underwent a curative ileostomy for intestinal obstruction in our center. During the procedure, biopsies were taken to confirm the diagnosis of congenital megacolon. Should the histopathological results confirm the diagnosis, a definitive corrective surgery will be planned. **Discussions :** In this article, we analyze the clinical and pathological features of an undiagnosed case of Hirschsprung's disease, with progressively worsening symptoms. This case highlights not only the diagnostic challenges associated with Hirschsprung's disease but also underscores the importance of early and accurate management. **Conclusions:** Following surgical intervention, the patient showed significant improvement in gastrointestinal symptoms, demonstrating the positive impact of timely and well-coordinated surgical treatment

Keywords: Hirschsprung’s disease, Abdominal distension, Ileostomy

AURICULAR HARVEST USE IN RECONSTRUCTIVE INFERIOR EYELID SURGERY

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Introduction: Nodular basal cell carcinoma (BCC) is the most common subtype of basal cell carcinoma, with surgical excision being the standard treatment. Due to the eyelid's vital role in ocular protection, moisturizing, and blinking, lower eyelid reconstruction must balance both function and aesthetics. Tripier's technique has shown efficacy in reconstruction after tumor removal in this area. **Case Report:** The following paper presents the case of a 72-year-old male patient with a 20x13 mm cutaneous ulcerative tumor on the right inferior eyelid, phenotype undetermined preoperatively. His medical history included hypertensive cardiomyopathy, grade III hypertension, hepatic steatosis, and cerebral atherosclerosis. The patient underwent surgery on 02.12.2024. A circumscribed incision was performed with 4 mm safety margin. Four tissue samples were collected for pathology: the tumor biopsy, re-excision from the tarsal margin at the external canthus, re-excision from the tarsal external margin, and re-excision of the middle third of the lower lid. A reconstruction also took place at the same time as the excision. It was performed through a combined reconstruction approach between cartilage harvested from the right auricular pavilion to give the framework to the posterior lamella and rotational Tripier technique for a flap from the superior eyelid lateral aspect. The procedure was concluded through intradermic suture, Omnistrips® (Hartmann) and bandages. The patient had a clean wound, healing palpebral ecchymosis, and no vascular compromise. He was discharged with instructions to avoid trauma, change dressing, and keep it dry. Histopathology confirmed non-infiltrative nodular BCC with complete tumor removal. **Discussions :** Although both Tripier's technique and ear cartilage harvest are widely used in reconstructive surgery, their combination in case of reconstruction after tumor removal is not always performed. Cartilage provides better support for the eyelid framework and helps prevent retraction, improving quality of life. This technique is especially useful when larger tissue portions are excised. This

one-stage procedure offers advantages over methods like the Hughes flap or free grafting by avoiding temporary occlusion, providing a better cosmetic result, and achieving functional restoration without requiring a second surgery. **Conclusions:** Palpebral incisions are difficult to perform with optimal aesthetic outcomes. The combination of Tripier's technique and auricular cartilage graft achieved the desired result. This approach provided the necessary support for eyelid functionality and preserved appearance through the rotational flap, reducing common complications, especially found in larger resections, such as ectropion and lagophthalmos.

Keywords: Basocellular carcinoma, Cartilage harvesting, Eyelid tumor, Reconstructive surgery

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BREAST OUT, BEAUTY IN: A SURGICAL TALE OF REMOVAL & RENEWAL

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Introduction: Primary squamous cell carcinoma(SCC) of the breast is an extremely rare entity, comprising less than 0.1% of breast malignancies. It is known for its aggressive clinical course, limited treatment options, and poor prognosis. Compared to more common breast cancers, SCC often lacks typical therapeutic targets and shows resistance to conventional treatments. **Case Report:** A 66-year-old female patient was admitted to the General Surgery Department of Târgu Mureș County Emergency Hospital with synchronous bilateral breast tumors presenting with infiltration, ulceration, abscess formation, necrosis, and bilateral axillary lymphadenopathy. A multidisciplinary team, including the Plastic Surgery Department, was formed to determine the appropriate surgical approach, indicating bilateral radical mastectomy out of necessity.The surgery begins with an arcuate perilezional incision, followed by dissection of the subcutaneous tissue around the tumor, ensuring macroscopic resection margins of approximately 2-3 cm. Bilateral areolar-mammary complexes were excised to prepare for flap reconstruction due to the large skin defect created. The tumor was removed in a single piece, following anatomical planes, down to the pectoralis muscle. Additionally, the excision included the affected axillary lymph nodes due to the presence of adenopathy. Infiltrations were visible both macroscopically during the surgery and in the preoperative CT-scan, indicating chest wall and lungs involvement.Reconstruction of the chest wall defects was achieved using an abdominal flap advanced on the inferior pedicle and two fascio-cutaneous flaps from the superior pedicle, taken from the upper pole of the breasts. Histophatological examination confirmed a poorly differentiated, keratinizing squamous cell carcinoma(G3), with at least 40 mm invasion depth, multiple satellite nodules(pT3N2), and metastases in 7 of 13 cutaneous and 4 of 14 axillary lymph nodes. **Discussions :** Given the advanced nature of the disease, the surgery was performed with a palliative intent to prepare the patient for the initiation of chemotherapy.The goal was to address the tumor as much as possible to improve the effectiveness of subsequent treatment. While unilateral SCC is more commonly encountered and treated with single-site resection and reconstruction, the bilateral presentation in our case posed significant challenges. Bilateral mastectomy increased the complexity of surgery due to the need for more extensive tissue coverage and reconstruction. **Conclusions:** Primary squamous carcinoma of the breast is a rare and aggressive malignancy, making individualized treatment plans essential due to the lack of standardized protocols. Surgical resection, along with systemic therapies such as chemotherapy, is vital for improving patient outcomes. Further research is needed to better understand its progression and refine treatment strategies.

Keywords: breast tumor, scuamos cell carcinoma, flap reconstruction, radical mastectomy

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ZUELZER - WILSON SYNDROME (TOTAL COLONIC AGANGLIONOSIS) IN A NEWBORN - DIAGNOSTIC CHALLENGES AND SURGICAL MANAGEMENT

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Introduction: Zuelzer-Wilson syndrome is both a rare and severe form of total colonic aganglionosis, a variant of Hirschsprung's disease ,characterized by the complete absence of ganglion cells in the Meissner and Auerbach plexuses throughout the entire colon.This results in a complete failure of colonic peristalsis, leading to severe intestinal obstruction from the neonatal period . **Case Report:** We present the case of a newborn admitted at two days of life with abdominal distension, multiple episodes of vomiting and absence of intestinal transit. Abdominal X-ray revealed multiple air-fluid levels and was established the intraoperative diagnosis of primary peritonitis.The

absence of ganglion cells in the Meissner and Auerbach plexuses was demonstrated through additional investigations ,including contrast enema and rectal biopsy .The diagnosis was also confirmed by second opinions from pathology centers in Salzburg and Bucharest.The patient experienced recurrent episodes of subocclusive syndrome and iron deficiency anemia refractory to oral medication. Multiple surgical interventions were required, including ileostomy, full thickness biopsies and finally,total colectomy with ileoanal anastomosis using the Soave technique . Postoperative evolution was favorable, with reestablished bowel function, good oral intake and minimal perianal irritation **Discussions :** Early diagnosis of Zuelzer-Wilson syndrome can be challenging due to the nonspecific symptomes in newborns, such as abdominal distention and vomiting, and it can be easily mistaken by other common gastrointestinal issues ,including meconium ileus or intestinal atresia. It is fundamental to consider aganglionosis in differential diagnosis in cases of chronic constipation or recurrent bowel obstruction ,for a timely treatment and well management. **Conclusions:** The highlight of this case is the importance of early recognition and management of total colonic aganglionosis in order to initiate a treatment as soon as possible . Histopathological evaluation and serial biopsies are foundation stones for confirming the diagnosis. While surgical correction is the definitive treatment , postoperative monitoring and dietary adjustments play a crucial role in long-term outcomes

Keywords: Zuelzer-Wilson syndrome, Total colonic aganglionosis, Neonatal intestinal obstruction, Colectomy

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TWO CASES OF RIGHT AORTIC ARCH WITH LEFT SUBCLAVIAN ARTERY ATRESIA AND SUBCLAVIAN STEAL SYNDROME: CLINICAL AND RADIOLOGICAL INSIGHTS INTO A RARE VASCULAR VARIANT

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Introduction: Congenital aortic arch anomalies arise from embryological malformations that are often asymptomatic, leading to their frequent oversight during perinatal assessments, with diagnoses commonly occurring incidentally in adulthood. Variants that present symptoms may result in conditions such as steal syndrome or dysphagia lusoria. The right aortic arch represents a rare anomaly, typically associated with other congenital defects, although it can manifest in isolation. **Case Report:** We present two clinical cases: a 30-year-old male patient and a 65-year-old female patient diagnosed with right aortic arch with left subclavian artery atresia. The male patient exhibited signs of subclavian steal syndrome, characterized by the absence of a pulse in both the radial and ulnar arteries, along with paresthesias at rest, headaches, and dizziness, which aggravate with minimal exertion of the left upper limb. Conversely, the female patient reports experiencing these symptoms during episodes of high-intensity physical activity. Upon ultrasound examination, arterial flow reversal is noted at the vertebral artery level. Considering the male patient's diagnosis of subclavian steal syndrome, we have opted to perform a carotid-subclavian bypass through a single left supraclavicular incision. In the case of the female patient, given the emergence of symptoms during strenuous activity, we have decided to pursue periodic monitoring; surgical intervention will be considered should her condition worsen. **Discussions :** Only eleven cases were reported in the literature, of which only five presented neurological symptoms associated with subclavian steal. Furthermore, only two cases have benefited from left carotid-subclavian transposition bypass and left carotid-axillary graft bypass. Endovascular repair of subclavian steal constitutes a minimally invasive treatment option, provided that the non-atretic vessel can be traversed using a guidewire. Nevertheless, most cases present with severely stenotic or atretic origins, which necessitates management via open carotid-subclavian transposition or bypass. This treatment modality is correlated with minimal morbidity and outstanding long-term outcomes. **Conclusions:** The diagnosis of Right Aortic Arch with Left Subclavian Artery Atresia and Subclavian Steal Syndrome often occurs in adulthood because symptoms are usually absent. As a result, chronic vertebrobasilar insufficiency can lead to prolonged morbidity and a diminished quality of life. Nevertheless, the carotid-subclavian bypass procedure is considered safe and feasible, demonstrating favorable long-term outcomes.

Keywords: vascular variations, right aortic arch, subclavian Steal syndrome, carotid-subclavicular bypass

DISCOVERY OF A BORDERLINE OVARIAN TUMOR FOLLOWING AN ACUTE ABDOMINAL PAIN EPISODE

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Introduction: Borderline ovarian tumor is a noninvasive epithelial neoplasia with moderate cellular atypia, located between benign and malignant lesions. **Case Report:** A 47-year-old patient presented to the UPU with intense abdominal pain with brachial installation in the left flank, which diffusely radiates to the abdomen, without remitting at rest or not responding to drug treatment, associated with dyspnea, vomiting, and agitation. Abdominal ultrasound revealed cholelithiasis and intraperitoneal fluid. Abdominal-pelvic CT examination with contrast revealed a voluminous 10/8/6 cm left ovarian cyst. Surgical indication was retained, intervening urgently, finding an efractured ovarian cystic lesion, intraperitoneal fluid. Bilateral adnexectomy, peritoneal toilet, and drainage were performed. CA-125 dosed later has moderately elevated values (67.7). The HP exam diagnoses borderline ovarian tumor. IHC is compatible with the diagnosis of mucinous ovarian adenocarcinoma. The extension assessment is completed with CT TAP, MRI, without highlighting secondary determinations. The oncology committee decides on complementary surgery, which was performed under general anesthesia with median pubo-suprapumbilical celiotomy. Peritoneal adhesions are found to be lysed, the pelvic peritoneum is infiltrated with inflammation in the context of recent surgery. Indurated lumbo-ovarian and adnexal stumps, the right one adherent to the appendix, inhabited the gallbladder. No secondary macroscopic determinations. Appendicectomy with resection of the mesoappendix, bipolar cholecystectomy, infracolic omentectomy, large peritoneal biopsies at the level of the right and left parietocolic gutters, ablation of the round ligament with large biopsy of the adjacent anterior epigastric parietal peritoneum are performed. Extended pelvic peritonectomy is performed, with difficulties in identifying the ureters in the context of tissue infiltration from the previous operation, requiring bilateral "en bloc" ureterolysis with total hysterectomy and proximal colpectomy. Subsequently, Cattell-Braasch type take-off of the right colon, mesenteric root, and duodeno-pancreas is performed, followed by intraaortocaval lymphadenectomy. During this maneuver, the right ureter, located between two high-positioned adenopathies, suffers thermal damage of approximately 8 mm, which is why the affected segment is removed into healthy tissue. The ureter is reconstructed on a Cook stent through end-to-end anastomosis. Lymphadenectomy is continued at the level of the external and internal common iliac arteries. **Discussions :** Cattell-Braasch type take-off is a surgical technique used to access structures in the retroperitoneal space and to the great abdominal vessels. This maneuver is frequently applied in vascular interventions, as well as complex oncological ones. **Conclusions:** Borderline tumors diagnosed in ovarian cystic lesions remain a challenge as they may harbor malignant lesions that require immunohistochemical examinations for a precise diagnosis.

Keywords: Cattell-Braasch type take-off, Mucinous ovarian adenocarcinoma, Cook stent, Lymphadenectomy

COMPLEX LOWER LIMB TRAUMA IN A MOTORCYCLE ACCIDENT: SURGICAL STRATEGIES AND FUNCTIONAL RECOVERY

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Introduction: We present the case of a 40-year-old male patient with no comorbidities who arrived at the emergency department with pain and functional impairment in the left lower limb and hip region following a motorcycle accident. A full-body CT scan revealed a posterior hip dislocation with a comminuted acetabular fracture, a displaced pertrochanteric fracture, a femoral shaft fracture in the middle third, a tibial plateau fracture, a proximal fibular fracture, and a butterfly fragment fibular fracture, all in the left lower limb. **Case Report:** Upon admission, pain management was initiated with morphinomimetics, and the patient was hemodynamically stabilized. A thorough radiological assessment confirmed the diagnosis, and a treatment plan was established. The hip dislocation required immediate reduction before proceeding with surgery for the femur fractures. A long Gamma 3 intramedullary nail osteosynthesis was selected to address both the displaced pertrochanteric and femoral shaft fractures. The tibial plateau fracture was stabilized in the same surgical session with two screws. Both procedures were performed under radiological guidance, and postoperative imaging confirmed proper

osteosynthesis placement. The acetabular and fibular fractures are planned for surgical treatment once the patient's condition allows. **Discussions :** Motorcycle accidents frequently result in complex trauma, necessitating early recognition of life-threatening conditions and prompt surgical intervention to reduce mortality and complications. In this case, fractures posing the greatest immediate risk and potential for severe disability were prioritized. Management involved a combination of internal fixation techniques, including intramedullary nailing and screw fixation. The acetabular fracture requires careful surgical planning, as its degree of comminution and fragment displacement could lead to malunion and an early onset of secondary hip arthrosis if left untreated. Surgical intervention will be pursued once the patient is stable to ensure proper alignment and long-term joint function. Regarding the fibular fracture, while its severity is relatively minor compared to the other fractures, its role in ankle stability and shock absorption must not be overlooked. Proper management is essential to prevent complications such as chronic instability or malalignment, which could impact the patient's overall recovery. **Conclusions:** A multidisciplinary approach is crucial in cases of extensive lower limb trauma, integrating orthopedic surgery, pain management, and rehabilitation strategies. Postoperative care, including physiotherapy, will play a vital role in optimizing functional recovery and preventing long-term disability. Continuous monitoring and timely surgical interventions will be key to achieving the best possible outcome for the patient.

Keywords: High-impact, Trauma, Fracture fixation, Orthopedic surgery

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THE HIDDEN RISKS OF MISDIAGNOSED HYDRONEPHROSIS IN PREGNANCY – A CASE REPORT

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Introduction: Asymptomatic hydronephrosis occurs in nearly 90% of pregnancies and is considered a physiological change during the second and third trimesters. It is more frequent in primagravida and typically affects the right kidney above the linea terminalis and it disappears within a few weeks after birth. Management is generally conservative, but in symptomatic cases uretral drainage using a double pigtail stent can be performed. Misdiagnosis and inadequate management can lead to significant complications, including renal function loss. **Case Report:** We present the case of a 14-year-old primagravida, with a previously drained right kidney cyst, exteriorized transperitoneal in the right iliac fossa with a Pezzer tube in another facility. She was discharged without any further medical recommendation. She was admitted to our hospital during her 24th week of pregnancy with severe right upper quadrant abdominal pain. **Discussions :** Pregnancy-related hydronephrosis is self-limiting most of the time, but cases complicated by severe symptoms or underlying renal pathology require careful evaluation.Ureteral compression caused by the gravid uterus along with muscle relaxation induced by progesterone contributes to urinary stasis and dilatation of the collecting system. This case shows the importance of timely intervention in high-risk patients and the risks associated with misdiagnosis. Management of pregnancy associated hydronephrosis usually involves conservative treatment, but in certain cases procedural interventions such as double-J placement or percutaneous nephrostomy may be necessary in order to prevent the deterioration of the renal function, as well as to ensure proper urinary drainage. The presented case shows the importance of close prenatal monitoring and individualized management strategies to minimize complications. **Conclusions:** Physiological hydronephrosis during pregnancy is managed in most cases with conservative measures such as analgesia, positioning and antibiotics. Selected cases refractory to medical management may require internal drainage.

Keywords: Pregnancy, Hydronephrosis, renal function loss, primagravida

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PERSONALIZED PERIOPERATIVE MANAGEMENT IN A PATIENT WITH MYASTHENIA GRAVIS, PULMONARY FIBROSIS AND ISCHEMIC HEART DISEASE UNDERGOING MYOCARDIAL REVASCULARIZATION BY CORONARY ARTERY BYPASS GRAFTING

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Introduction: Cardiovascular surgical interventions in patients with complex comorbidities, such as myasthenia gravis and pulmonary fibrosis, pose major challenges for perioperative teams. The success of these interventions

depends on a well-balanced anesthetic management, focused on individualizing the approach and fostering multidisciplinary collaboration. **Case Report:** We present the case of a 66-year-old patient with a complex medical history, including generalized myasthenia gravis, pulmonary fibrosis, severe ischemic heart disease, and a history of prostate cancer treated with radiotherapy and chemotherapy. The patient underwent myocardial revascularization via coronary artery bypass grafting under general anesthesia. The perioperative management involved: preoperative respiratory and neuromuscular optimization in collaboration with pulmonologists and neurologists; careful use of anesthetic agents to minimize neuromuscular transmission impairment; protective mechanical ventilation to reduce pulmonary injury risk; advanced intraoperative monitoring (Train of Four - TOF, invasive hemodynamic monitoring) for precise neuromuscular blockade control; early extubation four hours postoperatively, following a favorable evolution in the ICU, with subsequent transfer to the cardiovascular surgery ward. **Discussions :** We present the case of a 66-year-old patient with a complex medical history, including generalized myasthenia gravis, pulmonary fibrosis, severe ischemic heart disease, and a history of prostate cancer treated with radiotherapy and chemotherapy. The patient underwent myocardial revascularization via coronary artery bypass grafting under general anesthesia. The perioperative management involved: preoperative respiratory and neuromuscular optimization in collaboration with pulmonologists and neurologists; careful use of anesthetic agents to minimize neuromuscular transmission impairment; protective mechanical ventilation to reduce pulmonary injury risk; advanced intraoperative monitoring (Train of Four - TOF, invasive hemodynamic monitoring) for precise neuromuscular blockade control; early extubation four hours postoperatively, following a favorable evolution in the ICU, with subsequent transfer to the cardiovascular surgery ward. **Conclusions:** The success of this case underscores the crucial role of the anesthesiologist in coordinating a tailored plan for patients with neuromuscular and pulmonary diseases, the importance of a multidisciplinary preoperative assessment (neurologist, pulmonologist, cardiologist, surgeon, intensive care specialist), and the need for clinical flexibility in adjusting anesthetic techniques to prevent complications and ensure rapid recovery.

Keywords: myasthenia gravis, pulmonary fibrosis, Train of Four – TOF, myocardial revascularization

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MINIMALLY INVASIVE AORTIC VALVE SURGERY TO ENABLE SAFE SPINAL TUMOR RESECTION: A MULTIDISCIPLINARY APPROACH

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Introduction: Severe aortic stenosis is a progressive and critical condition that requires prompt surgical intervention, with median sternotomy being the standard procedure for aortic valve replacement (AVR). However, in individuals who require additional thoracic procedures, standard surgical access may complicate subsequent interventions. Strategic surgical planning becomes critical in such circumstances to improve outcomes while minimizing procedural interference. We present a case of a patient with severe aortic stenosis and significant thoracic neurofibroma requiring aortic valve replacement and posterior spinal access for tumor resection. Given that a standard sternotomy might compromise the viability of the second treatment, a less invasive method was chosen to maintain anterior thoracic integrity. **Case Report:** A 61-year-old female presented with progressive lower limb weakness, gait instability, and persistent thoracic pain over the past three months. Neurological examination revealed bilateral lower limb hyperreflexia, a positive Babinski sign, and diminished proprioception, raising suspicion of spinal cord compression. Contrast-enhanced MRI identified a 5 cm neurofibroma at the T5-T6 level, exerting significant mass effect on the spinal cord. Given the progressive neurological deficits, posterior tumor excision was recommended. During the preoperative cardiovascular assessment, a grade III/VI systolic ejection murmur was discovered, requiring additional investigation. Echocardiography suggested severe aortic stenosis. Due to the substantial perioperative risk, AVR was prioritized. The procedure was performed through a 6 cm right anterior mini-thoracotomy at the second intercostal space. Peripheral femoral-femoral cardiopulmonary bypass was commenced, with direct aortic cross-clamping in a transaxillary approach. A bioprosthetic aortic valve was implanted during cardioplegic arrest. The total CPB time was 50 minutes, with a cross-clamp time of 36 minutes. The patient recovered well and was released on postoperative day 5. **Discussions :** While sternotomy is still the gold standard for replacing the aortic valve, it may increase morbidity and impair future surgical access in patients who need staged thoracic procedures. By maintaining the integrity of the chest wall, a mini-thoracotomy technique minimizes surgical trauma, bleeding, and respiratory problems. In this instance, it improved hemodynamic stability and made access to the posterior spine easier. **Conclusions:** This case study underscores the significance of a specific surgical approach in minimizing procedural conflict, enhancing patient outcomes, and

assuring the safe execution of staged procedures in complex cardiovascular and spinal pathologies.

Keywords: Aortic Valve Replacement, Minimally Invasive Surgery, Multidisciplinary Strategy, Spinal Tumor Resection

MASSIVE PELVIABDOMINAL TUMOR WITH PARASITIC VASCULAR SUPPLY FROM THE BLADDER AND MESENTERY: A CASE REPORT

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Introduction: Leyomiomas, also known as fibroids, are benign tumors originating from the smooth muscle of the uterus and represent one of the most common gynecological conditions affecting women worldwide. Although their exact etiology remains poorly understood, their growth is believed to be hormone-regulated, typically leading to atrophy after menopause. This case presentation aims to emphasize the significance of appropriately managed treatment and the need to be extremely careful when making a differential diagnosis between a malignant and non-malignant gynecological disease, but also to highlight the preferred treatment for a tumor with an extremely high degree of adhesiveness. A deep understanding of fibroid degenerations, particularly unusual variants produced by association between fibroid tumors, the bowel and mesentery may aid optimal care and help resolve the diagnostic dilemma. **Case Report:** This is the case of an 89 female patient who was previously diagnosed with a highly extensive pelvic-abdominal tumor. She was subsequently admitted to the Clinical Emergency Hospital Targu Mures' Gynecology Department 1 with the following symptoms: dysuria, polyuria, sensation of incomplete bladder emptying and lower abdominal pain. At the time of abdominal entry, a uterine tumor was identified, adherent to the mesentery and intimately to the urinary bladder, irrigated by numerous parasitic vessels. Adhesiolysis proved to be extremely difficult, with diffused bleeding from the wall of mesentery and urinary bladder. A total extracapsular hysterectomy Wiart with bilateral adnexectomy was conducted, followed by vaginal closure with suturing. **Discussions :** Taking into consideration the patient's postmenopausal state, excessive growth in the postmenopausal period, strong intimate adhesions to the surrounding tissue, the firm consistency and the increased perfusion of the neoplasm, a differential diagnosis is very difficult to make, especially before getting the histological analysis. Therefore, several possibilities were taken into account, such as myoma, sarcoma or other malignant variations. The histological analysis of the nodular formation revealed a proliferation of smooth muscle cells without atypia, including extensive areas of cystic degeneration, and no areas of necrosis. Consequently, the final diagnosis was confirmed as a subserosal uterine leiomyoma. **Conclusions:** In these rare cases, the optimal treatment plan should be Wiart Extracapsular Hysterectomy, which ensures full uterine removal while preserving pelvic structures, accompanied by careful monitoring of the patient while performing the adhesiolysis, as the risk of bleeding in this case is very high.

Keywords: Leiomyoma, pediculated tumor, extracapsular hysterectomy, non-malignant

THE LAPAROSCOPIC MANAGEMENT OF DUNBAR’S SYNDROME

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Introduction: Median Arcuate Ligament Syndrome, also known as Dunbar's Syndrome, is a rare medical condition that presumes the vascular compression of the celiac trunk by the low positioning of the median arcuate ligament and the diaphragmatic crura. It is believed to be more common among females and has non-specific symptoms such as abdominal pain- especially postprandially and after physical activity, nausea, vomiting, and weight loss. **Case Report:** This is the case of a 47 female patient who had previously been diagnosed with hypothyroidism and is currently undergoing treatment, varicose veins on her inferior members, hepatic hemangioma, mitral valve prolapse, and chronic venous insufficiency. She presented with the following symptoms: epigastric pain which increased postprandially, nausea, bloating, and sensation of early satiety. After performing an aorto-pulmonary computed tomography angiogram, it was revealed the normal caliber, uniformly opacified, without parietal changes Aorta, alongside the extrinsic stenosis of the celiac trunk, caused by the median arcuate ligament of the diaphragm, with approximately 70% stenosis. She was subsequently admitted to the Clinical Emergency Hospital Targu Mures' General Surgery Department 1 where an exploratory laparoscopy was performed along with laparoscopic adhesiolysis, sectioning and release of the median arcuate ligament, subhepatic drainage, and

completion of the procedure with an intradermal suture. **Discussions :** Considering the generalized symptoms, this pathology is typically a diagnosis of exclusion and is established after performing imagistic procedures such as computed tomography angiograms. CTA entails exposure to ionizing radiations and the use of contrast, the latter of which is contraindicated for patients with renal dysfunction. Hence, magnetic resonance angiography (MRA) can be the alternative for these patients. The decompression of the stenosed blood vessel is the plan of treatment, which can only be achieved by surgical approach, and the most common procedure is laparoscopy. **Conclusions:** Dunbar's Syndrome is a rarely encountered pathology, and it is of the utmost importance to consider it when excluding other digestive or vascular diseases. Laparoscopy management offers the most benefits: small incisions with fast recovery time and low risk of complications. However, this is an extremely meticulous procedure, therefore the team of physicians' expertise is imperative

Keywords: Median Arcuate Ligament Syndrome, laparoscopy, celiac trunk

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A SUBTLE MASTERY: EFFICIENT CAROTID-CAVERNOUS FISTULA TREATMENT VIA TRANSFACIAL EMBOLIZATION

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Introduction: Carotid-cavernous fistulas (CCFs), whether direct or indirect, are abnormal shunts between the carotid arterial system and the cavernous sinus. The primary goal of the gold-standard endovascular treatment is to eliminate the fistulous connection and decrease the pressure within the cavernous sinus, thereby alleviating symptoms and preventing complications. **Case Report:** We describe the case of a 70-year-old female patient presented at the emergency room with dermatitis, eyelid edema, and painful proptosis of the right eye, which had onset one week prior and was unresponsive to topical antibiotics. Due to the initial suspicion of orbital cellulitis, she underwent a facial computed tomography (CT) scan, CT angiography (CTA), and comprehensive cerebral angiography.The facial CT revealed thickening of the extraocular muscles alongside swelling of the periorbital soft tissues. Subsequent CTA showed early enhancement of the right cavernous sinus and dilation of the ipsilateral supraorbital and facial veins, findings that raised suspicion for a CCF. In collaboration with the otorhinolaryngology team, selective catheterization of both the internal and external carotid arteries was performed during cerebral angiography. This confirmed the presence of an indirect fistula in the cavernous sinus. For symptomatic CCFs with ocular manifestations, timely treatment is essential. Endovascular strategies can involve transarterial or transvenous approaches. An embolization procedure was then performed via the right facial vein. A microcatheter was advanced to the fistula's site in the cavernous sinus, and 120 cm of vascular coils were deployed, achieving complete occlusion of the fistula while maintaining normal intracranial circulation. **Discussions :** The transvenous technique used in this case, though relatively rare, demonstrated excellent efficacy in managing the fistula. This method offers a minimally invasive alternative to the more commonly employed transarterial approach, with the added advantage of avoiding the need for surgical exposure or additional specialist involvement. Furthermore, the procedure was completed in just 40 minutes, underscoring its efficiency in treating such complex conditions. **Conclusions:** The transvenous embolization approach via the facial vein is a valuable but underutilized strategy for the treatment of dural arteriovenous fistulas. While it requires a high level of technical expertise, it offers a safe and fast solution, broadening the therapeutic options available for managing complex CCF cases.

Keywords: Caroticocavernous fistula, Transvenous embolization, Facial vein access

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OPEN OR ENDOSCOPIC? WHY NOT BOTH? THE MODERN TAKE ON FRONTAL OSTEOMAS

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Introduction: Paranasal sinus osteomas are benign, slow-growing tumors most commonly found in the frontal sinus as a solitary lesion. These tumors are typically asymptomatic and discovered incidentally during imaging studies for unrelated conditions. However, as they grow, they can cause significant complications due to their

location, making it crucial to carefully select the most appropriate surgical approach. **Case Report:** In this case, we explore the clinical journey of a 60-year-old female patient which presented in August 2023 with complaints of nasal obstruction, anterior rhinorrhea, frontal headache, and hyposmia. An initial nasal endoscopy demonstrated only a septal deviation. A subsequent computed tomography scan identified a well-circumscribed mass with a homogeneous sclerotic matrix located in the frontal sinus, highly suggestive of an osteoma. Considering the anatomy of the frontal sinus and pathology-specific factors such as tumor size and site of attachment, the lesion was classified as a grade 4 frontal osteoma. A thorough assessment was conducted to determine the most appropriate surgical approach, leading to a combined endoscopic and external intervention. Endoscopic anterior ethmoidotomy and DRAF III frontal sinusotomy were used to improve frontal recess access, followed by an external approach with a frontal osteoplastic flap. Four months after tumor resection, the patient returned with right supraorbital swelling and frontal headache. A control CT scan revealed the stenosis of the previously performed frontal sinusotomy. Revision surgery was then performed, involving a DRAF III frontal sinusotomy with the placement of a PROPEL® stent to reduce inflammation and scarring, promoting sustained postoperative sinus patency. At the 15th day of follow-up, endoscopic evaluation showed no signs of superinfection, a well-opened frontal sinusotomy, and the PROPEL® stent properly positioned. **Discussions :** This situation highlights key considerations in the management of frontal sinus osteomas, emphasizing the need for individualized treatment strategies. While frontal sinus osteomas are relatively common, symptomatic cases requiring surgery are less frequent, and high-grade lesions pose significant surgical challenges. Literature supports a combined endoscopic and open approach for extensive frontal osteomas, particularly when critical structures are involved. **Conclusions:** By illustrating both successful treatment and a managed complication, this case contributes underscores the pivotal role of combining traditional surgical techniques with advanced endonasal endoscopy in optimizing outcomes for complex frontal sinus tumors.

Keywords: Frontal sinus osteoma, DRAF III frontal sinusotomy, Osteoplastic flap, PROPEL™ stent

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BREAKING BAD (TWICE) : RECCURENT TRAUMA AND THE BATTLE FOR FEMORAL FIXATION

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Introduction: In the first five years following the primary hip replacement, the most common indications for a prosthesis revision are infection and joint instability. However, in the long term (beyond five years), revisions are primary caused by aseptic periprosthetic bone resorption. Through this case study, my pursuit is to showcase the mobilization of the femoral component due to periprosthetic bone loss induced by repeated trauma, along with the surgical approach taken to address the issue. **Case Report:** The patient is a 62-year-old woman with a history of hypertension and bilateral total hip replacement. Her medical records indicate that she sustained a trauma induced periprosthetic femoral Vancouver B2 fracture in her left hip. A subsequent trauma led to the mechanical failure of osteosynthesis implants, which were then replaced with a new "hook" plate, screws, and cerclage wires. Upon admission to our institution, she was diagnosed with aseptic mobilization of the femoral component of the left hip prosthesis, requiring a revision surgery to implant a modular femoral component. During the procedure, all previous implants (plates, screws, and cerclage cables) were removed, along with the primary femoral component. The Greater and Lesser Trochanters were preserved with their muscle insertions intact to facilitate reintegration. After preparing the femur, a Stryker modular prosthesis was implanted, and the Greater and Lesser Trochanters were reattached to the proximal femoral component. **Discussions :** The surgical intervention successfully restored stability by implanting the modular femoral component, while preserving essential bone structures and soft tissues. The patient's postoperative rehabilitation began promptly, and early results showed satisfactory stability and functional recovery. **Conclusions:** This case highlights the complexities of managing a periprosthetic fracture compounded by significant bone resorption and implant mobilization due to repeated trauma. Maintaining and reintegrating the trochanters in a stable manner may contribute to improved functional outcomes after prosthesis revision.

Keywords: Total hip replacement (THR), Periprosthetic fracture, Aseptic loosening, Femoral component mobilization

MENINGOENCEPHALOCELE OF THE LATERAL RECESS OF THE SPHENOID SINUS: CASE REPORT AND SURGICAL MANAGEMENT

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Introduction: Meningoencephalocele is a rare condition where a portion of the meninges and cerebral tissue protrudes through an abnormal opening, in this case, through the sphenoid bone into the lateral recess of the sphenoid sinus. If untreated, it may lead to severe complications such as meningitis, brain abscess, neurological deficits and seizures. **Case Report:** We present the case of a 62-year-old female patient who visited the Ambulatory ENT Service at the Clinical Hospital of Varese, Italy, with a long history of recurrent headaches and, in the last four months, the sudden appearance of left watery rhinorrhea. Her medical history included mild Obstructive Sleep Apnea, Arterial Hypertension, and Type 2 Diabetes, with no suspicious sinonasal neoformation detected.A biochemical test for Beta2 transferrin in the rhinorrhea fluid returned positive, indicating the presence of cerebrospinal fluid (CSF). Subsequently, a CT scan revealed a clear left lateral recess bone interruption. An MRI using T2 and T2 FLAIR sequences confirmed the presence of CSF and excluded inflammation or blood contamination. The final diagnosis was Sphenoidal lateral recess meningoencephalocele (MEC).A preoperative intrathecal fluorescein test was performed to precisely locate the CSF fistula before surgery, minimizing complications like meningitis or fistula recurrence. Fluorescein was injected intrathecally via lumbar puncture and identified under UV light during nasal endoscopy by the presence of fluorescent CSF leaks. For surgical repair, a TEPS (Trans-Ethmoid-Pterygoid Sphenoidotomy) approach was employed, allowing endoscopic access through the nasal cavity and ethmoid bone to reach the posterior sphenoid sinus safely and minimally invasively. This approach enhances visualization and reduces complication risks.The defect was repaired using the Gasket-Seal reconstruction technique, which involves three layers: an intracranial fascia lata free flap, a rigid/semi-rigid cartilage or bone gasket providing mechanical sealing, and an outer vascularized membrane (Hadad-Bassagasteguy flap) for final coverage and healing support. **Discussions :** Radiological findings also suggested idiopathic intracranial hypertension (IIH) as a possible cause of MEC, with signs such as optic nerve tortuosity, enlarged arachnoid pits, empty sella turcica, and an enlarged CSF ring around the optic nerve. **Conclusions:** The CT scan performed four days postoperatively showed no signs of pneumocephalus or complications, and the patient had a successful recovery. This case demonstrates that precise preoperative localization of CSF leaks and minimally invasive endoscopic techniques with effective closure methods like Gasket-Seal reconstruction can lead to excellent outcomes in managing sphenoidal meningoencephaloceles.

Keywords: Meningoencephalocele, Trans-Ethmoid-Pterygoid Sphenoidotomy, Gasket-Seal Reconstruction, Intrathecal Fluorescein Test

SINONASAL PERIPHERAL NERVE SHEATH TUMOR WITH INTRACRANIAL EXTENSION: A CASE REPORT

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Introduction: Sinonasal schwannomas are rare peripheral nerve sheath tumors, accounting for a small percentage of head and neck neoplasms. Their intracranial extension is even less common and poses significant diagnostic and therapeutic challenges. These tumors arise from Schwann cells of peripheral nerves and are typically benign, but their location in the sinonasal region can lead to significant local invasion and symptomatology. Because schwannomas can mimic other aggressive tumors such as malignant peripheral nerve sheath tumors (MPNSTs) or sinonasal carcinomas, accurate diagnosis requires a thorough radiological and histopathological evaluation. **Case Report:** A 34-year-old female presented with a long-standing history of left-sided respiratory nasal obstruction (RNO), frontal headache, and hyposmia, without diplopia or neurological deficits. Physical examination by an ENT specialist revealed a neoformation in the left nasal fossa, causing septal bulging. The lesion appeared firm, non-ulcerated, and extended superiorly towards the skull base.Imaging studies

were performed to characterize the lesion. Computed tomography (CT) demonstrated a left nasal fossa mass with erosion of the ethmoidal roof and nasal septum, along with displacement of the lamina papyracea and medial maxillary wall. Magnetic resonance imaging (MRI) confirmed intracranial extension of the lesion with contrast enhancement, raising suspicion for a malignant tumor. **Discussions :** A biopsy was performed under local anesthesia at the Head and Neck Center in Varese. The histopathological analysis suggested a malignant peripheral nerve sheath tumor (MPNST), prompting a multidisciplinary tumor board discussion. Given the location, potential malignancy, and risk of further intracranial invasion, a surgical approach was deemed necessary. The patient underwent a left endoscopic resection with transanal craniectomy (ERTC), followed by multilayer skull base reconstruction to ensure complete tumor removal while minimizing surgical morbidity. The final histopathological examination confirmed the diagnosis of a benign peripheral nerve sheath tumor - schwannoma, negating the need for adjuvant therapy. The patient recovered well postoperatively, with significant improvement in nasal breathing and olfactory function. **Conclusions:** At six-month follow-up, endoscopic evaluation and MRI showed no evidence of residual or recurrent disease. Given the low recurrence rates associated with benign schwannomas, long-term surveillance was planned.This case highlights the importance of a thorough diagnostic workup in sinonasal masses with intracranial extension. Given the significant overlap in imaging findings between benign schwannomas and more aggressive malignancies, histopathological confirmation is essential. ERTC proved to be a safe and effective surgical approach, offering complete tumor removal with favorable functional and oncological outcomes. Regular clinical and radiological follow-up remains crucial for early detection of recurrence.

Keywords: Sinonasal Schwannoma, Intracranial extension, Endoscopic resection, Multilayer skull base Reconstruction

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OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY IN A YOUNG PATIENT- CASE PRESENTATION

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Introduction: Obstructive hypertrophic cardiomyopathy is a primary myocardial disorder characterized by asymmetric left ventricular hypertrophy and left ventricular outflow tract (LVOT) obstruction. While its pathophysiology is well established, the phenotypical presentation, disease progression and response to treatment can vary significantly among patients. This case highlights a unique presentation of OHCM, demonstrating a characteristic phenotype and unexpected therapeutic response contributing to the growing body of literature on its diagnostic and management challenges. **Case Report:** 32-year-old patient complaining of progressive exhaustion and dyspnea upon low effort, previously diagnosed with "cardiomegaly" and placed on Betablocker medication presents to a clinic in Arad, Romania for "persisting symptoms". Paraclinical investigation showed abnormal ECG (Sokolov-Lyon criterion of 40mm; negative T waves of 4mm in V4-V6, DI, DII, aVL) ; structurally modified echocardiography (Left ventricle with predominantly septal hypertrophy (IVS 2.1 cm), LVEF 60%, physiological parietal-wall kinetics; significant hemodynamic pressure gradient in the LVOT; diastolic dysfunction type I; dilated Left Atrium (4.2 cm, 21 cm², 69 ml)). Findings using the Doppler Ultrasound technique included: Moderate mitral regurgitation due to elongation of the mitral valve (VMA) and SAM (systolic anterior motion) of the mitral valve; minor functional tricuspid regurgitation and mild secondary pulmonary hypertension (PAPs 44 mmHg). After ruling out other potential causes (metabolic abnormalities, neuromuscular diseases, etc.) the final diagnosis, based on all paraclinical investigations, was Obstructive hypertrophic cardiomyopathy of genetic causes leading to Class III Heart Failure. Treatment options included Betablocker medication, septal reduction intervention -either by septal myectomy or alcohol septal ablation). The latter was preferred and after successfully obliterating the 1st septal artery, the patient presented iatrogenic 3rd degree total AV-block and basal septal myocardial infraction (possible due to ischemia/necrosis or inflammation). After implanting a permanent dual-chamber pacemaker there was a significant symptomatic improvement with Basal interventricular septal akinesia, without SAM VMA and mild mitral regurgitation. **Discussions :** Standard treatments been stagnant for decades, although there have been significant advances in surgical treatment of patients with obstructive OHCM there is a strong need for a refined method that minimizes complications. The case is in correlation with recent clinical trials which showcase that alcohol ablation is preferred for younger patients, despite higher complication rate, when compared to myectomy. **Conclusions:** Although treatment complications are not intended, lack of treatment in OHCM results in an unfavorable prognosis. Alcohol septal ablation is a minimally invasive surgical treatment which favors higher quality of life, and good prognosis when compared to septal myectomy.

Keywords: Obstructive hypertrophic cardiomyopathy, Alcohol Septal Ablation, Cardiomegaly, Heart Failure

GIST AND RECURRENT BLADDER CANCER – A HIDDEN LINK OR A MERE COINCIDENCE? A CASE CHALLENGING ONCOLOGIC BOUNDARIES

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Introduction: Can two seemingly unrelated cancers be connected by an underlying oncogenic mechanism? Gastrointestinal stromal tumors (GISTs) are rare mesenchymal neoplasms driven by KIT or PDGFRA mutations, primarily affecting the stomach. While most cases are sporadic, recent findings suggest that GISTs may co-occur with other malignancies, raising the question of a shared oncogenic pathway. **Case Report:** A 70-year-old female with a history of high-grade urothelial bladder carcinoma (pT1 G3), previously treated with transurethral resection and intravesical BCG (Bacillus Calmette-Guérin), was admitted for persistent iron deficiency anemia (Hb 9.2 g/dL) unresponsive to oral iron supplements. Despite the absence of overt bleeding, the patient reported progressive fatigue and mild epigastric discomfort. Routine upper endoscopy revealed a 4.5 cm submucosal mass at the greater curvature, with intact overlying mucosa, raising suspicions of GIST, metastatic bladder cancer, or gastric lymphoma. Laparoscopic wedge resection was performed, with pathology confirming GIST (CD34+, c-KIT+). Given the tumor's low-risk profile, adjuvant imatinib was not initiated. The patient's anemia resolved postoperatively (Hb 12.1 g/dL at 3 months). The patient remains under close surveillance for both GIST and bladder cancer recurrence. **Discussions :** This case raises an intriguing question: is there a biological connection between GIST and bladder cancer, or is this a rare coincidence? While these malignancies originate from different tissues, KIT overexpression has been reported in both, suggesting a potential genetic or inflammatory link. Another key lesson is the critical role of persistent anemia as a diagnostic clue. In patients with prior cancer, hematologic abnormalities should never be dismissed as mere treatment effects - they might be the first sign of an undiagnosed neoplasm. **Conclusions:** Cancer rarely follows a single path. In this case, a simple lab abnormality - iron deficiency anemia - became the turning point that revealed an unexpected malignancy. This underscores a crucial oncologic principle: when a patient has a history of cancer, new symptoms should never be ignored, no matter how minor they seem. Recognizing potential links between different cancers, whether through genetic predisposition or chronic inflammation, is essential in improving early detection and patient outcomes. While GIST and bladder cancer rarely co-occur, this case highlights the importance of a multidisciplinary, proactive approach to oncology. It also serves as a reminder that sometimes, the key to a new diagnosis lies in listening carefully to the body's subtle warning signs.

Keywords: Gastrointestinal stromal tumor, KIT mutation, bladder cancer, BCG treatment

ENDOSCOPIC SUTURE AS A SOLUTION FOR HEMORRHAGE IN HIGH-RISK SURGICAL PATIENTS

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Introduction: Gastrointestinal hemorrhages are common medical emergencies. The main manifestations include hematemesis and melena. Major causes include esophagogastric varices, arteriovenous malformations, tumors, and Mallory-Weiss syndrome. The most frequent cause of upper gastrointestinal hemorrhages is peptic ulcers, which can be life-threatening for patients. **Case Report:** : An 84-year-old male patient with multiple comorbidities: atrial fibrillation with a high ventricular rate (CHADS-VASc score 4), aortic atheromatosis, severe left internal carotid stenosis (70%), right internal carotid stenosis (50%), history of stroke, previous acute myocardial infarction, chronic ischemic heart disease, grade II hypertension, and bladder cancer treated surgically and with radiotherapy. The patient presented to the Emergency Department with upper gastrointestinal bleeding (UGIB), hematemesis, epigastric pain, and deteriorated general condition. Two endoscopies were performed. Early endoscopy allows identifying the hemorrhage cause, diagnosing, and applying therapy if needed. The first endoscopy showed digested blood and clots in the duodenum and stomach, without signs of active bleeding. . The lower esophagus presented a large clot and fresh blood, raising suspicion of a possible aortoesophageal fistula A second endoscopy, two days later, showed blood in the duodenum and stomach without major lesions. A giant axial hiatal hernia with torsion and a 4 cm Cameron ulcer was identified. The ulcer was treated endoscopically using

hemoclips and an endoloop. **Discussions :** The therapeutic choice was between interventional endoscopy and classic surgery for high-risk patients. Classic surgery (gastrectomy, suturing) ensures direct control over the hemorrhage source but carries high postoperative complication risks and requires general anesthesia, dangerous for cardiovascular patients. Endoscopic intervention (suture with hemoclips and endoloop) is minimally invasive, avoids general anesthesia, and has a high success rate in controlling hemorrhages. It is effective in complicated ulcers, such as the Cameron ulcer Forrest IIA described here. The main drawback is the risk of rebleeding, manageable through monitoring and repeat interventions. **Conclusions:** Given the patient's high-risk profile, endoscopic intervention was the first-line choice. The selection of a minimally invasive procedure allowed effective hemostasis without exposing the patient to the major risks of classic surgery. His stable evolution and safe discharge confirm that the method was successful.

Keywords: Endoscopic intervention, Hemorrhage, Hemoclips, Hemostasis

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MANAGEMENT OF COMPLETELY ENDOPHYTIC RENAL TUMOR THROUGH 3D LAPAROSCOPIC PARTIAL NEPHRECTOMY

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Introduction: Kidney cancer ranks 14th in the World Health Organization Global Cancer Observatory with 434840 new cases identified in 2022 and 155953 deaths. For early stage tumors (T1-T2) partial nephrectomy is preferred. The completely endophytic tumors are hard to treat through partial nephrectomy, due to the fact it increases the complexity of the case. Minimally invasive approaches, especially laparoscopy are usually more difficult to perform, but the functional and oncologic results are superior to conventional surgery. **Case Report:** We present the case of a 41-year-old male patient, with a BMI of 28.73 with cT3a N2a M0 recto-sigmoid adenocarcinoma treated 8 years ago through radio-chemotherapy and surgery. During the CT scan follow-up, a 3 cm completely endophytic right renal tumor was discovered, which was evaluated with a score of 10 in the RENAL nephrometry chart. We performed a 3D laparoscopic partial nephrectomy. Intraoperative ultrasound was performed. The total operative time was 150 minutes, warm ischemia time of 31 minutes, and 150 ml of blood loss. No intraoperative complications occurred. The patient spent the first 24 postoperative hours in the intensive care unit and was discharged on postoperative day 3. Ultrasound and blood tests were performed on the day of discharge which were all in normal ranges. The pathology report confirmed a clear cell renal cell carcinoma, staged pT1a Nx Mx L0 V0 Pn0 R0. **Discussions :** It is considered uncommon for a young man to develop metachronous malignancies in the absence of known genetic risk factors. The patient was referred for genetic testing in order to identify possible mutations which could lead to further malignant pathologies in the future. It is demonstrated that partial nephrectomy is associated with improved overall survival compared to radical nephrectomy. Patients who underwent partial nephrectomy demonstrated approximately half the risk of developing cardiovascular complications and experienced less renal morbidity. Some studies even identified radical nephrectomy as a significant risk factor for the development of postoperative chronic kidney disease. Minimal invasive techniques demonstrate superior functional recovery, less pain, early social reintegration and higher self esteem. Even though, more difficult to achieve technically, the oncological results are the same as for the open technique. **Conclusions:** 3D laparoscopic partial nephrectomy can be performed for complex T1 clear cell renal carcinomas, with high functional and oncologic results.

Keywords: Clear cell renal cell carcinoma, Secondary malignancy, Partial 3D laparoscopic nephrectomy, Intraoperative ultrasound

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WHEN THERAPY STRIKES BACK: PROSTATIC TUBERCULOID GRANULOMAS AS AN UNINTENDED CONSEQUENCE OF BCG

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Introduction: Prostatic granulomas represent chronic inflammatory lesions which manifest as an answer to infections, injuries or even an autoimmune reaction. They are made of epithelioid macrophages, lymphocytes and multinucleated giant cells, and depending on their etiology, they may or may not present necrosis. BCG (Bacillus Calmette-Guérin) therapy, commonly used for non-muscle invasive bladder cancer, has been associated with rare

cases of granulomatous prostatitis, which can mimic malignancy both clinically and radiologically. **Case Report:** A 64-years-old patient presents to the Urology Department of the Cluj-Napoca Municipal Hospital. He has a history of multiple urothelial papillary carcinomas for which he receives treatment with BCG. The patient presents a slightly elevated PSA level (4.16 ng/ml). Given that he underwent an MRI evaluation which revealed a nodular area with low T2 signal intensity, fitting into PI-RADS 4 class, the suspicion of prostatic adenocarcinoma arises. A TRUS FUSION MRI biopsy is performed and 16 fragments are taken. Following the pathology examination, no neoplastic lesions are found on any of the samples. The observed changes include multifocal glandular hyperplasia, basal cell hyperplasia and marked stromal inflammation with glandular abscess formation. Unexpectedly, tuberculoid granulomas with complete necrosis areas are discovered. **Discussions :** The particularity of this case lies in the occurrence of tuberculoid granulomas as a complication of the BCG treatment. This is a rare outcome, but one that closely mimics prostatic cancer, both though laboratory tests (elevated PSA level) and imaging evaluations. Given that these types of granulomas are self-limiting, no treatment is required beyond clinical monitoring. **Conclusions:** Even though the risk is very slightly, patients that follow prolonged BCG treatment and those who have a compromised immune system must be kept under careful observation and every test must be verified throughly, including histopathological confirmation, which is essential to differentiate granulomatous prostatitis from malignancy and avoid misdiagnosis.

Keywords: granulomas, tuberculoid granulomas, prostatic adenocarcinoma, BCG treatment

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MANAGEMENT AND RECOVERY OF SEVERE POLYTRAUMA CAUSED BY A ROAD TRAFFIC ACCIDENT IN A PATIENT WITH A ONE-YEAR-OLD TOTAL LEFT HIP ARTHROPLASTY: A CASE STUDY

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Introduction: A periprosthetic fracture, a tibial plateau fracture, and a supracondylar fracture of the femur are three distinct types of complex lower limb injuries that involve, respectively, a fracture of the bone surrounding a joint replacement, a fracture of the proximal tibial articular surface compromising the knee joint integrity, and a distal femoral fracture above the knee - often affecting joint function. **Case Report:** We report the case of a 66-year-old patient who, following a traffic accident, was admitted to the hospital with severe polytrauma, including several injuries, most alarming of which were to the lower left limb. The patient's history reveals that he underwent a total left hip arthroplasty one year ago. Radiological assessment revealed multiple injuries, including pelvic trauma, a left ischiopubic ramus fracture, a periprosthetic fracture of the proximal left femur, and additional supracondylar and tibial plateau fracture. The primary objective was to manage the injuries sustained by the patient urgently and to initiate an effective recovery. Immediately after admission, the first two procedures were performed: periprosthetic fracture and supracondylar femur fracture. This operation is based on a lateral approach for the open reduction of the periprosthetic fracture and osteosynthesis using an anatomical plate with screws (a Hook-plate) and two orthopedic cables. Additionally, the supracondylar fracture was reduced and fixed with an interfragmentary screw and an anatomical distal femur plate. A 13 cm incision was made, extending from the previous anterolateral proximal incision. The fracture was reduced followed by osteosynthesis using two anatomical proximal tibia plates, along with a lateral interfragmentary traction screw and a medial plate. After one week, the second surgery was performed, where the tibial plateau plates were placed through the anterolateral approach on the proximal tibia. Following both interventions, the patient remained afebrile, with no complications, with a wound presenting serosanguineous secretions, without signs of inflammation. The prescribed treatment included analgesics, anticoagulants, and anti-inflammatory medication, along with antibiotics. **Discussions :** Most studies address these injuries individually, however, there is limited evidence about the immediate need to manage all three fractures. The staged surgical approach and use of anatomical plates with interfragmentary screws aligned will support fracture stability and joint preservation. **Conclusions:** All three procedures were successful and the patient remained in a stable condition. Additionally, the patient is currently undergoing physio-kinetotherapy and can perform knee-hip flexion of approximately 20 degrees. This case highlights the critical need for a well-coordinated approach to effectively manage complex medical conditions such as orthopedics-traumatology.

Keywords: Periprosthetic fracture, Tibial plateau fracture, Supracondylar fracture, Polytrauma

DOUBLE NUCHAL CORD STRANGULATION AND UTERINE HYPOTONIA: INSIGHTS FROM A CASE REPORT

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Introduction: Uterine hypotonia, also referred to as uterine atony, is a condition characterized by insufficient uterine muscle tone during or after childbirth.Fetal distress due to umbilical cord complications represents a critical obstetric emergency, often requiring immediate intervention to prevent adverse neonatal outcomes.What makes this case particularly rare and challenging is the concurrent occurrence of uterine hypotonia. Uterine hypotonia can impair the progress of labor and complicate fetal resuscitation efforts. **Case Report:** The patient is a 32-year-old female admitted at 36 weeks and 3 days of gestation for evaluation and management of amniotic fluid leakage and the onset of labor. Fetal assessment reveals acute fetal distress due to double nuchal cord strangulation, complicated by uterine hypotonia. Procedural interventions include an emergency cesarean section via segmental transverse incision, resulting in the delivery of a live, mature male neonate with a birth weight of 3080 grams. A cyanotic male newborn was delivered in an emergency setting due to fetal bradycardia. Postpartum, the mother developed severe uterine hypotonia, unresponsive to medical treatment (pabal, oxytocin, ergometrine, misoprostol), uterine massage, and the B-Lynch technique. Due to the failure of conservative management, a subtotal emergency hysterectomy with bilateral tubal ligation was performed.Newborn Outcome: APGAR score: initially 2/1, progressively improving to 7/5 and 8/10 in the following minutes. **Discussions :** The patient was diagnosed with third-trimester pregnancy termination for medical reasons (Voluntary Termination of Pregnancy (VTP)), with a cephalic-presenting fetus in acute fetal distress. Literature states that third-trimester termination is rare and should only occur in extreme cases, with urgent delivery, usually via cesarean section, recommended for acute fetal distress.A bilateral tubal ligation was performed as a permanent contraceptive method, per FIGO guidelines, at the patient's request. Due to severe hemorrhage and uterine hypotonia, a subtotal hysterectomy was necessary. Literature supports obstetric hysterectomy as a last-resort procedure for massive postpartum hemorrhage.Postoperative management, including antibiotics, anticoagulants, peritoneal drainage monitoring, and hemodynamic assessment, followed standard protocols to prevent infection and thromboembolic complications. **Conclusions:** In cases of severe uterine hypotonia, precise and calm management is essential, with the priority being the saving of both lives. The correct intervention represents a medical success.

Keywords: Uterine hypotonia, Fetal distress, B-Lynch technique, Emergency cesarean section

MANAGEMENT OF FRACTURE OF THE DISTAL TIBIAL EPIMETAPHYSIS, LEFT SIDE IN A 59-YEAR-OLD MALE

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Introduction: Fractures of the distal tibial epimetaphysis represent complex injuries involving the distal tibia, often characterized by comminution, intra-articular extension, and significant soft tissue damage. These fractures account for 5%-10% of all tibial fractures and are more prevalent in males aged 35-45 years. The etiology typically involves high-energy trauma, such as motor vehicle accidents or falls. **Case Report:** A 59-year-old male presented to the emergency department after a same-level fall, reporting acute left ankle pain. Radiographic and computed tomography (CT) imaging confirmed a distal tibial epi-metaphyseal fracture (pilon fracture). Initial management included immobilization with a below-knee plaster cast (Gipsverband-Pflaster, G-P cast), local antiseptic dressings, and thromboprophylaxis. Due to significant peri-lesional edema, surgical intervention was delayed until soft tissue conditions improved. On March 3, 2025, the patient underwent open reduction and internal fixation (ORIF) using an anatomical L-plate and screws under radiographic guidance. Postoperatively, the patient remained hemodynamically stable, with gradual edema resolution and no signs of infection. **Discussions :** This case highlights the challenges of managing pilon fractures, particularly the need for delayed surgery to address soft tissue compromise. The treatment protocol emphasized a multidisciplinary approach, including thromboprophylaxis, anti-inflammatory therapy, and meticulous wound care. Postoperative care involved a non-weight-bearing regimen for 10-12 weeks, immobilization, and physiotherapy to optimize recovery. **Conclusions:** This case underscores the importance of individualized treatment for pilon fractures, balancing surgical timing with

soft tissue recovery. Adherence to postoperative protocols, including prolonged immobilization and thromboprophylaxis, is critical for favorable outcomes. Further research is needed to refine anticoagulant guidelines in such trauma cases.

Keywords: Pilon fracture, Thromboprophylaxis, Open reduction and internal fixation(ORIF), Comminution

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MULTISTAGE RECONSTRUCTION OF A TRAUMATIC THUMB AMPUTATION: CASE REPORT OF LOCAL RADIAL FLAP AND SKIN GRAFTING WITH FAVORABLE OUTCOME

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Introduction: Traumatic amputations involving the thumb are one of the most serious traumas regarding the hand. 40% of the hand's functionality regarding grasping and holding are mediated by the thumb itself. If reconstruction is not achievable by replantation, soft tissue coverage can be achieved by a radial flap and skin grafting. **Case Report:** This paper presents the case of a 44 year old, male patient that had been brought to the emergency department due to a crushing / avulsion trauma with the consequence of amputation of the left thumb at the interphalangeal level with concurrent complete degloving of the first finger and open dislocation of the metacarpophalangeal joint. The first operation was performed on the 06.05.2023 with the initial debridement, excision of devitalized tissues, curettage, lavage, and hemostasis. The surgical exploration via a proximal incision revealed the complete amputation with complete transection of the nerve-vascular complex with an intact flexor pollicis longus tendon. Arterial repair has been performed via arteriorrhaphy on the radial artery, but with no successful distal perfusion. Therefore, the decision had been made to reamputate at the interphalangeal articulation with a residual circular skin defect. The second intervention was performed on the 08.05.2023, with coverage of the remaining skin and soft tissue defect using a local rotational radial flap with a distal pedicle. The remaining skin defect was covered with the use of a split-thickness skin graft from the anterior thigh. The graft had been fixated with staples, the flap with separate stitches. The post-operative outcome showed no inflammatory signs with a viable flap. There are no signs of vascular compromise, and the capillary pulse is normal. The graft is well integrated. **Discussions :** Traumatic amputations of the thumb require careful evaluation regarding the viability of the replanted organ. Unfortunately, in this case the vascular supply was not sufficient to ensure successful replantation. However, combining local radial flaps with the split thickness skin graft ensured effective wound closure where microsurgical techniques are limited. **Conclusions:** Optimal outcomes regarding traumatic events of this magnitude are hard to achieve. However, this case showed that even in complex injuries where amputations were necessary, functional and aesthetically acceptable outcomes can be achieved using regional flap techniques

Keywords: Trauma of the upper extremity, Reconstructive surgery, Radial flap, Skin Grafting

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MULTISTRUCTURAL REPAIR FOLLOWING SEVERE OPEN FOREARM INJURY: TENDON, VASCULAR AND SKELETAL RECONSTRUCTION

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Introduction: We present the case of a 64-year-old patient presenting in the ER accusing pain and functional impairment of the right forearm. Clinical examination reveals an open fracture of the radius with multiple lesions involving adjacent structures, such as tendons and blood vessels. Additionally, the patient had a history of other orthopaedic implants, but most importantly, a case of mental and behavioural disorders caused by harmful usage of tobacco, for which he received counselling and supervision. The association of the traumas and the lack of access to tobacco while being admitted, according to international studies, shows that it usually leads to non-compliant patients and it directly affects the outcomes and the effectiveness of medical interventions. **Case Report:** The patient underwent surgical interventions, which involved a primary surgical debridement under general anaesthesia. During the intervention, the surgical team identified the fracture site and excised all devitalised tissue to reduce the risk of infection. An external fixator was applied to ensure proper stabilisation of the fractured radius. The extensor carpi radialis longus and brevis were repaired, while the extensor digitorum communis tendon of the index and the abductor pollicis longus tendon required reconstruction by performing a tenorraphy. Intraoperatively,

a 3 cm segmental defect of the radial artery was discovered. To maintain arterial patency and ensure future vascular continuity, intraluminal catheters were inserted into both ends of the artery. Due to the extensive soft tissue loss, the fracture site was covered using local muscle flaps. Finally, a negative pressure wound therapy system (Vivano) was applied to promote granulation tissue formation, control exudate and support wound healing. **Discussions :** The surgical management of the laceration was successful, although there was a postoperative tegumentar defect still left. After a few days of proper care, bandaging, and cleaning of the wound by the medical personnel, the patient shows an inappropriate attitude, refusing vehemently a surgical intervention for the skin defect, despite having exposed the risks, disadvantages, and the suboptimal evolution in the absence of further treatment. **Conclusions:** This case highlights the successful surgical resolution of a complex intervention involving multiple structures being damaged. However, through meticulous surgical techniques and multidisciplinary care, favorabile postoperative outcomes would have been achieved, if continued vigilance and follow-up care had been possible, for they are crucial in managing such cases effectively.

Keywords: Arterial patency, Tenorraphy, Multidisciplinary, Laceration

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INFECTED AND CALCIFIED HYDATID CYST MIMICKING ACUTE CHOLECYSTITIS: A SURGICAL CHALLENGE

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Introduction: Hydatid disease remains a significant health concern in endemic regions. When complicated by infection, calcification, and adhesion to neighboring organs, surgical management becomes particularly challenging. We present a rare case of a calcified and abscessed hydatid cyst of the liver, adherent to the transverse colon and duodenum, managed surgically at our tertiary center. **Case Report:** A 75-year-old female presented with right upper quadrant pain lasting one week, associated with nausea, vomiting, diaphoresis, and generalized weakness. Clinical examination revealed jaundice and tenderness in the right hypochondrium. Her history included hypothyroidism, cholelithiasis, acute edematous pancreatitis, and hiatal hernia. Laboratory findings indicated mild anemia and inflammatory syndrome. Initial abdominal ultrasound showed a distended gallbladder with multiple infundibular microliths, slightly thickened walls, and no biliary dilation. A preoperative diagnosis of acute lithiasic cholecystitis was made. She was admitted and prepared for surgery with supportive therapy and antibiotic prophylaxis. During surgery, laparoscopic exploration revealed a calcified, abscessed hydatid cyst in the right hepatic lobe (segments V/VI), adherent to the transverse colon and duodenum, with a normal gallbladder. Due to extensive adhesions and purulent content, conversion to open laparotomy was decided. The procedure included partial pericystectomy (Lagrot-Mabitt), adhesiolysis, duodenorraphy, and double drainage of the subhepatic and cystic cavities. Intraoperative methylene blue testing excluded anastomotic leakage. Histopathology confirmed a calcified cyst wall, consistent with parasitic origin. Postoperatively, the patient had a favorable evolution under broad-spectrum antibiotics (Meropenem), analgesics, and anticoagulant prophylaxis. Follow-up ultrasound and MRI confirmed regression of the inflammatory process, no fluid collections, and proper healing. The first drain was removed on day 15, and the second on day 22. **Discussions :** Hydatid cysts may remain asymptomatic for years, but complications such as secondary infection, calcification, and adherence to neighboring structures significantly increase surgical complexity. In this case, despite a misleading clinical picture of acute cholecystitis, surgical exploration revealed a far more complex pathology. A multidisciplinary approach and intraoperative adaptability were crucial for successful management. **Conclusions:** This case underlines the importance of considering hydatid disease in the differential diagnosis of right upper quadrant pain, especially in elderly patients from endemic areas. Thorough surgical planning, careful dissection, and rigorous postoperative care enabled a good outcome despite initial diagnostic uncertainty and intraoperative challenges.

Keywords: calcified cyst, hydatid disease, liver

SYNCHRONOUS RECTAL SCHWANNOMA AND GALLBLADDER ADENOCARCINOMA: A CASE REPORT OF BENIGN-MALIGNANT TUMOR COEXISTENCE

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Introduction: Schwannomas, benign tumors originating from Schwann cells, are rare in the gastrointestinal tract,

with colorectal schwannomas particularly uncommon. Papillary intracholecystic adenocarcinoma (PIA), an aggressive gallbladder cancer variant, typically arises from precursor lesions like intracholecystic papillary neoplasms (ICPNs). Compared to other gallbladder malignancies, papillary adenocarcinomas display more aggressive biological behavior, characterized by rapid progression and poor prognosis. This case report emphasizes the unique coexistence of a benign rectal schwannoma with a malignant gallbladder adenocarcinoma, discussing specific diagnostic and therapeutic challenges. **Case Report:** A 68-year-old female patient presented for surgical management of Grade IV genital prolapse. Clinical and paraclinical evaluations incidentally identified a large, stenosing rectal tumor and asymptomatic biliary lithiasis. Exploratory laparotomy involved total hysterectomy with bilateral adnexectomy (WIART type), rectosigmoid resection with colorectal anastomosis, and bipolar cholecystectomy. This extensive surgical approach posed significant intraoperative challenges, necessitating meticulous dissection and careful preservation of adjacent structures. No postoperative complications occurred, and discharge followed after six days. Histopathological examination confirmed rectal schwannoma and gallbladder papillary adenocarcinoma (pT3). **Discussions :** Rectal schwannomas, usually benign, typically have excellent prognoses post-resection. In contrast, papillary gallbladder adenocarcinoma represents an aggressive malignancy requiring extensive surgical management and vigilant oncological follow-up due to high recurrence risks. Literature rarely documents synchronous presentations involving rectal schwannomas with concurrent malignancies, emphasizing the rarity and unique diagnostic considerations this combination entails. **Conclusions:** The coexistence of rectal schwannoma and gallbladder adenocarcinoma highlights the necessity for thorough preoperative assessment and multidisciplinary management strategies. Genetic evaluations might be beneficial in understanding atypical tumor associations. Continuous long-term monitoring is crucial for early detection of recurrence, particularly of gallbladder cancer, ensuring comprehensive assessment and optimal patient recovery.

Keywords: Synchronous tumors, rectal schwannoma, gallbladder adenocarcinoma, colorectal surgery

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RECONSTRUCTION OF THE UPPER EXTREMITY USING ANTEROLATERAL THIGH FLAP AND FREE VASCULARIZED FIBULAR FLAP IN A MIDDLE AGED PATIENT- CASE REPORT.

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Introduction: Reconstructive procedures in plastic surgery play a salient role in managing forearm injuries. They are characterized by many vascular, nervous, tendinous, and bone defects, which can have a significant impact on the patient's life. Frequently, the loss of upper extremity tissue results from multiple causes, such as burns, electric shocks, and crush injuries, highlighting the necessity of an urgent and decisive surgical intervention. **Case Report:** In this case, a 44-year-old patient presents in the emergency room with a midshaft forearm injury affecting soft tissues, exposing the ulnar bone. Initially, the wound was surgically debrided, and we applied the negative pressure vacuum to stimulate the granulation tissue. Due to a favorable evolution, we performed a muscle flap procedure using extensor carpi ulnaris and flexor digitorum profundus to restore the loss. Three days postoperatively, the wound showed signs of infection, and the radiography revealed osteolysis of the bone. Following this observation, 23 cm of ulnar bone was resected, and we used an anterolateral thigh flap (ALT) to cover the soft tissue defect. This flap is based on the perforator vessels that emerge from the descending branch of the lateral circumflex femoral artery. We made the free vascular transfer using one perforate artery, with an end-to-side anastomosis to the ulnar artery. Three months later, for the remaining bone defect, we used a free vascularized fibular flap, harvesting 23 cm of the bone, to make the osteosynthesis and restore the functionality of the forearm. **Discussions :** The literature supports the ALT flap as a reliable option for soft tissue coverage due to its versatility and vascularity [1]. The free vascularized fibular flap remains the gold standard for segmental bone reconstruction [2]. Combining both ensures structural and functional restoration, in line with modern microsurgical reconstructive strategies. **Conclusions:** Therefore, it can be concluded that the ALT flap has become one of the most used flaps in reconstructive surgery . Moreover, the importance of postoperative rehabilitation should not be neglected to ensure proper restoration of upper limb functionality. Using the best reconstructive method and physiotherapy treatment can salvage the upper limb, which plays an important role in the patient's daily activities.

Keywords: forearm injury, ALT flap, free vascular fibular flap, physiotherapy

SURGICAL MANAGEMENT OF GRAVES' DISEASE

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Introduction: Graves' Disease is an autoimmune disorder which impacts the thyroid gland being the most frequent cause of thyrotoxicosis and hyperthyroidism. The disease is significant because according to the statistics 5% of men and 3% of women will develop it during their lifetime. **Case Report:** A 39-year-old female patient was diagnosed 20 years ago with Graves' disease. Firstly, she experienced an increase in the size of the gland, which caused a slight deformation of the anterior cervical region. After being monitored by an endocrinologist, treatment with antithyroid drugs (Thiamazole) was initiated, leading to a reduction in size of the gland. Shortly after being diagnosed, the patient exhibited symptoms characteristic of hyperthyroidism, including tachycardia, fine finger tremors, excessive sweating, hot flashes and exophthalmos. In the past year, the patient reported a slight increase in the size of the thyroid gland, despite the treatment she was taking. Following an endocrinological consultation, surgical treatment was recommended. She was admitted to the SCJM Surgery Clinic, where a total thyroidectomy was performed. In the immediate postoperative period, the patient did not experience cardiorespiratory or phonation difficulties. Considering the favorable evolution the patient was discharged three days after surgery. **Discussions :** Normally, the disease may be kept under control using antithyroid drugs and the surgical approach is not necessary. However, if the symptoms persist or aggravate and the gland increases in volume with compressive symptoms, surgery is recommended **Conclusions:** This case highlights the importance of surgical treatment as a last resort for long-standing Graves' disease, in which, despite a long-term medication, local thyroid phenomena (gland hypertrophy) have reappeared, most likely due to the development of tolerance to antithyroid drugs.

Keywords: total thyroidectomy, long-term medication, gland hypertrophy, exophthalmos

RECURRENT RETROPERITONEAL ABSCESS FOLLOWING PANCREATIC NECROSIS AND ENDOSCOPIC PSEUDOCYST DRAINAGE: A SURGICAL CASE REPORT

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Introduction: Pancreatic necrosis and its sequelae, including pseudocyst formation and retroperitoneal abscess, remain challenging entities in abdominal surgery. While endoscopic drainage techniques such as Lumen-Apposing Metal Stents (LAMS) have emerged as less invasive alternatives, complications and recurrence still necessitate surgical intervention in selected cases. We present a case of recurrent retroperitoneal abscess post-endoscopic drainage of a pancreatic pseudocyst, managed surgically on two separate occasions. **Case Report:** A 40-year-old male initially presented with fever, upper abdominal pain radiating to the left flank, and significant weight loss. He had a prior diagnosis of necrotico-hemorrhagic pancreatitis while working abroad, managed conservatively, followed by endoscopic pseudocyst drainage using a LAMS. Upon return to Romania, he was admitted for conservative treatment and later discharged after three weeks with oral antibiotics. Contrast-enhanced CT revealed a large left-sided retroperitoneal collection extending from the peripancreatic region to the left iliac fossa, along with a significant left-sided pleural effusion. A pleural drain was inserted and evacuated abscess-like fluid, with removal after one week following imagistic and quantitative reassessment. Despite conservative measures, the patient's condition warranted surgical intervention. An exploratory laparotomy was performed, including left latero-colic mobilization, evacuation of multiple retroperitoneal abscesses, and placement of multiple intra-abdominal drains. Postoperative complications included Clostridium difficile infection and positive cultures for XDR Acinetobacter baumannii and Enterococcus faecalis, managed with targeted antibiotics and patient isolation. The patient was discharged with retroperitoneal and Douglas drainage in situ, which were removed one week later. However, he failed to return for follow-up and definitive surgical management. After 11 months, the patient returned with recurrent fever and flank pain. Imaging confirmed recurrent retroperitoneal abscess. A second laparotomy was performed, involving adhesiolysis, renewed left latero-colic mobilization, abscess evacuation, and drainage. Intraoperative cultures revealed Streptococcus constellatus, treated with Ampiplus. Recovery was uneventful, and the patient was discharged with one drain, removed later after favorable imaging. He was advised to return for monthly follow-ups in order to establish an optimal timing for definitive surgical treatment. **Discussions :**

This case highlights the potential for recurrence despite minimally invasive drainage of pancreatic pseudocysts. It also illustrates how incomplete follow-up can lead to delayed complications requiring repeated surgical intervention. Multidrug-resistant organisms further complicate management, necessitating a coordinated, multidisciplinary response. **Conclusions:** Endoscopic approaches may not be definitive in complicated pancreatic necrosis. Surgical re-evaluation, close follow-up, and tailored infection management are critical to prevent recurrence and ensure optimal patient outcomes.

Keywords: Pancreatic necrosis, Retroperitoneal abscess, Lumen-Apposing Metal Stent (LAMS), Surgical drainage

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SURGICAL CHALLENGES IN CREATING A BRACHIO-BASILIC ARTERIOVENOUS FISTULA IN PATIENTS WITH DOUBLE BRACHIAL ARTERIES: A CASE REPORT

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Introduction: A brachio-basilic arteriovenous fistula (BB-AVF) is an abnormal connection linking the brachial artery to the basilic vein, most commonly created surgically to establish long-term vascular access for hemodialysis. This type of fistula is favored due to its superior long-term patency as well as its lower complication rates compared to other access types. While BB-AVFs can be typically iatrogenic in their origin, they may on occasion result from trauma or from congenital vascular anomalies. Anatomical variations are rare, like instances of duplicated brachial arteries. These variations pose challenges for preoperative planning plus surgical execution. In most cases, accurate identification and selection of one dominant artery for now are critical for the success and maturation of such fistula. **Case Report:** A 66-year-old male patient with a medical history of hypertension, cardiac pathology, and hepato-renal polycystic disease was electively admitted with a diagnosis of chronic kidney disease, stage G5A3, according to the KDIGO classification. Preoperative assessment revealed few rare anatomical variations: the presence of two brachial arteries within the left arm. This did require intraoperative identification and a selection of an artery appropriate for anastomosis. Surgical intervention consisted in the attempted superficialization of any pre-existing left BB-AVF. Intraoperatively, the arteriovenous connection was identified and retained. **Discussions :** Arteriovenous fistulas are the preferred method for hemodialysis access, offering longer patency and lower infection risk compared to grafts and central venous catheters. The brachio-basilic AVF is typically chosen when the cephalic vein is unavailable. However, anatomical variants such as brachial artery duplication can significantly complicate surgical planning and execution. Double brachial arteries are rare and may go undetected without detailed preoperative vascular imaging. Failure to correctly identify the dominant artery can result in insufficient blood flow and eventual fistula failure. In the presented case, thorough intraoperative evaluation enabled successful identification and use of the optimal artery. Duplex ultrasound remains the gold standard for detecting such vascular anomalies and should be employed routinely when anatomical variants are suspected. **Conclusions:** Anatomical variations, such as duplicated brachial arteries, present significant challenges in the creation of a functional brachio-basilic arteriovenous fistula. Accurate preoperative vascular mapping and meticulous intraoperative assessment are essential to identify the dominant vessel and ensure procedural success. Despite these challenges, the BB-AVF remains a viable and effective option when the vascular anatomy is thoroughly understood. Long-term fistula success depends on early identification of potential complications and consistent postoperative surveillance.

Keywords: Brachio-basilic arteriovenous fistula, Double brachial artery, Hemodialysis access, Preoperative vascular mapping

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ANORECTAL MALFORMATION, IN A NEWBORN FEMALE PATIENT.

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Introduction: Anorectal malformations (ARM) are a relatively common congenital condition, occurring in about 1 in every 5,000 newborns, with a slightly higher incidence in boys. It ranges from simple anal atresia to complex fistulas connecting to adjacent organs, often involving the urinary and genital systems. Rectoperineal fistula is the mildest form: the rectum is primarly encircled by the sphincteric muscles, except for the lowest part, which is anteriorly displaced. The rectum and vagina remain clearly separated. The fistula may present as a small

subepithelial tract, along the midline perineal raphe. Prompt treatment is required. It can be performed in a single step (no colostomy) or three separated steps (creating a colostomy, repairing and closure of colostomy. Approximately 50% of patients have related anomalies, which may include respiratory ones. Choanal atresia is an obstruction of the posterior choanae due to the persistence of the buccopharyngeal membrane inhibiting the communication between the nasal cavity and the nasopharynx. **Case Report:** A premature female newborn (GA: 36 weeks), norm weight (birth weight: 2600 g) was delivered by urgent C-section due to severe fetal distress (FHR: 80-90 bpm) with APGAR scores: 3/1, 4/5, 5/10, 8/20. After birth, she presented with a poor general condition, cyanotic skin, generalized hypotonia, and no spontaneous breathing, with a heart rate of 80-90 bpm. In the delivery room, orotracheal intubation was performed - the presence of anal atresia with a perineal fistula and bilateral choanal atresia was revealed. **Discussions :** After cardiorespiratory and metabolic stabilization of the patient, several interdisciplinary consultations, and imagistic and laboratory investigations, she was transferred to the pediatric surgery ward. At two days old, because of the gravity of anatomical and functional impairment, the decision was made to create a diverting colostomy before the surgical repair. The presence of bilateral choanal atresia further complicated the case, requiring airway stabilization and respiratory support. Despite these concerns, the newborn began to show gradual improvement. **Conclusions:** Anorectal malformations, particularly in conjunction with conditions such as bilateral choanal atresia, present significant challenges in the management of affected newborns. The case demostrate the effective stabilizzation of the newborn, with the deliberate choice to perform a diverting colostomy which helped the management of bowel obstruction and prepared the patient for the upcoming surgical intervention.

Keywords: Anal atresia, Perineal fistula, Choanal atresia

TWO STAGED PENOPLASTY AFTER SELF INJECTION OF FOREIGN MATERIAL FOR PENILE AUGMENTATION – CASE REPORT

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Introduction: A various proportion of men appear to corelate dimensions and penis size with sexual prowess and physical fitness. For improving penile shaft contour and dimensions, foreign materials such as silicone, paraffin oil, mineral oils, and paraffin balm have been used. **Case Report:** We report a case of a 40-year-old male patient who was given subcutaneous foreign material -vaseline- into his penile shaft and prepuce by a non-medical practitioner. Abnormal reactions were noticed about 3 months after the injection when the patient arrived in our emergency service with an abced collection of the prepuce. **Discussions :** A dorsal incision and collection drainage were performed in the first stage associated with antibiotic administration. In the second stage, subcutaneous tissue and fibrotic skin were circumferentially excised from the corona to the penile shaft down to the level of Buck's fascia, after that degloving surgery technique is applied for covering prepuce deficit of the penis. The patient presented a favorable post-op evolution, resuming erectile function 4 weeks after surgery. The cosmetic outcome was acceptable regarding the severity of the damage caused by self-injection. **Conclusions:** Exogenous self-injection of non-medical substances such as vaseline are rare amongst patients. The injection of foreign bodies for penile augmentation may result in delayed complications, including granulomatous reaction and infection. Surgery may be performed as soon as possible to avoid all the potential complications.

Keywords: penoplasty, foreign-materials, self-injection, penile augmentation

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HIGH-GRADE RECURRENT MYXOFIBROSARCOMA IN A PREVIOUSLY TREATED FIELD: DIAGNOSTIC AND MANAGEMENT CHALLENGES

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Introduction: Myxofibrosarcoma is a cancer affecting less than one per million people, with a high recurrence and metastatic rate. It mainly affects patients aged sixty to eighty years old and clinically presents as a slow-growing painless mass typically in the lower extremities. The standard treatment is wide resection that may be combined with radiotherapy and chemotherapy. The case presented is a high-grade (G3) recurring myxofibrosarcoma, highlighting its aggressive behaviour. **Case Report:** A 66-year-old female patient diagnosed with a high-grade myxofibrosarcoma located in the posterior compartment of the left thigh underwent surgery in March 2024, and a

suspicion of recurrence followed in May 2024. The patient was reoperated on in June and July 2024; histopathology confirmed a myxofibrosarcoma G3. November 2024 marked the completion of radiotherapeutic treatment with a total dose of 58 Grays per 29 fractions. In February 2025, an MRI revealed a nodular myofascial lesion at the long head of the biceps femoris. The clinical exam revealed a firm 6 by 3 cm mass near the surgical scar, with an evolution towards the popliteal fossa, suggesting local recurrence. The last pathological staging is ypG3 T2b N0 M0, R1. Wide compartmental excision with reconstruction and adjuvant chemotherapy was recommended as treatment. **Discussions :** A multidisciplinary approach involving surgical excision with neoadjuvant radiotherapy and chemotherapy is recommended based on current guidelines due to the aggressiveness and poor differentiation of myxofibrosarcomas. The guidelines are based on limited data due to the rarity of the cancer, leading to variable outcomes such as a high distant metastasis rate of 9.5-27.5% and a local recurrence rate of 23.5%. Since the recommended therapies have toxic effects and unreliable outcomes depending on the cancer staging, further research is needed to assess the impact of combined therapy on survival and recurrence rates, as well as the implementation of new treatment guidelines. **Conclusions:** In conclusion, myxofibrosarcoma is a challenging tumour to diagnose and treat. While local recurrence alone did not impact the survival rate, distant metastases act as a poor prognostic factor. When selecting a treatment plan, grading has a higher impact than staging, particularly in making decisions regarding neoadjuvant radiotherapy. Early and accurate grading is essential for optimizing patient outcomes.

Keywords: Myxofibrosarcoma, Soft tissue sarcoma, Recurrent sarcoma

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OSTEOSYNTHESIS OF A PROXIMAL TIBIAL AVULSION FRACTURE ON A 15 Y.O. PATIENT

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Introduction: Avulsion fractures of the tibial tuberosity are uncommon in young patients, accounting for only <1% of all the epiphyseal injuries and 3% of all the proximal tibial fractures. These fractures can be encountered in high-impact sports or forceful contraction of the quadriceps. where sudden unbalanced forces spread throughout the patellar tendon causing the separation of the tibial tubercle from the anterior portion of the tibia. In this case presentation we are going to discuss the treatment of this rare type of fracture. **Case Report:** A 15 y.o. male patient with a known right sided tibial avulsion fracture, was admitted for a scheduled specialized treatment. The avulsed fragment was reattached and osteosynthesis was performed with 2x4.5 cannulated screws and 2 SwiveLock 475 bioresorbable anchors, also the parapatellar reticular bone-cartilaginous free body was extracted. The post-operative evolution was favorable and during the hospitalization the patient received prophylactic antibiotic treatment, analgesics, anti-inflammatories and anticoagulants. At the time of his discharge the patient was in good general condition, clean wound, without edema under the cast and able to tolerate immobilization. **Discussions :** This case highlights that even despite the rarity of this injury, the clinician can still accurately make a diagnosis based on the modality of action of the fracture, clinical features and imagistic modalities. Also, and most importantly, properly treat this fracture in order to achieve the best outcomes, and so to help the child in returning to his pre-injury activities. **Conclusions:** The overall case highlights the importance of choosing the right surgical treatment, to ensure proper fixation, healing and long-term joint function. The technique used in this case not only restores the anatomical integrity of the tibial tuberosity and allows early rehabilitation, but also, given the young age of the patient, preserves the natural development of the tibia.

Keywords: Osteosynthesis, Avulsion fracture, High impact sports

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HYPERTHERMIC ISOLATED LIMB PERFUSION IN THE TREATMENT OF RECURRENT SYNOVIAL SARCOMA

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Introduction: Bifasic synovial sarcoma is a rare, aggressive malignant tumor that predominantly affects the extremities and has a high rate of local recurrence. This type of sarcoma is based on two types of cells and most commonly arises from soft tissues such as muscle, adipose, or connective tissue. Its association with Recklinghausen disease (neurofibromatosis type 1 - NF1) increases the risk of malignancy and complicates the

therapeutic strategy due to the predisposition of NF1 patients to soft tissue tumors. Surgical management is challenging, particularly in anatomical areas with important vascular structures, such as the popliteal region. For this reason, we chose to approach this case in two stages, with the first stage being isolated limb perfusion (ILP) chemotherapy, followed by tumor resection in the second stage. **Case Report:** A 20-year-old female presented with recurrent bifasic sarcoma in the popliteal region, in the context of NF1. Given the patient's history of previous surgery and the high risk of local recurrence, it was decided to perform ILP with the chemotherapy agent Melfalan, heated to 43°C for 60 minutes, ensuring extracorporeal circulation of the affected limb during this time. Dissection of the femoral artery and vein was performed, through which catheters were inserted for chemotherapy delivery, and the affected limb was excluded from systemic circulation by clamping the vessels and applying a tourniquet at the base of the limb. One month postoperatively, excision of the tumor mass was performed with negative resection borders. **Discussions :** ILP is a technique used in advanced sarcoma cases of the limbs, allowing for increased exposure to chemotherapy agents without systemic toxicity. In patients with NF1, where the risk of recurrence is high, this technique can optimize oncological outcomes, avoiding amputation and favoring functional prognosis. In the absence of this method, the treatment would have involved systemic chemotherapy, which has numerous adverse effects and low efficacy in local tumor control. In severe cases, the only alternative would have been limb amputation, which would have significantly affected the patient's quality of life. **Conclusions:** This case highlights the complexity of treating recurrent synovial sarcomas, emphasizing the importance of ILP as a strategy for local tumor control. The procedure allowed for reduced recurrence risk and limb preservation, demonstrating the benefits of this therapeutic approach.

Keywords: Synovial Sarcoma, Hyperthermic Isolated Limb Perfusion, Neurofibromatosis type 1

ROBOTIC SURGERY – AN INNOVATIVE ALTERNATIVE FOR THE TREATMENT OF DIAPHRAGMATIC RELAXATION

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Introduction: Diaphragmatic relaxation is characterized by a loss of diaphragm strength, causing abdominal organs to shift into the chest cavity and affecting breathing and heart function. Diaphragmatic plication via thoracic approach is the most common treatment option, but recent advancements in medical technology have made minimally invasive robotic surgery a viable option. This case shows how an innovative method can be used to treat diaphragmatic relaxation, reducing surgical trauma and increasing precision. **Case Report:** A 67-year-old woman came to our clinic complaining of shortness of breath and early fatigue. Her medical history did not reveal any significant trauma or illness. A thoraco-abdominal CT scan showed relaxation of the left diaphragm, causing the stomach, spleen, colon, and left kidney to move into the chest cavity. A robotic abdominal surgery was planned. The procedure started with a phrenotomy in the central tendinous part of the diaphragm, which helped reveal an excess of diaphragmatic muscle. A linear stapler was then used to remove the unnecessary muscle, and a V-Lock suture was used to reattach the resection line. Cor-Knot technology, which was taken from minimally invasive cardiac surgery, was used to reinforce the repair even further. The organs repositioned themselves naturally as the diaphragm returned to a size comparable to the right side. **Discussions :** Because diaphragmatic relaxation has a high recurrence rate, a customized treatment strategy is crucial. A robotic abdominal approach offers key advantages, such as less invasive surgery, reduced trauma, better control over reconstruction, and higher precision. Compared to traditional diaphragmatic plication, using a linear stapler followed by V-Lock suture maintains uniform tension without the need for extra knots. Meanwhile, Cor-Knot fixation provides long-term stability, significantly lowering the risk of the condition coming back. **Conclusions:** This case highlights the benefits of robotic surgery for treating diaphragmatic relaxation through an abdominal approach. Cor-Knot technology, inspired by heart surgery, represents an innovative technique that could further improve these procedures. Implementing such methods may lead to better surgical results and fewer long-term complications.

Keywords: diaphragmatic relaxation, Robotic surgery, shortness of breath

SEVERE GRADE IV GENITAL PROLAPSE COMPLICATED BY SUPERINFECTION AND SQUAMOUS CELL CARCINOMA – A MULTIDISCIPLINARY CHALLENGE

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Introduction: Genital prolapse is a common condition in elderly women, with an increased incidence between 69 and 83 years, according to studies published on PubMed. It significantly affects quality of life, causing discomfort and functional impairment. In severe and complicated cases, chronic superinfections and malignant transformations may occur, making management extremely challenging. Squamous cell carcinoma developing on a neglected genital prolapse is rare and often diagnosed at advanced stages due to delayed presentation to a gynecologist. **Case Report:** This clinical case highlights the diagnostic and therapeutic challenges in managing a patient with Grade IV genital prolapse, superinfection, and squamous cell carcinoma, confirmed through histopathological biopsies. It emphasizes the importance of early intervention and a multidisciplinary approach. **Discussions :** We present the case of a 93-year-old female patient diagnosed with Grade IV genital prolapse with superinfection. After adequate preoperative preparation, an excisional punch biopsy was performed. The clinical examination revealed an irreducible Grade IV prolapse, and the biopsy confirmed the presence of an invasive squamous cell carcinoma. **Conclusions:** Considering the patient's advanced age, comorbidities, and local tumor stage, a total vaginal hysterectomy was performed, along with suturing of rectal lesions observed intraoperatively, bladder repositioning into the peritoneal bursa, and reconstruction of the vaginal wall and perineal area. According to PubMed studies, 1 in 4 women with this condition reach exitus, and the remaining patients have a significantly increased risk within the next 14 months. The postoperative evolution was favorable, with symptom relief and progressive recovery.

Keywords: genital prolapse, squamous cell carcinoma, superinfection, vaginal hysterectomy

CHRONIC NON-SUPPURATIVE BILATERAL OTITIS WITH CONDUCTIVE HEARING LOSS

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Introduction: Chronic non-suppurative bilateral otitis with conductive hearing loss of 50 dB due to the blockage of the pharyngeal orifice of the Eustachian tube requires a complex approach to improve hearing. **Case Report:** A 62-year-old patient complains of hearing loss. He was unsuccessfully operated on in another clinic 4 years before for a deviated septum to improve it. Following the examination, the patient is proposed to have a complex intervention to unblock the pharyngeal orifice of the Eustachian tube caused by chronic sinusitis leading to chronic otitis. This intervention aims at several aspects: the unblocking the middle meatus to cure chronic sinusitis with posterior mucoid secretion specific to nasal blockages, the reduction of the hypertrophy of the inferior turbinate by means of radio frequency, the excision of the epipharyngeal tissue by means of coblation, the reduction of the hypertrophy of the inferior turbinate of the peritubal adenoid tissue by means of radio frequency, the uvolopalatoplasty for laxity and pronounced hypertrophy of the soft palate. If one of these interventions is not performed, the Eustachian tube will not be unblocked. The middle ears are also approached: right ear - removal of the eardrum from the malleus handle and insertion of a temporary grommet, left ear - removal of the eardrum from the incus and insertion of a long-lasting grommet. The following day after surgery the patient's hearing improves, a week after surgery the patient's hearing is much improved. **Discussions :** A deviated septum followed by chronic sinusitis, if not treated accordingly, can lead to various complications, such as blockage of the Eustachian tube, chronic otitis and also hearing loss due to the interconnection between them. Endoscopic sinus surgery, radiofrequency turbinate reductions, insertion of grommet are effective ways to restore the normal function of the Eustachian tube. **Conclusions:** The management of chronic non-suppurative otitis with complete tubal obstruction of the pharyngeal orifice of the Eustachian tube is difficult and requires a complex approach of the nasopharyngeal areas.

Keywords: blockage of the Eustachian tube, chronic otitis, hearing loss, radio frequency

WHEN RARITY MEETS COMPLEXITY: A GIANT OVARIAN CYST IN A CHILD WITH LAURENCE-MOON-BARDET-BIEDL SYNDROME

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Introduction: Bardet-Biedl Syndrome (BBS) is an autosomal recessive disorder, characterized by a constellation of symptoms including morbid obesity, intellectual disability, hypogonadism, renal dysfunction, and polydactyly. From a gynecological perspective, Müllerian malformations are more commonly associated with BBS, and the presence of ovarian cysts is rarely encountered. Literature on such cases is limited, with only one documented case in Romania. This case highlights a unique and complex presentation of a giant ovarian cyst in a young patient with BBS. **Case Report:** An 11-year-old female patient with BBS presented with morbid obesity (BMI > 40 kg/m², weight 150 kg), severe intellectual disability, significant locomotor disorders, right lower limb polydactyly, and right upper limb syndactyly of the IV-V fingers. Additionally, the patient reported orthopnea and chronic abdominal pain, which had worsened over the preceding month. Clinical evaluation and imaging investigations revealed a large right ovarian cyst. Due to technical limitations of ultrasound, the cyst's dimensions could not be measured beyond 20x20 cm. The cyst was septated, predominantly containing liquid, with no evidence of intrachystic vegetation or Doppler signals. Given the patient's substantial abdominal circumference, CT and MRI imaging were technically unfeasible. A multidisciplinary surgical approach, involving both gynecology and pediatric surgery, was planned following pre-anesthetic consultation and preoperative preparation. A median laparotomy was performed, extending from the suprapubic region to the left paraumbilical and supraumbilical areas. During surgery, a large right ovarian cyst was identified, approximately 40x30 cm in size, extending to the diaphragm dome, and encased in a thick fibrous capsule. No intraperitoneal fluid accumulation was observed. Aspiration of approximately 4.5 liters of serous fluid was conducted, followed by a right-sided cystectomy. The uterus, ovaries, and fallopian tubes appeared involuted for the patient's age. Histopathological examination confirmed the presence of a serous ovarian cystadenofibroma with no atypia. **Discussions :** Bardet-Biedl Syndrome (BBS) is typically associated with Müllerian malformations, not ovarian cysts, making this case of a giant ovarian cyst in an 11-year-old BBS patient unique. The technical limitations of imaging, combined with the patient's substantial obesity, necessitated a surgical approach for diagnosis and treatment, highlighting the complexity of managing such rare presentations **Conclusions:** This case presents a rare and complex occurrence of a giant ovarian cyst in a patient with Bardet-Biedl Syndrome. It underscores the importance of considering unusual gynecological manifestations in BBS and the necessity of a multidisciplinary approach for effective diagnosis and treatment. Early intervention and careful surgical management resulted in a favorable postoperative outcome.

Keywords: Laurence-Moon-Bardet-Biedl Syndrome, Ovarian Cyst, Cystectomy, Multidisciplinary Approach

CONQUERING UTERINE LEIOMYOMAS: A PATH TO FERTILITY AND PAIN RELIEF

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Introduction: Uterine leiomyomas are a common benign tumors originating from the smooth muscle tissue of the uterus, frequently diagnosed in women of reproductive age, with the highest incidence occurring between the ages of 30 and 50. It is estimated that 50-70% of women will develop uterine leiomyomas during their lifetime, with only a small proportion being symptomatic and requiring treatment, while the remainder undergo a process of involution.They are a significant cause of infertility, contributing to tubal obstruction, uterine cavity distortion, altered uterine blood flow, and a chronic inflammatory state. **Case Report:** A 34-year-old female patient with a 5-year history of infertility presented to the gynecology clinic with cyclical pelvic pain. She reported chronic use of NSAIDs. Paraclinical investigations revealed normal hormonal function. Clinical and imaging evaluations showed normal ovaries and fallopian tubes, while the uterus contained five pedunculated leiomyomas, two subserosal and two intramural, ranging from 1 to 5 cm. Three leiomyomas were indenting the endometrial cavity. Following counseling, pre-anesthetic consultation, and preoperative preparation, a scheduled Pfannenstiel laparotomy was performed. Intraoperatively, nine leiomyomas were identified, including two at the uterine cornua obstructing the tubal ostia. Myomectomy was performed using the Aburel technique to preserve the endometrial cavity, followed

by uterine reconstruction. The patient was discharged on postoperative day 3 in good condition with no complaints and was advised to resume family planning efforts six months postoperatively. **Discussions :** Uterine leiomyomas are a common cause of infertility, particularly when they distort the uterine cavity or obstruct the fallopian tubes. This case highlights the role of myomectomy in improving fertility outcomes, as surgical removal of symptomatic leiomyomas can restore normal uterine anatomy and alleviate chronic pelvic pain, enhancing the chances of conception. **Conclusions:** Myomectomy is an effective treatment for women with uterine polyfibromatosis who experience infertility and chronic pelvic pain. By removing leiomyomas that distort the uterine cavity and obstruct the fallopian tubes, fertility and obstetric outcomes can be improved. This case demonstrates the importance of timely surgical intervention in managing symptomatic uterine leiomyomas.

Keywords: Leiomyoma, Myomectomy, Fertility, Chronic Pelvic Pain

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LAPAROSCOPIC APPROACH IN A FEMALE PATIENT WITH INTESTINAL OBSTRUCTION DUE TO INCARCERATED UMBILICAL HERNIA AND MORBID OBESITY.

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Introduction: An umbilical hernia is a defect in the ventral abdominal fascia at or near the umbilicus. The umbilicus is a frequent site of hernia, and umbilical hernias are often diagnosed during routine physical examinations and 65% of adults with an umbilical hernia require surgical intervention. **Case Report:** A 52-year-old female patient was admitted on 15.03.2025 with the diagnosis of intestinal obstruction due to incarcerated umbilical hernia, arterial hypertension, morbid obesity(210kg,1.65m), in emergency conditions. After adequate preoperative preparation, surgical intervention was performed on 15.03.2025 for the intraoperative diagnosis of intestinal obstruction due to umbilical hernia, extensive adhesion syndrome. The procedure performed consisted of exploratory laparoscopy, chelotomy, ADHESIOLYSIS, surgical repair of the umbilical hernia with parietex composite mesh, ipom+procedure, skin suturing, and sterile dressing. The postoperative course was favorable. Discharge is indicated on 18.03.2025. with the following recommendations: hygienic-dietary regimen as per the attending physician's instructions, daily local wound care with Betadine and sterile dressing, analgesic treatment with Algocalmin (3x1/day as needed), thromboprophylaxis with Aspenter 75mg (0-1-0) for 21 days. The patient was readmitted on 22.03.2025 with a diagnosis of an abdominal wall abscess in the umbilical region. A surgical intervention was performed, including incision, drainage, cleaning and wound dressing. The postoperative evolution was favourable. **Discussions :** Body Mass Index (BMI) measures weight relative to height, classifying individuals as underweight (<18.5), normal weight (18.5-24.9), overweight (25-29.9), or obese (≥30). For our female patient, weighing 210 kg and measuring 1.65 m in height, the BMI is 77.2, indicating severe obesity. While BMI is a useful health indicator, it does not distinguish between fat and muscle mass and should be considered alongside other assessments. The surgical approach to umbilical hernia repair is determined by the size of the hernia and other patient-specific factors such as comorbidities, body mass index, and the presence of other abdominal wall hernias. While elective umbilical hernia repair can be performed under local anesthesia with sedation or general anesthesia, urgent surgery often requires general anesthesia. Specialised literature shows the superior results of laparoscopic surgery in overweight patients, with a shorter hospitalisation period, less pain, and faster postoperative recovery compared to the traditional open approach, where pain is also greater. **Conclusions:** The surgical treatment of the umbilical hernia restores the abdominal wall integrity, prevents complications like incarceration, laparoscopic approach allows for a smooth recovery for overweight patients.

Keywords: umbilical hernia, morbid obesity, obstruction

MUSCLE BREAKDOWN AFTER SURGERY: A CASE OF POSTOPERATIVE RHABDOMYOLYSIS IN A 53 YEARS OLD MALE

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Introduction: Rhabdomyolisis refers to the release of intracellular elements after the skeletal muscle is destroyed. The typical symptoms consist of weakness and muscle pain, linked with increased CK levels. Early identification of postoperative rhabdomyolysis is essential because it can lead to severe complications such as acute kidney injury,

disruptions in electrolyte balance and compartment syndrome if not treated quickly. **Case Report:** We present the case of a 53 years old man, diagnosed with bladder cancer G3pT2 stage following an extended intervention of radical cystectomy with ileal conduit in Trendelenburg position. Risk factors included grade 2 obesity, 8 hours of prolonged surgical duration and positioning. In the following morning, after the surgical intervention, the patient accused hypoaesthesia, muscle stiffness and motor difficulties in both legs. Laboratory work-up demonstrated a CK of 151000 IU/L, AST of 1676 IU/L and ureea of 65 mg/dl. Based on his elevated CK, myalgia, myoglobinuria, he was diagnosed with rhabdomyolisis. Higher kaliemia prompted us to administer calcium gluconate before starting hemodiafiltration. The patient is carried to the MRI room to examinate the lumbar area where we found degenerative lesions of vertebral plateaus, intraspongious hernia, posterior osteofibrosis, severe spinal cord stenosis. Later that day, the patient becomes dyspneic with 88% O2 saturation on facial mask, so we decided to intubate him. The evolution remains unfavorable, with higher lactic acidosis and vasopressor support is continued. The patient is carried into the operating room for a fasciotomy of gluteal and lateral femoral regions in order to relieve the pressure in the muscular compartments and restore perfusion before irreversible damage occurs. The following day, the pacient presents severe bradycardia, asystole and advanced resuscitation is initiated without any favorable response. **Discussions :** Related cases documented in the literature, particularly following urologic cancer surgeries, underscore the impact of obesity, prolonged surgical duration, and Trendelenburg positioning on the risk of muscle damage. This case highlights the necessity for prompt identification, vigilant postoperative observation in patients at higher risk, and the adoption of preventive strategies, including reducing the time spent in Trendelenburg position. **Conclusions:** Rhabdomyolisis is a severe and potentially fatal complication of various critical illness conditions. Close monitoring of CK levels, combined with clinical evaluations for pain, swelling or weakness is essential. These symptoms may be subtle at first, but early detection can greatly reduce the risk of acute kidney injury and other severe complications. Delaying until clear symptoms arise could postpone treatment outside of the ideal timeframe.

Keywords: rhabdomyolisis, creatine kinaze, immobility, surgical posture

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HEALING COMPLEXITIES AFTER VEIN HARVESTING: A CASE REPORT ON THE ROLE OF NEGATIVE PRESSURE WOUND THERAPY AND SKIN GRAFTING SYNERGY

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Introduction: Coronary artery bypass grafting (CABG) is the most common procedure performed in adult cardiovascular surgery, in which the great saphenous vein continues to be the most frequently used conduit. The traditional technique for saphenous vein harvesting involves a long continuous incision - saphenectomy - frequently resulting in delayed healing, unsatisfactory cosmetic outcomes, and impaired postoperative mobilization. **Case Report:** We present the case of a 76-year-old female diagnosed with type 2 insulin-dependent diabetes mellitus, complicated by diabetic nephropathy, multiple cardiovascular risk factors, and a history of non-ST-elevation myocardial infarction (NSTEMI). The patient was diagnosed with triple-vessel coronary artery disease and underwent CABG using an autologous saphenous vein graft. In the postoperative period, while the presternal wound healed uneventfully, the surgical site on the right lower limb demonstrated a more complex and unfavorable healing course. Initially, there was extensive inflammation along the entire length of the right leg, accompanied by areas of necrosis and tendency for wound dehiscence. Wound secretion cultures revealed Enterococcus faecalis and Candida albicans, requiring targeted antimicrobial therapy based on the antibiogram. **Discussions :** The leg wound progressed to extensive dehiscence and necrosis; consequently, surgical debridement and necrosectomy were followed by the initiation of negative pressure wound therapy (NPWT) using the Vivano® system. After three weeks of NPWT, secondary closure was attempted due to signs of granulation and marginal wound improvement, and the Vivano dressing was re-applied to the distal portion of the wound. One week later, under general anesthesia, further debridement and curettage were performed, followed by defect coverage using a partial-thickness skin graft (PTSG) harvested from the ipsilateral thigh with a dermatome. The mesh technique was employed, and the graft was secured with fine sutures and covered with a compressive dressing. The postoperative course was favorable. **Conclusions:** Ulcers resulting from saphenous vein harvesting represent a rare but significant complication, caused by a pathological interplay of compromised perfusion, microbial colonization, and mechanical tension. NPWT with Vivano® enhances wound bed preparation by removing exudate, reducing local edema, enhancing tissue perfusion, and stimulating granulation tissue formation. This prepares an optimal wound bed for graft adherence and subsequent epithelialization. The integration of NPWT and skin grafting constitutes a synergistic, evidence-based strategy for managing complex postoperative ulcers,

ultimately improving patient recovery and quality of life.

Keywords: Saphenous vein harvesting, Vivano®, NPWT, partial-thickness skin graft

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LAPAROSCOPIC MANAGMENT OF RECURRENT HIATAL HERNIA:A CASE REPORT

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Introduction: A transmittal gastric hernia represents a pathological condition of the esophagogastric junction, in which a portion of the stomach, especially the cardia ,slides through the esophageal diaphragmatic hiatus into the toracic cavity.This phenomenon is due to excessive widening or weakening of the hiatus ,resulting in the deterioration of the regional stability and the appearance of gastroesophageal reflux symptoms. **Case Report:** In this case, the pacient is 67 year old female , with a personal history of hiatal hernia surgically treated in 2015,who presents complaining of gastric discomfort worsened after each meal, accompanied by nausea and heartburn.The exacerbated symptoms lead the patient to avoid physical effort and to eat small meals,aspects that impact her quality of life.An upper digestive endoscopy was performed, that revealed a recurrence of the hiatal hernia in which surgical intervention was recommended.The chosen surgical procedure was minimally invasive laparoscopy, with the placement of a resorbable mesh designed to stimulate the formation of new connective tissue to strengthen the area of the esophageal hiatus. Suture were performed to close the hiatus as much as possible, and the resorbable mesh was adjusted to the appropriate size to cover the space without compressing the other structures. **Discussions :** Performing the laparoscopic intervention in this case was difficult and presented many risks, such as techniques related to postoperative adhesions and modified anatomical structures, but the procedure went without incident. At 3 months postoperatively, the gastroenterological follow-up showed that the clinical and imaging evolution was favorable. The healing process was supported by the integration of the resorbable mesh, demonstrating the efficacy of the intervention and allowing the patient a smooth recovery. **Conclusions:** In conclusion, recurrent hiatal hernia represent a significant complications, and although laparoscopic intervention is technically challening,it proved to be an efficient and safe option in this case. Aiming to improve the patient's quality of life, with early identification of recurrence and a correctly performed surgical procedure ,favorable outcomes can be achieved.

Keywords: Recurrence, Hiatal hernia, Laparoscopic, Postoperative adhesions

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SURGICAL MANAGEMENT OF AN EXTENSIVE L5 TUMOR WITH LONG SEGMENT SPINAL STABILIZATION

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Introduction: Spinal plasmacytomas are rare plasma cell neoplasms that may present as solitary lesions or as part of systemic multiple myeloma. Their potential to progress into multiple myeloma necessitates timely diagnosis and management. Infiltrative spinal tumors often cause severe pain, neurological deficits, and mechanical instability due to osteolysis and neural compression. Surgical intervention is typically palliative - aimed at relieving pain, preserving neurological function, and restoring spinal stability. **Case Report:** A 55-year-old woman with a history of hypertension presented with progressive lower back pain and bilateral leg paresthesia over four months. Lumbar MRI revealed a large infiltrative lesion (62×45×53 mm) centered at L5, with extensive osteolysis of the vertebra, partial involvement of L4, and invasion into the left sacral wing. The mass encroached upon the spinal canal, involving left L4, L5, and S1 nerve roots, and infiltrated the left paravertebral musculature. Due to significant spinal compromise and neurologic compression, the patient underwent surgery via a posterior midline approach. The procedure included microsurgical tumor resection and long segment spinal stabilization using a Medtronic Solera titanium screw-and-rod system from L3 to S2-iliac screws. The tumor was resected without prior biopsy, and the diagnosis was made postoperatively. Pathology Findings Histopathological analysis confirmed a plasmacytoma. Outcome Postoperative recovery was uneventful. The patient reported marked pain relief and neurological improvement. Post-op imaging confirmed correct implant positioning and subtotal tumor resection, with a small residual component at the posterior vertebral wall. The surgical site healed well, and anemia was corrected with transfusions. She was discharged in stable condition with a rehabilitation plan and referred for hematologic evaluation to assess for systemic disease. **Discussions :** Unlike typical solitary plasmacytomas which

often remain localized, this case involved aggressive local invasion requiring extensive surgical intervention. It underscores the variability of presentation and the importance of distinguishing between solitary lesions and systemic involvement. **Conclusions:** Early surgical intervention in spinal plasmacytomas is critical to preserve neurological function and restore spinal stability. A multidisciplinary approach, including hematologic follow-up and long-term monitoring, is essential to guide further treatment and detect progression to multiple myeloma.

Keywords: Spinal stabilization, Plasmacytoma, Microsurgical tumor removal, Osteolysis

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SURGICAL TREATMENT OF INFERIOR POLE PATELLAR FRACTURE USING THE KRACKOW SUTURE TECHNIQUE

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Introduction: Road traffic accidents constitute a frequent etiological factor in osteoarticular pathologies. As evidenced by research study , inferior pole patellar fractures represent a considerable challenge due to their complexity and high risks of complications associated with current treatment methods. **Case Report:** In what follows , we will present a case of a 28-year-old man , who showed to the Emergency Department with an inferior pole fracture of the right patella, associated with a laceration over the anterior aspect of the right patella , as well as cranio-cerebral trauma (CCT) and thoraco-abdominal trauma (TAT) , sustained as a result of a work-related road traffic accident. Following the performed radiography , an inferior pole frature of the right patella is observed , with caudal displacement of the distal fragment. The contour of the right fibular head appears doubled , and the presence of an avulsion fracture at this level cannot be definitively excluded ; hypertranslucent areas are projected suprapatellar and prepatellar. Subsequent to the radiograph , surgical intervention was performed , with preoperative spinal anesthesia administred at the L4-L5 level , followed by the surgical procedure itself: inferior pole patellectomy, with reinsertion of the patellar tendon. The surgical procedure commenced with a middline approach at the level of the right knee, followed by meticulous dissection, hemostasis and excision of the inferior pole of patella. Reinsertion of the pattelar tendon was performed using the Krackow suture technique with #5 Ti-cron stitches, passed through transpatellar bone tunnels. Thorough irrigation was carried out, along with debridement of devitalized tissue from prepatellar wound. The injury was closed using stratified suturing and cover with a sterile dressing. **Discussions :** Regarding the evolution and recovery of the pacient, the case progressed with a favorable prognosis , with the surgical wound remaining clear , without pathological secretions or signs of inflammation. For effective recovery , the pacient mentained the affected lower limb immobilized in elevation , with active mobilization performed without weight-bearing on the operated limb , using assistive support . **Conclusions:** The Krackow technique represents a complex yet effective surgical method , ensuring stable fracture fixation and favorable clinical outcomes in the management and rehabilitation of inferior pole patellar fracture.

Keywords: Krackow suture technique, patella fracture, patellectomy, patellar tendon

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GIANT VARICOSE DILATATIONS OF THE SMALL SAPHENOUS VEIN IN A YOUNG PATIENT: SURGICAL MANAGEMENT AND CLINICAL OUTCOME

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Introduction: Chronic venous insufficiency (CVI) is defined by the presence of venous hypertension, resulting in venous dilatations, edema, pain, hyperpigmentation, and ulcerations. It is noteworthy that only 15% of varicose veins in the lower extremities can be attributed to insufficiency of the small saphenous vein. Furthermore, there has been a significant increase in the prevalence of chronic venous insufficiency among men in the lower limbs in recent years. **Case Report:** We describe a 45-year-old male patient diagnosed with chronic venous insufficiency, categorized as CEAP C6. Two decades earlier, he underwent great saphenous vein stripping in the right lower limb. Recently, he was admitted to the Vascular Surgery Clinic due to gigantic varicose dilations on the back of his right calf, accompanied by hyperpigmentation, edema, and pain that worsened with prolonged standing. After thorough preoperative preparation, the patient had the right small saphenous vein stripped and accessory varicose clusters excised. His recovery was straightforward, leading to his discharge on the second postoperative day in stable condition. He had clean surgical wounds, no abnormal secretions, and minimal bruising in the calf area. The

clinical outcome was positive, with improvements in edema and pain, better appearance of the varicose dilatations, and an overall boost in the patient's quality of life. After completing the CIVIQ 20 questionnaire, the patient expressed considerable discomfort, challenges in engaging in daily activities, and a shift in mood. Long-term postoperative results indicate a notable enhancement in quality of life, enabling patients to perform their activities easily. **Discussions :** Given the size, location, and appearance of the varicose venous clusters, early surgical intervention is recommended to prevent complications such as post-traumatic hemorrhage or venous leg ulcer. Additionally, prompt treatment can help mitigate the risk of progression to more advanced stages of chronic venous insufficiency, which can lead to debilitating symptoms, skin changes, and functional impairments. This research was funded by George Emil Palade UMFST of Targu Mureș, Romania, grant number 170/2/09.01.2024. **Conclusions:** As a conclusion, this case demonstrates the importance of early intervention in chronic venous insufficiency, which has a direct impact on preventing further complications and improving long-term outcomes.

Keywords: small saphenous vein, venous leg ulcer, chronic venous insufficiency, vascular surgery

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LATE GRAFT FAILURE AND SURGICAL INTERVENTION IN A 16-YEAR-OLD FEMOROPOPLITEAL BYPASS

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Introduction: Over the last two decades, the global prevalence of peripheral arterial disease (PAD) has risen. In 1990, there were 1,229 cases per 100,000 people, which increased to 1,466 cases per 100,000 by 2019. Specialists face challenges in managing patients diagnosed with PAD. **Case Report:** We present the case of a 73-year-old patient who is blind and has a history of peripheral artery disease (PAD). He underwent bilateral femoropopliteal bypass surgeries, the first 16 years ago using a Dacron prosthesis and the second 14 years ago with a great saphenous vein graft. The patient arrives at the emergency department of Targu Mures County Emergency Clinical Hospital, exhibiting a large mass on the left inner thigh along with skin necrosis. This admission came after a computed tomography angiography (CTA) showed a pseudoaneurysm measuring 17x14x15 cm with active extravasation from the Dacron prosthesis, a permeable bypass, and occlusion of the popliteal artery segment P2-P3, as well as a giant lipoma located at the vastus lateralis muscle measuring 12x6x23 cm. Given the patient's blindness and the occlusion of the popliteal artery, we chose to remove the "en bloc" pseudoaneurysm along with the lipoma, and perform grafting on the inner thigh area. The post-operative recovery is positive, showing successful graft integration and epithelization in that area, with no indications of ischemia in the limb. **Discussions :** In this case, the patient's femoropopliteal graft failed 16 years after the initial procedure. Although synthetic grafts like Dacron are commonly employed for bypass surgeries in PAD, they may result in long-term complications, including pseudoaneurysms or infections. Here, the pseudoaneurysm formation on the Dacron graft was significant, carrying a considerable risk of rupture and substantial hemorrhage. Furthermore, it is crucial to highlight the necessity of regular monitoring of the grafts, particularly in femoropopliteal bypasses that involve synthetic grafts. Utilizing imaging methods such as Doppler ultrasound is essential for identifying pathological changes and allowing for timely intervention before issues become irreversible. **Conclusions:** If not identified promptly, complications from the synthetic graft can lead to severe repercussions. In this instance, the pseudoaneurysm exhibited a concerning increase in size over the past month, accompanied by worsening skin necrosis, which poses a significant risk of rupture and potential hemorrhagic shock. Regular monitoring of the bypass can help avert such issues.

Keywords: Peripheral Arterial Disease, Graft Complication, Pseudoaneurysm, Vascular Surgery

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PARADOXICAL NEUROPROTECTION: IMPROVED ACUTE SUBDURAL HEMATOMA OUTCOME IN A CHRONIC ALCOHOL USER DUE TO CEREBRAL ATROPHY

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Introduction: Acute subdural hematoma (ASD) is a severe condition involving blood accumulation in the subdural space, with acute onset of neurological symptoms. It usually occurs due to head injury and is associated with poor

outcomes across literature, especially in the case of geriatric patients. **Case Report:** We report the case of a 70-year-old female who presented to the emergency room with altered consciousness following cranial trauma caused by a same level fall while inebriated. The patient's history included diabetes mellitus type 2, essential hypertension, cirrhosis, alcohol use disorder (AUD). On admission, a neurological exam showed somnolence, a Glasgow Coma Score (GCS) of 14, no signs of increased intracranial pressure, no motor/sensory deficits and mixed aphasia. A native CT scan of the head revealed a left convexity ASD. Emergency surgery was performed, involving the evacuation of the hematoma and the left frontal concussion site through left side pterional craniotomy, using an enlarged pterional flap. The flap was then secured using a CRANIOFIX system and a subgaleal drain was installed while suturing the remaining anatomical layers. Postoperative recovery progressed mostly without incidents; at discharge, a neurological consult showed few persistent issues: mixed aphasia (although improved), episodes of psychomotor agitation (attributed to alcohol withdrawal syndrome) and refusal to cooperate. **Discussions :** This case highlights an interesting paradox: while AUD contributed to the hematoma-causing trauma, it may also have improved the patient's short-term prognosis. Cerebral atrophy is a well-documented severe symptom of long-term AUD, also evident in this patient. This led to an increase in unoccupied space in the cranium, which allowed for the dispersion of the hematoma, therefore limiting the increase of intracranial pressure and midline shift (MLS); a smaller MLS in particular has been correlated with improved prospects in the case of ASD. This is not an isolated case, as there are multiple reports of patients with a history of AUD and favourable evolutions, though spontaneous resorption remains uncommon. However, it should be noted that AUD has also been strongly correlated with poor long-term neurological recovery due to systemic complications, despite possible short-term benefits. **Conclusions:** This case presents a rare scenario: a severe chronic illness syndrome (atrophy) paradoxically improved the short-term prognosis of a life-threatening acute condition. It underscores the importance of tailored surgical treatments, taking into consideration even the rarer interactions between symptoms of separate conditions.

Keywords: acute subdural hematoma, alcohol use disorder, cerebral atrophy

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SEPTATE UTERUS WITH CERVICAL AND VAGINAL DUPLICATION RESEMBLING A DIDELPHYS UTERUS

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Introduction: A septate uterus represents an anatomical anomaly that leads to a partially or totally divided endometrial cavity, caused by the maldevelopment of the embryologic Müllerian. In clinical practice this is the most frequent congenital malformation with an estimated prevalence of 0.2-2.3% in women of reproductive age, it is frequently asymptomatic can cause pregnancy complications and miscarriages. **Case Report:** A twenty-five-year-old multiparous female patient presented with premature labor and membrane rupture at 35/36 weeks of pregnancy. The fetus was in a cephalic position. Clinical assessment identified a septate uterus, a double cervix, and a longitudinal vaginal septum. The medical team opted for a Pfannenstiel laparotomy, which involved opening the peritoneal cavity and dissecting the vesico-uterine fold, followed by careful bladder displacement. A segmental transverse hysterectomy was then performed, resulting in the delivery of a live premature female infant in cephalic presentation, achieving an Apgar score of 9/1 and 10/5. Subsequently, the medical team conducted a manual placenta extraction, followed by a uterine inspection, which confirmed the presence of a single uterus separated by a septum, along with cervical and vaginal duplication. **Discussions :** The intraoperative findings during the C-section revealed a single uterine body, confirming a diagnosis of complete septate uterus. Both conditions can present with duplicated cervix and vagina, leading to potential diagnostic confusion. Nevertheless, the distinguishing factor lies in the external contour of the uterus. **Conclusions:** This case highlights the complexities of diagnosis and the obstetric implications associated with a rare Müllerian anomaly misidentified as uterus didelphys. Accurate differentiation among uterine anomalies is critical, as it significantly affects pregnancy risks. A complete septate uterus is more commonly linked to miscarriage, implantation failure, and fetal malpresentation. While vaginal delivery may be feasible in certain cases of Müllerian anomalies, most situations require surgical intervention.

Keywords: septate uterus, cephalic position, Pfannenstiel laparotomy, uterus Didelphys

GIANT MUCINOUS OVARIAN CYST WITH COMPRESSION SYNDROME – INSIGHTS FROM A CASE REPORT AND SURGICAL CHALLENGES

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Introduction: Mucinous ovarian formations are characterized by slow but progressive growth, potentially reaching large sizes before becoming symptomatic. These tumors may be discovered incidentally or in the context of symptoms related to the compression of pelvic and abdominal organs. The case is rare due to the large size of the cyst, severe adhesion syndrome, and delayed diagnosis, requiring a complex surgical intervention. **Case Report:** A 55-year-old female presented with colicky abdominal pain on the left side, associated with fever and a sensation of pelvic compression. Imaging studies revealed a giant left ovarian cyst, compressing adjacent structures, including the left ureter. Given the large size of the cyst and the risk of torsion or rupture, surgical intervention for cyst removal was recommended. Imaging revealed a giant left ovarian cyst (~20 cm) with compressive effects. Surgery was initially planned as laparoscopy but converted to laparotomy due to severe adhesions. Findings included a giant cyst (2.5L aspirated fluid), extensive adhesions, and atrophic right adnexa. Bilateral adnexectomy, peritoneal lavage, and pelvic drain placement were performed. Postoperatively, the patient received antibiotics, anticoagulation, and pain management. She was discharged with follow-up in three weeks and advised to return for fever, pain, or bleeding. **Discussions :** Medical literature frequently describes compression phenomena affecting adjacent organs, in cases of large ovarian cysts, which was also observed in this patient. Although laparoscopy is the preferred surgical approach, conversion to laparotomy was necessary due to extensive adhesions and the difficulty of safe dissection. The patient also had essential hypertension, which is commonly seen in postmenopausal women or those with severe gynecological conditions. **Conclusions:** Managing a giant mucinous ovarian cyst requires proper preparation and the flexibility to perform any necessary maneuvers as needed

Keywords: Mucinous ovarian cyst, Ovarian torsion, Pelvic compression, Adhesion syndrome

TWICE THE FIGHT: CURATIVE SURGERY FOR SEQUENTIAL HEAD AND NECK SQUAMOUS CELL CARCINOMAS IN A MALNOURISHED SMOKER

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Introduction: Squamous cell carcinoma (SCC) of the oropharynx remains a significant global health concern. In recent decades, the epidemiology of oropharyngeal cancers has shifted, with a rising incidence of cases associated with high-risk human papillomavirus (HPV) infection. HPV-associated oropharyngeal squamous cell carcinoma (OPSCC), particularly p16-positive tumors, now represent the majority of cases in many high-income countries. These tumors typically demonstrate distinct biological behavior, improved response to therapy and a more favorable prognosis compared to HPV-negative cancers. **Case Report:** We report the case of a 61-year-old male with a history of left-sided p16-positive OPSCC (T3N2), treated with cisplatin-based radiochemotherapy since 2020. He later presented to the otorhinolaryngology department at CHU - Saint-Étienne, France, with odynophagia, dysphagia and significant weight loss (10 kg over two months). Clinical examination revealed a budding lesion at the right base of the tongue extending to the floor of the mouth. Flexible fibroscopy showed right vallecular and aryepiglottic fold involvement while cervical palpation identified enlarged right-sided lymphadenopathy. Further investigations with PET-CT and panendoscopy confirmed a large ulcerative lesion at the base of the tongue with extensive local invasion. Biopsies established the diagnosis of a second primary p16-negative SCC, staged T4N0M0. **Discussions :** The therapeutic options were carefully reviewed with the patient, balancing the possibility of a curative but highly mutilating surgery against a non-curative approach with palliative chemotherapy. Severe malnutrition (BMI 14.8) further complicated the treatment strategy, necessitating urgent placement of a gastrostomy tube to initiate enteral nutritional support. Following multidisciplinary discussion and modest weight gain, the patient consented to proceed with curative intent, undergoing an extensive surgical resection consisting of total glossectomy, pharyngolaryngectomy, and bilateral cervical lymphadenectomy via

cervicotomy, followed by reconstruction with a free osteo-musculocutaneous latissimus dorsi flap and vascular anastomosis, along with the creation of a permanent tracheostomy. Persistent tobacco use is a well-established risk factor for second primary tumor development in head and neck cancer survivors and likely contributed to this patient's recurrence. Continued exposure negatively affects prognosis by increasing recurrence rates, impairing treatment response and reducing overall survival. Integrating smoking cessation strategies and coordinating multidisciplinary management, including nutritional support and individualized treatment planning, are essential to stabilize the patient, optimize eligibility for curative treatment and improve long-term outcomes in this high-risk population. **Conclusions:** Beyond curative surgical intervention, smoking cessation and risk factor modification must be integral components of the treatment plan, given their substantial impact on disease recurrence, survival outcomes and overall patient health.

Keywords: oropharyngeal squamous cell carcinoma, p16 status, curative surgery, free flap reconstruction

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A SIMPLE CAR ACCIDENT, A DEFECTIVE SUTURE AND AN AMAZING OUTCOME

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Introduction: Cranio-facial trauma is a recurrent pathology in contemporary medicine that affects normal life course. The nervous system is connected to all body parts that can later be affected, causing devastating anti-homeostatic subsequent problems. The impact of computer-based 3D printing has reached a level that allows doctors to substitute deficient body parts to emulate the original component. The technology can be used to produce a clone that can ensure an almost identical function with minimal deficiency. The case initially involved a simple car accident, which was treated without enough attention, leading to a more delicate case. **Case Report:** The patient is a 49-year-old female who was involved in a car accident that caused frontal bone fracture and severe damage to the left orbital region. After the accident the patient presented to a private clinic where she had the frontal plague sutured, and was subsequently discharged, with the expectation that the ossification process will repair the cranial structure. One month later she presented to the maxillofacial department in collaboration with the neurosurgery department where she was diagnosed with multiple cranio-facial fractures and abnormal ossification that could cause future issues, surgery being imperative. The interventions were based on reconstructing the orbit with implants, the zygomatic, frontal bone and the maxilla. In the process of repairing the floor and the medial part of the orbit, the surgeons had to enucleate the left eye, providing better access to the damaged region. Because of the extended trauma, maxillary bone osteosynthesis was necessary. The last steps of the intervention were repairing the tegument plague and the subcutaneous tissue. After surgery, the patient had an accelerated recovery, and was discharged after 9 days of hospitalization. **Discussions :** Because of the relatively frequent cases of cranial and facial trauma, and in line with the evolution of technology , the medical procedures have evolved and new studies were performed to develop the perfect implant. Before the case was presented, there was a lot of documentation on different cases that concluded to the usage of implants to ensure the welfare of the patient. **Conclusions:** This case emphasises the necessity of personalised implants that are possible because of computer 3D printing and the importance of a fast intervention. Due to the reconstruction of the damaged area, the patient is protected from further complications, the quality of life being affected on a less severe level.

Keywords: Orbital Implant, Orbital floor Fracture, Reconstruction, Cranio-Facial Trauma

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ACUTE BASILAR ARTERY OCCLUSION WITH INTRAOPERATIVE MALLORY WEISS SYNDROME

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Introduction: Basilar artery occlusion (BAO) is a rare yet devastating subtype of ischemic stroke with high mortality and morbidity. Prompt recanalization via thrombolysis and/or thrombectomy is critical. However, the coexistence of non-neurological emergencies can complicate management and outcomes. **Case Report:** We present the case of a hypertensive male with a history of chronic gastritis and gastric ulcer, who arrived at the emergency department at 14:00 with sudden-onset altered consciousness. Neurological exam revealed spastic tetraparesis, right facial palsy, tonic posture, oculogyric deviation to the right, and Glasgow Coma Scale of 10. Muscle strength was 0/5 in lower limbs and right upper limb, and 3/5 in the left upper limb. NIHSS was 28. Non-

contrast CT showed no acute lesions, while angio-CT confirmed basilar artery occlusion with patent collateral circulation. Thrombolysis with Actilyse began at 18:20. During subsequent endovascular thrombectomy (puncture at 19:05), the patient developed profuse hematemesis. Mallory-Weiss syndrome was diagnosed intraoperatively, requiring immediate gastrointestinal management within the operating room to stabilize the patient. Despite the complication, basilar artery recanalization was successfully completed by 19:45. Post-intervention, neurological status improved markedly (NIHSS 6, muscle strength 4+), though the patient later experienced severe diarrhea and gastrointestinal discomfort. Follow-up imaging revealed ischemic lesions in the left cerebellum and right frontal lobe, without hemorrhagic transformation. **Discussions :** This case highlights the complexity of managing simultaneous life-threatening conditions. While BAO requires rapid intervention, the sudden onset of gastrointestinal bleeding due to Mallory-Weiss syndrome during the procedure posed a significant challenge. Prompt multidisciplinary response ensured stabilization and a favorable neurological outcome. **Conclusions:** Acute BAO can coexist with other critical emergencies such as Mallory-Weiss syndrome. Intraoperative readiness and cross-specialty coordination are key to optimizing survival and functional recovery.

Keywords: Basilar artery occlusion, Mallory-Weiss syndrome, Ischemic stroke

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A RARE AND AGGRESSIVE INFECTION: MUCORMYCOSIS IN A DIABETIC PATIENT

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Introduction: Mucormycosis is a rare fungal infection caused by a group of filamentous molds within the order Mucorales. The most frequent clinical manifestation is rhino-orbital-cerebral infection, given by the presence of the spores in the paranasal sinuses of a vulnerable host (the most common underlying condition being poorly controlled diabetes mellitus, particularly with ketoacidosis). Mucormycosis has an affinity for invading blood vessels, with thrombosis and tissue necrosis. Delayed treatment worsens prognosis, with a high mortality rate (>30-50%), rising to 90% for disseminated disease. **Case Report:** A 65-year-old woman presented with dark coloroured anterior rhinorrhea, bilateral nasal obstruction, left peripheral facial paralysis, left eye chemosis and eyelid swelling that began insidiously 3 weeks prior to presentation at the ENT department of Cluj-Napoca County Emergency Hospital (SCJU). The symptoms began during admission to another hospital, where the patient was being treated for right lower lobe pneumonia and urinary tract infection. The patient has a history of type 2 insulin-dependent diabetes mellitus. Clinical examination raised suspicion of mucormycosis due to the appearance of the entire left nasal cavity: degenerated mucosa, slight bleeding, muco-serous secretions and dark crusts with a spiculiform appearance. Emergency surgery was performed and extemporaneous histopathological examination confirmed the diagnosis. Antifungal treatment was initiated. CT scans revealed cavernous lesions in the left lung, raising suspicion of TB. During the patient's hospitalization, episodes of respiratory distress were recorded, with imaging confirming foci of pulmonary condensation, large left pleural collection, pericardial effusion and progression of the fungal infection to the left infraorbital region, forming a left premaxillary abscess drained by the oromaxillary surgeon, along with pansinusitis. Cultures taken from infraorbital secretion confirmed superinfection with Acinetobacter baumannii XDR and Klebsiella pneumoniae XDR. A tracheobronchial aspirate confirmed a Pseudomonas aeruginosa infection. **Discussions :** Additional surgical interventions were required, and consultations from the departments of internal medicine, cardiology, pulmonology, nephrology, ophthalmology, diabetology and infectious diseases were performed (transfers were made by ambulance, as SCJU Cluj-Napoca is a pavilion-type hospital). The patient's condition fluctuated, but the outcome leaned toward a favorable recovery under right care. **Conclusions:** The pathological complexity of the disease, associated with the involvement of multiple systems and the overlap of complications, highlights the need for an integrated system that allows a unified and coordinated approach to patient care. Transfers between departments for specialized consultations could be reduced by implementing a single integrated care system that facilitates interdisciplinary collaboration, optimizes treatment, ensures more efficient and timely care.

Keywords: Mucormycosis, Rhino-orbital-cerebral infection, Diabetes mellitus, Acinetobacter baumannii XDR

A FIRST CHALLENGING WEEK

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Introduction: The management of a premature neonate with multiple comorbidities presents a significant challenge for medical teams. In the case of the 7-day-old premature infant presented here, the extensive pathology involved led to a multidisciplinary approach that resulted in a surgical intervention in the Pediatric Surgery and Orthopedics Department. **Case Report:** We present the case of a 7-day-old premature neonate delivered through cesarean section with a history of intestinal perforation, acute surgical abdomen, stercoral peritonitis, upper gastrointestinal hemorrhage, atrial septal defect, neonatal sepsis, and respiratory distress syndrome. Due to the premature gestational age and the clinical condition, the patient was transferred to the Neonatal Intensive Care Unit for specialized treatment and investigations, requiring intubation and mechanical ventilation. After one week, the neonate's critical condition persisted, developing pneumoperitoneum and maintaining abdominal distention along with inguinal and iliac edema. Therefore, the transfer to the Pediatric Surgery Department was arranged to continue the therapeutic plan. Based on the clinical and paraclinical examination, the acute surgical abdomen diagnosis was confirmed. The surgery revealed multiple ileal perforations, acute abdomen caused by ulcerative enterocolitis and stercoral peritonitis, prompting a median celiotomy with ileal resection and right terminal ileostomy. **Discussions :** Intestinal perforation and stercoral peritonitis are among the most serious surgical emergencies in preterm infants. In premature patients, the risk of complications is significantly higher due to the immaturity of organ systems and limited physiological reserves. Furthermore, these patients often present with nonspecific symptoms, and the diagnosis can be delayed, leading to rapid clinical deterioration and the need for urgent surgical intervention, as was the case in our patient. **Conclusions:** In conclusion, the management of a premature infant with multiple comorbidities requires a careful, multidisciplinary approach tailored to the patient's needs. Early surgical interventions, combining surgical approaches with appropriate supportive therapies, are essential for improving the patient's prognosis. This case highlights the importance of an interdisciplinary medical team and rigorous monitoring to effectively respond to extremely complex situations.

Keywords: neonate, ileal perforation, median celiotomy, acute abdomen

POSTER - NON - SURGICAL

WHEN THE HEART ISN'T TO BLAME: AORTOESOPHAGEAL FISTULA UNVEILED POST-MORTEM

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Introduction: Sudden cardiac death is a leading cause of death worldwide, often linked to acute coronary events or arrhythmia. However, non-cardiac conditions can exhibit similar symptoms, leading to misdiagnosis. Aortoesophageal fistulae are abnormal communications between the aorta and esophagus, a rare but life-threatening entity that could lead to massive upper gastrointestinal bleeding, rapid exsanguination and death. **Case Report:** We present the case of a 65-year-old man found deceased without any visible signs of trauma or injury, initially suggesting sudden cardiac death. No medical records or prior history were available. Upon inspection, the cadaver presented a reddish liquid exuding from the nostrils and oral cavity flowing towards the right auricular pavillion, fingertip cyanosis, swollen calves and ankles Godeu's sign positive. Key findings included a solution of continuity on the anterior wall of the esophagus communicating with the descending thoracic aorta. The aorta presented a dilatation on the posterior wall that contains a layered coagulum, and at the intimal level, a small area with a loss of substance, suggestive for an aortoesophageal fisula (AEF), secondary to a descending thoracic aorta dissection. The lumen of the stomach was occupied with a reddish blood clot taking the shape of the organ with a volume of 2,5 liters, confirming a massive upper gastrointestinal hemorrhage. The lungs presented 150 ml of serous fluid in the left pleural cavity, a sponge-like appearance, dark red liquid discharge mixed with frothy, foamy tissue and areas with a "leopard skin" appearance indicative of pulmonary oedema. The heart is enlarged due to left ventricular hypertrophy, the coronary arteries have firm yellowish deposits, suggesting hypertrophic cardiomiopathy and coronary atherosclerosis. The cause of death was ruled to be exsanguination due to the previously mentioned findings. **Discussions :** AEFs are often misdiagnosed during life, the majority of cases being diagnosed post-mortem due to their rapid progression and nonspecific presentation. Chiari described the presentation of AEF as midthoracic pain, sentinel arterial hemorrhage translated into hematemesis and final exsanguination after a symptom-free interval. In our case, we cannot know if the patient had any of them as they are not always present, or if they were, they might have been overlooked. However, in a forensic setting, the gold standard remains the detailed autopsy examination. This case reinforces the necessity of considering vascular emergencies in cases of unexplained sudden death. **Conclusions:** This case report highlights the importance of forensic examination in uncovering rare but fatal conditions that mimic sudden cardiac death.

Keywords: aortoesophageal fistula, post-mortem case report, sudden death

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THE EFFECTS OF DENTAL ALLOYS ON ALLERGIC REACTIONS: URTICARIA AND ANGIOEDEMA INDUCED BY NICKEL AND PALLADIUM

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Introduction: Chronic urticaria (CU) is characterized by recurrent hives persisting for more than six weeks. When accompanied by angioedema (50%), CU is often considered a more severe form of the condition, as it indicates deeper tissue involvement meaning that the immune system has been triggered in a more intense way, releasing histamine and stimulating nerve endings. This leads to pruritus, pain and a burning sensation. While most cases of CU are idiopathic, triggers such as infections, autoimmune disorders, medications, and allergens-including metal hypersensitivity-have been implicated. Nickel and Palladium, commonly found in dental restorations, are known allergens that can contribute to CU with angioedema. **Case Report:** A 27-year-old female patient, with a gold alloy dental restoration of 2 years, presents with maculopapular eruptions (urticaria) and palpebral and lip angioedema. She undergoes blood tests, such as specific IgE testing (FEIA) for egg yolk, wheat, gluten, soy, nuts, bovine serum albumin, with negative results (<0.1 Ku/L). Additionally, she undergoes the dental LTT test (Lymphocyte Transformation Test). The test is positive for Nickel (4.8 SI) and Palladium (6.4 SI). The patient was recommended to remove the metal alloy dental restoration and take Xyzal 5 mgx2/day, with the possibility of increasing the dose up to 20 mg per day if the symptoms persist. **Discussions :** Metal hypersensitivity, mediated by a type IV immune response, is a frequently overlooked but clinically relevant cause of chronic urticaria. This case illustrates the diagnostic relevance of the Lymphocyte Transformation Test (LTT) in the evaluation of chronic urticaria. The test

confirmed sensitization to Nickel and Palladium, most likely related to the patient's dental restoration. **Conclusions:** This case highlights the importance of considering metal hypersensitivity as a potential cause of chronic urticaria and angioedema. Due to the delayed nature of these reactions, identifying and eliminating the allergen source is crucial for symptom resolution, as antihistamines on their own may not achieve sufficient therapeutic effect.

Keywords: Chronic Urticaria, Angioedema, Metal Hypersensitivity, Lymphocite Transformation Test

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SPITZ NEVUS: CASE PRESENTATION OF A DIAGNOSTIC CHALLENGE IN MELANOCYTIC LESIONS

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Introduction: Spitz Nevus is a benign neoplasm, firstly described by Sophie Spitz in 1948 and it represents 1-2% of all the excise nevi. Conventional nevi are dome shaped papules (<6mm), composed of large spindled and epithelioid melanocytes. The etiology is unknown. The tumour is more common in children and young adults, especially female, typically involving the face and the upper body. **Case Report:** A 17-year-old female presented to a dermatologist's office in 2019 with a 0.5 cm erythematous papule on the right side of the nasal pyramid, resembling a haemangioma, that had been rapidly growing for the past 4 months. The patient was sent to the Plastic Surgery Department for excision. The histopathological examination showed a 4,5x5 mm grey nodular tumour. Microscopy revealed a cutaneous fragment covered by keratinized stratified squamous epithelium that presents large junctional and dermal melanocytic nests, which are parallel with the epidermis. The cells are spindled and diamond shaped, with abundant eosinophil cytoplasm and large nuclei, prominent nucleoli, without atypia. The cells present a positive stain for immunohistochemistry marker S100 and the proliferation index Ki67 index is less than 5%. The final diagnosis of Spitz nevus was established. At the follow-up appointment, the patient showed proper healing of the tumour excision site, with no signs of recurrence. **Discussions :** Initially, the suspicion was of an atypical tumour because of the clinical aspect of the lesion and the main concern was excluding a Spitzoid melanoma. A correct differential diagnostic between benign, maligned and atypical spitzoid lesions is challenging but essential. The nevus is a symmetric, well delimited tumour, smaller than 6 mm, presents Kamino bodies and enlarged nuclei, with absent pleomorphism. This lesion presents a positive but weak stain for S100, a positive intense stain with p16 and a Ki67 index is lower than 5%. Spitz melanoma is asymmetrical, poorly defined, usually larger than 10 mm. The epidermis can be ulcerated, Kamino bodies are absent and we can observe pleomorphism and cytological atypia. The tumour has an intense expression of the S100 immunomarker and the Ki67 index is high. Atypical Spitz nevi do not express all the criteria of a typical nevus or of a melanoma. **Conclusions:** The diagnostic of the Spitz nevus remains a challenge for both clinicians and histopathologists.

Keywords: Spitz Nevus, melanoma, spitzoid lesion, Kamion bodies

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UPPER GASTROINTESTINAL BLEEDING OF NEOPLASTIC ETIOLOGY – MULTIDISCIPLINARY APPROACH – CASE REPORT

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Introduction: Upper gastrointestinal hemorrhages are becoming increasingly frequent as patients present with multiple comorbidities, leading to complex clinical scenarios that require individualized therapy and an interdisciplinary approach. **Case Report:** We present the case of a 66-year-old man who presented with massive haematemesis, melena, and dizziness. Upon admission, the patient was hemodynamically stable, with hemoglobin levels of 6.67 g/dL and elevated creatinine and serum urea levels, suggestive of acute kidney injury. Hematologic and volume resuscitation were initiated, followed by an emergency upper gastrointestinal endoscopy, which revealed a 5 cm circular elevated lesion with a proliferative nodular appearance of the gastric angle on the lesser curvature. A particularly deep circular ulcer was identified within this lesion, characterized by a fibrin-covered crater and three small vessels exhibiting slow bleeding. Argon plasma coagulation was performed, and two hemostatic clips successfully stopped the hemorrhage. Biopsies were taken from the lesion. After 24 hours, the patient experienced a new episode of haematemesis. A repeat endoscopy revealed a medium-sized clot at the ulcer site. The clot was removed, and 1:10,000 adrenaline was injected, with no active bleeding observed. The patient underwent two hemodialysis sessions, followed by a contrast-enhanced CT scan. The scan revealed the presence

of metallic clips on the lesser curvature, a hyperdense clot with air inclusions at this level, no active contrast extravasation into the stomach, and thickening of the gastric wall, up to 10 mm, at the lesser curvature. Given the lack of hemostasis, surgical treatment or embolization of the tumor was considered. Due to the patient's poor hemodynamics and neurological status, an endovascular intervention was indicated. The celiac trunk was catheterized, followed by contrast injection, which revealed a hypervascular area in the projection of the lesser curvature. Selective catheterization of the branches of the left gastric artery was performed, followed by the injection of PVA embolization particles until devascularization of the hypervascular area was achieved. **Discussions :** The lesion's hemostasis was achieved, renal function recovered, and the patient was discharged. Histopathological examination confirmed the presence of gastric adenocarcinoma. **Conclusions:** The failure of endoscopic hemostasis necessitates alternative hemostatic measures, with endovascular intervention proving effective and better tolerated by the patient. Temporary endoscopic hemostasis should not be underestimated, as it allows for patient stabilization, management of comorbidities, and determination of the most appropriate therapeutic strategy.

Keywords: digestive bleeding, polyvinyl embolization, endoscopic hemostasis

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URTICARIA AND ANGIOEDEMA WITH BLASTOCYSTIS AND AN IUD: A CASE REPORT

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Introduction: Chronic spontaneous urticaria and angioedema are syndromes characterized by pruritus and edema that occur intermittently. The cause may arise from various factors, including autoimmune disorders, infections, and exposure to foreign substances. Identifying the etiology is important to ensure that the appropriate treatment is started. **Case Report:** A 38-year-old female smoker with a medical history significant for Helicobacter pylori-associated gastritis and hiatal hernia was evaluated as a new patient. She reported no personal history of allergic or atopic disorders and was not taking any medications. She presented in September 2024 with an erythematous, edematous, well-demarcated plaque on the left foot, associated with marked pruritus and tenderness. The lesion was consistent with a urticarial wheal, characterized by transient, raised, and circumscribed dermal edema. The same eruption reappeared on the right foot after one week, and later lesions appeared on the right hand and lower epigastrium. The patient self-administered loratadine, resulting in complete symptom resolution. However, one month later, she experienced angioedema upon awakening, which resolved within three hours after taking two doses of loratadine. Fecal PCR for Blastocystis hominis was positive and metronidazole and H1-antihistamine were administered. She experienced another episode of angioedema in December, and intravenous dexamethasone was administered. Further investigations, including an ALEX panel, total IgE, and tumor markers, were negative, except for mild eosinophilia. She was also positive for circulating immune complex. Additionally, the patient was using an intrauterine device with levonorgestrel. The patient was initiated on treatment with four antihistamines daily and was recommended for intrauterine device removal. The patient returned to the clinic with persistent urticarial eruptions and angioedema, regardless of receiving maximum-dose antihistamine therapy for the past 2 months. Due to inadequate response to standard treatment, biological therapy with Omalizumab was initiated, following the protocol for refractory chronic spontaneous urticaria. **Discussions :** Chronic urticaria and angioedema can be caused by numerous factors. Chronic urticaria can be induced by Blastocystis hominis according to studies. Intrauterine devices can also induce immune responses. Total normal IgE and absence of tumor markers reduce the possibility of malignancy-associated or atopy-associated paraneoplastic syndromes. **Conclusions:** The relationship between recurrent urticaria or angioedema, chronic infection, and the foreign body response to an intrauterine device represents a major diagnostic and therapeutic challenge. Detailed evaluation, in the context of scarce laboratory findings is essential to elucidate the underlying cause and to guide optimal treatment management.

Keywords: Chronic spontaneous urticaria, Angioedema, Blastocystis hominis, Intrauterine device

RENDU-OSLER SYNDROME- A CASE OF PULMONARY ARTERIOVENOUS MALFORMATION

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Introduction: Pulmonary arteriovenous malformations (AVMs) are rare and abnormal connections between the pulmonary arteries and veins. They are mostly congenital and are often associated with hereditary hemorrhagic telangiectasia, also known as Osler-Weber-Rendu syndrome, which is an autosomal dominant hereditary disorder characterized by phenotypic manifestations, including arteriovenous malformations in the pulmonary, cerebrospinal, hepatic, and other visceral organs. On CT examination, these vascular malformations are most commonly located in the lower lobes and are characterized by a round-oval intraparenchymal mass with relatively homogeneous contrast enhancement, associated with a dilated afferent artery and an efferent draining vein. **Case Report:** Our case involves a 48-year-old patient, known to have hereditary hemorrhagic telangiectasia, pulmonary tuberculosis, and COPD, who presents at the Târgu-Mureș County Emergency Clinical Hospital for a contrast-enhanced thoraco-abdominopelvic CT scan. In the arterial phase, an arteriovenous malformation is identified in the left lower lobe, communicating with the left pulmonary artery and the left inferior pulmonary vein. The CT examination also reveals other associated lesions, including characteristic emphysema and bilateral apical fibro-sclerotic lesions, in the context of pulmonary tuberculosis.The arteriovenous malformation was incidentally identified while the patient presented for a CT scan to evaluate pre-existing pulmonary lesions discovered on radiography. **Discussions :** The uniqueness of this case lies in the patient presenting for a contrast-enhanced CT after a pulmonary radiograph. A complex arteriovenous malformation involving a minimum of two tributary segmental branches was detected. Imaging also revealed incidental hepatic and renal involvement. **Conclusions:** Early identification through imaging, clinical examination, and paraclinical investigations is crucial, and immediate surgical intervention upon detection represents the safest treatment method for preventing complications.

Keywords: malformation, Osler-Weber-Rendu syndrome, telangiectasia, incidental

WHEN TRANSPLANT ISN'T THE END: CHRONIC GRAFT REJECTION IN WILSON'S DISEASE

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Introduction: Wilson disease (WD) is a rare autosomal recessive disorder of copper metabolism, characterized by impaired biliary excretion of copper. The standard treatment involves the use of chelating agents, such as D-penicillamine and trientine dihydrochloride, to enhance copper depletion. Liver transplantation (LT) is indicated in cases of acute liver failure or end-stage liver disease unresponsive to medical therapy. When LT is not feasible, TIPS (transjugular intrahepatic portosystemic shunt) may be used as a bridge to transplantation. **Case Report:** A 36-year-old female presented to the emergency department in December 2024 with hematemesis and melena, which had onset the previous day. She was diagnosed with Wilson's disease in 2004 and managed with D-penicillamine. In 2006, she developed decompensated cirrhosis and underwent liver transplantation in 2010 in Italy. Post-transplant, she was maintained on immunosuppressive therapy with Tacrolimus, which she discontinued during pregnancy, resulting in progressive graft dysfunction. After delivery, Everolimus was added to her regimen in an attempt to regain immunologic control. In the context of persistent liver dysfunction marked by elevated total bilirubin, hypoalbuminemia, and prolonged INR, a liver biopsy was performed. Histopathology revealed findings consistent with chronic graft rejection including marked ductopenia, and a dense portal inflammatory infiltrate of lymphocytes and plasma cell. Currently, the patient presents with decompensated cirrhosis complicated by ascites. On admission, endoscopy revealed grade 3 varices, for which six elastic band ligations were performed. Due to the high risk of bleeding, a TIPS procedure was recommended as a bridge to a possible LT. A TIPS was successfully performed, creating a shunt between the right hepatic vein and the right portal vein, without complications. In April 2025, she underwent a second liver transplant, which was successful. **Discussions :** The success of LT is strongly dependent on long-term adherence to immunosuppressive therapy to prevent graft rejection. Non-adherence can lead to chronic rejection, complications, and the need for retransplantation. While TIPS can

effectively stabilize patients by reducing portal pressure, it does not offer a permanent solution for portal hypertension. Retransplantation, though essential for patients with failed grafts, is impacted by challenges such as limited organ availability, poorer outcomes compared to primary transplants, and high costs. These factors raise ethical concerns regarding the allocation of limited donor organs. **Conclusions:** This case highlights the critical role of long-term adherence to immunosuppressive therapy, the necessity of specialized transplant expertise in Wilson's disease patients, and the utility of TIPS as a bridging intervention when retransplantation is not immediately available.

Keywords: liver transplantation, transjugular intrahepatic portosystemic shunt, chronic graft rejection

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RENDU-OSLER SYNDROME: A CHALLENGE FOR THE PATIENT, BUT ALSO FOR THE PHYSICIAN?

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Introduction: Rendu-Osler disease, or Hereditary Hemorrhagic Telangiectasia (HHT), is a rare genetic disorder caused by mutations in multiple genes (e.g., ACVRL1, ENG, SMAD4), inherited in an autosomal dominant manner. It is characterized by blood vessel abnormalities leading to arteriovenous malformations and telangiectasia, resulting in recurrent bleeding. **Case Report:** The case of a 76-year-old female patient with a history of grade I hypertension and ischemic stroke, who presented to the clinic with complaints of palpitations with a rapid, irregular rhythm. The objective clinical examination revealed a right femoral vascular murmur, while paraclinical investigations showed hyperbilirubinemia, hyperuricemia and moderate hypokalemia. Due to these findings, abdominal ultrasonography and Doppler ultrasonography were performed. Abdominal ultrasonography revealed dilation of the intrahepatic bile ducts and the main bile duct, while arterial Doppler examination of the right lower limb confirmed the presence of an arteriovenous fistula between the common femoral artery and the common femoral vein. Consequently, a contrast-enhanced CT scan was performed to evaluate the abdomen and the bilateral aorto-femoral axis. The CT scan revealed a subcapsular hepatic arteriovenous malformation and a femoral arteriovenous fistula. Additionally, given the patient's fluctuating oxygen saturation levels and dyspnea, a chest X-ray was performed, revealing an irregularly shaped opacity at the level of the left pulmonary hilum, suggestive of a pulmonary arteriovenous malformation, consistent with findings from a previous CT examination. Regarding the episodes of rapid and irregular palpitations, an ECG was performed, showing sinus rhythm with an AV rate of 50 BPM. Given the history of ischemic stroke, Holter ECG monitoring for 48 hours was conducted to evaluate potential cardioembolic etiology. The Holter recording demonstrated sinus rhythm throughout, with a few short (<3 seconds) episodes of focal atrial tachycardia, but no atrial fibrillation or other malignant arrhythmias. **Discussions :** Given the presence of telangiectasias, arteriovenous malformations, and a history of recurrent epistaxis (meeting 3 out of 4 Curaçao criteria), the diagnosis of Hereditary Hemorrhagic Telangiectasia (Rendu-Osler Disease) was established. Due to the autosomal dominant inheritance pattern, screening for this condition in first-degree relatives and genetic counseling for the family were recommended. **Conclusions:** Rendu-Osler Disease can significantly impact patients' quality of life due to its numerous complications, including epistaxis, telangiectasias, gastrointestinal bleeding, arteriovenous malformations, and chronic anemia. However, early diagnosis and appropriate treatment can help control symptoms and improve patient outcomes, even in elderly and fragile patients with significant cardiovascular diseases.

Keywords: Rendu-Osler Disease, genetic pathology, arteriovenous malformations, telangiectasias

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SILENT SEEDS OF MALIGNANCY: AN ATYPICAL CASE OF OVARIAN SEROUS CARCINOMA

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Introduction: Ovarian serous carcinoma (OSC) is an aggressive form of ovarian cancer arising from epithelial cells of the fimbriated end of the fallopian tube. Its primary mode of dissemination occurs along the mesothelial lining of the peritoneal cavity, and it commonly infiltrates the pelvic and para-aortic lymph nodes. It is classified into two variants: high-grade serous carcinoma (HGSC) and low-grade serous carcinoma (LGSC). HGSC is the

predominant type and is often diagnosed at advanced stages leading to a poor prognosis with a median overall survival rate of approximately 40.7 months. This abstract explores a unique case of high-grade ovarian serous carcinoma that presented with laterocervical and mediastinal lymph node involvement. **Case Report:** A 54-year-old woman presented with multiple adenopathies, including laterocervical and mediastinal lymph node involvement. Given the peculiar distribution of the lymphadenopathy, a malignancy was suspected, prompting further investigation. The patient underwent fine-needle aspiration (FNA) and three core needle biopsies. Histopathological analysis revealed that the connective adipose tissue exhibited tumoural proliferation, characterized by micropapillary and papillary architectural patterns, and marked cytonuclear atypia. Immunohistochemical staining showed strong and diffuse positivity for WT1 and CK7, focal positivity for ER, and negativity for TTF1, GATA3, p63, and CK20. The Histopathological findings and the immunohistochemical profile confirm metastatic high-grade serous carcinoma of ovarian origin. **Discussions :** The involvement of laterocervical and mediastinal lymph nodes in the case of ovarian serous carcinoma is a rare occurrence and contributes to the existing literature due to its rarity. Metastasis to these lymph nodes occurs in approximately 10% of cases, but without widespread peritoneal disease is observed in only 1-2% of cases. This indicates advanced-stage disease (stage III-IV), according to FIGO staging, which warrants systemic therapy. Standard treatment consists of cytoreductive surgery followed by platinum-based chemotherapy consisting of Carboplatin and Paclitaxel. **Conclusions:** This case highlights the rare presentation of isolated laterocervical and mediastinal lymph node metastases in ovarian serous carcinoma and the vital role of histopathology and immunohistochemistry in the diagnosis, management, and treatment. To enhance patient outcomes, it is essential to analyze additional cases to identify predictive patterns that can improve therapeutic efficacy, ultimately guiding more personalized and effective treatment strategies.

Keywords: High-Grade Serous Carcinoma, Mediastinal Lymph Node Metastasis, Laterocervical Lymph Node Metastasis, Ovarian Cancer

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UNRAVELING A RARE SCALP PRESENTATION OF PRIMARY CUTANEOUS CD4+ SMALL/MEDIUM T-CELL LYMPHOPROLIFERATIVE DISORDER

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Introduction: Primary cutaneous CD4-positive small/medium T-cell lymphoproliferative disorder (PCSM-TLPD) is a rare and slow-growing subtype of cutaneous T-cell lymphoma, affecting about 0.2-0.2 people per million annually. It normally presents as a single, harmless, asymptomatic skin lesion, and has an excellent prognosis, often requiring minimal intervention. As it is infrequent and overlaps with other types of lymphoproliferative disorders, a conclusive diagnosis is vital to negate unnecessary treatment. Here, we report a case of PCSM-TLPD detected in a middle-aged man following a diagnostic biopsy. **Case Report:** A 56-year-old male presented with a pinkish, slightly elevated nodular lesion on the left frontal scalp, measuring approximately 10 mm in diameter. An elliptical excisional biopsy revealed a dense lymphoid infiltrate with epidermotropism, extending from the superficial dermis into the hypodermis. The infiltrate was polymorphous, predominantly composed of small to medium-sized lymphocytes, along with large atypical cells featuring irregular nuclear contours. Background cells included histiocytes, eosinophils, plasma cells, and small aggregates of B lymphocytes. The infiltrate involved adnexal structures, including hair follicles and sebaceous glands. Immunohistochemistry demonstrated a mature T-cell phenotype with strong CD3 and CD4 expression, and a CD4:CD8 ratio of 10:1. Ki-67 highlighted 20-30% nuclear proliferation, primarily in the larger atypical cells. CD20-positive B cells were relatively increased. These histopathologic and immunophenotypic features supported a provisional diagnosis of PCSM-TLPD, pending further immunostaining. **Discussions :** The histological and immunophenotypic features, correspond to PCSM-TLPD, a disorder that can be misinterpreted for conditions such as mycosis fungoides or systemic T-cell lymphoma. Recently PCSM-TLPD has been recognized as an unparalleled clinicopathological disorder by the WHO-EORTC (World Health Organization - European Organization for Research and Treatment of Cancer). PCSM-TLPD generally follows a benign, localized course and prognosis is excellent, with most lesions resolving following surgical excision. In contrary to more aggressive lymphomas, PCSM-TLPD displays low proliferative activity and limited cytologic atypia. Misclassification can result in superfluous treatment, including unnecessary systemic chemotherapy or radiotherapy. This case highlights the imperative need of comprehensive histopathological evaluation and immunophenotyping to discern PCSM-TLPD from more aggressive lymphoproliferative disorders and guide appropriate and less invasive therapies. **Conclusions:** This case contributes to the limited literature on PCSM-TLPD and emphasizes the importance of recognizing its distinct clinicopathologic profile. Given its

favourable prognosis and excellent response to local treatment, increased clinical awareness can help ensure accurate diagnosis and prevent unnecessary treatments.

Keywords: Lymphoproliferative disorder, Cutaneous T cell lymphoma, CD4, Primary cutaneous lymphoma

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LONG-TERM RESPONSE TO NIVOLUMAB IN ADVANCED LUNG ADENOCARCINOMA

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Introduction: Lung adenocarcinoma is the most common subtype of non-small cell lung cancer originating in the lung's glandular cells. Thought it often grows slowly, it can spread early, posing a serious health risk. In Romania, lung cancer, especially adenocarcinoma, has the highest incidence and mortality rates among men, acording to the National Institute of Public Health, underscoring the need for better prevention and treatment. **Case Report:** We present the case of a 64 year-old male who underwent a right medio-superior bilobectomy with mediastinal lymphadenectomy 6 years ago, following the radiological discovery of an expansive process with caudal extension in the right upper lung lobe. Histopathological examination revealed a moderately differentiated pulmonary adenocarcinoma with pleural invasion and metastasis in 6 out of 9 ipsilateral centrohilar lymph nodes. Immunohistochemical analysis demonstrated 50% PD-L1 expression. The tumor progressed after one year of first-line chemotherapy with Paclitaxel and Carboplatin, prompting the decision to switch to second-line treatment with Nivolumab. For this patient, there was a PD-L1 TPS score of 50% within the tumoral cells, making him a suitable candidate for immunotherapy. This level of expression often predicts a better response to treatments like Nivolumab, enhancing the likelihood of tumor control through immune modulation, even in the metastatic stage. **Discussions :** For a patient with pT4N1 stage lung adenocarcinoma treated with Nivolumab, the estimated 5-year survival rate is around 16%. Nivolumab, as an immune checkpoint inhibitor, can facilitate durable responses, especially in those with significant PD-L1 expression, allowing the cancer to stabilize over extended periods. While many patients achieve stable disease, the duration and consistency of the response may differ based on individual factors like tumor biology and secondary resistance. **Conclusions:** This case underscores the significant role of Nivolumab in managing advanced pT4N1 lung adenocarcinoma, highlighting PD-L1 expression as a crucial predictive indicator for treatment efficacy. The fact that the patient has been in stationary disease for almost 5 years reiterates the importance of immunotherapy in long-term survival. As personalized treatment approaches evolve, ongoing research is essential to enhance therapeutic strategies and improve outcomes for patients with advanced lung cancer.

Keywords: PD-L1 biomarker, Lung metastatic adenocarcinoma, Immune checkpoint inhibitors

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THE IMPORTANCE OF SOCIAL SUPPORT IN A DELUSIONAL DISORDER – CASE REPORT

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Introduction: Persistent delusional disorder refers non-bizarre delusional ideas that occur for at least 1 month. These ego-syntonic ideas cannot be refuted by logical arguments, are accompanied by a major dynamic-energetic support and tend to appear in the context of low stress tolerance, increased suspicion, as well as in an environment perceived as hostile. **Case Report:** A 56-year-old female patient with prior documented psychiatric history of sleep disorder and non-adherence to medication treatment is brought to the psychiatric emergency unit exhibiting the following symptoms: delusional ideas of persecution, harm, stalking, suspiciousness, interpretability, accelerated ideational rhythm, logorrhea, coprolalia, impulsive and unpredictable behavior, psychomotor agitation. The previously described symptomatology started several years ago, evolving chronically with episodes of exacerbation due to situational background (mother and daughter's pathology). Considering the fact that the patient's first contact with the psychiatric service took place at the age of 56, laboratory tests were performed to detect any organic pathology, with negative results for Borrelia, HIV, Syphilis. Although an irritative zone was detected on the EEG in the right and left centro-parieto-temporal regions, no epileptic seizures occurred over time. **Discussions :** The diagnosis was made based on DSM-5 criteria, following a comprehensive clinical psychiatric evaluation. The patient attends monthly follow-up appointments for monitoring of symptoms and treatment

response. Prior to psychiatric admission, the patient experienced disputes with colleagues at work and was unable to perform professional tasks. At admission, she exhibits demanding behavior and refuses medication. However, during the course of hospitalization, a good therapeutic alliance is established, leading to treatment compliance and a favorable outcome. Family support is a positive factor in long-term treatment compliance, while negative factors include lack of insight into the illness and its chronic progression. **Conclusions:** The delusional disorder began insidiously several years ago, evolving chronically over time. Although the patient lacks insight into the illness, the social support and an optimal therapeutic alliance that she receives represent a key factor in her treatment compliance and positive outcome.

Keywords: delusional disorder, therapeutic alliance, primary social support network, dissimulation

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A RARE CASE OF ADHESIVE ARACHNOIDITIS TYPE 3 WITH MULTISITE SEPSIS

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Introduction: Adhesive arachnoiditis can be classified into three types. In type 1 the nerve roots are distorted and conglomerated, in type 2 the nerve roots are adherent to the dural sac, resulting in a hollow-appearing dural sac and in type 3 the nerve roots and dural sac are fused, forming a solid mass of tissue located in the center of the spinal canal being the rarest type of them. It is an infrequent case of lumbar pain, mimicking degenerative spine conditions. Its association with systemic sepsis from multiple infectious sites presents a significant diagnostic and therapeutic challenge. **Case Report:** We present the case of an 84-year-old male, admitted multiple times between 2020 and 2023. The presentation included paraparesis syndrome and chronic low back pain. MRI and clinical findings revealed advanced degenerative lumbar disease with L3 anterolisthesis, L4 vertebral body collapse, and severe spinal canal stenosis, a surgical decompression treatment being proposed. Refusing treatment his condition worsened over time, and at subsequent presentation in June 2023 another MRI exam described a type 3 adhesive arachnoiditis. The patient underwent surgical decompression for L4-L5 spinal stenosis. Postoperatively, he presented with worsening general condition and was readmitted in July 2023 for somnolence, altered mental status, and signs of systemic infection. Despite aggressive antimicrobial treatment and multidisciplinary care, the patient's condition worsened and culminated with its death. **Discussions :** The case underlines the rare occurrence of adhesive arachnoiditis type 3. Advanced adhesive arachnoiditis accelerated neurological decline, promoting immobility and subsequent decubitus ulcers and urinary retention, all contributing to the infections and sepsis. This case exemplifies the challenges in managing elderly polymorbid patients with overlapping neurological and infectious pathologies. **Conclusions:** This case highlights the critical importance of early diagnosis and comprehensive management of spinal stenosis and its complication as adhesive arachnoiditis, especially when combined with systemic sepsis. Multidisciplinary collaboration is vital to improve prognosis in similarly complex cases.

Keywords: adhesive arachnoiditis, sepsis, spinal stenosis

SEVERE ANEMIA CAUSED BY GASTRIC ANTRAL VASCULAR ECTASIA: A CASE REPORT

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Introduction: Gastric Antral Vascular Ectasia (GAVE) is a rare form of gastrointestinal bleeding, accounting for approximately 4% of non-variceal upper gastrointestinal haemorrhages, and generally affects the elderly population over the age of 70. GAVE is characterised by telangiectatic blood vessels involving the gastric antrum and pylorus, though in rare cases, it may also affect the gastric fundus, duodenum, and jejunum. The term "watermelon stomach" refers to the presence of longitudinal rugal folds with visible columns of convoluted vessels resembling watermelon stripes. The exact cause of its onset remains unclear, but GAVE is often associated with cirrhosis, chronic kidney failure, and autoimmune diseases. **Case Report:** We report the case of a 79-year-old patient hospitalised for the following symptoms: asthenia, vertigo, dyspnea, bilateral leg oedema, pale skin, mucous membranes, and recurring episodes of upper gastrointestinal bleeding, for which the evidence was melena. The patient had a medical history of chronic kidney disease stage IV KDIGO and multiple cardiovascular pathologies. An upper gastrointestinal endoscopy showed an oedematous and erythematous appearance,

accompanied by numerous telangiectasias (some with laminar bleeding) at the level of the stomach and pyloric antrum, extending even to the first jejunal loops. Argon plasma coagulation (APC) therapy was initiated, requiring repeated sessions. **Discussions :** As a therapeutic approach, multiple sessions of APC were considered. However, the case proved to be challenging, as follow-up examinations revealed progression of the angiectasias toward the duodenum and jejunum, and the blood loss resulted in severe haemorrhage requiring repeated red blood cell transfusions. The patient was under observation, and anti-angiogenic drug therapy was added to the APC treatment. Also, treatment with proton pump inhibitors, vitamin therapy, and hydroelectrolytic rebalancing was necessary. **Conclusions:** In conclusion, GAVE is a rare cause of upper gastrointestinal bleeding, presenting with symptoms ranging from occult bleeding to acute blood loss requiring resuscitation. APC has been successfully used in the treatment of GAVE, although multiple sessions may be necessary. Several other endoscopic interventions are available, and surgical antrectomy is generally considered a last resort.

Keywords: GAVE, anemia, argon plasma coagulation, endoscopic treatment

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COMPLICATIONS OF A HEPATIC HYDATIC CYST: A CASE REPORT

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Introduction: Cystic echinococcosis (CE), or hydatidosis, is a zoonotic parasitic disease caused by the larval stages of Echinococcus granulosus, a tapeworm. The most commonly affected organs include the liver, lungs, brain, and heart. The purpose of this report is to present the management of a case of a ruptured hepatic hydatid cyst previously treated, which became complicated by bacterial superinfection and developed into an abscess. **Case Report:** We report the case of a 50-year-old patient who presented for scleral and skin jaundice. He has a medical history of a ruptured hydatid cyst in the left intrahepatic bile ducts (CBIH), stenosis of the common hepatic duct (CHC), and left hepatic duct (LHC) complicated by acute Tokyo I cholangitis with previous endoscopic dilation, a clogged plastic stent and re-stenting of the left CBIH with a plastic biliary stent, pneumatic dilation of the CHC and left CBIH in history, and endoscopic sphincterotomy with stenting of the right CBIH. Biological examination revealed leukocytosis with mild neutrophilia, normochromic normocytic anemia (Hb = 12.7 g/dL), hyperbilirubinemia (BT = 16.6 mg/dL; BD = 13.6 mg/dL), isolated elevated GOT, cholestasis, and PCR = 4.6 mg/dL indicating an inflammatory syndrome. Following ERCP, a stenosis communicating with a 4-5 cm cystic dilation along the left hepatic duct was identified. The cystic area was cauterized, the stenosis was dilated with a 6 mm balloon, and a pig-tail stent was inserted, through which white pus was exteriorized. The diagnosis was a ruptured hepatic hydatid cyst in the left lobe, complicated by inflammatory stenosis of the CHC and LHC. **Discussions :** The bile culture result was positive for E. Coli, Proteus mirabilis, Klebsiella pneumoniae, and Candida Albicans. Antibiotic treatment with Cefort and Metronidazole was prescribed for 7 days following drainage. An abdominal CT scan was performed, and a surgical consultation was held for planning the surgical intervention. **Conclusions:** This case is remarkable due to the severity of the complication, the need for multidisciplinary management, and the increased risk of unfavourable outcomes without appropriate treatment. Careful monitoring and prompt treatment were crucial for the favourable outcome of the patient.

Keywords: hydatic cyst, bile culture, abscess, Echinococcus granulosus

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MONITORING THE EVOLUTION OF PERITONEAL TUBERCULOSIS IN A YOUNG FEMALE PATIENT

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Introduction: While most cases of TB are pulmonary, the abdominal TB also appears to be rising and is currently the 6th most common extrapulmonary site for TB infection. PTB most commonly affects those between the ages of 35-45 , making this a rare case considering the age of the patient. **Case Report:** An 18-year-old female presented with a three-week history of loss of appetite, weight loss, abdominal distension and pain. Her medical history included bronchial asthma since childhood, with no known family history of TB or chronic diseases. Clinical examination revealed a dorsal right-convex thoracic deformity, symmetrical respiratory movements, and bilateral breath sounds without pathological rales. Abdominal examination showed a non-tender abdomen with a

postoperative scar and normal intestinal transit. Initial surgical intervention at the Gynecology I Clinic led to bacteriological and histopathological examinations, which suggested peritoneal TB. The patient was subsequently admitted to the Pneumology Clinic Tg. Mureș for further investigation and registered at the TB Dispensary Tg. Mureș. Bacteriological examination confirmed the presence of acid-fast bacilli (BAAR) in omentum samples, while histopathological findings revealed epithelioid granulomas and Langhans giant cells. Chest X-ray showed no active pleuro-pulmonary TB, and HIV testing was negative. The patient was registered at the Pneumology Dispensary Reghin and initiated on Treatment Regimen I under the National Program for TB Control and Surveillance (PNPSCT). The treatment plan included an attack phase with HIN, RMP, PZM, EMB, and Vitamin B6 for two months, followed by a continuation phase with HIN and RMP for six months, along with Vitamin B6. Regular monitoring of hepatic transaminases and periodic gynecological controls were conducted. The patient's allergy to Ampicillin was noted, and she was diagnosed with right convex dorsal scoliosis. **Discussions :** This case underscores the significance of considering extrapulmonary TB in patients presenting with non-specific abdominal symptoms, especially in regions with a high TB incidence. The absence of a family history of TB emphasizes the need for comprehensive diagnostic evaluations, including bacteriological and histopathological examinations, to confirm the diagnosis. **Conclusions:** The management of peritoneal TB requires a multidisciplinary approach, involving specialized antituberculosis treatment and regular monitoring. This case contributes to the medical literature by highlighting the importance of differential diagnosis and tailored treatment plans for extrapulmonary TB, particularly in young patients without a known history of the disease.

Keywords: Peritoneal Tuberculosis, Histopatological confirmation, Antituberculosis Treatment, Surgical Intervention

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HIDING IN PLAIN SIGHT: THE NEED OF A MULTIMODALITY IMAGING APPROACH IN APICAL HYPERTROPHIC CARDIOMYOPATHY

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Introduction: Hypertrophic cardiomyopathy (HCM) is a heterogeneous myocardial disease defined by the presence of increased left ventricular wall thickness which cannot be solely explained by abnormal loading conditions. A rarely diagnosed morphological variant, apical hypertrophic cardiomyopathy (ApHCM) specifically involves the apex of the heart, causing a "spade-like" appearance of the left ventricular cavity and exhibits various structural features which support the need of multimodal imaging (MMI). **Case Report:** We present the case of a 16-year-old female patient who was admitted from the Emergency Department following 2 days of recurrent episodes of sharp chest pain, left upper arm paraesthesia and dizziness. The 12-lead electrocardiogram revealed respiratory sinus arrhythmia, prolonged PQ interval, narrow QRS complex, deep, inverted T waves in V2-V6, DII, DIII, aVF. The laboratory tests showed slightly elevated cardiac enzymes, NT-proBNP and elevated IgG levels for Cytomegalovirus, Epstein-Barr virus and Parvovirus B19, consistent with the suspicion of acute myocarditis. However, besides a mild pericardial effusion, the echocardiography revealed significant hypertrophy of the apical segments of the left ventricle (LV), which prompted suspicion of a co-existing HCM. The cardiac magnetic resonance (CMR) showed normal LV indexed mass and volumes, a predominantly concentric LV apical hypertrophy with a "spade-like" contour, with systolic obstruction of the LV mid-cavity, associating a small apical aneurysm without thrombus. Regardless of a mild hypokinesia of the interventricular septum where a few myocardial crypts were observed, the ejection fraction was preserved (58%), but with a reduced global longitudinal strain (-8,1%). Tissue characterization sequences showed no evidence of myocardial oedema, therefore excluding the diagnosis of acute myocarditis, while the transmural pattern of late gadolinium enhancement in the apical segments was suggestive of myocardial fibrosis. Concordant with the CMR findings, the coronary computer tomography (CT) angiogram revealed a myocardial bridge of the left anterior descending artery causing moderate systolic narrowing. Dried blood spots (DBS) testing and genetic analysis ruled out storage disease as an aetiology. After an improvement in clinical status, the patient was discharged and scheduled for imagistic follow-up. **Discussions :** Paediatric ApHCM presents unique challenges with distinct presentation, aetiologies and outcomes. Integrated MMI using echocardiography, CMR, CT plays a crucial role in diagnosis, therapy and risk stratification. **Conclusions:** ApHCM is an intriguing and complex subset of HCM that is highly heterogeneous in its clinical and pathological profile and complementary investigations are required for case management. Adequate imaging strategy ensures a better characterization of each phenotype, highlighting the need for an individualized approach.

Keywords: apical hypertrophic cardiomyopathy, left ventricular apical aneurysm, cardiac magnetic resonance,

echocardiography

LEFT BUNDLE BRANCH PACING: AN ALTERNATIVE FOR CARDIAC RESYNCHRONIZATION THERAPY?

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Introduction: Cardiac resynchronization therapy (CRT) with biventricular pacing represents a well established cornerstone in the management of heart failure patients with reduced ejection fraction and left bundle branch block (LBBB). Despite the extensive proof that CRT improves left ventricle (LV) function and reduces heart failure symptoms and long-term morbimortality, the non-response rate to CRT still remains high, due to incomplete restoration of activation synchrony. However, left bundle branch pacing (LBBP) emerged as a novel conduction system pacing technique which provides a nearly physiological depolarization pattern with low, stable thresholds and a possibility to correct conduction system disease by capturing the left bundle branch (LBB) distal to the pathologic region of block. **Case Report:** We present the case of a 57-year-old female patient with a history of non-ischaemic dilated cardiomyopathy, heart failure with reduced ejection fraction and Hashimoto's thyroiditis, who reported progressive dyspnoea on exertion, fatigue, dizziness and lower limb oedema over the past two years. The 12-lead electrocardiogram showed sinus rhythm and LBBB with a QRS interval of 140ms, while the transthoracic echocardiography revealed a mildly dilated LV with severe global systolic dysfunction (LV ejection fraction 37%) and intraventricular dyssynchrony. Although the patient was considered a candidate for CRT, the coronary sinus venography showed a small-caliber posterolateral vein, inadequate for lead insertion. Reconsidering the therapeutic strategy, LBBP was proposed. A specialised delivery sheath was used to place the lead deep into the targeted area of the basal interventricular septum and intraoperative testing confirmed appropriate LBB capture. Pacemaker programming enabled effective LBBB correction, with fusion of the paced wavefront and intrinsic right bundle branch conduction, resulting in a marked reduction in QRS duration and a very narrow paced QRS complex (100 ms) on the surface 12-lead electrocardiogram. Moreover, the echocardiographic evaluation demonstrated an improved LV mechanical activation pattern due to resolution of intraventricular dyssynchrony. The patient's clinical status improved, with notable short time symptomatic relief. **Discussions :** LBBP ensures fast, physiological LV electrical activation which promotes mechanical synchrony and haemodynamic improvement, therefore highlighting the clinical value of LBBP as a promising alternative for both CRT and conventional pacing. **Conclusions:** Comparably, LBBP offers several technical advantages including good lead stability, larger target area, excellent electrical parameters, narrowing of the QRS complex and the possibility to correct conduction disease, potentially overcoming the limitations of CRT non-response.

Keywords: left bundle branch pacing, cardiac resynchronization therapy, conduction system disease, heart failure

UNCOMMON SUICIDE METHODS: A FORENSIC CASE OF SELF-INFLICTED ELECTROCUTION

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Introduction: Electrical injuries result from exposure to electrical current, leading to various pathological effects depending on voltage and exposure time. Typically, electrical injuries are accidental and can result in immediate or delayed violent death. Suicide by electrocution is rare; reported cases show a prevalence in specific demographics, such as males with experience in electrical fields and a history of depression. **Case Report:** We present the case of a 78-year-old institutionalized male with a history of depression, found deceased within the precinct of the nursing home where he resided. In accordance with legal requirements, a forensic autopsy was conducted to determine the circumstances of death, and the most significant findings were analyzed. The body exhibited visible nasal pyramid excoriation, cyanosis of the extremities, and first-, second-, and third-degree burns on the hands (electrical entry marks) and the presternal region (electrical exit mark). Additionally, hydrocephalus and cerebral edema were observed. The lungs displayed massive acute pulmonary edema. Notably, the absence of blood alcohol suggests the act was deliberate, uninfluenced by intoxication, reinforcing a self-destructive intent. Death was attributed to acute cardiorespiratory failure with tetanization of the respiratory muscles due to

electrocution in an elderly individual with multiple comorbidities. **Discussions :** In the context of romanian suicide statistics, it is significant to note that the suicide rate in Mureș County is considerably higher than the national average, with a male-to-female ratio of 4.8:1. The most common method remains hanging (80%), whereas electrocution as a means of suicide is rare and complex, requiring technical knowledge of electrical systems to ensure fatality. In this case, the traumatic injuries observed during the forensic autopsy suggest a bipolar contact mechanism involving electrical conductors connected to a medium voltage current source, with a direct, unconditional causal link to death **Conclusions:** This case illustrates a violent death characterized by the hallmark signs of electrocution and distinct electrical burns. It underscores the importance of raising awareness about suicide, particularly among vulnerable populations. The act was likely influenced by underlying psychological distress, including depression and a pessimistic outlook on aging. Unaddressed psychological distress, especially in susceptible individuals, may escalate to suicidal behavior, as evidenced in this case. Additionally, from a forensic perspective, distinguishing self-inflicted electrocution from accidental cases remains a critical consideration in medico-legal investigations.

Keywords: electrocution, suicide, forensic medicine, physical factor

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RECURRENT OVARIAN HYPERSTIMULATION SYNDROME FOLLOWING GNRH AGONIST TRIGGER : A CASE REPORT

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Introduction: Ovarian hyperstimulation syndrome (OHSS) is an iatrogenic complication associated with fertility treatments, particularly those involving ovarian stimulation. Excessive ovarian stimulation can lead to ovarian enlargement and increased capillary permeability, potentially resulting in complications such as ascites, hydrothorax, and pericardial effusion. **Case Report:** A 33-year-old nulliparous female patient, presenting with a 7-year history of infertility, was referred to our in vitro fertilization (IVF) unit for IVF treatment due to a history of OHSS following two controlled ovarian stimulations. The patient had a history of using antagonist protocol and agonist trigger for final oocyte maturation in her previous two treatments. She had oligomenorrhea in her history and no other symptoms. No additional findings were detected by transvaginal ultrasound, except polycystic ovarian morphology in bilateral ovaries. Since she had a previous history of OHSS with the antagonist protocol, stimulation was started with the medroxyprogesterone acetate (MPA). Stimulation with recombinant FSH (Gonal-f) 150 IU started on day-3 of the menstrual cycle, and the MPA was administered from the first day of stimulation (Tarlusal). After the 9 days stimulation, agonist trigger was initiated and because of the known OHSS, Dostinex (Cabergoline) was administered for one week. Ovum pick-up was performed and out of 34 oocysts, 4 corresponding to maturity day 5 were cryopreserved using "freeze all strategy". Three days later, she presented with signs and symptoms of OHSS at the Emergency Department: abdominal pain, distention, and ascites. After resolution, she returned two months later for frozen embryo transfer. 3BB-1CB embryos were implanted, resulting in a confirmed pregnancy with high hCG levels, currently expecting dichorionic diamniotic twins under close monitoring. **Discussions :** Although the treatment of choice for infertility is hCG, this could not be used in the presented case due to OHSS. HCG would negatively impact the patient by exacerbating OHSS symptomatology, making it life-threatening. Therefore, the gynaecology team chose MPA and GnRH analogs trigger, combined with prophylactic medication (Dostinex and Tarlusal), to maximize the chances of pregnancy and mitigate threatening symptoms. Even though GnRH alone was proven to almost eliminate the chance of triggering OHSS in women undergoing IVF cycles, in this case, the OHSS was triggered, and the zygote implantation had to be postponed until the symptoms resolved, making it an exceptional occurrence **Conclusions:** The GnRH agonist method demonstrates the optimal approach to substantially reduce the incidence of OHSS, resulting in a higher yield of mature oocytes and better-quality embryos comparing an hCG trigger.

Keywords: Ovarian Hyperstimulation Syndrome (OHSS), In Vitro Fertilization (IVF), Infertility

SILENT KILLERS OF THE FOREST: FORENSIC INVESTIGATION OF FATAL MUSHROOM POISONING IN TWO GENERATIONS

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Introduction: While mushrooms provide nutritional benefits, misidentification can lead to severe toxic effects, including gastrointestinal distress, hepatic and renal failure, neurological impairment, hallucinogenic episodes, and fatal outcomes. Wild mushrooms are commonly consumed in the forests of Transylvania, particularly in rural areas, where foraging is a traditional practice. However, toxic species pose a significant health risk. **Case Report:** We present a series of two cases of acute mushroom intoxication. Forensic evaluation determined that violent deaths, absent of traumatic injuries, occurred following the ingestion of toxic mushroom species. According to official statements, both victims were from a rural area and were second-degree relatives: a granddaughter and her grandfather. The 9-year-old girl and the 72-year-old man were admitted to the hospital with classical symptoms of mushroom poisoning. Clinical findings included diffuse abdominal pain, nausea, vomiting, diarrhea, hypotension, coagulopathy, metabolic/respiratory acidosis, and acute liver and kidney failure. After thorough forensic autopsies, the most significant findings were noted. The necropsy of the girl revealed massive cerebral and cerebellar edema, serosanguineous frothy fluid oozing from the nostrils (suggesting acute pulmonary edema), hemorrhagic petechiae, myocardial ischemia, and acute renal injury (shock kidneys). The necropsy of the male revealed diffuse subdural hemorrhages, cerebral edema, left basilar artery rupture with a Willis-hematoma, acute pulmonary edema, hypertrophic dilated cardiomyopathy, and myocardial ischemia. Although both patients consumed the same mushrooms (allegedly Cantharellus cibarius) and presented with similar clinical states, forensic analysis revealed different causes of death. The female's death resulted from toxic shock, while the male succumbed to non-traumatic cerebral hemorrhage. **Discussions :** The investigation suggested that the victims suffered from specific poisoning symptoms strongly indicative of amatoxin toxicity, commonly associated with Amanita phalloides. Despite the family's reported experience in identifying mushroom species, ingestion of Amanita phalloides likely occurred. A plausible hypothesis, reinforced by the foraging site investigation, is mycelial proximity, where Amanita phalloides and Cantharellus cibarius grew in close proximity, potentially leading to cross-contamination with toxic spores. While misidentification remains a common risk among inexperienced foragers, this case highlights additional environmental factors contributing to accidental poisoning. **Conclusions:** This case demonstrates differing forensic outcomes despite shared toxic exposure, underscoring the role of individual physiological vulnerabilities in pathological responses. Raising awareness among rural mushroom foragers is crucial, particularly regarding toxic lookalikes. Given the existence of visually similar toxic species, misidentification of Cantharellus cibarius remains a significant risk.

Keywords: mushroom intoxication, Cantharellus cibarius, Amanita phalloides, forensic toxicology

FOLLICULITIS DECALVANS: THE USEFULNESS OF DERMOSCOPY IN ELUCIDATING THE DIAGNOSIS

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Introduction: Folliculitis decalvans (FD) is a rare, chronic skin condition that results in permanent scarring alopecia. Many other scalp diseases share clinical features with FD, making early diagnosis challenging. This paper demonstrates the utility of dermoscopy in diagnosing FD through specific dermoscopic features. **Case Report:** We present a case of a 40-year-old man with extensive comedonal acne on his back and patchy scarring alopecia characterized by multiple pustules and crusting lesions on the posterior scalp, extending to the neck. Dermoscopy revealed tufted hairs, perifollicular scaling with erythema, yellow crusts, and follicular pustules, as well as atrophic scarring with alopecia and follicular plugs. The dermoscopic features were consistent with those of FD, aiding in the establishment of the diagnosis and distinguishing it from other skin conditions, such as lichen planopilaris and acne keloidalis nuchae. **Discussions :** No cure has been found for FD, however, a combination of drugs has helped achieve remission and prevent scarring and hair loss in many cases when initiated early. This presents the importance of dermoscopy. **Conclusions:** Dermoscopy is a valuable tool for diagnosing FD and can

be used to monitor disease activity and guide the selection of biopsy sites. It should be integrated into the routine assessment of scarring alopecia and the evaluation of FD suspicion, facilitating early diagnosis and the initiation of treatment.

Keywords: folliculitis decalvans, dermoscopy, alopecia, early diagnosis

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THE EOSINOPHILIC PHENOTYPE IN SEVERE BRONCHIAL ASTHMA – THE ROLE OF PRECISION THERAPY: CASE REPORT

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Introduction: Late-onset severe bronchial asthma is a chronic inflammatory condition of the airways, often difficult to control despite high-dose inhaled corticosteroid therapy. In recent years, treatment strategies have evolved through the concept of phenotyping, aiming to tailor management based on individual biological profiles. One of the key phenotypes is eosinophilic asthma, characterized by eosinophil-mediated airway inflammation, frequent exacerbations, and poor response to standard therapies. A peripheral blood eosinophil count exceeding 300 cells/μL serves as an essential biomarker for this phenotype, guiding the use of targeted biological agents such as benralizumab - an anti-IL-5 receptor α monoclonal antibody that depletes eosinophils and reduces eosinophilic inflammation. **Case Report:** We report the case of a 49-year-old male with a history of bronchial asthma and allergic rhinitis, previously treated with inhaled bronchodilators, high-dose corticosteroids, and leukotriene receptor antagonists, with suboptimal disease control. Over the past 12 months, the patient experienced four severe exacerbations, each requiring hospitalization. At admission, he presented with mucous productive cough, exertional dyspnea, wheezing, and the need for supplemental oxygen. Chest X-ray revealed widened intercostal spaces and accentuated interstitial markings. Laboratory tests showed marked eosinophilia (0.70×10^3/μL), lymphocytosis, and impaired gas exchange (DLCO 63%). Pulmonary function testing confirmed significant airway obstruction and hyperinflation. The Asthma Control Test (ACT) score was 10 points, indicating poor disease control. **Discussions :** Due to persistent eosinophilia, frequent severe exacerbations, and inadequate response to conventional therapy, treatment with benralizumab 30 mg subcutaneously every four weeks was initiated. This decision was based on the identification of a type 2 inflammation pattern and the need for a targeted therapeutic approach. **Conclusions:** Accurate phenotyping of asthma, particularly in patients over 30-40 years old, plays a crucial role in therapeutic decision-making. The introduction of biologic therapy targeting eosinophilic inflammation led to a reduction in exacerbation frequency, improved disease control, and preservation of lung function in this case. Precision medicine, therefore, represents a cornerstone in the management of severe eosinophilic asthma, ensuring a better quality of life for affected patients.

Keywords: severe bronchial asthma, eosinophilic phenotype, benralizumab, biological therapy

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HIDE AND SEEK: A GASTROPANCREATIC FISTULA

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Introduction: Acute pancreatitis is a common inflammatory disease of the exocrine pancreas that causes severe abdominal pain and multiple organ dysfunction that may lead to pancreatic necrosis and persistent organ failure, with a mortality of 1-5%. It is one of the most complicated and clinically challenging disorders affecting the abdomen. The main causes of acute pancreatitis are gallstone migration and alcohol abuse. **Case Report:** A 65-year-old male presented to the hospital with abdominal distension, bilateral lower leg edema and unintentional weight loss, being known with an acute post-pancreatitis condition. Laboratory tests revealed an inflammatory syndrome (CRP 4,75 mg/dl and ESR 36/mm) with a normal level of procalcitonin (0,14 ng/ml), which remained within normal limits during the entire hospitalization and a negative blood culture. It was performed an upper gastrointestinal endoscopy where the findings were suggestive for a delayed gastric emptying syndrome. A biopsy was collected from the gastric body, causing pus discharge. Following the result of the investigations, it was initiated the antibiotic treatment. The endoscopic ultrasound (EUS) revealed heterogeneous images of the body and tail of the pancreas, with a possible area of necrosis. At the pericardial level, air is noted within the perigastric fluid suggesting a possible fistula. The patient underwent a CT scan demonstrating multiple peripancreatic necrotic fluid collections, without evidence of a gastric fistula, multiple cystic-appearing areas in the cephalic region and

thrombosis of the portal veous system. Another EUS was performed where it was detected with difficulty a fistulous opening on the posterior wall above the gastric angle. Subsquently an endoscopic necrosectomy was carried out where it was mounted a double pig tail prosthesis. A follow-up CT scan was performed revealing collections at the level of left pleura, pericardium and peripancreatic. Multiple paracentesis were done, but the ascites remained refractory to treatment. **Discussions :** Although gastropancreatic fistula is a well-recognized complication of acute pancreatitis, it hasn't been reported often in recent literature. Although, fistulas are more commonly complications of chronic pancreatitis, they can also be associated with intraductal papillary mucinous neoplasm (IPMN). Diagnosing a gastropancreatic fistula can be challenging and often requires multiple investigations. A negative blood work with a normal level of procalcitonin should not exclude the presence of an uninfected fistula. **Conclusions:** This case highlights the complexity of post-acute pancreatitis complications, particularly the development of a rare gastropancreatic fistula. EUS played a crucial role in finding the fistulous opening which lead to a proper endoscopic treatment.

Keywords: acute pancreatitis, gastropancreatic fistula, endoscopic ultrasound, endoscopic necrosectomy

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A JOURNEY FROM MISDIAGNOSIS TO REMISSION: THE COMPLEXITY OF MANAGING SEVERE HEMORRHAGIC ULCERATIVE PANCOLITIS

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Introduction: Ulcerative Pancolitis is a serious inflammatory condition marked by significant bleeding and extensive ulceration of the colon. Although its etiopathogenesis remains unclear, genetic predisposition, immune dysregulation and environmental triggers may be influencing the pathophysiological process underneath the disease. Clinical experience typically identifies profuse bloody diarrhea, abdominal pain and systemic inflammation as the primary symptoms. The global burden of the disease represents 0.1-0.2% of the general population, nevertheless accounting for frequent and prolonged hospitalizations aimed at controlling life-threatening complications this disease bears. **Case Report:** We present the case of a 28-year-old male initially misdiagnosed with Crohn's disease. He presents to the clinic complaining of 5-6 episodes of bloody diarrhea per day, unintentional weight loss of 8 kilograms, moderate-intensity lower abdominal pain and associated knee pain, seeking a gastroenterological evaluation. Stool analysis revealed positivity for Clostridium difficile B toxin, resulting in a two-week course of Vancomycin and Mesalazine therapy. Despite initial treatment, the patient was readmitted one month later with persistent symptomatology. A repeat colonoscopy revealed severe hemorrhagic ulcerative pancolitis (Mayo endoscopic score 3) and multiple inflammatory colonic polyps. On the other hand, laboratory findings showed leukocytosis, iron deficiency anemia, elevated inflammatory markers and fecal calprotectin, peaking at 6,820 mcg/g. Given the severity of the disease and the lack of response to maintenance treatment, we opted for step-up therapy, using an anti-TNF alpha biological treatment (Adalimumab). However, despite mild clinical improvement, inflammatory markers remained elevated, requiring the addition of Prednisone and Azathioprine. Over the subsequent 6-months follow up, fecal calprotectin rose to 9,140 mcg/g, encouraging the discontinuation of Adalimumab and Prednisone in favor of Infliximab, Mesalazine and Azathioprine. Finally, following three years of treatment adjustments, the patient achieved clinical, laboratory and endoscopic remission, with fecal calprotectin decreasing to 258 mcg/g. **Discussions :** Diagnostic challenges can be encountered in clinical practice when approaching Inflammatory Bowel Diseases (IBD), especially in the context of Clostridium difficile infection, which further complicated the clinical picture. Moreover, due to the extensive lesions caused by chronic inflammation and the presence of multiple inflammatory polyps, monitoring the risk of dysplasia is challenging. The complexity of the general picture of this patient reflected over the appropriate therapeutic decisions: in our case despite Adalimumab therapy, persistent inflammation required escalation to Infliximab and immunosuppressive therapy, ultimately achieving remission. **Conclusions:** Severe hemorrhagic ulcerative pancolitis demands early, aggressive treatment. This case underscores the importance of careful reevaluation, timely therapeutic adjustments and a multidisciplinary approach in refractory IBD.

Keywords: Ulcerative Colitis, Biological treatment, Calprotectin, Polyps

ASYMPTOMATIC BACTERIURIA - A HIDDEN CAUSE OF UNBALANCED DIABETES

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Introduction: Diabetes represents an extremely important risk factor for infection with a frequent worse prognosis due to the increased incidence of rare and life-threatening infectious processes. Hyperglycemia is the hallmark symptom of uncontrolled diabetes, being a central factor of the emergence and worsening of bacterial infections. **Case Report:** We hereby report a case of a 56-year-old female patient, known with Type 2 Diabetes Mellitus (T2DM) for 2 years, only on diet control with glycate hemoglobin (HgbA1c) within the target goals (HgbA1c 6.11% in October 2024), presents to the Diabetology Department in January 2025, complaining of polyuria, polydipsia, weight loss (approximately 10 kg in about 3 months). Laboratory investigations revealed fasting plasma glucose 472 mg/dL, HgbA1c 12.4%. Due to persistent hyperglycemia even under basal-bolus insulin therapy with no obvious cause for the imbalanced T2DM, screening for infections was performed and urine culture was positive for Proteus mirabilis >100,000 CFU in the absence of any urinary symptoms. Antibiotic therapy was administered according to the antibiogram and after a few days, the glycemic values were balanced and the insulin requirement decreased. **Discussions :** Hyperglycemia is often a consequence of infectious and inflammatory syndromes a context in which the pathophysiological mechanism involved consists in the overproduction of glucose combined with inadequate insulin secretion. High levels glucose creates an ideal growth environment for many bacterial pathogens and might increase their virulence. Although in our case asymptomatic bacteriuria represents the determinant factor of glycemic imbalance, considering that glucose is the preferred carbohydrate of most bacteria, we can agree that glycosuria most likely contributed to the occurrence of bacteriuria. **Conclusions:** Adequate glycemic control and strict hygiene can limit infectious complications and reduce the risk of acquiring infection in an already susceptible diabetic patient.

Keywords: Type 2 Diabetes Mellitus,, unballanced diabetes,, asymptomatic bacteriuria

UNNOTICED DANGER: SEPTIC SHOCK TRIGGERED BY A MINOR INJURY

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Introduction: Sepsis remains a severe complication of infection, often evolving unpredictably from minor symptoms to multiple organ dysfunction. While major injuries raise concern, trivial wounds rarely do. However, in rare cases, a minor cut can serve as the entry point for aggressive pathogens, leading to life-threatening consequences. **Case Report:** We present the case of a 37-year-old male farmer who sustained a small puncture wound on his index finger while working in the fields. Considering the minor nature of the injury, he did not seek medical attention or disinfect the wound. Five days later, he developed dyspnea, abdominal pain, fever, and weakness, along with progressive pain and skin changes in the affected hand. Clinical examination revealed tachypnea, tachycardia, hypotension, fever, and cyanosis of the right upper limb. The small wound showed signs of local infection. Laboratory results indicated systemic inflammation and early multiple organ dysfunction. A rapid streptococcal antigen test was positive. He exhibited progressive hemodynamic instability, requiring vasopressor therapy. Elevated lactate levels and worsening clinical status confirmed progression to septic shock. Imaging studies, including thoracoabdominal CT, were performed. The Sequential Organ Failure Assessment (SOFA) score helped assess organ dysfunction severity. Rising SOFA scores guided the intensive care team in timely and targeted intervention, crucial in preventing further deterioration. **Discussions :** Empirical broad-spectrum antibiotics (penicillin and clindamycin) were started in the emergency department and continued in the ICU. Blood cultures confirmed Streptococcus pyogenes as the causative pathogen. This case highlights how a trivial wound from routine agricultural work rapidly evolved into a critical emergency. The SOFA score proved essential in detecting this atypical case, where a minor wound led to septic shock, reinforcing its role in early sepsis diagnosis. **Conclusions:** This case underscores the unpredictable nature of sepsis and the danger of neglecting minor wounds. A seemingly harmless injury triggered a cascade of systemic infection, leading to multiple organ failure. The SOFA score is a key tool for identifying high-risk patients, even when initial symptoms appear benign. This case reinforces the need for early recognition and intervention, as, in sepsis, the "Golden Hour" can determine survival.

Keywords: minor wound, septic shock, streptococcal infection, SOFA score

METFORMIN TOXICITY IN THE SETTING OF ACUTE KIDNEY INJURY: DIAGNOSTIC AND THERAPEUTIC CHALLENGES

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Introduction: Metformin is the most commonly used hypoglycemic agent for the treatment of type 2 diabetes mellitus. A rare but severe adverse effect is metformin-associated lactic acidosis (MALA), which must be distinguished from sepsis-induced lactic acidosis due to its higher mortality risk. **Case Report:** A 72-year-old female presents to the emergency department with altered mental status, pallor, livedo reticularis, hypothermia, hypotension and anuria. Medical history includes type 2 diabetes mellitus treated with Metformin, hypertension, congestive heart failure and psychiatric history. Laboratory findings revealed severe metabolic acidosis, hyperlactatemia, severe hyperkalaemia, azotemia(creatinine 8,98 mg/dl, urea 260mg/dl), elevated inflammatory markers. Imaging investigations, such as chest X-ray highlighted minimal bilateral pleural effusions and reticulonodular interstitial opacities. The primary diagnosis was septic shock with unknown etiology, acute kidney failure, and intoxication with Metformin. The patient was transferred to the ICU for initiating ECTR(extracorporeal treatment), hydroelectrolytic and acid-base rebalancing, vasoactive support, diuretics and broad-spectrum antibiotics. Postdialysis, the acidosis parameters improved, and diuresis resumed with furosemide treatment. Pulmonary imaging was performed to reasses the pleural effusion, revealing findings suggestive of pneumonia. At discharge, her creatinine was 1.6 mg/dL with no signs of infection. At the 3-month follow-up, the patient's ABG and renal function tests were within normal limits. One year later the patient returned for evaluation, where she was diagnosed with chronic kidney disease G3bA2. She decided to discontinue the nephroprotective medication that had been prescribed. **Discussions :** Biguanides inhibit mitochondrial transport chain complex-1, leading to NADH build up which causes pyruvate to be converted into lactate. Metformin toxicity is a condition that can be subdivided into 3 groups: Metformin-associated lactic acidosis (MALA), metformin-induced lactic acidosis (MILA) and metformin-unrelated lactic acidosis (MULA). MILA is exclusively related to metformin therapy, and it is usually seen in acute overdose. MULA occurs in patients on metformin but is it due to a separate cause. MALA is rare but the most severe form, it occurs when an acute critical condition develops in a patient on metformin. Differentiating between these entities is essential for choosing the appropiate treatment because it can influence the patient's recovery. This case report highlights the importance of correlating the patient's clinical signs with their history and elevated lactate levels in order to identify the correct diagnosis, initiate hemodialysis as soon as possible, and restore hydroelectrolytic balance. **Conclusions:** Metformin intoxication should be considered a potential cause of severe lactic acidosis in diabetic patients.

Keywords: Intoxication, Lactic acidosis, Acute Kidney Failure, Metformin

SEQUENTIAL DEVELOPMENT OF THREE MALIGNANCIES: A RARE AND INTRIGUING CASE REPORT

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Introduction: The evolution in haematologic and oncologic therapies has undoubtedly improved the survival of patients. However, this has also led to an increased risk of developing secondary malignancies.The occurrence of three malignancies in the same patient draws attention to the genetic susceptibility, immune dysfunction, and prior chemotherapy exposure. **Case Report:** We present the case of 68-year-old male, chronic smoker (45 pack-years), known with chronic lymphocytic leukemia stage IIB, under observation. His history includes a myocardial infarction with stenting, cardiac failure with 40% ejection fraction and non-Hodgkin lymphoma in remission for 10 years, treated with R-CHOP. To monitor his haematologic disease, he underwent a PET-CT, which revealed a tumoral mass measuring 52x46 mm in the right lung and widespread lymphadenopathy. After a few days, he came to the emergency department accusing neurological symptoms such as severe headache and dizziness, for which a brain MRI was performed. Imaging revealed a cerebellar lesion 31x30 mm, and neurosurgery was performed through a retrosigmoid craniotomy with macroscopic tumor ablation. Histopathology confirmed a metastasis of unknown origin. Following the surgery, a biopsy of the pulmonary mass was performed and the results established

the diagnosis of non-small-cell lung cancer in favor of adenocarcinoma. Tumoral cells were positive for PDL-1 with a TPS of 90%. Immunotherapy with Pembrolizumab was initiated, showing notable effectiveness despite extensive metastases, in line with current strategies for PD-L1 high NSCLC. The patient's clinical course was marked by worsening neurological symptoms and follow-up brain MRI revealed multiple recurrent metastases. Palliative whole-brain radiation was performed with positive clinical response. He continued immunotherapy and the imaging follow-up indicated significant reduction in the pulmonary tumor size. **Discussions :** Our case presents a rare association between 3 malignancies. CLL is the most common leukemia in adults and is related to a greater risk of developing secondary malignancies. The exact mechanism remains unclear. However, it is thought that the breakdown in the control mechanism of lymphocyte proliferation as well as disruption in the immune system function can create an enviroment of immune tollerance, conductive to malignancy. Additionally, it is worth noting that neoplasms that develop after diagnosing CLL tend to behave in a more aggressive manner and managing these patients with cardiac comorbidities is challenging. **Conclusions:** The carriers of chronic lymphocytic leukemia and with a history of non-Hodgkin lymphoma tend to show a higher risk of developing other neoplasms, compared to the general population. Therefore, careful surveillance during follow-up is essential.

Keywords: Multineoplasia, Immunotherapy, Adenocarcinoma, Leukemia

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CHRONIC MESENTERIC ISCHEMIA: CLINICAL CASE REPORT

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Introduction: Chronic mesenteric ischemia is a condition caused by atherosclerosis of the celiac trunk, mesenteric arteries, and their branches, leading to insufficient oxygen supply to the intestine. The high prevalence of atherosclerosis risk factors and their accumulation make this condition increasingly common. **Case Report:** A 55-year-old male, smoker, with a history of obesity, presented with massive weight loss over the past three months (40 kg), postprandial abdominal pain, vomiting, and diarrhea. Physical examination revealed a cachectic patient (BMI 18.7 kg/m²), pale skin, and hepatomegaly. Laboratory tests showed anemia, low serum iron, hypoproteinemia, prolonged INR, and moderate carcinoembryonic antigen elevation, raising suspicion of malignancy. A chest X-ray revealed aortic atherosclerosis. An abdominal ultrasound showed hepatic steatosis. Upper gastrointestinal endoscopy identified "sausage-shaped" duodenal ulcers, while lower gastrointestinal endoscopy revealed patchy erythema in the right and left colon and mucosal edema in the left colon. A contrast-enhanced abdominal CT scan showed a celiac trunk occlusion at its origin over a 5 mm segment, with subsequent revascularization via collateral circulation. A complete occlusion of 32 mm was found in the superior mesenteric artery, while the inferior mesenteric artery was patent but narrowed. **Discussions :** Two treatment options were considered: surgical bypass or endovascular stenting. Given the patient's compromised condition, stenting was preferred as the less invasive approach. The endovascular procedure was performed via a left brachial approach, with catheterization of the abdominal aorta, celiac trunk, and superior mesenteric artery. A subocclusive stenosis at the origin of the celiac trunk was identified, along with the absence of the superior mesenteric artery and a 70% stenosis at the origin of the inferior mesenteric artery. Stenotic and occlusive lesions were traversed using guidewires, followed by angioplasty and stent placement at these levels. Post-procedural contrast injection confirmed good stent apposition and significantly improved angiographic flow. Post-procedural management included anticoagulation with enoxaparin and antiplatelet therapy with clopidogrel. The patient's evolution was very good, with complete resolution of abdominal pain and appetite restoration. At the 4-week follow-up, the patient had gained 10 kg, was asymptomatic, and a CT scan confirmed stent patency. The patient had also quit smoking and adhered to antiplatelet therapy. **Conclusions:** Endovascular procedures effectively treat complex celiac trunk stenoses, offering a safer alternative to surgical bypass with excellent outcomes. Interdisciplinary collaboration is key to improving prognosis.

Keywords: celiac artery stenosis, mesenteric artery stenosis, stent angioplasty

RARE MALIGNANT TRANSFORMATION OF A LONG-STANDING BREAST FIBROADENOMA: A CASE REPORT

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Introduction: Fibroadenomas are the most common benign breast tumors, typically affecting women aged 15-35. While generally stable, their malignant transformation is rare, occurring in less than 0.3% of cases. When malignancy arises, it presents significant diagnostic challenges, highlighting the need for careful monitoring, especially in postmenopausal patients. **Case Report:** We report the case of a 63-year-old nulliparous woman with no relevant family history of breast cancer. At the age of 46, she underwent surgical excision of a fibroadenoma in her right breast, confirmed histologically as a benign fibroadenoma. At 50, a new fibroadenoma appeared in the left breast, which was followed with mammography every 2 years and annual ultrasound. The lesion remained unchanged until six months ago when routine imaging detected significant growth of the initial fibroadenoma and the emergence of a neighboring suspicious mass. Ultrasound examination revealed that the previously well-circumscribed, hypoechoic fibroadenoma, measuring between 1.5 and 2 cm, had developed an adjacent lesion with an irregular, ill-defined contour, a heterogeneous hypoechoic structure, and anterior marginal microcalcifications, measuring 0.8 × 0.6 cm. Mammography raised suspicion of malignancy, prompting an ultrasound-guided biopsy. Histopathology confirmed adenocarcinoma, and no axillary lymphadenopathy was detected. The patient subsequently underwent a wide local excision with axillary lymph node dissection on the left side and is currently under oncological follow-up. **Discussions :** Malignant transformation of a fibroadenoma is exceptionally rare and often difficult to detect. In this case, the lesion remained stable for years before showing rapid growth and structural changes, emphasizing the importance of long-term surveillance. Postmenopausal onset of new lesions or changes in existing fibroadenomas should raise suspicion. Imaging remains crucial, but histopathology is essential for diagnosis. The emergence of a secondary suspicious lesion was a key indicator that enabled early intervention. **Conclusions:** This case highlights the rare occurrence of malignant transformation in a fibroadenoma and underlines the importance of individualized surveillance strategies. While fibroadenomas are generally benign, any suspicious changes warrant further investigation. Early identification of malignancy can significantly impact treatment decisions and improve patient outcomes, reinforcing the need for a vigilant approach to breast tumor monitoring.

Keywords: fibroadenoma, malignant transformation, breast cancer, adenocarcinoma

RECURRENT ACUTE PANCREATITIS AS A RARE MANIFESTATION OF PRIMARY HYPERPARATHYROIDISM – A CASE REPORT

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Introduction: Acute pancreatitis is a condition often linked to well-established causes such as gallstones and excessive alcohol consumption. However, when pancreatitis recurs despite addressing these common triggers, clinicians are challenged to explore less conventional etiologies. Among these, hyperparathyroidism remains an underrecognized yet significant contributor, particularly when accompanied by hypercalcemia. The report of this case aims to emphasize that recurrent pancreatitis is not always a straightforward clinical puzzle. Sometimes, the key to solving it lies in looking beyond the obvious and paying attention to subtle metabolic clues. **Case Report:** A 47-year-old female pacient experienced three instances of acute pancreatitis over a span of six weeks. The initial two episodes displayed common symptoms (upper abdominal pain, nausea, vomiting) along with increased pancreatic enzymes. The initial evaluation showed biliary stones on ultrasound, with serum calcium at a normal level (8.9 mg/dL). Conservative treatment offered short-term alleviation. The third episode was characterized by significant hypercalcemia (total calcium: 17.3 mg/dL). Believing it to be biliary pancreatitis, a cholecystectomy was carried out. After surgery, pancreatitis was resolved; however, the patient experienced swift weight loss (8 kg per month). A subsequent ultrasound revealed a 1.8 cm hypoechoic nodule adjacent to the left inferior thyroid lobe, indicative of parathyroid adenoma. Surgical procedure (total thyroidectomy with left inferior parathyroidectomy)

verified a noncancerous parathyroid adenoma. Histopathology additionally showed a thyroid follicular adenoma featuring Hurthle cell alterations. After the surgery, calcium levels returned to normal, but ongoing hypocalcemia necessitated long-term supplementation. **Discussions :** This case underscores the complexity of diagnosing recurrent pancreatitis when multiple etiologies coexist. Initially, biliary lithiasis dominated the clinical picture, leading to cholecystectomy. However, the recurrence of symptoms post-surgery, paired with severe hypercalcemia during the third episode, shifted focus to metabolic causes. Hypercalcemia's role in pancreatitis pathogenesis is well-established. Elevated calcium levels accelerate the conversion of trypsinogen to trypsin, leading to pancreatic autodigestion. This case also highlights that normal calcium levels in early episodes do not exclude hyperparathyroidism, emphasizing the need for serial monitoring in recurrent cases. The incidental discovery of the parathyroid adenoma on ultrasound demonstrates the importance of re-evaluating imaging studies, even when performed for unrelated indications. **Conclusions:** Recognizing hyperparathyroidism as a potential contributor to pancreatitis can prevent delays in diagnosis and unnecessary interventions. A multidisciplinary approach that integrates metabolic assessment with conventional workups is essential in resolving complex clinical cases.

Keywords: Acute Pancreatitis, Hyperparathyroidism, Hypercalcemia, Parathyroid Adenoma

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DIAGNOSIS CHALLENGES IN POLYARTERITIS NODOSA

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Introduction: Polyarteritis nodosa (PAN) is a rare autoimmune systemic disease known as 'medium-sized arteries vasculitis'. PAN may affect various organs including skin, kidneys, nervous system and gastrointestinal system. There is no diagnosis laboratory test. It can be associated with HBV infection or other viral etiologies. **Case Report:** A 68-year-old male is admitted for migratory non-pruritic extremely painful erythematous nodules on the limbs and orbital, fever, weakness, fatigue and unspecified arthralgias. He had no history of using drugs known to induce vasculitis. The blood test revealed inflammatory syndrome, anemia, elevated NT-proBNP, cholestasis syndrome and leukocytosis with neutrophilia. There is no evidence of renal disfunction. To rule out infections we performed: HBV, HCV and HIV-antibodies. EBV and CVM test results were also negative. The negative blood culture among the echocardiography ruled out endocarditis. We performed thoraco-abdomino-pelvic CT scan to exclude a solid tumor or a myelodysplastic syndrome. Myelogram showed a simple chronic anemia, with no evidence of a hemophagocytic syndrome. Immune hepatitis was also excluded due to negative specific tests. For the diagnosis of vasculitis we performed: RF, C3 and C4 that were normal; c-ANCA, p-ANCA and cryoglobulins that were negative. To confirm the diagnosis, an excisional skin biopsy was requested. It revealed medium-size arteries vasculitis. A diagnosis of polyarteritis nodosa was made and we performed a screening to evaluate organ involvement. CT Angiography scan demonstrated irregular constrictions, an aneurysm in renal arteries and a dilated left iliac common artery. The patient was treated with azathioprine and methylprednisolone with favorable response. **Discussions :** We ruled out vasculitis mimics or other small-size or medium size vasculitis such as: ANCA-associated, cryoglobulinemic, leukocytoclastic and hypocomplementemic urticarial vasculitis, as well as myelodysplastic syndrome and solid tumors. The diagnosis of PAN was made by clinical, biological, imaging and histopathological criteria. The treatment was individualized according to disease severity, following the ACR 2021 Guidelines for the management of PAN. **Conclusions:** A clinical diagnosis of PAN is suspected based upon a detailed medical history, a careful physical examination along with the basic and additional laboratory test results. Nevertheless, the diagnosis should be confirmed by biopsy and imaging procedures because of the relative rarity of PAN and the severe adverse effects related to immunosuppressive treatment.

Keywords: polyarteritis nodosa, medium-sized arteries vasculitis, excisional skin biopsy, aretriography

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SYNCHRONOUS PRIMARY LUNG CARCINOMAS: AN AUTOPSY CASE REPORT

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Introduction: Autopsy remains the gold standard for determining the cause of death, particularly in cases of unexpected or unexplained fatalities. Lung cancer is one of the most frequently diagnosed malignancies worldwide and the leading cause of cancer-related mortality, often presenting in advanced stages with limited treatment

options. Many cases remain undiagnosed until postmortem examination, especially when symptoms are vague or attributed to other comorbidities. **Case Report:** A 74-year-old female patient succumbed to cardiopulmonary arrest and septic shock. Her clinical diagnoses included septic shock, pneumonia, radiological proof of pulmonary neoplasms, chronic obstructive pulmonary disease, high blood pressure, and hepatic cytolysis syndrome. The autopsy revealed two distinct pulmonary tumor formations, together with bronchopneumonia, left hydrothorax, hydropericardium, left ventricular hypertrophy, and systemic atherosclerosis. The left upper lobe contained a 55 mm neoplasm characterized by a proliferation of small, round-to-oval cells with minimal cytoplasm and hyperchromatic nuclei, arranged diffusely. Extensive necrotic areas were observed, accompanied by the Azzopardi effect, indicative of small-cell lung carcinoma. The right upper lobe harbored a 90 mm tumor composed of large cohesive polygonal cells with abundant eosinophilic cytoplasm, pleomorphic nucleolated nuclei, keratinization, and necrotic foci, consistent with moderately differentiated keratinizing squamous cell carcinoma. Metastatic dissemination was evidentiated in the liver, and the para-aortic and paratracheal lymph nodes, all these locations demonstrating architectural effacement by tumor cells morphologically identical to the tumor described in the left lung. **Discussions :** The occurrence of two distinct primary lung malignant tumors, known as synchronous multiple primary lung cancers (SMPLCs), especially in separate lungs, is relatively rare. The number of identified SMPLCs is gradually increasing, proportionately with the evolvement in imaging techniques. More combinations of different malignant lung tumors were described, both small cell and non-small cell carcinomas. **Conclusions:** Although rare, multiple pulmonary malignancies may coexist, histopathological evaluation of the radiologically suspected lesions is compulsory for the correct diagnosis and case management.

Keywords: small cell carcinoma, squamous cell carcinoma, lung cancer, autopsy findings

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METHYL ALCOHOL INTOXICATION

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Introduction: Methanol intoxication is a life-threatening condition causing severe metabolic acidosis, neurological impairment, and irreversible visual damage. Due to its nonspecific symptoms, it can be misdiagnosed, delaying treatment. This report highlights the importance of a correct and precise anamnesis, timely diagnosis, and a multidisciplinary approach. **Case Report:** A 47-year-old male, V.A., from Târgu Mureș, presented in the emergency department with main complaints: blurred vision, nausea, vomiting, and headache. His history included type 2 diabetes treated with metformin and hypertension without any current treatment. Visual symptoms began three hours prior, more severe in the right eye. Laboratory tests revealed metabolic acidosis (pH 7.134, PCO2 10.4 mmHg, HCO3- 3.8 mmol/L) and hyperglycemia (glucose 298 mg/dL). Initially denying any alcohol ingestion, as he was sober since 6 months before, the patient underwent neurological and ophthalmologic evaluations, including fundoscopy and head CT scan. laboratory tests supported the toxic alcohol intoxication and the patient later admitted to consuming homemade alcohol as his visual deficit worsened. He underwent aggressive treatment, including hemodialysis, but despite all efforts, he developed permanent blindness in his right eye and impaired vision in left eye. Two days later, toxicology tests result confirmed methanol intoxication - 1.18 g/l. After a week, the patient was discharged with normalized metabolic parameters and follow-up instructions. **Discussions :** Methanol is metabolized to formaldehyde and formic acid, leading to acidosis, neurological damage, and ocular toxicity. Due to similarities with diabetic ketoacidosis (DKA) and stroke, misdiagnosis can occur. Initial suspicion of DKA and glaucoma delayed proper intervention. However, metabolic acidosis and renal dysfunction prompted toxicological testing, confirming methanol poisoning. Treatment includes fomepizole or ethanol to block methanol metabolism, sodium bicarbonate for acidosis, and hemodialysis for toxin removal. Delayed diagnosis due to patient history bias significantly worsened the prognosis. **Conclusions:** Methanol intoxication requires high clinical suspicion, especially in patients with unexplained acidosis and visual disturbances. A thorough history, early toxicology screening, and rapid hemodialysis are crucial. This case highlights the importance of early identification of an intoxication and overcoming diagnostic biases to prevent severe complications.

Keywords: Methanol intoxication, Metabolic acidosis, Visual impairment, Emergency medicine

FROM SUSPICION TO CERTAINTY: BIOPSY'S ROLE IN DIAGNOSING DRUG-INDUCED COLITIS

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Introduction: Although drug-induced colitis is relatively rare, it presents diagnostic challenges due to its nonspecific clinical features. It predominantly affects elderly patients or those with comorbidities undergoing prolonged pharmacotherapy, necessitating a multidisciplinary approach for accurate diagnosis and effective management. **Case Report:** We present the case of a 77-year-old patient with a significant history of multiple cardiovascular conditions and leg amputation who came to the emergency department with abdominal pain, episodes of nausea and vomiting. Biologically, the patient exhibits signs of sepsis with a while their clinical status remains unstable, with low blood pressure values, necessitating vasopressor support. A thoraco-abdomino-pelvic CT scan was urgently performed. However, due to impaired renal function, the administration of contrast material is contraindicated. The findings described, characteristic for this case, include an irregular, concentric thickening of the ascending colon extending over approximately 7 cm. The imaging findings necessitate a thorough investigation of the lower gastrointestinal tract, leading to the performance of a colonoscopy. The procedure revealed a pseudo-tumoral lesion at the cecal level, exhibiting ulcerated and spontaneously bleeding mucosa, extending up to approximately 3 cm distal to the ileocecal valve. The lesion appeared infiltrative at the valve, but lacks stenotic features. Additionally, three ulcers were observed, all of them being Forrest III, two of which being situated in proximity to the aforementioned lesion, while the third one being located approximately 10 cm from the anal orifice. During hospitalization, the patient received supportive therapy to restore hemodynamic stability and targeted antibiotic treatment for sepsis. Following a favorable clinical course, the patient was discharged with a recommendation for oncologic consultation pending histopathologic results. Unexpectedly, microscopic examination revealed no dysplastic changes or neoplastic processes, even upon multiple resections. The findings were consistent with drug-induced colitis. By discontinuing the potentially causative medications and implementing targeted treatment with Mesalazine and Rifaximin, remission was achieved, with a favorable clinical outcome. **Discussions :** Considering the patient's clinical status, significant cardiovascular history, and prolonged antibiotic therapy for multidrug-resistant infections, the probability of therapeutic, surgical, or oncologic success was considerably limited. In this context, multi-level biopsies played a crucial role in establishing a definitive diagnosis and guiding the optimal management strategy. **Conclusions:** : Drug-induced colitis is a critical diagnosis when evaluating patients on long-term medications such as antibiotics, NSAIDs, or immunosuppressants. Accurate diagnosis relies on clinical history, endoscopy, and histopathology, with biopsy being essential to rule out malignancy and confirm inflammatory patterns, ensuring timely and targeted treatment.

Keywords: colitis, colonoscopy, histopatologic, diagnosis

THE IMPORTANCE OF EARLY TREATMENT IN ETHYLENE GLYCOL POISONING - A CASE REPORT

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Introduction: Ethylene glycol is a substance found in antifreeze, deicing solution, engine coolant or brake fluid. Since it is odorless, colorless and sweet, it can be accidentally or voluntary ingested. **Case Report:** We present the case of an 86-year-old patient with a history of chronic kidney disease, type 2 diabetes, paroxysmal atrial fibrillation, obesity and chronic alcohol consumption who came to the emergency room with progressive alteration of the mental state, hemodynamic and respiratory instability after drinking from a bottle with homemade alcohol. Head CT was clear, no acute ischemic lesions detectable, even after 24h. The toxicology test showed glycolic acid increased (5.077 mmol/L), a metabolite of ethylene glycol and an increased blood alcohol level (in therapeutic context). ABG revealed metabolic acidosis and hypokalemia. The patient was transferred in the ICU, orotracheally intubated, for complete management: ethanol administration, hydroelectrolytic rebalance, bicarbonates and consequently hemodialysis. Afterwards, the glycolic acid levels and blood pH normalized, however the patient remained oliguric. Initially it was attributed to sepsis and dehydration. During hospitalization, Inflammatory markers progressively increased, and physical examination revealed diminished breath sounds; therefore, a radiograph

was performed to complete the evaluation. The X-Ray showed condensation areas in both lungs with minimal pleural collection, treated with linezolid and meropenem which normalized the inflammatory markers. The patient was transferred afterwards to the nephrology department, clinically stable, still oliguric, therefore acute tubular necrosis due to ethylene glycol ingestion was diagnosed. The creatinine and urea remained elevated, therefore he continued the dialysis sessions and nowadays he is part of the chronic hemodialysis program. **Discussions :** Ethylene glycol is rapidly absorbed GI and metabolized in the liver with the help of the alcohol dehydrogenase enzyme, leading to formation of glycolaldehyde and glycolic acid. Glycolic acid is responsible for developing metabolic acidosis and for the actual toxicity of ethylene glycol, which initially impacts the CNS (0-12h), then the cardiopulmonary system (12-24h) and lastly the kidney (48-72h) resulting in acute tubular necrosis. The CNS lesion subsided upon discharge, but the renal function didn't improve despite resuming diuresis. At the follow-up, we will assess whether renal function will improve and whether dialysis can be discontinued. **Conclusions:** Due to his high degree of toxicity and rapid GI absorption ethylene glycol poisoning is an important emergency which must be recognized and differentiated from other intoxication like ethanol or formaldehyde in order to start the treatment as soon as possible.

Keywords: poisoning, ethylene glycol, acute renal failure

OVERLAP OF CANCA-ASSOCIATED VASCULITIS AND SYSTEMIC LUPUS ERYTHEMATOSUS: A CHALLENGING DIAGNOSIS OF RAPIDLY PROGRESSIVE GLOMERULONEPHRITIS

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Introduction: Antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis is a necrotizing vasculitis that mainly affects small vessels and is marked by minimal immune complex deposition. Systemic lupus erythematosus (SLE) is a chronic autoimmune disease involving multiple organs, characterized by immunologic abnormalities, particularly autoantibody production. The rare case of overlapping between these two conditions, which poses significant diagnostic and treatment challenges, will be presented. **Case Report:** A 38-year-old male patient presented to the Rheumatology clinic for investigation of suspected cANCA-positive systemic vasculitis. Clinical examination revealed an altered general condition, grade II hypertension, pallor, an erythematous maculopapular rash on the knees, perimaleolar region, and elbows, erythema and nodular lesions at the left third proximal interphalangeal joint (PIP III), and arthritis of the left and right PIP III joints, without lymphadenopathy. Medical history included recurrent sinusitis, otitis, rhinitis, iridocyclitis, and nasal crusting. Laboratory tests showed positive cANCA, with negative dsDNA and ANA. Additional findings included moderate hypochromic microcytic anemia, inflammatory syndrome, dyslipidemia, low folic acid, and no complement consumption. Nephritic syndrome was diagnosed based on a urine protein/creatinine ratio of 3 g/g, hematuria, renal failure (elevated urea and creatinine), and hypertension. Due to progressive anemia, a chest CT was performed to exclude alveolar hemorrhage, but identified pericarditis and inflammatory lymphadenopathy. The diagnosis of cANCA-positive systemic vasculitis was established and treatment with Methylprednisolone (3 pulses) followed by oral corticosteroids (Prednisone) was initiated. The patient was transferred to the Nephrology clinic, where a renal biopsy was performed. A partial histopathologic report indicated nephritic syndrome in the context of rapidly progressive glomerulonephritis (fibro-cellular crescents) due to cANCA-positive systemic vasculitis. Accordingly, immunosuppressive therapy was escalated, and Cyclophosphamide was initiated, along with Pneumocystis jirovecii and osteoporosis prophylaxis (per KDIGO 2024 ANCA-vasculitis guideline). The final histopathologic report established the diagnosis of lupus nephritis based on diffuse endocapillary proliferation and positive immunofluorescence with full-house mesangial depositions. The final management switched to the EUROLUPUS regimen and Hydroxychloroquine was added. **Discussions :** Although the initial diagnosis was glomerulonephritis due to cANCA-associated vasculitis, renal biopsy revealed overlap with lupus nephritis, prompting a change in therapy to induce remission. This case highlights the importance of renal biopsy in a poorly described association of SLE and systemic vasculitis. **Conclusions:** This case highlights the complexity of diagnosis of overlapping autoimmune diseases with shared manifestations, such as rapidly progressive glomerulonephritis in systemic vasculitis and SLE.

Keywords: Systemic vasculitis, Systemic Lupus Erythematosus, Rapidly progressive glomerulonephritis, Renal biopsy

COULD SERONEGATIVE CELIAC DISEASE AND EXOCRINE PANCREATIC INSUFFICIENCY BE CONNECTED IN A PATIENT WITH AUTOIMMUNE GASTRITIS?

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Introduction: Celiac disease (CD) is a chronic autoimmune enteropathy affecting the small intestine, triggered by dietary gluten. Seronegative celiac disease, one of the most elusive conditions, is characterized by negative anti-tissue transglutaminase antibodies, positive duodenal biopsy samples (mild villous atrophy), associated with human leukocyte antigen (HLA) haplotype DQ2 and/or DQ8. It is prevalent in individuals with other autoimmune diseases. Evidence suggests that in CD, the release of secretin and cholecystokinin in response to meals is impaired, limiting bile and pancreatic secretion delivery, thereby compromising intraluminal digestion. **Case Report:** A 47-year-old female patient with a history of preeclampsia-complicated pregnancy, cholecystectomy followed by a 30 kg weight loss, Lyme disease and multiple allergies, was diagnosed with autoimmune gastritis in 2023, with elevated parietal cell antibodies and decreased gastrin levels. The patient presented with abdominal pain in the epigastric and left hypochondrial region, radiating to the back, occurring after meals, associated with abdominal distension and diarrheal stools, ongoing symptoms since the cholecystectomy performed in 2021. Serology showed negative anti-tissue transglutaminase antibodies, however, esophagogastroduodenoscopy with biopsy revealed mild villous atrophy (Marsh 3a stage). Further tests pointed to anemia, folate deficiency associated with polyneuropathy and ataxia, and brain MRI revealed multiple parietal demyelinating lesions. The patient adhered to a gluten-free diet and received gastric protectors, antispasmodics and supplemental therapy. Extended testing revealed moderate exocrine pancreatic insufficiency, with a stool elastase level of 189 µg/g. No abnormalities were detected in IgG4 and CA 19-9 levels. **Discussions :** Early studies found that exocrine pancreatic insufficiency (EPI) is common in CD, affecting up to 80% of newly diagnosed cases, but typically non-severe. Despite adherence to gluten-free diet (GFD) the patient remained symptomatic. Research has shown that CD patients on GFD with persistent symptoms have a significantly higher rate of EPI (12-18%), supporting our clinical findings. Given the patient's allergies to iodinated contrast agents, an MRI was performed without contrast, revealing a corporeo-caudal pancreatic microcyst. Abdominal ultrasound identified an atrophic, hyperechoic pancreas. While EPI in CD appears to be primarily functional rather than structural, our patient's imaging findings are notable. Treatment with pancreatic enzymes, gastric protector and probiotics led to improved stool consistency. The stool elastase level increased to 245 µg/g. HLA genotyping and an endoscopy-guided pancreatic biopsy is planned for further investigation. **Conclusions:** This case may support the relationship between seronegative celiac disease and pancreatic dysfunction within the challenging framework of autoimmune diseases triggered by late pregnancy.

Keywords: autoimmune gastritis, celiac disease, exocrine pancreatic insufficiency

CASE REPORT ABSTRACT: NODULAR MELANOMA

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Introduction: Nodular melanoma is an aggressive subtype of cutaneous melanoma, taking up 10-15% of all melanoma cases. Disproportionate to that it has a high mortality, which makes it even more important to diagnose it early stage in potential dermatological screenings. The following case will highlight the rapid progression and the specific clinical, dermatological, and histopathological findings. **Case Report:** Patient Anamnesis: 57-year-old patient with a history of the presented mole for several years. The patient has not noticed changes in size, color, and growth. She presented herself to the dermatologist due to local pain. Dermatological Examination: Macroscopic: Melanoma with an irregular border, multicolor appearance with hyperpigmented dots, slightly ulcerated and crusted surface Dermatoscopic findings: Polymorphic vascular pattern with irregular linear vessels, areas of regression and fibrosis, asymmetry of pigmentation Histopathological diagnosis: Nodular malignant melanoma, infiltrative in the hypodermis (Clark V), with a maximum tumor thickness of 11.5 mm (Breslow Index), situated 3mm from the nearest lateral surgical excision margin and 6mm from the deep surgical excision margin Tumour stage: pT4a (pT4a = 2.01-4 mm ulcerated or > 4 mm non ulcerated, N0 M0) Immunohistochemical profile: tumor cells are diffusely positive to Sox 10 and Melan A reactions, and focal positive to HMB 45 (including tumor

nodules in depth). Ki - 67 proliferation index is increased (15-20 %) **Discussions :** In this case report, we highlighted the specific dermatological findings in this patient's nodular melanoma to generate an understanding and potential positive future effects in the early recognition and overall recognition of nodular melanoma. As this was an advanced case, we intended to explicitly highlight the Importance of obeying the given excision margins to achieve a tumor-free excision margin. **Conclusions:** In this specific case, the correct diagnosis combined with the proper application of the excision margins resulted in the patient's successful treatment. It must be highlighted that the patient did not present with metastases or regional lymph node involvement, which resulted in an exclusive excision treatment.

Keywords: Melanoma, Nodular, Infiltrative, Excision

AUTOIMMUNE HAEMOLYTIC ANAEMIA: IS IT ENOUGH OF A REASON TO TREAT CHRONIC LYMPHOCYTIC LEUKAEMIA?

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Introduction: Chronic lymphocytic leukaemia (CLL) is characterized by a monoclonal, malignant proliferation of mature lymphoid cells. It usually involves B lymphocytes. For asymptomatic, early-stage patients, the standard of care is clinical observation, as one third of them will never require treatment. Treatment should begin only when the patient meets the criteria for it. Glucocorticoid-refractory autoimmune haemolytic anaemia (AIHA) occurs in around 10% of CLL cases and it represents an indication for starting treatment. **Case Report:** We present the case of a 68-year-old male patient admitted to the haematology section for further investigations after depicting an abnormal haemogram pattern. The immunophenotyping by flow-cytometry suggested a monoclonal, CD5 positive B lymphocyte proliferation and the osteo-medullar biopsy showed the presence of a nodular lymphocytic infiltration, positive for CD20 staining. Immunohistochemistry confirmed the positivity of CD5 and CD23 markers on the surface of infiltrative tumoral B lymphocytes and the negativity of CD10. The absence of anaemia or thrombocytopenia led to the diagnosis of CLL, stage Binet B (RAI 2). The patient started to come in for clinical reevaluation regularly, as he didn't meet the criteria to begin treatment. 2 years later, he was admitted for severe anaemia (Hb=6.3 g/dL), mild thrombocytopenia and high reticulocytes. The Coombs test came back positive. Therapy with Dexamethasone was initiated, but without a therapeutic response. It is therefore decided to start therapy with first-line treatment: Obinutuzumab and Venetoclax. **Discussions :** Therapy with Obinutuzumab (monoclonal antibody against CD20) and Venetoclax (targeted therapy against BCL2) is the main treatment for Binet C (RAI 3-4) or symptomatic CLL in cases of patients above 65 years old, despite the IGHV gene status. In case of an absent response to therapy, other treatment schemes may be considered, like Bruton tyrosine kinase inhibitors or PI3K inhibitors, in combination with Rituximab. In case of refractory or relapsed CLL, other options, besides systemic therapy, may be considered, like Chimeric Antigen Receptor T-cell Therapy (CAR-T) or allogenic stem cell transplantation (for young patients, without other comorbidities). **Conclusions:** This case highlights the importance of regular reevaluation of chronic lymphocytic leukaemia patients, even if they are not receiving any treatment. This way, if any complications occur, they can be detected in time and treated, so that the patient's life is not put in danger.

Keywords: Chronic lymphocytic leukaemia, Autoimmune haemolytic anaemia, Glucocorticoids

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THE HISTOPATHOLOGICAL EXAMINATION – THE GAME-CHANGER IN PATIENT MANAGEMENT – CASE REPORT

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Introduction: Ischemic colitis, while often underdiagnosed, represents the most prevalent form of intestinal ischemia, predominantly affecting elderly individuals or those with underlying cardiovascular comorbidities. **Case Report:** We present the case of a 78-year-old female patient with a significant cardiovascular history, who presented to the emergency department with acute right flank pain. In light of the patient's clinical presentation, additional diagnostic investigations were undertaken. The abdominopelvic CT scan reveals a significant thickening with malignant characteristics in the ascending colon over a segment of approximately 87 mm, accompanied by infiltration of the pericolic adipose tissue and the presence of loco-regional lymphadenopathy. Given the described

findings, a colonoscopy is warranted, revealing a pseudotumor formation at the level of the cecum, with ulcerated mucosa and spontaneous bleeding, apparently infiltrating the ileocecal valve but without stenotic features, from which biopsies are obtained. Despite the macroscopic features suggestive of a malignant pathology, consistent with the abnormalities identified on prior imaging, histopathological analysis demonstrates changes characteristic of ischemic colitis, a finding that significantly modifies the patient's management strategy. It was therefore decided to initiate analgesic and supportive therapy through hydro-electrolytic rebalancing. Additionally, vasoconstrictive medications were discontinued from the patient's chronic treatment regimen and intestinal antibiotic therapy with Rifaximin and Mesalazine was also initiated. One month following the confirmation of the diagnosis, the patient underwent repeat imaging with a contrast-enhanced abdominopelvic CT scan. The findings, interpreted in correlation with the previous examination, revealed no pathological contrast uptake within the colonic framework or evidence of pathological lymph nodes. Given the favorable progression of the patient, periodic monitoring through imaging and endoscopy has been chosen, with the involvement of cardiologists to adjust the underlying treatment in accordance with the risk of intestinal side effects from medications included in the patient's therapeutic plan. **Discussions :** . Ischemic colitis is a frequently underdiagnosed condition, and in this case, the histopathological examination enabled the identification of specific changes that led to the reevaluation of the therapeutic approach. By correlating clinical, imaging, and histopathological data, a precise diagnosis was achieved, avoiding unnecessary interventions and ensuring optimal treatment for the patient, who experienced a favorable clinical and biological outcome. **Conclusions:** In cases with macroscopic or imaging features suggestive of malignancy, biopsies must be mandatory for diagnostic confirmation prior to any therapeutic decision. This case serves as a powerful reminder that, in modern medicine, histopathology remains an essential pillar of precision diagnosis.

Keywords: pseudotumor, colitis, histopathology

A SILENT ASSASIN: A CASE REPORT DESCRIBING THE HARDSHIPS OF MANAGEMENT FOR METASTATIC MELANOMA

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Introduction: Among skin neoplasms, melanoma represents the third most common cutaneous malignancy. Brain metastases are a frequent and yet devastating complication of melanoma. The infiltration of the leptomeninges and cerebrospinal fluid (CSF) by malignant cells leads to leptomeningeal carcinomatosis. **Case Report:** We present the case of a 32-year-old woman, who arrived at the emergency department with vomiting, altered mental status and right-sided paresthesia. In 2022 the patient was diagnosed with paraumbilical malignant melanoma. She underwent two surgical resections followed by chemotherapy. Suspicion of rhombencephalitis is raised and the patient is started on antibiotics. She is later referred to the Neurology department. The lumbar puncture revealed slight proteinorrachia and pleocytosis. To rule out the infectious etiology, blood cultures and serological tests were performed. In addition, autoimmune encephalitis specific antibodies such as anti-NMDA and GABA A were tested. EEG revealed bilateral frontal abnormalities, suggestive of lesion, along with generalized epileptiform discharges. MRI showed increased diffuse signal in FLAIR imaging bilaterally in the intergryral spaces, underlining a possible leptomeningitis, and millimetric non-specific demyelination lesions in the left frontal lobe. Despite all the negative serological, microbiological and autoimmune tests, the patient responded well to treatment with Dexamethasone. A few days later, she experienced similar symptoms, for which she received intravenous immunoglobulins. Although the remission of symptoms was spectacular, a week later she was admitted to the hospital with Glasgow Coma Scale (GCS)=3p, hydrocephalus, diffuse vasogenic cerebral edema and cerebellar tonsillar herniation, detectable on CT. MRI revealed leptomeningeal carcinomatosis. CSF cytology showed hyperglycorrhachia. CT angiography demonstrated the absence of cerebral circulation. Unfortunately, due to complications associated with the current disease, the patient passed away. **Discussions :** Leptomeningeal carcinomatosis occurs in 5% of patients with melanoma. MRI and CSF cytology remain the standard diagnostic approach for the disease. Negative findings on the examinations are not exclusionary, since the specificity of these methods varies from 75 to 80%. Due to the illusive nature of this disease, most patients are being diagnosed at autopsy, only 30% of them are diagnosed before death. Despite recent advances in therapeutic strategies, the prognosis remains poor, with a median survival time of 2-4 months. **Conclusions:** This case highlights the complexity of diagnosing leptomeningeal carcinomatosis in patients with melanoma, due to unspecific clinical symptoms. Furthermore, it underscores the necessity for improving therapeutic and diagnostic procedures, by developing techniques or examinations with

enhanced sensitivity and specificity.

Keywords: malignant melanoma, leptomeningeal carcinomatosis, diagnosis

MANDIBULAR METASTASIS – THE FIRST CLINICAL MANIFESTATION OF LUNG CANCER - A CASE REPORT

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Introduction: Lung adenocarcinoma, the most common non-small cell lung cancer subtype, has high metastatic potential. While lymph node, lung, and bone metastases are typical, mandibular involvement is extremely rare. **Case Report:** A 68-year-old patient, non-smoker, known with a history of BPOC stage II GOLD, mild respiratory failure, angina pectoris on exertion, hypertension grade III , insulin-requiring type II diabetes, obesity grade II and mixed dyslipidemia, presents at the Oro-Maxillofacial Surgery clinic, complaining of right mandibular pain. The local clinical examination reveals an uncertain tumor lesion fixed to the surrounding planes, associated with local edema. The native oral and maxillofacial CT scan shows an osteololytic lesion in the right mandibular hemibody. Chest CT examination reveals an inhomogeneous lung mass, with axial dimensions of 48/40 mm, located on the right upper lobe and paratracheal adenopathies. Incisional biopsy of the mandibuar tumor confirms the diagnosis of mandibular metastasis of andenocarcinoma of pulmonary origin. The immunohistochemical evaluation reveals negative PD-L1, ALC and EGFR markers, so the patient will benefit from combined immunotherapy and chemotherapy treatment. The TTF1 marker is positive, confirming the pulmonary origin of adenocarcinoma. The imaging assessment was completed with a total CT scan, which didn't show other lesionss. The patient was classified in stage IV and started treatment with Pembrolizumab, Pemetrexed, Carboplatin in four cycles followed by a year of immunotherapy and targeted therapy. Following the discovery of several brain metastases on imaging, cerebral irradiation was conducted, and paclitaxel treatment started for a year. Lung imaging showed a progressing lung disease and treatment was modified with Gemcitabine for one year. The patient's condition worsened with speech and balance issues; imaging showed brain disease progression, prompting Vinorelbine tablet treatment initiation. **Discussions :** The particularity of the case lies in the onset of the disease through the symptomatology given by the mandibular metastasis, which is an atypical location and can cause a delay in diagnosis. At the same time, the patient has insulin-requiring type II diabetes mellitus and has an alteration of renal function, which limits both the treatment options and the performance of investigations with contrast substance. **Conclusions:** Mandibular metastasis-related pain rarely indicates lung cancer. This case underscores molecular testing's role and a multidisciplinary approach in advanced lung adenocarcinoma with atypical metastases.

Keywords: Pulmonary adenocarcinoma, Mandibular metastasis, Chemotherapy, Immunotherapy

FROM PRESUMED INFECTIOUS COLITIS TO CONFIRMED CROHN’S DISEASE. A DIAGNOSTIC CHALLENGE

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Introduction: Chronic diarrhea in young adults can prompt initial consideration of infectious or functional causes, potentially delaying the diagnosis of inflammatory bowel disease (IBD). Early and subtle symptoms can overlap with infections, leading to bad diagnoses. We present a case of chronic diarrhea and systemic symptoms initially managed as presumed infectious colitis.The following diagnosis of Crohn's disease shows the importance of not forgetting family history, alarm symptoms, and laboratory abnormalities early in the evaluation. **Case Report:** A 29-year-old woman, with no past medical history, presented to her primary care physician with a 6-month history of intermittent watery diarrhea (up to five times daily), low-grade fevers, nausea, and abdominal pain. She occasionally used over-the-counter antidiarrheal drugs, but these didn't offer much relief. Notably, her sister was diagnosed with Crohn's disease at age 25, a fact she minimized at first thinking her symptoms were due to a lingering stomach bug. Physical examination revealed a mild fever (37.8°C) and a small right lower quadrant tenderness. A first diagnosis of bacterial colitis led to a 7-day course of ofloxacin, which failed to provide relief. Repeated stool cultures, including tests for Clostridioides difficile toxin, ova, and parasites, were negative. Over the subsequent weeks, things got worse as she developed progressive fatigue, lost 14 kg, and continued to have low-

grade fevers. Laboratory tests showed elevated C-reactive protein (CRP 95 mg/L), mild anemia (hemoglobin 10.5 g/dL), thrombocytosis, and hypoalbuminemia, raising concern for an inflammatory or neoplastic process. Blood cancers were ruled out by a normal peripheral blood smear. Abdominal CT revealed circumferential thickening of the terminal ileum. Colonoscopy demonstrated ulcerated lesions in the terminal ileum; histopathology confirmed non-caseating epithelioid granulomas. No lesions suggestive of colonic cancer were seen, and biopsies were negative for malignancy. These findings confirmed Crohn's disease. Corticosteroids (prednisone 40 mg daily) and mesalamine led to clinical improvement within two weeks. **Discussions :** This case highlights the risk of delayed diagnosis in young adults with chronic diarrhea, especially when infection is presumed without really considering family history or inflammatory markers. Timely imaging and endoscopy are essential to distinguish Crohn's disease from other causes, including cancer. **Conclusions:** Early recognition and treatment can significantly improve outcomes and prevent disease complications. Indeed, late diagnosis is associated to a 1.88 fold increase of scar tissue narrowings, a 1.64 fold increase of fistulas, 2.24 fold increase of intestinal surgery and a 4.13 fold increase of colectomy.

Keywords: Crohn's disease, Bowel Disease, delayed diagnosis

COMPREHENSIVE MANAGEMENT OF TRAUMATIC ASPHYXIA AND SUPERIOR VENA CAVA SYNDROME:FROM PREHOSPITAL CARE TO THE EMERGENCY DEPARTMENT

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Introduction: Traumatic asphyxia is a rare but critical condition characterized by cervicofacial cyanosis, edema, subconjunctival hemorrhages, and petechiae in the upper body. It results from severe thoracoabdominal compression, inducing abrupt intrathoracic pressure elevation and retrograde venous hypertension. In our case, this mechanism compromises superior vena cava outflow, leading to superior vena cava syndrome which is uncommon in trauma. However, it can occur particularly in cases of severe trauma involving the chest, neck and upper thorax. **Case Report:** A 29-years old female, victim of a severe trauma in a road traffic accident of unspecified circumstances, was found entrapped beneath the vehicle. She was extricated in a state of cardiopulmonary arrest and underwent resuscitation for 12 minutes at the scene. Upon transfer, she remained in critical condition GCS=3 (Glasgow Coma Score). She was intubated orotracheally, mechanically ventilated, and required vasopressor support due to hemodynamic instability. Physical examination revealed confluent petechiae on the face, extending to the neck. By the time the patient arrived in the Emergency Department, vital signs had been reassessed and were within normal limits. The CT scan revealed no signs of rib fractures, pneumothorax, pleural collections, or pericardial effusion. Following comprehensive investigations and stabilization, the patient was transferred to the Intensive Care Unit (ICU). **Discussions :** All signs and laboratory tests in this trauma case indicate that severe thoracoabdominal compression led to the development of superior vena cava syndrome (SVCS). This represents an atypical feature in cases of traumatic asphyxia, where venous congestion, cyanosis, and petechial hemorrhages are commonly observed. The pathophysiology of SVCS in this context suggests an acute obstruction of venous return due to the intense compressive force, leading to rapid hemodynamic compromise. **Conclusions:** Severe blunt trauma with asphyxial injuries can induce acute vascular congestion, leading to superior vena cava syndrome (SVCS), a condition rarely seen outside chronic malignant contexts. The sudden venous outflow obstruction results in facial edema, venous distension, and potential cerebral hypoxia. This case highlights the importance of rapid diagnosis and intervention to prevent severe neurological and cardiovascular complications.

Keywords: Traumatic Asphyxia, Superior Vena Cava Syndrome, Thoracoabdominal compression, Resuscitation

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MASLD AND ITS ACCELERATED COURSE TO HCC: AN UNCOMMMON CASE OF SILENT BUT AGGRESSIVE EVOLUTION

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Introduction: Metabolic dysfunction-associated fatty liver disease (MASLD), formerly known as non-alcoholic fatty liver disease (NAFLD), is the most common chronic liver disease worldwide. It is characterized by the excessive infiltration of fat cells in hepatocytes, accompanied by at least one cardiometabolic risk factor and no other

identifiable cause. Due to its asymptomatic nature, it can lead to discovering patients already with end stage complications of liver cirrhosis or even hepatocellular carcinoma (HCC). Here we present a case of MASLD with an accelerated course to HCC, despite prior normal liver tests and imaging. Our objective is to highlight the variability of MASLD progression and the importance of early detection strategies. **Case Report:** We present the case of a 67-year-old overweight patient (BMI=28.99kg/m2, abdominal circumference=103cm) in whom liver cirrhosis was incidentally discovered during an abdominopelvic CT scan. By continuing the investigations, we identified signs of portal hypertension, including ascites, splenomegaly, and grade one esophageal varices. Comprehensive tests excluded various causes of the cirrhotic process, including viral hepatitis with negative viral markers, alcohol-related liver disease, toxic, hemochromatosis, Wilson's disease and cardiac cirrhosis. Given the appearance of a focal hepatic lesion in segment VIII on abdominal ultrasound, an MRI and alpha-fetoprotein (AFP) test were performed, revealing a 27/20 mm lesion with heterogeneous gadolinium uptake in the arterial phase and rapid wash-out, along with elevated alpha-fetoprotein levels. The underlying cause was identified as MASLD, with a rather atypical and rapid progression to hepatocellular carcinoma. **Discussions :** The classic course of MASLD to cirrhosis and eventually HCC generally occurs over 10-20 years. Nevertheless, in this case the patient demonstrated the possibility of the disease to have a marked accelerated timeline with a silent course: three years prior he had an ultrasound performed that identified only liver steatosis, and one year prior his blood work showed nothing relevant. The patient remained asymptomatic until the diagnosis, emphasizing the silent nature of MASLD. **Conclusions:** This case highlights the potential severity of MASLD and the unexpected progress to the advanced stage within a significantly short period of time than the traditional one, culminating to HCC. Because of its silent course, it raises the importance of early detection, even in asymptomatic individuals that do not present prior abnormalities. Further research should elucidate the determinants of the rapidly progressive phenotype of MASLD and refine predictive models to better understand and identify high-risk patients.

Keywords: MASDL, HCC, Silent course, Atypical progression

AN UNCONVENTIONAL APPROACH IN COVID-19 THERAPY CAN SAVE LIVES – A CASE REPORT

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Introduction: The unforeseen and devastating COVID-19 pandemic has been marked by numerous attempts to identify effective therapies for severe cases. In this context, an initially controversial and disputed protocol has proven to be life-saving in critical situations. The severe progression of SARS-CoV-2 infection is characterized by the transition from the viral phase to an inflammatory phase dominated by a cytokine storm, which can lead to acute respiratory failure and multiorgan dysfunction. The therapeutic protocol proposed by Dr. Paul Marik involves the intensive administration of high-dose corticosteroids, intravenous vitamin C, and anticoagulants, aiming to control inflammation and prevent thrombotic complications. **Case Report:** We present the case of a 51-year-old male patient with a history of left ventricular failure, type 2 diabetes mellitus, mild renal insufficiency, and dyslipidemia, who was admitted with severe respiratory failure. Upon admission, the patient exhibited marked tachypnea, severe hypoxemia (oxygen saturation of 68%), and significant systemic inflammation markers (CRP 137 mg/L, ferritin 1420 ng/mL, D-dimer 2.1 mg/L). Pulmonary imaging revealed bilateral infiltrates and early signs of pulmonary fibrosis. The therapeutic management included high-dose methylprednisolone (80 mg/day initially, then gradually reduced to 40 mg/day based on inflammatory markers), intravenous vitamin C (750 mg every 6 hours), and anticoagulation with Clexane 40 mg/day. Additionally, the patient received ventilatory support through oxygen therapy. The clinical course was favorable, with progressive improvement in inflammatory and respiratory parameters, allowing discharge after 10 days of intensive treatment. **Discussions :** The cytokine storm is a key pathogenic mechanism in severe COVID-19, leading to worsening respiratory failure and increased risk of thromboembolic complications. Early administration of high-dose corticosteroids helps control the inflammatory process and may reduce the need for invasive mechanical ventilation. The addition of vitamin C enhances the effects of corticosteroids, playing a crucial role in reducing oxidative stress and protecting vascular endothelium. Although the use of high-dose steroids was initially controversial due to concerns about promoting viral replication, the favorable outcome of this patient, with a significant reduction in systemic inflammation and improved pulmonary function, suggests that in the late inflammatory phase, the benefits of this treatment outweigh the theoretical risks. **Conclusions:** Implementing a therapeutic strategy based on high-dose corticosteroids, intravenous vitamin C, and anticoagulation can positively influence the evolution of patients with severe COVID-19.

The presented case highlights the importance of a rapid and personalized intervention, tailored to the patient's biological response.

Keywords: COVID-19, Inflammation, Corticosteroids, Therapeutic protocol

SUBLINGUAL GLAND ACC – AN UNCOMMON OCCURRENCE WITH UNIQUE SURGICAL AND THERAPEUTIC CHALLENGES: A CASE REPORT

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Introduction: Adenoid cystic carcinoma (ACC) of the sublingual gland is a rare clinical occurrence (less than 1% of head and neck tumors), characterized by its potential for bone and perineural infiltration and its delayed metastatic behavior. This case highlights unique therapeutic challenges and the need to adapt reconstructive strategies. **Case Report:** A 42-year-old male with a history of lower limb surgeries came in with a 6-month progression of swelling under his right sublingual area and right hemimandubular hypoesthesia. The clinical examination revealed a fixed, firm 3.5 cm sublingual mass with intact mucosal lining, along with a swollen lymph node measuring 2 cm in the right submandibular region. Imaging studies showed a 3.5 cm tumor originating from the right sublingual gland, demonstrating mild invasion of the mandibular cortex and perineural extension along the lingual nerve and excluded distant metastases. The histopathological examination confirmed a cribriform adenoid cystic carcinoma (ACC) with a high Ki-67 index and positive immunohistochemical staining for CD117/SOX10, resulting in classification as pT2N1M0. Surgical intervention consisted of a wide excision of the sublingual gland with clear margins, a marginal mandibulectomy that maintained the mandible continuity, and a modified radical neck dissection covering levels I-III, which identified one metastatic lymph node. Due to previous surgeries on his lower limbs that contraindicated the use of fibular flaps, a microvascularized radial flap was used for reconstruction. Post-surgery, adjuvant radiotherapy was delivered at a dose of 66 Gy to the primary tumor site and 60 Gy to the cervical lymphatics. Given the tumor's elevated Ki-67 and lymph node involvement, it was classified as high-risk, necessitating close monitoring for local recurrence and potential pulmonary metastasis. Follow-up care included clinical evaluations and MRI every three months, along with annual CT scans. **Discussions :** The flap choice emphasizes the importance of adapting to the anatomical constraints and patient history. The presence of cortical bone invasion, although limited, required aggressive radiotherapy to reduce the risk of recurrence. Unlike sinus ACCs, the sublingual location presents specific risks of damage to cranial nerves and oral function. The prognosis remains reserved (5-year survival: 40-60%), with the need for long-term monitoring to detect late pulmonary metastases. **Conclusions:** The management of sublingual ACC requires personalized surgical approaches and thorough preoperative evaluation, especially in cases with particular medical histories. The use of alternative flaps in reconstruction demonstrates the flexibility needed in head and neck oncology. Interdisciplinary collaboration and adjuvant radiotherapy are essential pillars for improving long-term outcomes.

Keywords: Adenoid cystic carcinoma, Sublingual gland, Radial flap, Radiotherapy

PUMPING AGAINST THE ODDS – LVAD FOR ADVANCED HEART FAILURE

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Introduction: Advanced heart failure is the most severe form of heart failure and poses significant therapeutic challenges for medical professionals. Left ventricular assist device (LVAD) therapy has been transformational for patients, providing increased life expectancy and relief of symptoms for those with end-stage disease, either as a bridge-to-transplantation or as destination therapy. **Case Report:** A 42-year-old male patient with a history of heart failure with a severely reduced ejection fraction of 15% and dilated cardiomyopathy of ischemic etiology diagnosed after an anterior myocardial infarction at the age of 26, presented to the cardiology department for worsening fatigue, dyspnea, and jaundice. He also had persistent recurrent atrial fibrillation with several previous electrical cardioversions performed and an implantable cardioverter-defibrillator for secondary prevention of sudden cardiac death. He was admitted multiple times for repetitive episodes of cardiac decompensations during the previous 24 months and was included on the transplant waiting list. However, he continued to have worsening symptoms albeit being administrated the maximum tolerated doses of heart failure treatment. LVAD implantation as bridge-to-

transplant was recommended by the Heart Team and performed with no significant postoperative complications. Post-implant follow-up echocardiography showed dilated cardiomyopathy with a HeartMate 3 assist device present and persistent severely reduced left ventricular systolic function and right ventricular dysfunction, moderate mitral regurgitation, moderate tricuspid regurgitation, and defibrillator leads visible in the right cavities. Device interrogation revealed an estimated flow of 4.2 L/min and normal LVAD functioning. Laboratory monitoring revealed hyperbilirubinemia due to amiodarone-induced hepatic toxicity, which was stopped. Ramp testing was performed for LVAD speed optimization and digoxin was introduced for improved rhythm control of his atrial fibrillation. **Discussions :** This case illustrates the impact of using an LVAD as a life-saving therapy in patients with advanced heart failure. The patient presented a stable post-implant condition with a good response to the LVAD, despite severe structural cardiac dysfunction and arrhythmic burden. However, close follow-up and LVAD optimization are indispensable, as complications can still occur even after the dramatic improvement in systemic blood flow. **Conclusions:** LVAD implantation can prove life-saving in the fight against the ominous outcomes of advanced heart failure. Despite the patient's complications, LVAD therapy has provided a viable path forward, but with a need for close monitoring.

Keywords: LVAD, heart failure with reduced ejection fraction, advanced heart failure, bridge to transplantation

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ADVERSE EFFECTS OF BIOLOGIC THERAPIES IN CROHN'S DISEASE INDICATE THE POTENTIAL FOR ADVANCING RESILIENT PHENOTYPE-TARGETED TREATMENTS

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Introduction: Crohn's is a chronic autoimmune inflammatory bowel disease (IBD), often presenting during teenage years with symptoms such as diarrhea, abdominal pain and fatigue. Management typically follows a step-up approach, where treatment escalates in response to increasing disease severity. Anti Tumor Necrosis Factor alpha (Anti-TNFα) drugs such as Infliximab are often used to treat more complicated phenotypes of the disease. These monoclonal agents have an increased risk in potential paradoxical autoimmune reactions. **Case Report:** We present the case of a 34-years old individual with a history of abscessed terminal ileitis. In 2015 our patient underwent a right hemicolectomy with ileo-transverse anastomosis. Subsequent histopathological results confirmed Crohn's disease and the patient was put on intermittent treatment of 5 ASA derivatives and Budenofalk. In 2021, after multiple flare-ups, a colonoscopy was performed and the histopathological result showed aspects of Chronic enteritis and the patient was classified as high-risk. After screening for systemic infections and neoplasia, a pulmonology consultation was performed, and biological treatment with infliximab was initiated. In 2023, after two years of infliximab therapy, the patient presented to the dermatology clinic with complaints of erythema, plaques, and pruritus on the thorax. A skin biopsy, along with clinical features, confirmed the diagnosis of psoriasis vulgaris. Topical treatment with antibiotics and corticosteroids was recommended. During the clinical and paraclinical reassessment of the patient, a calprotectin of 183 µg/g was observed. Additionally, the Quantiferon-TB test returned a positive result. After pulmonary consultation it was decided to initiate chemoprophylaxis for the Tuberculosis (TB) infection, and the biological therapy was put on hold. **Discussions :** The complications associated with long-term biologic therapy in aggressive phenotypes are evident in our case. The patient's progression from surgical intervention to maintenance therapy to the eventual need for Infliximab underscores the progressive nature of Crohn's management. The development of psoriasis vulgaris and subsequent TB illustrates the potential effects of long-term biologic therapy. This raises important questions about the long-term safety assessment of these powerful biologics and the need to improve monitoring for extraintestinal manifestations for IBD patients. **Conclusions:** Our case like many others similar in nature underscores the need for personalized phenotyping to guide the selection and monitoring of biologic therapy. Furthermore, it emphasizes the importance of adopting long term surveillance protocols during biologic therapy to early identify adverse effects and, in turn, optimize therapeutic outcomes.

Keywords: Crohn's disease,, IBD,, Infliximab,, Paradoxical autoimmune reactions

HERLYN-WERNER-WUNDERLICH SYNDROME IN A PREPUBESCENT PATIENT

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Introduction: Herlyn-Werner-Wunderlich (HWW) syndrome is a rare Müllerian congenital anomaly, which consists of a didelphic uterus (double uterus), obstructive hemivagina and ipsilateral renal agenesis. Patients with HWW syndrome are asymptomatic until puberty. **Case Report:** Patient, age 11, is diagnosed in-utero with a unique left kidney, confirmed through a postpartum echography, presents at the Pediatric Ward of the Mures County Clinical Hospital, in a febrile state and dysuria, laboratory examinations showed a upper urinary tract infection (UTI) with E.Coli. Following paraclinical investigations in the nephrology unit, an MRI is done in Cluj, after which a complex malformation with double uterus and vagina was discovered. In the right renal lodge, at the inferior lumbar level, a dilated and tortuous ureter is emphasized, which protrudes in the urinary bladder forming a ureterocele. Urinary bladder is shifted anteriorly and compressed by a liquid cystic structure with 'funnel' aspect which presents as a distended vagina. Cranial to the distended vagina, a uterine structure is highlighted with a slightly volume distended cavity. This has a millimetric communication with the previously described vagina, it has the aspect of a hydrometrocolpos. To the left of this it shows a structure suggestive of another uterine body, only visible on MRI, which doesn't present an obviously distended cavity, a communication with the described general apparatus is not highlighted. An incision is performed at the level of the ureterocele alongside the evacuation of a large quantity of cloudy urine. At the level of the superior pole of the vagina a formation is distinguished which proeminates at the vagina level, a minimal incision is done after which the presence of a hemivagina is observed, with a high quantity of impure liquid. Through the correlation of clinical, paraclinical, imagistic and interventional data the final diagnosis is determined to be: HERLYN-WERNER-WUNDERLICH SYNDROME (didelphic uterus, obstruction at the level of the right hemivagina and ipsilateral renal agenesis). **Discussions :** Although the HWW syndrome is, usually, diagnosed after puberty, in this case, investigations following repeated UTIs led to the timely identification of the anomalies. Early detection offers the advantage of adequate monitoring and prevention of possible gynaecological complications. **Conclusions:** Knowing the anatomical and imagistic particularities of the HWW syndrome is crucial to guide the patients' surgical treatment, prophylaxis of possible complications and maintaining fertility. In our patient's case, monitoring is recommended in the pediatric surgery ward, repeated nephrological follow-ups and gynaecological monitoring.

Keywords: Müllerian anomaly, didelphic uterus, infection, obstructed hemivagina

THE DEVELOPMENT AND LONG-TERM TREATMENT OF COPD EXACERBATIONS AND SUBSEQUENT COR PULMONALE, OSA CAUSED BY A HIGHLY TOXIC WORK ENVIRONMENT.

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Introduction: Chronic obstructive pulmonary disease (COPD) is a progressive lung disorder caused by prolonged exposure to irritants such as smoke or occupational hazards, resulting in airflow limitation. A major complication, chronic cor pulmonale, involves right heart strain from pulmonary hypertension due to hypoxic vasoconstriction, often accompanied by obstructive sleep apnea (OSA), worsening prognosis with symptoms like dyspnea and fatigue, necessitating multidisciplinary management to improve oxygenation and reduce exacerbations. **Case Report:** We report the case of a 53-year-old male with chronic cor pulmonale and OSA secondary to severe COPD, triggered by years of occupational exposure in a steel factory without protective equipment, compounded by a 40-year smoking history. Inhaling toxic fumes and particulate matter accelerated his COPD progression. Diagnosed in 1994, his condition has advanced to GOLD stage IV, with mMRC grade 3 and GOLD risk class B, indicating severe dyspnea (unable to walk 100 meters without significant respiratory distress) and high exacerbation risk. He presented with SpO2 86% on ambient air, being oxygen-dependent, alongside cough, expectoration, and thoracic pain. The exacerbation, characterized by increased dyspnea, cough, and sputum production, was caused by pneumonia, which responded to third-generation cephalosporins and glycopeptides. In

1995, he developed erysipelas caused by beta-hemolytic group A Streptococcus, resulting in a non-healing erythematous plaque on his right leg, worsened by his depressed immune system due to chronic illness and malnutrition. Treatment included short-acting and long-acting bronchodilators, inhalatory corticosteroids, venotonics, long-term oxygen therapy, respiratory physiotherapy, kinesitherapy, influenza and pneumococcal vaccinations, physical activity, and social support to prevent further exacerbations and improve quality of life. Also, emphasis must be placed on the treatment of the accompanying commorbidities. **Discussions :** This case underscores how occupational exposure and smoking drive COPD etiology, leading to severe respiratory dysfunction, cor pulmonale, and OSA. The non-healing erysipelas reflects the impact of a depressed immune system, increasing infection risk. Influenza and pneumococcal vaccinations are critical to reduce respiratory infections that trigger exacerbations in patients with compromised immunity and chronic lung disease. For young COPD patients, lung transplantation may be considered, though comorbidities pose challenges. **Conclusions:** Meta-analyses emphasize that preventing exacerbations in COPD and cor pulmonale through long-term oxygen therapy, smoking cessation, bronchodilators and even chronic antibiotic administration is critical to manage airway obstruction. This patient's early retirement at 53 highlights the need for stringent occupational safety regulations to prevent such outcomes.

Keywords: COPD, cor pulmonale, erysipelas, vaccinations

BEYOND THE SURFACE: THE CRITICAL ROLE OF ADVANCED GENETIC SCREENING IN DETECTING ATYPICAL DIGEORGE SYNDROME

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Introduction: DiGeorge syndrome is a genetic disorder caused by a 22q11.2 microdeletion resulting in a broad spectrum of anomalies like: congenital heart defects, hypoplasia/aplasia of the thymus and/or the parathyroid glands and developmental delays.The variability of the phenotype is linked to the type of deletion : common (region LCR22A-LCR22D of 3 Mb) or atypical (proximal, nested ,distal deletions of 1.5Mb or 2 Mb).Currently, the atypical deletions are found only by undergoing SNP(Single Nucleotide Polymorphism) array or MLPA (Multiplex Ligation-dependent Probe Amplification) analysis. NIPT (non-invasive prenatal test) has a higher chance of detecting microdeletions longer than 3 Mb. NIPT is a screening test that uses cell-free fetal DNA from the maternal serum and the method called Next Generation Sequencing (NGS). **Case Report:** We present a case of a fetus diagnosed with DiGeorge syndrome through definitive SNP array analysis. Initially,in the first trimester,the NIPT screening for trisomies 9,13,16,18 ,21 and the microdeletion panel (including 22q11.2 deletion) returned negative results. At 14 weeks,the ultrasound showed multiple cardiac malformations which were confirmed ,at 18 weeks, by a fetal echocardiography : ventricular septal defect, truncus arteriosus type 2, right aortic arch,aberrant left subclavian artery and a suspicion of MAPCAS (major aortopulmonary collateral arteries syndrome).These findings prompted amniocentesis at 19 weeks followed by a QF-PCR (quantitative fluorescent PCR) test which confirmed the genetic female sex and the absence of aneuploidies of chromosomes X,13,18 and 21.The SNP array detected an interstitial heterozygous proximal deletion of 2.2 Mb in the region 22q11.21. The molecular and the constitutional karyotypes of both parents were normal, therefore suggesting a de novo mutation.After genetic counseling, the parents decided not to continue the pregnancy, given the severe cardiac malformations. **Discussions :** There are two NIPT methodologies: genome- wide counting and targeted SNP-based methodology. It seems that the frequency of de novo deletions detected using genome-wide counting is less than expected and for its improvement would require a high depth of sequencing , when fetal fraction is low. Targeted testing seems to have a higher sensitivity for A-D deletions, although unable to efficiently detect nested and distal deletions. Also,the sensitivity increases when searching for deletions longer than 3 Mb. **Conclusions:** This case underscores the importance of integrating more comprehensive genetic screening into routine prenatal care. Negative NIPT results can provide false reassurance ,potentially delaying critical diagnoses. Investing in technologies that could improve NIPT's sensitivity is very important .

Keywords: NIPT, microdeletion, screening, DiGeorge syndrome

AUTOPSY FINDINGS IN A CASE OF PRIMARY EXTENSIVE ACUTE LYMPHOCYTIC MYOCARDITIS.

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Introduction: The clinical presentation of myocarditis may range from subclinical to sudden death. Fatal myocarditis, often leading to rapid or sudden death, is a rare condition that can affect individuals of all ages. Myocarditis may be caused by viral, bacterial or fungal infections, immune disturbances (autoimmunity or hypersensitivity) or a combination of infections trigger by secondary autoimmunity. Lymphocytic myocarditis, the most common type, is usually associated with viral or post-viral infection, autoimmune diseases, connective tissue disorders, or is idiopathic. This case study aims to highlight the histopathological features in a case of extensive acute lymphocytic myocarditis. **Case Report:** This case concerns a 53-year-old female, who unexpectedly passed away at home. A complete autopsy was conducted at the Institute of Forensic Medicine Târgu Mureș, Romania. On gross examination, the left ventricular wall appeared thickened, suggesting hypertrophic cardiomyopathy. A myocardial bridging was observed in the left anterior descending coronary artery. Microscopically, the hypertrophic cardiomyopathy and a band of myocardium overlying a segment of the normal epicardial coronary artery were confirmed. Additionally, the presence of a diffuse amount of lymphocytes with a minor component of macrophages together with edema and myocyte damage and rare neutrophils attracted by myocyte necrosis were observed. Inflammation was observed across the entire thickness of the left ventricle, including the papillary muscles, endocardium and focally the epicardium. Massive acute pulmonary edema was noted in lung samples and no signs of inflammation were found in other organs. The cause of death was primary extensive acute lymphocytic myocarditis associated with hypertrophic cardiomyopathy and myocardial bridging. **Discussions :** This case highlights the diagnostic challenges of acute lymphocytic myocarditis, particularly in the context of sudden unexpected death. The presence of widespread lymphocytic infiltration with myocyte necrosis and edema - without evidence of systemic infection - supports a diagnosis of primary myocarditis. The concurrent findings of hypertrophic cardiomyopathy and myocardial bridging further complicate the clinical picture, underscoring the importance of distinguishing between primary myocarditis and other heart diseases. **Conclusions:** In this case, primary extensive acute lymphocytic myocarditis was the main cause of death, despite the coexistence of hypertrophic cardiomyopathy and myocardial bridging. This underlines the vital role of histopathology not only in confirming the diagnosis but also in clarifying the primary versus secondary nature of the inflammatory process. Careful integration of gross findings, histology, and clinical context is essential for accurate post-mortem diagnosis in such complex cases.

Keywords: acute lymphocytic myocarditis, sudden death, autopsy

LIPODYSTROPHY - A BARRIER IN THE MANAGEMENT OF UNBALANCED DIABETES

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Introduction: Insulin treatment has many complications and side effects that affect the skin and the adipose tissue. Lipodystrophy (LD), a condition affecting adipose tissue, is a common complication of subcutaneous insulin injections therapy. It can occur as lipohypertrophy (LH), the thickening of adipose tissue at injection sites, or as lipoatrophy (LA), the localized loss of fat. **Case Report:** We hereby report a case of a 72-year-old female patient with previously diagnosed type 2 diabetes mellitus (T2DM), for about 20 years under insulin treatment with basal-bolus regimen which was admitted to the Diabetology Department for: high glycemic values (peak value 340mg/dL), xerostomia, polydipsia and polyuria for several months, even after multiple insulin dosage adjustments. According to the patient, the insulin injection site was always in the abdomen - in the supraumbilical area. The physical examination revealed at this level a hardened area with several nodules, which persisted with LD. The insulin administration into the LD area leaded to an inadequate insulin absorption. Therefore, we recommended changing the injection sites of insulin and avoiding the LD area. **Discussions :** The strongest results of the studies about this subject showed the link between LH and inadequate rotation of injection sites. The precise cause of insulin-related LH is still not fully understood. Among the suggested mechanisms, LH seems to result from the reaction of fat cells to repeated insulin injections. Some studies suggest a link between LH and higher levels of anti-

insulin antibodies, while others highlight insulin's anabolic effect on fat cells, which stimulates the fat and protein synthesis, contributing to LH development. **Conclusions:** This pathology highlights the importance of education process of diabetic patients not only regarding the rotation injection sites which is mandatory but also on using a simple method, such as spacing each injection about a finger's width (around 1 cm) from the last. Carefully checking the skin for previous puncture marks or following a grid system can also help patients track past injection sites and choose the next one accordingly.

Keywords: Lipodistrophy, Type 2 Diabetes Mellitus, Insulin Therapy, Diabetes Complications

A LONG PATHWAY OF INVESTIGATIONS AND COMORBIDITIES TO A FINAL DIAGNOSIS OF CHRONIC PANCREATITIS IN THE EXOCRINE INSUFFICIENCY PHASE

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Introduction: Chronic pancreatitis is a multifactorial fibro-inflammatory syndrome characterized by extensive fibrotic tissue replacement, leading to irreversible morphological and functional changes. Potential causes are toxic factors such as smoking and alcohol abuse, metabolic abnormalities and obstructive mechanisms. Clinical manifestations include exocrine and endocrine insufficiency, malabsorption syndrome, and abdominal pain. **Case Report:** We present the case of a 48-year-old patient with a medical history of hypertension, hypothyroidism (under treatment) and a recent diagnosis of type II diabetes, who was admitted to the emergency department following a presyncopal episode and diarrhea two days prior to presentation. The patient was transferred to the internal medicine ward, where toxic megacolon and celiac disease were initially suspected. These conditions were ruled out by negative stool examinations for C. difficile toxin, as well as negative anti-endomysial and anti-transglutaminase antibody tests. Due to persistent gastrointestinal symptoms, a SARS-CoV-2 infection was suspected, with positive RT-PCR test results. One month later, after multiple investigations, the patient no longer tested positive for the virus, but her general condition remained altered, with persistent diarrhea and stool samples positive for C. difficile toxin. Furthermore, her mental status deteriorated significantly, requiring psychiatric consultation. She was diagnosed with post-SARS-CoV-2 encephalopathy, psychotic depression, leading to appropriate treatment. A high-dose corticosteroid therapy, administered for a suspected but later unconfirmed case of inflammatory bowel disease, resulted in a severe drop in potassium levels, inducing nephrogenic diabetes insipidus. The patient also experienced sepsis due to Klebsiella pneumoniae, urinary tract infections caused by Enterobacter species, and membranous pseudocolitis. Following another gastroenterology evaluation, the final diagnosis of chronic pancreatitis in the exocrine insufficiency phase was established. **Discussions :** The particularity of this case revolves around the two months spent by the patient in healthcare facilities, confronting various investigations and misdiagnoses due to numerous comorbidities. Pancreatic amylase levels and abdominopelvic CT scans showed no pathological changes. A key investigation in establishing the final diagnosis was stool examination, which was performed only after the treatment of C. difficile enterocolitis. This underscores the importance of basic yet essential tests in complex cases. In the exocrine insufficiency phase of chronic pancreatitis, steatorrhea is a hallmark clinical feature, characterized by increased fat content in stools, which appear pale, voluminous, and malodorous. **Conclusions:** Chronic pancreatitis is known for its protracted clinical course, requiring a complex diagnosis, management and therapeutic procedures.

Keywords: Chronic pancreatitis, Exocrine insufficiency, Steatorrhea

PSYCHOTIC ELEMENTS IN A CASE OF ATYPICAL LATE-ONSET ANOREXIA NERVOSA, AND FIRST WEEKS OF TREATMENT

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Introduction: Anorexia nervosa is a serious eating disorder, well known for an intense aversion towards weight gain. The peak age of onset for anorexia nervosa is 15.5y. The peak age of onset for primary psychotic disorders is 20.5y. The causes for anorexia are multifactorial. Psychotic symptoms and eating disorders might, in certain circumstances, be intertwined. This interconnection goes either way. Still, psychosis is not one of the primary comorbidities of anorexia, or eating disorders at large. **Case Report:** The patient is a 52 year old Romanian

lawyer. She is diagnosed with anorexia nervosa, and qualifies as "late onset". Her reason for her not to eat is "her stomach not working" and not dreading to be fat, it is atypical (F50.1). Psychotic elements are added. According to the medical records though, her sister directly came with her to the psychiatric ward. Her own account of this differs. The patient accuses her stomach of a non-functioning state (delusional idea of negation); hence she does not eat or plainly refuses food. Yet, she does not recognise her weight as problematic, which is standard for cases of anorexia nervosa. Moreover, she exhibits bizarre behaviours which are uncommon for anorexia but might occur in delusional states. When the patient first presented to the psychiatry she was markedly cachectic; with an BMI of 13.6. Her sodium needed correction. **Discussions :** This case presents an uncommon manifestation of anorexia nervosa, which differs from the typical etiological causes, such as purely societal and familial pressures, less psychotic body image distortions, and genetic predispositions. In contrast, this case involves a high-class woman who exhibits severe delusions, including the belief that her stomach is non-functional, and the presence of non-existent GI issues. The comorbidity of psychosis and anorexia nervosa is rare, multiplied by the late-onset nature of this case. This highlights the complexity of the presentation. **Conclusions:** It is important to recognise presentations of anorexia nervosa in which psychotic symptoms complicate the clinical picture and treatment advances. Delusions are a major obstacle to the success of treatment and must be addressed, as they are a major hindrance to successful treament. A tailored approach is necessary. Further research is needed to better understand the convergence of psychosis and anorexia, as well as to develop effective treatments for such cases like this, as the litterature here is limited.

Keywords: Anorexia nervosa, Psychiatry, Eating disorders, Delusions

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SUICIDE ATTEMPTS, AS INFECTIOUS AS THE FLU? A CASE OF SUICIDAL IDEATION INDUCED BY AN ENVIROMENT OF SOCIAL CONTAGION EFFECTS.

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Introduction: Suicide in adolescents is a growing public health concern, being one of the leading causes of death in the paediatric population. One factor in adolescent suicidality is the phenomenon of suicide contagion: exposure to suicidal behaviours, or suicide suggestion among peers increases the likelihood of suicide ideation, and attempts at it. **Case Report:** The patient is a 14 year old girl from Tg. Mures. She had a suicide attempt in 2023; now presenting as a transfer from a psychotherapy centre, due to increasing distress and unstable mood. She is diagnosed with emotional and behavioural disorders; school refusal. Numerous other problems contribute, such as school absenteeism, self-harm, symptoms of anxiety, weak self-identity, and susceptibilities to negative influence, especially by her online-friends. She also reports addictive tendencies, although their validity is highly questionable Her psychiatric history began in 2023 after the suicide of her best friend, both being 12y at the time. That same year, she attempted suicide by overdose and required intensive care before admittance to the paediatric psychiatric ward. The suicide of this boy is still a significant concern in her life. Three months ago, another friend died by suicide, leading to a worsening of symptoms. She has an online "suicide community" girlfriend; Having found each other in an online portal concerned with suicide and connected topics. They claim to be in a relationship. Both proclaim also to be trans-boys. **Discussions :** Bearman et all, 2004, showed an increase in suicidal thoughts if a friend of an adolescent committed suicide in the previous year, with odds ratios of 2.73 and 2.37 for males and females respectively. It leads to the conclusion that the exposure to suicide is an important precursor to the suicidal ideation of adolescents; which is illustrated by the patient to a high degree. The impact of suicide on surviving loved ones and peer group members takes a significant toll on this population. **Conclusions:** With her we find two types of influence at that. On the one hand, she is continuously thinking about the suicide of her friends. On the other hand, she is in a relationship with another person who has similar feelings about suicide. This keeps her in a place where a lot of her thinking might revolve around this topic. Professional psychotherapy and psychiatric treatment is of high necessity.

Keywords: Child and adolescent psychiatry, Suicidal ideation, Social contagion theory, Emotional and behavioural disorder

THE HIDDEN RISK FACTORS IN GASTROINTESTINAL ANGIODYSPLASIA: A CASE REPORT

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Introduction: Gastrointestinal angiodysplasia(GIAD) presents as ectasia of gastrointestinal(GI) tract submucosal vessels. It can have a variety of causes, ranging from rare ones, such as vascular malformations, to more frequent causes, such as chronic kidney disease(CKD) or aortic stenosis(AS). Studies show that in more than 20% of cases, GIAD is complicated by bleeding; hence patients present with anemia. In association with severe AS, this manifests as an acquired von Willebrand's disease and can be classified as Heyde's syndrome(HS). **Case Report:** This is the case of a 66-year-old woman with a history of stage 5 CKD on hemodialysis, atrial fibrillation, secondary hypertension, NYHA II heart failure and recent gastric surgery for a hemorrhagic ulcer. She was referred to the gastroenterology service for management of jejunal angiodysplasia, some complicated by bleeding. A following cardiology consult highlighted the presence of severe AS, which can be taken into consideration as a cause of gastrointestinal bleeding symptoms. On admission, the patient was anemic (Hb=4.1g/dl) and was stabilized after multiple blood transfusions(Hb=9.3g/dl). However, her general state was good, with abdominal motility and no sensibility on palpation. Capsule endoscopy, one of the superior diagnostic methods for GI bleeding, identified duodenal and jejunal angiodysplasia, with bleeding and clotting. Treatment was done with Argon plasma coagulation(APC), using a pediatric colonoscope, advanced to the proximal jejunum, by identifying two sites of angiodysplasia, hematic membranes and a 10mm bleeding telangiectasia, controlled by a clip. **Discussions :** There are multiple diagnostic methods for GIAD, like colonoscopy, enteroscopy, or angiography, but capsule endoscopy, while less invasive, seems to be a better choice, with a higher sensitivity. Studies have highlighted around 50% of cases with negative colonoscopy or upper GI enteroscopy, where capsule endoscopy identified the bleeding site. HS seems to be a frequent occurrence in elderly patients, but it tends to be overlooked and under-reported. Previous studies have identified GIAD in less than 5% of patients with AS, while its occurrence has been proven to be more common in patients who associate end-stage CKD, with hemodialysis also increasing the risk. According to literature, the best long-term solution in these cases is aortic valve replacement, while blood transfusions might offer temporary relief. **Conclusions:** The challenge in cases with HS symptoms is identifying all risk factors, especially hemodialysis, and choosing the appropriate management. Early diagnosis, by choosing the proper investigations, is key in patients with HS, while their age allows adequate recovery after valve replacement surgery.

Keywords: Heyde's syndrome, Aortic stenosis, jejunal angiodysplasia, hemodialysis

APPLIED ANATOMY IN SEX IDENTIFICATION IN SKELETONIZED CORPSES

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Introduction: Sexual dimorphism refers to the phenotypic differences observed between males and females in both morphological and behavioral aspects, influenced by genetic, hormonal, and environmental factors. These characteristics have been anatomically studied and are now applied in forensic anthropology to identify sex in skeletonized corpses, aiding legal investigations. **Case Report:** This paper aims to highlight distinctive features of the mandible and pelvis useful in determining sex. The analysis focused on bone fragments of both sexes from the Department of Anatomy Museum collection, supported by specialized anatomical literature. The bones analyzed were from adult individuals of known sex, ensuring complete anatomical development. The female mandible displayed a more rounded shape, less pronounced prominences for muscle insertions, a more obtuse mandibular angle, a smaller and thinner mandibular body, less prominent alveolar arches and alveolar process of the maxilla, a rounder and smaller menton, and a more inclined and thinner mandibular ramus. In contrast, the male mandible displayed a more robust and angular shape, more pronounced prominences for the insertions of mandibular muscles, a sharper mandibular angle, a larger and thicker overall mandibular body, more prominent alveolar arches and alveolar process of the maxilla, a square-shaped menton with larger dimensions, and a straighter and more robust mandibular ramus. The female pelvic bone was short and wide, with increased diameters, a short and widened sacrum, tilted posteriorly and superiorly, a cylindrical shape of the pelvis minor, smooth iliac crests, and a

prominent lower margin of the pubic bone, with an obtuse subpubic angle and a wide and low symphysis. The male pelvic bone was characterized by a narrower and taller appearance, with reduced diameters, a narrow and elongated sacrum, oriented anteriorly and inferiorly, a conical shape of the pelvis minor, rough and irregular iliac crests, a non- prominent lower margin of the pubic bone, and a sharp angle, with a narrow symphysis. **Discussions :** The observed features align with established literature on sexual dimorphism and highlight the diagnostic value of pelvic and mandibular characteristics in sex determination. Limitations include the necessity of post-pubertal development for trait expression, bone integrity, degree of deterioration, and difficulties in analyzing small or fragmented bones. **Conclusions:** The study of distinctive characteristics of the mandible and pelvis in determining phenotype brings to the forefront the importance of applied anatomy in the field of sex identification in skeletonized corpses, providing a clear framework for forensic anthropology.

Keywords: forensic anthropology, mandibles, sex identification, pelvises

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UNEXPECTED DISCOVERY OF PARATHYROID ADENOMA DUE TO PARATHYROID CRISIS

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Introduction: Although the etiology is often unknown, parathyroid adenoma is a benign tumor responsible for 85% cases of primary hyperparathyroidism and requires regular monitoring to prevent complications. The long-term effect is osteoporosis. Hypercalcemia is present in approximately 90% of cases however when calcium levels exceed 15.00 mg/dL it is defined as parathyroid crisis which rarely happens but is a life-threatening situation because this electrolyte implicates many vital organs. **Case Report:** We present the case of a 61 y/o female patient with no medical history who presented at the emergency service department of Akdeniz University Hospital in March 2025 reporting fatigue, nausea, and palpitations for several days. The patient couldn't articulate logical answers to normal questions. Upon assessing the investigations, she was hospitalized to the Internal Medicine Clinic for treating hypercalcemia due to life threatening peak levels of 15.86 mg/dL Calcium (normal 8.8-10.2 mg/dL), 788.40 ng/L of Intact PTH (normal 15 - 65 ng/L) and 0.79 mg/dL of Phosphorus (normal 2.5 - 4.5 mg/dL) which indicate primary hyperparathyroidism. Intravenous fluid therapy, furosemide and glucocorticoids treatment were started to reduce the patient's serum calcium level for three consecutive days. Treatment-refractory hypercalcemia ultimately necessitated hemodialysis. The patient finally reached lower levels such as 9.45 mg/dL Calcium and 393.00 ng/L Intact PTH resulting in her discharge from the hospital in a stable condition with the recommendation of parathyroidectomy. Ultrasonography revealed a hypoechoic solid lesion in the posterior aspect of the right lobe showing intense internal vascularization, regular margins and measures of 15x12 mm. Parathyroid scintigraphy revealed findings consistent with parathyroid adenoma in the right lobe. **Discussions :** Since fine needle aspiration of the tissue is not recommended if suspicion of carcinoma exists due to the risk of seeding tumor cells, differential diagnosis was performed post-surgical excision by histopathological examination of the mass which revealed parathyroid adenoma excluding malignancy. Due to hypercalcemia, 1.29 mg/dL of creatinine (normal 0.5-0.9 mg/dL) and dehydration associated with Ramadan fasting, nephrology department was consulted but upon examination both kidneys were declared normal. **Conclusions:** Primary hyperparathyroidism and malignancy should be considered first in patients with hypercalcemia. Severe hypercalcemia can lead to complications such as arrhythmia, confusion, kidney failure, pancreatitis, coma and even death requiring emergency treatment. This case highlights the value of prompt medical action which can not only save a patient but also diagnose unexpected life-threatening diseases.

Keywords: hypercalcemia, hyperparathyroidism, crisis, adenoma

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40-WEEK NEWBORN WITH LAPAROSCHISIS AFTER AN UNMONITORED TEENAGE PREGNANCY-A CASE REPORT

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Introduction: Laparoschisis represents one of the most severe congenital malformations of the abdominal wall, being defined by the herniation of the intestines into the amniotic fluid. In comparison with the omphalocele,

condition in which the intestines protrude from the umbilicus and are protected by peritoneum, in laparoschisis the intestines are fully exposed to the external environment and most often the defect is located on the right side. **Case Report:** We present the case of a 40-week gestational age newborn, by vaginal delivery and cranial presentation with a weight of 1990g, growth being restricted by laparoschisis. The APGAR score at 1 minute was 9 and 10 at 5 minutes. The infant needed reanimation as the amniotic fluid contained meconium and the upper airways were obstructed. As the malformation was not prenatally diagnosed due to the lack of medical supervision of the pregnancy, the newborn was transferred from the first day in our intensive care unit. The imminent major risks of laparoschisis are: hypothermia, hypotension and sepsis, but they were managed by covering the exposed intestines with a sterile moist compress and a transparent polyethylene bag, the peripheral vascular access was ensured in case of fluid resuscitation was needed and the prophylactic antibiotic therapy was started. Moreover, a nasogastric tube was inserted to prevent gastric distension and to reduce the risk of aspiration. **Discussions :** The infant was assessed by the multidisciplinary team and considering the risk of increased abdominal pressure caused by reintroducing the tremendously edematous intestines into the abdominal cavity the primary closure was postponed for staged closure. In this case the intestines are placed into a silo bag and due to gravity they are gradually introduced into the abdominal space allowing them to accommodate and then perform a delayed suture. More recently a new closure has been developed and consists in stretching the umbilical cord across the defect without fascial suturing. The advantage of this method is that it can be performed without general anesthesia and intubation, but in our case because of the defect's severity the surgical correction has to be done. **Conclusions:** Laparoschisis cannot be prevented or treated in utero but the prenatal diagnose is vital in order to avoid delivery complications and to institute the proper treatment in an intensive care unit with a multidisciplinary team. The particularities of this case consist in the delivery conditions of a non-supervised pregnancy, which was vaginal even though the laparoschisis was complex.

Keywords: laparoschisis, non-supervised pregnancy, delayed suture, silo bag

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AN ATYPICAL CASE OF MEMBRANOUS NEPHROPATHY

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Introduction: Membranous nephropathy represents a complex autoimmune disorder, characterized by the accumulation of immunoglobulins and complement fractions on the subepithelial surface of the glomerular basement membrane, beneath the podocytes. In primary membranous nephropathy autoantibodies against podocytes are synthetized, most common being Ig anti-PLA2R, followed by Ig anti-NELL1, while secondary form results from circulating immune complexes or formed in situ, often being related to lupus, hepatitis, syphilis or malignancy. The formation of the complement membrane attack complex alters the architecture of podocytes, causing increased permeability which leads to proteinuria and nephrotic syndrome. **Case Report:** We depict the case of a 55-year man, which presents to the hospital due to severe anasarca and hematuria debuted 3 months ago. The blood tests indicate severe hypoalbuminemia, hyperlipemia, hyperfibrinogenemia while the urinalysis shows massive proteinuria 7,35g/24h, increased creatinine level and hematuria with dysmorphic erythrocytes. As a nephrotic syndrome is suspected the presence of anti-PLA2R antibodies was tested. In the serum were not only anti-PLA2R antibodies present, but also AMA-M3 antibodies. The macroscopic hematuria which is characteristic for nephritic syndrome made us suspect the association of a IgA nephropathy, their coexistence being suggestive for an Overlap Syndrome. The patient associates a series of cardiac comorbidities including: atrial fibrillation, mitral insufficiency, left heart failure, arterial and pulmonary hypertension, thrombosis which precipitate the edema and the renal disfunction. Considering the complexity of the case a kidney biopsy is needed to certainly establish the diagnosis, consequently rivaroxaban is replaced with enoxaparin. Puls-therapy was started with methylprednisolone 1g/day for 3 days, followed by oral administration of 48mg/day in combination with hydrochlorothiazide 12.5mg/day. Evolution was favorable after corticotherapy, the patient lost 10kg and hematuria was solved. **Discussions :** Due to the macroscopic hematuria a renal biopsy is needed in order to precisely diagnose the glomerular lesion. In case of membranous nephropathy, light microscopy depicts the uniform and peripheral thickening of the glomerular basement membrane and the electronic microscopy indicates precisely the subepithelial location of the immune deposits. In comparison to IgA nephropathy, it does not associate cellular proliferation, formation of crescents and inflammatory infiltrate. Moreover, in IgA nephropathy the electronic-dense area is presented in the mesangium. **Conclusions:** The particularities of this case consist in the association of anti-PLA2R with AMA-M3 antibodies, for which we do not have an explanation, a false positive result might be possible.

Keywords: anti-PLA2R antibodies, AMA-M3 antibodies, membranous nephropathy, hematuria

HIDDEN IN PLAIN SIGHT: A CASE OF DIAMINE OXIDASE (DAO) DEFICIENCY MISDIAGNOSED AS IRRITABLE BOWEL SYNDROME (IBS)

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Introduction: Histamine intolerance is a clinical condition characterized by an impaired capacity to metabolize histamine efficiently, resulting in its excessive accumulation in circulation. This condition is primarily attributed to a deficiency or dysfunction of DAO. Due to the significant overlap in gastrointestinal symptoms, it is often misdiagnosed as IBS. **Case Report:** A 54-year-old man with no significant medical history presented with a five-year history of persistent gastrointestinal and systemic symptoms. Initially diagnosed with irritable bowel syndrome (IBS), he experienced no relief despite multiple treatments, including antispasmodics, probiotics, motility regulators, and a low-FODMAP diet. His symptoms included severe postprandial bloating, periumbilical abdominal discomfort, alternating diarrhea and constipation, and a sensation of gastric fullness unrelated to food intake. Additionally, he suffered from recurrent headaches and chronic fatigue, often linked to histamine-rich foods such as red wine, aged cheese, and processed meats. A neurological examination found no abnormalities. Routine blood tests, inflammatory markers, liver and renal function tests, and serologic tests for celiac disease were all normal. However, his serum diamine oxidase (DAO) activity was significantly reduced (2.8 U/mL), confirming histamine intolerance due to DAO deficiency. Further gastrointestinal investigations, including gastroscopy and colonoscopy, ruled out structural and inflammatory diseases. Management included a strict low-histamine diet, DAO enzyme supplementation, and H1-antihistamines for acute symptoms. After three months, he reported significant symptom improvement, with relief of headaches and fatigue, normalized bowel habits, and reduced bloating and discomfort. The success of dietary modifications and DAO supplementation confirmed histamine intolerance as the root cause of his symptoms. **Discussions :** DAO deficiency is a recognized contributor to both gastrointestinal and neurological symptoms. This case reinforces findings from the MigraDAO trial, which identified low DAO activity in 87% of migraine patients, linking histamine accumulation to migraine pathophysiology. The patient's recurrent headaches, triggered by histamine-rich foods, support this association. DAO supplementation effectively reduced migraine duration and severity, as demonstrated in the MigraDAO trial and in the patient's case. **Conclusions:** This case underscores the need to consider histamine intolerance as a differential diagnosis in patients with persistent gastrointestinal symptoms that do not respond to standard IBS treatments. As IBS is a diagnosis of exclusion, the presence of systemic symptoms, particularly those triggered by dietary histamine intake, should prompt further investigation. Histamine intolerance remains an underdiagnosed condition, often leading to prolonged patient distress and ineffective treatments. A targeted diagnostic approach, including an evaluation of histamine metabolism, can uncover the true cause of unexplained gastrointestinal symptoms.

Keywords: differential diagnosis, dietary triggers, IBS, histamine intolerance

THE ROLE OF IMMUNOHISTOCHEMISTRY IN PREDICTING SOMATOSTATIN ANALOGUE TREATMENT RESPONSE IN ACROMEGALY – A CASE REPORT

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Introduction: Acromegaly is a rare disorder, caused by hypersecretion of Growth Hormone (GH) in adults. This condition leads to abnormal growth of the bones and tissues, an increase in the size of extremities, especially in the hands, feet and face. This pathology is usually caused by a pituitary secreting adenoma. If surgical treatment does not completely reduce the abnormal secretion of GH, it is most commonly treated with somatostatin analogues, followed by dopamine agonists and GH-Receptor antagonists. The objective of this presentation is to depict the importance of immunohistochemistry (IHC) and how it could help in predicting medication response in acromegaly patients. This would favor first generation somatostatin analogue resistant cases of acromegaly patients to get the most effective treatment for their condition quicker than by clinically observing treatment inefficiency. **Case Report:** This presentation includes the case of a 38-year-old female patient diagnosed with a GH secreting pituitary macroadenoma, operated through transsphenoidal approach in June 2021. After the surgery, the IGF-1 level remained inadequately high, and on the last MRI made in October 2022, a remnant

fragment of the tumor is shown in the sphenoidal sinus. Treatment with Octreotide and Lanreotide was inefficient. Little improvement was observed in association of Lanreotide and Cabergoline and after the IGF-1 levels kept increasing, Lanreotide and Cabergoline was associated with Pegvisomant as well, treatment which seemed more efficient. Once more immunohistochemistry was done, the tumor as classified as sparsely granulated, with weak expression of E-cadherin, which is characteristic for aggressive and more invasive tumors. IHC also showed weak expression of SSTR-2 and strong expression of SSTR-5, which would suggest a more favorable response to treatment with Pasireotide, rather than Octreotide or Lanreotide. When Lanreotide was replaced with Pasireotide in the treatment regimen, IGF-1 levels normalized within 3 months, the patient achieving optimal biochemical control under this treatment option. **Discussions :** A histopathology report with a detailed IHC analysis of such tumors would help with recognizing which patients are prone to have minimal response to first generation somatostatin analogues (Ocreotide, Lanreotide), thus leading to optimal treatment. This would prove to bring more efficient results in the evolution of the tumor and a better prognosis for the patient. **Conclusions:** The observed IGF-1 normalization after switching from Lanreotide to Pasireotide indicates the importance of immunohistochemistry in predicting treatment resistance. Integrating detailed IHC analysis into routine practice could enhance personalized therapy in acromegaly.

Keywords: Immunohistochemistry, Acromegaly, First generation somatostatin analogues, Predicting treatment resistance

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TREATMENT RESISTANT URTICARIA IN A YOUNG PATIENT – A POSSIBLE LINK TO SILENT ENTERAL INFECTIONS

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Introduction: Urticaria is a skin condition characterized by pruritic red-coloured wheals and migratory swelling, sometimes accompanied by a burning sensation. The pathology is caused by histamine release, triggered by allergens (including medication), infectious agents, and physical stimuli. In an infectious context, studies suggest Salmonella to be one of the most frequent gastrointestinal pathogens associated with chronic urticaria. The exact physiopathology of the symptoms remains uncertain, potential mechanisms including the direct presence of the microorganism in the skin, toxin release, or complement activation mediated by circulating immune complexes. **Case Report:** This presentation describes the case of a 14-year-old male patient presenting to the hospital with acute generalized urticaria and mild angioedema, which was unresponsive to antihistamines, hydrocortisone, and dexamethasone. Administration of epinephrine provided partial symptom relief, and methylprednisolone was prescribed for home treatment. Unfortunately, this treatment option was initially inefficient in fully alleviating the urticaria symptoms, the treatment resistance leading to closer inspection. Further investigation revealed a family history of Crohn's disease and allergic rhinitis, suggesting an atopic background. While examining plausible causes of the urticaria, the pathology remitted after a week of treatment with methylprednisolone. Despite the normal stools and absence of digestive symptoms, laboratory tests showed elevated fecal calprotectin levels (>1000 µg/g). Given these findings, an enteral infection was taken into consideration, so the patient was tested for fecal Salmonella antigen, which was positive. Following the initiation of appropriate antibiotic therapy fecal calprotectin levels normalized to 15 µg/g. **Discussions :** This case represents an atypical presentation of urticaria in a pediatric patient, as no other allergens or contributing factors were identified aside from Salmonella infection, thus supporting studies linking enteral infections to urticaria. Furthermore, studies indicating that Salmonella infection can lead to elevated fecal calprotectin levels independent of inflammatory bowel disease (IBD), with values normalizing post-antibiotic therapy may reinforce the theory that fecal calprotectin is useful in monitoring gastrointestinal infections beyond IBD. **Conclusions:** The lack of response to standard urticaria treatment and the spontaneous resolution of symptoms highlights the importance of deeper analysis of organ systems as well as considering pathogens of enterocolitis as a potential trigger for treatment-resistant urticaria. The absence of gastrointestinal symptoms suggests that in urticaria cases with no clear etiology, infections should not be overlooked as a primary cause.

Keywords: Urticaria, Salmonella, Treatment resistance, Fecal Calprotectin

MULTIDISCIPLINARY APPROACH TO ADVANCED CHRONIC KIDNEY DISEASE: THE CHALLENGES IN DIAGNOSIS – A CASE REPORT

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Introduction: Chronic kidney disease (CKD) is a devastating condition that is reaching epidemic levels owing to the increasing prevalence of diabetes, hypertension and obesity, as well as aging of the population. Regardless of the underlying etiology, CKD is slowly progressive and leads to irreversible nephron loss, end-stage renal disease and/or premature death. It is associated with systemic disease, like arterial hypertension and intrinsic renal disease, such as chronic glomerulopathies, chronic pyelonephritis, and it is classified into 6 stages based on the value of the glomerular filtration rate (GFR), last stage depending on hemodialysis or kidney transplant. **Case Report:** We present a 55-year-old patient with grade 3 arterial hypertension, apparently therapeutically neglected, who was admitted to the Nephrology Department complaining of severe physical asthenia, significant azotemia with serum creatinine level of 9mg/dl, reporting spontaneous emissions of hyperchromic urine in the past. The results of laboratory tests showed elevated urea levels, eGFR of 5.7ml/min/1.73 mm2, hyperkalemia, hypocalcemia and a severe anemia of renal origin, as erythropoietin and iron levels were decreased. The patient was administered 3 IU of erytrocyte mass, along with antihypertensive medications, with a reduced blood pressure to at least 145mmHg. A significant increase in proteinuria during the hospitalization, from 150 to 2305mg/24h led to the presumptive diagnostic of Berger's disease. As a result, a native CT scan was performed, revealing kidneys with a bilateral scleroatrophic appearance, and additionally a renal biopsy was conducted, which confirmed the pathology of chronic glomerulonephritis with chronic nephritic syndrome, Berger's disease. **Discussions :** The lowered GFR was associated with severe anemia syndrome, permanently elevated values throughout the entire hospitalization of creatinine and urea, as well as the decompensated metabolic acidosis and hyperkalemia, without joint lesions, which were defining characteristics for our CKD grade 4 diagnosis. Renal function replacement therapy through hemodialysis was recommended to the patient, for which, a central venous catheter was placed in the vascular surgery department. This case highlights the importance of multidisciplinary approach, involving nephrologists, cardiologists and vascular surgeons in the management of advanced CKD. **Conclusions:** Chronic kidney disease is a progressive lessions that put the patient's life at risk, and this case highlights the way neglected high blood pressure and chronic glomerulonephritis were decisive factors in the fast degradation of kidney function. The severe progression of the disease emphasizes the need of early diagnosis and a multidisciplinary management to slow progression and prevent terminal CKD.

Keywords: Chronic Kidney Disease (CKD), Hemodialysis, Glomerulonephritis, Hypertension

PAPILLARY CARCINOMA OF THE THYROGLOSSAL DUCT WITH OSTEOLYTIC METASTASIS TO THE HYOID BONE

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Introduction: The thyroid gland begins development in the third week of embryogenesis and descends to its final position by the 10th week. During this descent, thyroglossal duct remnants may persist, forming thyroglossal duct cysts, which occur in approximately 7% of the population. Of these, only half contain thyroid tissue, and around 1% undergo malignant transformation into papillary carcinoma. **Case Report:** A 72-year-old male, without any significant medical history, presented with a firm, painless, anterior neck mass. Computed tomography revealed a non-homogenous, iodophilic and partially necrotic tumor, and an osteolytic lesion at the hyoid bone. Surgery was performed and histopathological examination confirmed papillary carcinoma. Thyroid ultrasonography confirms the presence of a few nodules, but without malignant suspicion. A total thyroidectomy with selective neck dissection revealed lymph node metastases with no primary thyroid source for the malignancy. Subsequently, otolaryngology surgical reintervention was performed to excise a hyoid-level metastasis. The patient then underwent adjuvant radioiodine therapy to eradicate any residual thyroid tissue. **Discussions :** The particularity of the case was given by the rarity of the factors involved in the pathogenesis and evolution of the disease, as well as by the best

personalized approach of the case. Ectopic papillary thyroid carcinoma is a rare occurrence, particularly when the thyroid gland itself remains uninvolved. Differential diagnosis is key in ensuring an adequate treatment plan, especially in the absence of specific guidelines for such cases. However, established thyroid carcinoma protocols must still be followed to provide optimal patient care. Total thyroidectomy, selective neck dissection, and adjuvant radioiodine therapy remain the most effective strategies to optimize patient outcomes. **Conclusions:** The case highlights the importance of a multidisciplinary team in the management of a rare case of ectopic papillary carcinoma that invaded the hyoid bone. Given the scarcity of data on the treatment of such cases, ensuring proper timing and a well-planned approach becomes crucial in providing the necessary intervention that will treat the patient and offer the highest chance of survival rate while minimizing the risks and complications of multiple procedures.

Keywords: Thyroglossal duct carcinoma, Papillary carcinoma, Osteolytic hyoid metastasis

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MALARIA RELAPSE IN A TRAVELER: PLASMODIUM FALCIPARUM AND PLASMODIUM VIVAX COINFECTION WITH NON-ADHERENCE

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Introduction: Malaria, a common vector-borne disease caused by *Plasmodium* species and transmitted through *Anopheles* mosquitoes, poses a significant global health burden. Among the species, *Plasmodium falciparum* (*P. falciparum*) is the most virulent, often associated with severe complications such as thrombocytopenia, hemolysis, and renal impairment. Chemoprophylaxis is strongly recommended for travelers to endemic regions. **Case Report:** A 41-year-old male presented with fever, chills, myalgia, headache, dry cough, nausea, and abdominal pain. He had recently traveled to Bali (Indonesia) and the Philippines for three weeks and reported multiple mosquito bites during his stay. A rapid diagnostic test (RDT) was positive for *P. falciparum* being the only antigen it detects. Thick blood smear microscopy confirmed *P. falciparum* parasitemia, and erythrocyte morphology revealed discrete poikilocytosis and ovalocytes. Laboratory findings showed severe thrombocytopenia, elevated bilirubin, and increased serum creatinine levels. The patient was admitted to the Infectious Diseases department and initiated on antimalarial therapy. Further diagnostic testing later confirmed a co-infection with *Plasmodium vivax* (*P. vivax*). His clinical condition improved with treatment, and he was discharged with appropriate therapeutic recommendations. However, one month later, he returned with fever, chills, and asthenia. Repeat peripheral smear demonstrated the presence of signet ring forms, trophozoites, and schizonts, accompanied by moderate thrombocytopenia and elevated liver enzymes. On further questioning, the patient admitted to non-adherence to the prescribed post-discharge antimalarial therapy. **Discussions :** This case highlights the risk of malaria recurrence due to poor adherence to treatment, especially in *P. falciparum* infections. Although *P. falciparum* does not have a dormant liver stage like *P. vivax*, recurrence may occur if treatment is incomplete or ineffective. The patient's initial presentation, marked by thrombocytopenia, hyperbilirubinemia, and renal impairment, underscores the potential severity of malaria. The recurrence of parasitemia, along with the presence of trophozoites and schizonts, likely reflects insufficient parasite clearance rather than reinfection. This case also emphasizes the importance of differentiating co-infections through comprehensive testing. **Conclusions:** This case underlines the critical role of thorough medical history-taking in promptly identifying travel-related infectious diseases and initiating timely treatment. It reinforces the importance of adherence to antimalarial therapy and the necessity of post-treatment follow-up. Patient education is essential to ensure compliance and prevent complications. The distinctiveness of this case lies in the *P. falciparum-P. vivax* co-infection and the treatment failure due to poor adherence to home-based therapy.

Keywords: Plasmodium falciparum, Plasmodium vivax, malaria, signet ring

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DIAGNOSTIC AND THERAPEUTIC CHALLENGES IN CASE OF SEVERE, PERSISTENT IRON DEFICIENCY ANEMIA OF UNKNOWN CAUSE

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Introduction: A 51-year-old female patient presented with severe anemia despite treatment. Anemia has multiple

causes, including nutritional deficiencies, chronic diseases, and hematological disorders. While iron deficiency anemia is most common, persistent anemia necessitates further investigation to identify underlying causes and guide management. **Case Report:** The patient had severely low serum ferritin (4 µg/L, reference 13-150 µg/L) and transferrin at the highest limit of normal range (3.58 g/L, reference 2.0-3.6 g/L), indicating iron depletion. Her lowest recorded values in 2017 were Hb 7.2 g/dL, Hct 25.4%, MCV 73.3 fL, RBC 3.47 $\times 10^6$/µL, while current values were Hb 8.8 g/dL, Hct 27.4%, MCV 78.3 fL, RBC 3.5 $\times 10^6$/µL. She received continuous iron therapy under hematological supervision, with periodic changes, along with folic acid and B vitamins. Despite this, anemia persisted. Stool occult blood testing was negative, and gynecological, gastroenterological (without endoscopy), and endocrinological evaluations found no chronic blood loss. Serological tests showed positive IgG for Herpes Simplex Virus (HSV) 1 and 2, with negative IgM, indicating past infection. ANA and other immunological tests were negative, reducing the likelihood of autoimmune anemia. The patient also had neurogenic thoracic outlet syndrome due to supernumerary cervical ribs, causing nerve compression in the right arm, though she had not undergone surgery. Leucocytopenia (WBC 2500/µL, lower limit 3000/µL) and thrombocytopenia (PLT 100,000/µL, lower limit 150,000/µL) were later confirmed alongside anemia. Bone marrow examination revealed unspecified bone marrow failure. **Discussions :** Persistent anemia requires broad evaluation. Common causes include gastrointestinal bleeding, malabsorption syndromes like celiac disease, and hematological disorders such as myelodysplastic syndromes or hemolytic anemias. In rare cases, HSV infection has been linked to aplastic anemia. Her anemia complicated her pregnancy, but she delivered a healthy child 20 years ago. Further investigations, including gastrointestinal endoscopy, repeated stool occult blood tests, and bone marrow evaluation are needed. **Conclusions:** This case underscores the need for a systematic approach to unexplained anemia. Persistent iron deficiency warrants evaluation for malabsorption, chronic blood loss, or hematological conditions. The presence of leukocytopenia and thrombocytopenia highlights the importance of bone marrow assessment. A multidisciplinary approach is essential for accurate diagnosis and management.

Keywords: refractory anemia, iron deficiency, bone marrow failure

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THE DILEMMA OF TUBERCULOSIS THAT DEFIES DIAGNOSIS: CHALLENGES IN MANAGING AN ATYPICAL MYCOBACTERIAL INFECTION

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Introduction: Nontuberculous mycobacteria (NTM) comprise a large group of mycobacteria, excluding Mycobacterium tuberculosis (MTB) and Mycobacterium leprae. The pulmonary disease caused by nontuberculous mycobacteria and tuberculous mycobacteria presents similar clinical and imaging manifestations, in some cases, they can even associate, leading to challenges in establishing a diagnosis. The MTB/RIF GeneXpert test, is a molecular biology test forming a fully automated closed loop, engineered for the semi-quantitative amplification by RT-PCR of Mycobacterium tuberculosis DNA and resistance genes to rifampicin. Therefore, it is a valuable tool utilized in the diagnosis algorithm of both primary and reactivated Tuberculosis. **Case Report:** We present the case of a 57-year-old patient, with a history of tuberculosis (2020) who has been experiencing the following symptoms for the past 3 weeks: fatigue, myalgia, arthralgia, productive cough, recurrent microhemoptysis and skin sensitivity. The thoracic CT scan revealed extensive fibrosis and a residual cavity at the level of the superior right pulmonary lobe, thus raising the suspicion of tuberculosis reactivation. Two sputum samples with a mucopurulent appearance were collected for microscopic examination and for culture insemination, to establish the diagnosis of reactivated pulmonary tuberculosis. The Ziehl-Neelsen Acid-Resistant-stain and the bacterial culture came back positive, but the TB MPT64 Ag immunochromatographic test was negative. Considering the symptomatology, radiological findings, and history of tuberculosis, two additional sputum samples with the same aspect were sent for analysis after 4 days. The microscopic exam was positive and the GeneXpert test that was requested revealed: Mycobacterium tuberculosis - Trace detected. The bacterial culture was confirmed positive after 90 days, and from it, another GeneXpert was effectuated, with a negative result. Consequently, the culture was categorized as a nontuberculous mycobacterium and was sent for further identification. The patient followed up with the pulmonary antituberculosis medication, resulting in a favorable evolution associated with a ponderal growth of 1.5 kg and the absence of hemoptysis. **Discussions :** The first series of investigations indicated an infection with nontuberculous mycobacteria (NTM). However, the results of the second round of investigations suggest either a reactivation of pulmonary tuberculosis associated with a pulmonary NTM infection, or a pulmonary NTM infection in the absence of pulmonary tuberculosis. **Conclusions:** The MTB/RIF GeneXpert test can provide a positive diagnosis for tuberculosis in a significantly shorter time than bacterial culture, with high sensitivity and specificity. However, in

this case, the question arises: Is it a reactivation of pulmonary tuberculosis associated with atypical mycobacteria or a pulmonary infection with atypical mycobacteria?

Keywords: Tuberculosis, Atypical, Mycobacterial, GeneXpert

MANAGEMENT OF RECURRENT PNEUMONIA IN COFFIN-LOWRY SYNDROME

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Introduction: Coffin-Lowry Syndrome (CLS) is a rare X-linked dominant disorder caused by mutations in the RSK2 gene, characterized by intellectual disability, craniofacial abnormalities, and skeletal deformities. Affected individuals frequently experience hypotonia and developmental delays, which contribute to neuromuscular weakness and impaired airway clearance. These factors significantly increase the risk of recurrent pneumonia. Additionally, CLS patients often develop pulmonary hypertension, requiring long-term cardiological monitoring and medical management. This case report presents the challenges and multidisciplinary approach to managing recurrent pneumonia in a child with CLS. **Case Report:** An 11-year-old male diagnosed with CLS was admitted with fever, cough, and respiratory distress. His history of recurrent pneumonia raised concerns about neuromuscular weakness, aspiration risk, and cardiopulmonary complications. His background treatment included captopril, spironolactone, and furosemide for pulmonary hypertension. Clinical Assessment: Medical history: Recurrent pneumonia, global developmental delay, feeding difficulties, and pulmonary hypertension. Physical examination: Respiratory distress, coarse facial features, pectus carinatum, hypotonia, and poor weight gain. Imaging and laboratory tests: A CT scan confirmed pulmonary fibrosis, bronchiectasis, pleurisy, and pericarditis. Blood tests revealed elevated inflammatory markers. The patient was diagnosed with bacterial pneumonia and treated with IV antibiotics, oxygen therapy, and respiratory physiotherapy. Due to feeding difficulties and aspiration risk, a multidisciplinary intervention was implemented, including respiratory physiotherapy, neurological care, nutritional management, and cardiological monitoring. **Discussions :** Recurrent pneumonia in CLS is a well-documented complication due to neuromuscular weakness and impaired airway clearance. Pulmonary hypertension further exacerbates respiratory distress, necessitating continuous cardiological monitoring. While speech therapy is often considered for swallowing difficulties, respiratory physiotherapy is more appropriate in this case for managing airway clearance and reducing aspiration risk. Multidisciplinary management, including neurological support for functional recovery, plays a key role in improving outcomes. However, resource limitations and family constraints present significant challenges in long-term care. **Conclusions:** The management of recurrent pneumonia in CLS requires an integrated approach involving respiratory physiotherapy, neurological support, nutritional interventions, and cardiological care. Early intervention and long-term follow-up are essential to prevent complications and optimize health outcomes. However, real-life constraints, including limited resources and family circumstances, can impact the overall effectiveness of treatment.

Keywords: Coffin-Lowry, Recurrent Pneumonia, RSK2 Mutation, Hypotonia

FROM METABOLIC DISFUNCTION-ASOCIATED STEATOTIC LIVER DISEASE TO HEPATOCARCINOMA

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Introduction: Hepatocarcinoma (HCC) is a form of primary liver tumor. Epidemiological data indicate that HCC is the fifth cause of cancer and the third cause of cancer death globally. The main cause of HCC is liver cirrhosis. **Case Report:** A 56-year-old male patient known with compensated metabolic liver cirrhosis (2019), grade 1 esophageal varices (2022), intolerant to beta-blockers, type 2 diabetes, without treatment, mixed dyslipidemia, treated with Coleatez and Omacor and an episode of acute metabolic pancreatitis (2022), presented to our service in 06.03.2024 for reevaluation. The biological evaluation revealed polyglobulia, thrombocytopenia and slightly reacted C-reactive protein. During the abdominal ultrasound a 16/133 mm hypoechoic nodule was detected, in the IV hepatic segment. A contrast-enhanced ultrasound was requested, following which numerous Li-RADS 3 hepatic nodules were highlighted in the right lobe. The MRI showed a Li-RADS 5 focal lesion in the VI segment, a Li-RADS 3 lesion in the VIII segment and numerous regeneration nodules with the appearance of a micronodular cirrhotic

liver. After the evaluation, the final diagnosis was a CHILD PUGH A (5 points), MELD 10 points metabolic liver cirrhosis with Li-RADS 5 and 3 nodules. The microwave ablation of the nodule in the VI segment was performed. The CT scan (15.04.2024) showed a hypodense area in segment VI, which corresponds to the former Li-RADS 5 lesion, without areas of pathological uptake of perilesional contrast material in the rest of the liver. The case was presented and accepted by the liver transplantation commission and a pre-liver transplant biological assessment was contucted. The patient was reevaluated every 3 months. The MRI (10.12.2024) highlighted Liver Reporting Treatment Response (LR-TR) equivocal changes with a stationary character and further monitoring was recommended. The presence a new nodule near by the ablation area was confirmed, for which a new ablation was performed (13.03.2025). The patient is now under observation and the case is already on the transplantation list. **Discussions :** The periodic imaging evaluation was essential for diagnosis and treatment. According to the latest guidelines published by the European Association for the Study of the Liver, LI-RADS CT/MR criteria facilitate the diagnosis and monitoring of HCC patients, reducing the risk of HCC underdiagnosis. The presence of multiple nodules asociated with high risk of HCC recurence was the main indication for liver transplantation. **Conclusions:** In our patient's situation, liver transplantation is the treatment of choice. Liver translation can greatly increase the life expectancy of HCC patients.

Keywords: hepatocarcinoma, microwave ablation, LI-RADS criteria, liver transplantation

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NAVIGATING COMPLEX DIAGNOSES: A CASE OF BIPOLAR DISORDER WITH HYPOMANIA AND RESPIRATORY INFECTION

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Introduction: Bipolar affective disorder is defined by recurrent episodes of depression with sadness, lack of energy and negative thoughts and episodes of mania or hypomania. Manic and hypomanic episodes are characterized by changes in mood and behavior over a specific time frame. Hypomania is considered a milder version of mania, but still an abnormal state, different to the person's usual mood and generally do not cause hallucination and delirium, compared to mania. **Case Report:** We present the case of a 46-year-old female, with history of psychiatric disorder and multiple hospitalizations. The patient presented to the clinic due to a gradual development of psychiatric symptoms such as hyperactivity, decreased sleep need and logorrhea associated with an expansive mood, irritability and psychomotor restlessness.The patient presented also symptoms of emotional lability, hyperphagia and multisensory hyperesthesia therefore she was hospitalized for investigation and specialized treatment. **Discussions :** Clinical examination revealed good overall state of health with signs of excessive weight and varicose veins. While, psychiatric examination demonstrated coherent thought, accelerated thinking with high irritability and hyperactive behavior. Hypoprosexia and hypermnesia were also highlighted. The Global Assessment of Functioning (GAF) score was 50, which indicate a significant functional impairment and the need for long term support. Clinical findings showed high fever (39,3°C), maculopapular rash, hyperemic pharynx with difficult deglutition, pulmonary rales and low oxygen levels. The clinical picture is indicative for an acute respiratory failure with suspicion of pneumonia and bipolar affective disorder with a current hypomanic episode. **Conclusions:** The particularity of this case is the complex comorbidity of psychiatric and medical conditions since the patient is suffering from a hypomanic episode with psychiatric symptoms in the context of a suspected pneumonia. Key learning points from this case include that the atypical psychiatric symptoms can complicate or obscure the recognition of coexisting medical condition. Furthermore less common feature of hypomania may be not recognized in clinical practice. There are some implications for clinical practice, including the collaborative care between mental health professionals and medical teams that should become standard practice; also there is a clear need to broaden clinicians' understanding of mood disorders beyond their typical presentations. Lastly, this case highlights the importance of systematically incorporating physical health evaluations into the assessment of patients presenting with acute psychiatric symptoms. Routine medical screening protocols in psychiatric settings could help prevent missed or delayed diagnoses of concurrent physical illnesses, ultimately supporting more timely and comprehensive treatment.

Keywords: bipolardisorder, hypomania, respiratoryinfection, multidisciplinaryapproach

COLONIC POLYPS – A RARE PRESENTATION OF SEVERE LOWER GASTROINTESTINAL BLEEDING

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Introduction: Lower gastrointestinal bleeding is a common medical emergency that should be diagnosed and treated early. Hemorrhagic colorectal polyps are an important cause of bleeding, especially in older patients with comorbidities. Polyps are localized masses of tissue of varying sizes, shapes, and locations that protrude above the mucosa into the intestinal lumen. The etiopathogenesis of polyps has been attributed to genetic predisposition, hypercholesterolemia, and environmental exposures such as high-fat diets, smoking, and alcohol consumption. Clinically, they may be associated with changes in bowel habits, nonspecific abdominal pain, risk of malignancy, occult gastrointestinal bleeding, and very rarely overt gastrointestinal hemorrhage. **Case Report:** A 74-year-old man with hypertension, type 2 diabetes mellitus, dyslipidemia, atrial fibrillation, and a history of ischemic stroke, was admitted to the hospital after passing clots and fresh blood in his stools, which had begun three days earlier. On admission, his blood pressure was 121/66 mmHg, heart rate 75 bpm, and laboratory tests showed a hemoglobin of 6.2 g/dL and a hematocrit of 18.1%, indicating severe anemia. Fluid and electrolyte resuscitation was initiated, along with anemia correction and hemostatic treatment with adrenostazin and etamsylate. Because of the severity of the bleeding, an upper endoscopy was performed to rule out a proximal source. A colonoscopy revealed a pedunculated rectal polyp with signs of recent hemorrhage. Hot snare polypectomy was performed; two hemostatic clips were placed, and the polyp was sent for histopathological study. Post-polypectomy treatment with rifaximin was initiated and the patient continued his regular home medications. The patient's course was uneventful, with no further bleeding and improvement in laboratory parameters (Hb 9.7 g/dL, Ht 29%). **Discussions :** Although colonic polyps are not among the most common causes of lower gastrointestinal bleeding, in our patient we observed profuse hemorrhage originating from a small polyp. This case illustrates the importance of early identification of the bleeding source and timely endoscopic intervention, particularly in patients with significant comorbidities. **Conclusions:** Although uncommon, hemodynamically significant bleeding from a colonic polyp should be part of the differential diagnosis for lower gastrointestinal bleeding. Prompt colonoscopy with polypectomy secures rapid hemostasis and reduces the long-term risk of colorectal cancer.

Keywords: Rectal bleeding, colorectal polyp, secondary anemia, mechanical hemostasis

FROM MESALAZINE TO UPADACITNIB: A PATIENT’S JOURNEY THROUGH SEVERE AND RESISTANT ULCERATIVE COLITIS

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Introduction: Ulcerative colitis (UC) is a chronic, inflammatory bowel disease (IBD) characterized by inflammation and ulceration of the mucosal layer of the colon and rectum. It typically presents as continuous lesions, beginning in the rectum and extending proximally through the colon in a variable pattern. **Case Report:** A 41-year-old patient presented to our department with recurrent diarrhea and hematochezia. He was diagnosed with ulcerative colitis in 2019 following similar symptoms, confirmed by colonoscopy and histopathological examination. Initial treatment included Mesalazine 3g/day and Prednisone 30mg/day. His disease course was marked by recurrent exacerbations, prompting adjustments to the treatment plan: increasing Mesalazine to 4g/day, adding Azathioprine 75mg/day (2020), and eventually initiating biological therapy with anti-TNF-alpha agents in 2021 (Infliximab 300mg every 8 weeks, and later increased to a 300mg dose every 4 weeks). In 2022, Infliximab was replaced with Vedolizumab (Integrin receptor antagonist) 300mg every 8 weeks, with the frequency increased again to once every 4 weeks in 2024. At the current admission, the patient clinically presented four Bristol 5 stools with blood and mucus and mild normochromic, normocytic anemia. Colonoscopy and histopathology confirmed ulcerative colitis with Cytomegalovirus (CMV) superinfection. Considering the fact that clinical, endoscopic, and histological remission has not been achieved with previous treatments, the biological treatment agent was changed to Upadacitinib 45mg/day. Valganciclovir 1.8g/day was initiated for three weeks to treat the CMV superinfection, with a recommended re-evaluation afterward. Long-term prophylaxis with Valganciclovir 900mg/day was also

prescribed. After 4 weeks of treatment with Upadacitinib, the clinical course has been favorable, with 1-2 bowel movements per day, without pathological products. A colonoscopy is scheduled at 8 weeks after the initiation of Upadacitinib to assess the evolution of endoscopic and histological lesions. **Discussions :** This case illustrates the challenge of managing refractory UC, requiring sequential biologic therapy. Failure of anti-TNF-alpha therapy led to the introduction of Vedolizumab, which provided only partial control, prompting the switch to Upadacitinib, a JAK inhibitor. The presence of CMV superinfection further complicated management, requiring antiviral therapy alongside IBD treatment. **Conclusions:** Effective UC management relies on a personalized, stepwise therapeutic approach. This case underscores the need for early escalation in refractory cases and the role of novel treatments such as JAK inhibitors when conventional and biologic therapies fail.

Keywords: Ulcerative colitis, Biologic therapy, CMV superinfection, JAK inhibitors

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MULTIDISCIPLINARY APPROACH OF LOWER GASTROINTESTINAL BLEEDING OF DIVERTICULAR ETIOLOGY

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Introduction: Diverticulosis is commonly found in the colon, occurring almost 50% of cases in patients over 50 years. Even though it occurs predominantly in the sigmoid colon, it can extend to entire colon over time. The main risk factors for lower gastrointestinal hemorrhage in diverticulosis include older age, hypertension, antiplatelet and anticoagulants use, long term of nonsteroidal anti-inflammatory drugs (NSAIDs), obesity (metabolic syndrome), smoking, and excessive alcohol consumption. **Case Report:** We present the case of 76-year-old female patient with significant cardiovascular comorbidities (grade 2 hypertension, chronic coronary syndrome, systemic atherosclerosis) who came to the hospital for numerous episodes of hematochezia, starting the day before, asthenia and fatigue. Upon admission, the patient's general condition was influenced, blood pressure 138/76 mmHg, heart rate 109 bpm, and laboratory results showed leukocytes 14,300/uL, hemoglobin 9.75 g/dL, and urea 62 mg/dL. Rectal examination revealed rectal bleeding and internal hemorrhoids. An emergency computed tomography scan was performed, revealing diverticular disease. Lower gastrointestinal endoscopy was done, revealing multiple deep diverticular openings of medium and large size, containing blood and clots. Due to the multitude of diverticula, the exact source of bleeding could not be identified. The management of the patient included fluid resuscitation and blood transfusion. During hospitalization, she experienced massive rectorrhagia with a progressive decrease in hemoglobin levels, thereby necessitating radiologic evaluation by the interventional radiologist for selective embolization. Subsequently, an arteriography was performed, thereby leading to the embolization of an inferior mesenteric artery branch. The patient ceased to have rectorrhagia after the procedure with increase in hemoglobin level. **Discussions :** Although diverticular hemorrhage is generally self-limiting, this case was distinguished due to severity of bleeding. A timely imaging diagnosis is key to ensuring proper management and treatment decisions. The need for repeated transfusion and ongoing decrease in hemoglobin highlighted the need for an alternative therapeutic modality. Given the patient's condition, arterial embolization was chosen as the most suitable therapeutic approach. **Conclusions:** This case highlights the importance of early diagnosis and treatment of severe lower gastrointestinal bleeding in elderly patients, involving multidisciplinary approach. Arterial embolization is an effective and less invasive technique, particularly in high-risk surgical patients.

Keywords: Lower gastrointestinal bleeding, Colonic diverticulosis, Anemia, Arterial embolization

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DYSFUNCTIONAL CALCIUM METABOLISM ASSOCIATED WITH PARATHYROID ADENOMA IN A PATIENT WITH PRIOR MALIGNANCY

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Introduction: This case report presents a 77-year-old female patient who routinely undergoes laboratory follow-up analyses after a successful parathyroid adenoma removal to monitor serum calcium, parathyroid hormone (PTH), and vitamin D levels. The patient's medical history includes dyslipidaemia and hypertension for 15 years and breast cancer diagnosed in 1994. The patient underwent surgery and combined chemoradiotherapy. Left axillary lymph nodes were removed, and no metastases were detected. Following lymph node removal, the patient

developed chronic lymphoedema in her left arm. **Case Report:** The evolution of breast cancer was favourable after the combined therapy, and the tumour markers (CA15-3 and CA125) used for monitoring are in the normal range. The patient experienced consistently high calcium values during routine laboratory tests between 2015 and 2022. Additionally, elevated PTH and decreased vitamin D levels were identified during this period; thus, she was referred to endocrinology. Imaging studies, including ultrasonography and scintigraphy, confirmed the presence of a parathyroid tumour on the left side. Due to multiple factors, including the COVID-19 pandemic, the patient deferred surgery for six years. During this period, she developed immunosuppression related to vitamin D deficiency and secondary osteoporosis. Management of osteoporosis was with ibandronate, but the patient reported oromaxillofacial adverse effects. The patient underwent surgery for parathyroid adenoma removal in 2022. The procedure was successful, with no complications or calcifications observed. **Discussions :** This case report is unique in several aspects. An association of two independent tumours with different dignities was observed in this patient. Repeated serum calcium, PTH, and 25-OH-cholecalciferol level anomalies occurred due to underlying parathyroid adenoma. The patient developed immunological vulnerability and osteoporosis due to hypovitaminosis D, and there was a prolonged delay in surgical intervention due to the COVID-19 pandemic and personal decisions. Treatment with bisphosphonates led to the development of side effects in the oral cavity. **Conclusions:** No pathological changes have been observed since the parathyroid adenoma removal. The patient is currently stable with normal calcium, PTH, and vitamin D values confirmed through routine six-month follow-up appointments. Adequate vitamin D concentration is achieved and maintained by supplementation. The tumour markers aimed at monitoring breast cancer show no recurrence. These findings highlight the importance of regular monitoring and a multidisciplinary approach to patient management.

Keywords: parathyroid, adenoma, hypercalcaemia, hormone analysis

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WHEN ASCITES HIDES A SECRET: PERITONEAL TUBERCULOSIS, THE GREAT MIMICKER OF REFRACTORY ASCITES

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Introduction: Peritoneal tuberculosis (PT) is an extrapulmonary form of tuberculosis (TB) caused by Mycobacterium tuberculosis that affects the peritoneum. It may spread to the gastrointestinal tract or mesenteric lymph nodes through hematogenous dissemination. Epidemiological data indicates that the prevalence of peritoneal tuberculosis is approximately 1% to 3% of all tuberculosis cases worldwide. **Case Report:** A 56-year-old male patient was admitted in our department for abdominal pain and swelling, anorexia and significant weight loss (15 kg in the last 3 months), fatigue and diarrhea (4-6 liquid stools/day in the last 3 months). His past medical history includes chronic toxic pancreatitis (2016), post-tuberculosis pulmonary sequelae(2012), inflammatory distal CBD stenosis and chronic portal vein thrombosis. Laboratory test revealed microcytic, hypochromic anemia, hypoalbuminemia with hypoproteinemia and electrolyte imbalances. Tumor markers (AFP, CEA, CA 19-9), amylases, and lipase were normal, and cultures (coprocultures, urine and blood cultures) were negative. Abdominal ultrasound showed peripancreatic and mesenteric lymph nodes 12-15 mm and thickening of the peritoneum up to 10 mm. Multiple diagnostic and therapeutic paracenteses were performed, and they came back negative for spontaneous bacterial peritonitis, SAAG>1.9g/dl and cytology revealed rare inflammatory cells. CT scan showed reticulonodular pattern with central calcification, enlarged peripancreatic and mesenteric lymph nodes with thickening of the mesentery 13 mm so EUS-FNA was used for biopsy. Pathological examen from lymph nodes revealed tuberculoid granulomas, positive result from QuantiFERON test and imaging aspects of the peritoneum helped confirm the diagnosis of Peritoneal Tuberculosis. The outcome was clinically favorable during Anti-Tubercular therapy and supportive care, with remission of abdominal pain, diarrhea and weight gain (3kg in 2 weeks). **Discussions :** Ascites can have various causes, such as liver cirrhosis, neoplasia, heart failure and exacerbation of pancreatitis, all of them have been excluded through laboratory tests and imaging investigations. The patient's past medical history plays a crucial role, which in this case was a key link in discovering the etiology of ascites. The connection between peritoneal and pulmonary TB is most commonly considered to be a reactivation of latent infection from a primary lung focus. **Conclusions:** The present case highlights the need for a rigorous differential diagnosis. From an epidemiological perspective, there are rare diseases such as PT, which can be unexpectedly discovered but effective treatment can make such a big difference in patients' lives.

Keywords: Peritoneal tuberculosis, Refractory ascites, Tuberculoid granuloma, QuantiFERON Test

TEMPORAL TRENDS IN BIOMARKERS AND THE ONSET OF ACUTE KIDNEY INJURY

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Introduction: Acute kidney injury is a clinical condition in which the renal function is abruptly decreased or ceased. Its etiology is diverse, ranging from chronic conditions such as HIV infection, hemosiderosis, hepatic disorders or congestive heart failure, to acute causes including renal ischemia, liver failure and thromboembolism. In this study we will focus on acute kidney injury (AKI) due to hypovolemic shock. **Case Report:** This case report describes a 35-year-old male who has suffered a rupture of the renal hilum, hemoperitoneum, splenic rupture, craniocerebral trauma and duodenum rupture, due to polytrauma. During the one month hospitalization, the patient developed AKI secondary to hypovolemia. Blood tests revealed a 50% decrease in hematocrit by the third day following admission. A trend toward normalising was observed, with levels spiking after 3 weeks, however a decline followed. Prothrombin time remained elevated throughout the hospitalised period, while APTT presented abnormally high values only between days 7 and 9. Creatinine levels peaked on day 30, reaching 2.77 times the baseline values. **Discussions :** This case highlights the importance of elevated creatinine levels in the early diagnosis of AKI, as well as their role in monitoring patients with critical renal conditions. The observed creatinine dynamics, including the peak, provide valuable information regarding the progression of renal dysfunction. **Conclusions:** Creatinine remains a key biomarker in AKI diagnosis and management, but an additional analysis of NGAL levels would have provided a broader perspective on this condition. Further research is warranted to assess the prognostic value of these biomarkers.

Keywords: AKI, Creatinine, Polytrauma, Biomarkers

TWO DECADES OF REVASCULARIZATION: MANAGEMENT OF A COMPLEX ISCHEMIC HEART DISEASE CASE

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Introduction: Cardiovascular disease is the leading cause of death in Romania. Approximately half of worldwide heart failure(HF) patients have an ischemic aetiology with Eastern Europe revealing some of the highest prevalences. This imposes the need for accurate diagnosis, targeted therapeutic strategies and long-term follow-up to improve clinical outcomes. **Case Report:** We present the case of a 68-year-old male who presented to our clinic in 2007 with aggravated angina pectoris CCS-III. From his medical history, we mention prior diagnoses of stage-III arterial hypertension, type-II diabetes mellitus and dyslipidaemia. Transthoracic echocardiography revealed inferolateral hypokinesia of the left ventricle and mildly reduced left ventricular ejection fraction(LVEF) of 45%. Coronary angiography was performed and diagnosed distal sub-occlusion of the left main artery(LMA), chronic occlusions of the proximal left anterior descending(LAD) and right coronary artery(RCA), as well as distal occlusion of the circumflex artery(CxA). The patient underwent surgical revascularization with implantation of the left internal mammary artery to LAD and coronary artery by-pass grafting with two autogenous saphenous vein grafts(ASVGs) to Obtuse marginal artery(OMA) and RCA respectively. In 2013, he was re-evaluated due to recurrent angina symptoms, coronary angiography revealed sub-occlusion of the ASVG-RCA and percutaneous coronary intervention(PCI) with a drug-eluting stent(DES) of this lesion was performed. The patient was readmitted in 2021 due to dyspnoea on effort, oedema of the lower limbs and increased NT-proBNP levels(2,176pg/ml), leading to a diagnosis of HF with reduced LVEF: 35%. During coronary angiography, in-stent occlusion of the ASVG-RCA and a distal sub-occlusion of the ASVG-OMA were identified. The patient underwent PCI of the ASVG-OMA stenosis with overlapping implantation of two DES. The patent was re-evaluated in 2024 and had an improved functional and paraclinical status (NYHA-class-II, NT-proBNP 286 pg/ml, improved LVEF:43%). Adequate pharmacological management of the comorbidities was addressed at each re-evaluation to obtain the individualised targets, contributing to the clinical stabilization of the patient. **Discussions :** In this case, with multiple cardiovascular risk factors and a complex history of ischemic heart disease(IHD), the patient underwent sequential revascularization interventions over the years. Despite significant coronary pathology and HF, the patient's clinical condition improved under appropriate interventional and medical treatment. **Conclusions:** The

case underlines the difficulties of treating and managing IHD leading to HF, focusing on the personalised, long-term care. Regardless of these challenges, the patient's favourable progression highlights the effectiveness of targeted therapy, demonstrating the importance of regular monitoring, lifestyle management, and timely interventions in reducing cardiovascular complications of IHD.

Keywords: Ischemic heart disease, myocardial revascularization, coronary artery by-pass grafting, heart failure

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INHERITED RISK, MULTIPLE REALITIES: A CASE OF BILATERAL HIGH-GRADE SEROUS CARCINOMA IN A YOUNG BRCA-POSITIVE PATIENT

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Introduction: The BRCA genes are tumor suppressor genes that are responsible for coding DNA repair proteins. Thus, their mutations, especially the BRCA1 mutations increase the risk for mainly breast and ovarian cancer but also colon cancer and in males, prostate cancer. The germline mutation is passed down autosomal dominantly while the somatic mutation appears spontaneously. Olaparib is a PRAP inhibitor used as a targeted maintenance therapy in cancers with BRCA gene mutations. **Case Report:** A case of a 36-year-old female patient with a history of both familial cancer and genetic cancer, the father with pulmonary adenocarcinoma and the mother with serous ovarian cancer due to BRCA1 mutation, presented with high grade serous ovarian cancer FIGO stage II with tumoral deposits on the uterine serosa. Successful treatment consisted of bilateral hysterectomy and salpingo-oophorectomy in 2019 followed by adjuvant chemotherapy with Carboplatin, Paclitaxel and Bevacizumab. Following the 15-month period of treatment she was given Olaparib as maintenance therapy to which she developed hypersensitivity. For this she underwent a desensitization protocol after which administration was continued. What's more, two months post-operatively the patient was diagnosed with stage II invasive ductal carcinoma in the upper inner quadrant of the left breast for which she underwent a sectorectomy as curative treatment. At present the patient is in complete remission in both cases. **Discussions :** BRCA1 mutation carriers develop early onset cancers, at around 35-40 years old, and have a lifelong developmental risk of 85% for breast cancer and 40-50% for ovarian cancer. Furthermore, the patient's history of genetic and familial cancer predisposes her to an even higher risk of cancer. Patients with BRCA mutation have a higher risk of Olaparib hypersensitivity as in this case and must undergo a desensitization process. **Conclusions:** Considering the family medical history of cancer, testing for the BRCA1 gene mutation is imperative for early screening and early diagnosis of breast, ovarian and even colon cancer. Treatment with Olaparib comes with grave adverse effects such as myelodysplastic syndrome highlighting the importance of patient monitoring and screening to prevent further complications

Keywords: BRCA1, High grade serous ovarian cancer, Olaparib, Myelodysplastic syndrome

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GUTTATE PSORIASIS UNVEILED: A RARE CASE OF POST-STREPTOCOCCAL ONSET MANAGED WITH METHOTREXATE AND NBUVB THERAPY

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Introduction: Guttate Psoriasis is a rare form of Psoriasis, accounting for approximately 2% of all Psoriasis cases. It is characterized by the sudden onset of small, erythematous, scaly papules, often following a streptococcal infection. Unlike Plaque Psoriasis, Guttate Psoriasis is less chronic but can progress to other forms over time. The pathogenesis involves a complex interplay between genetic predisposition, immune dysregulation, and environmental triggers, leading to T-cell-mediated keratinocyte hyperproliferation. **Case Report:** We report the case of a 22 year-old female with no prior history of Psoriasis, who presented with a widespread eruption of small, pink, scaly papules all over her body, predominantly on the trunk, back and proximal limbs, without pruritus. The lesions appeared three weeks after a streptococcal pharyngitis episode. Clinical examination and dermoscopy suggested Guttate Psoriasis, which was confirmed by histopathological analysis. The performed biopsy revealed parakeratosis, acanthosis with the presence of the Munro microabscesses, and elongation of rete ridges, concluding the diagnosis of Psoriasis. Initial management with topical corticosteroids provided minimal improvement. Given the extensive nature of the disease and the patient's distress, systemic therapy with Methotrexate (20 mg weekly) was initiated alongside NBUVB (narrow band UVB light) phototherapy, two sessions

per week, up to 8 weeks, with marked improovment, with no major adverse effects reported. **Discussions :** Guttate Psoriasis is often self-limiting, but in some cases, it may require systemic treatment, especially when lesions are widespread or refractory to topical therapy. The disease mechanism involves an exaggerated immune response, primarily mediated by Th1 and Th17 cells, leading to increased production of inflammatory cytokines such as IL-17 and TNF-α. Streptococcal infections are a known trigger, as molecular mimicry between streptococcal antigens and keratinocyte proteins can drive autoimmune activation. NBUVB phototherapy is an effective adjunct, reducing hyperproliferation and inflammation. **Conclusions:** This case highlights the importance of recognizing Guttate Psoriasis, especially in patients with a recent history of streptococcal infection. While topical treatments may suffice in mild cases, extensive disease may necessitate systemic immunomodulation. Methotrexate combined with NBUVB phototherapy proved to be an effective treatment strategy, demonstrating the need for individualized therapeutic approaches.

Keywords: Guttate, Psoriasis, NBUV Therapy, Biopsy

RARE CASE OF FOLLICULAR LYMPHOMA IN THE RENAL PELVIS: IMPORTANCE OF IMAGISTIC EVALUATION AND MONITORING

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Introduction: Follicular lymphoma occurs more commonly in lymph nodes, primary extranodal lymphomas being rare. Lymphoid neoplasms of the urinary tract are extremely rare, with only a few cases of follicular lymphoma with involvement of the pelvis reported to date. Follicular lymphoma is an indolent non-Hodgkin's lymphoma, but can undergo aggressive transformation and relapse. We present a case of recurrence of follicular lymphoma with renal involvement, illustrating the challenges of imaging diagnosis. **Case Report:** The patient was incidentally diagnosed in May 2024 with a suspicious sonographic abnormality of the left kidney. A CT examination in August 2024 described a parietal thickening of the left renal pelvis with extension to the lumbar ureter, associated with grade I/II pyelocaliceal dilatation, an appearance considered suggestive of urothelial tumor. Robotic-assisted left ureteronephrectomy (da Vinci) was performed, and histopathologic and IHC examination revealed features consistent with grade 3A follicular B-cell lymphoma. Postoperative PET-CT identified intrathoracic lymph nodes with discrete 18F-FDG uptake, without obvious systemic involvement. CT re-evaluation performed in March 2025 revealed suspicious parietal thickening of the right proximal basilar and ureteral pelvis and ureter, suggestive of recurrence. Laboratory analysis revealed increased beta-2 microglobulin and proliferative indices (Ki-67 40%) suggested a risk of progression. Initiation of MDT was recommended. **Discussions :** Primary renal involvement of follicular lymphoma is unusual. Tumors of the renal pelvis are very rare, accounting for only 0.1% of all cancers. Primary lymphomas of the renal pelvis and ureter are even rarer, with only a few cases documented in the medical literature. Recurrence in the right pelvis and ureter raises suspicion of systemic progression. Differential diagnosis includes urothelial carcinoma, which is why correlation with immunohistochemistry is necessary. Management of recurrent follicular lymphoma includes chemotherapy, immunotherapy, radiotherapy and careful imaging monitoring. The survival rate depends on the proliferative index and response to treatment. In this case, the absence of other liver or brain lesions is favorable, but requires continuous follow-up. **Conclusions:** This case emphasizes the complexity of a case of follicular lymphoma with recurrent renal involvement, the importance of imaging monitoring, and the need for oncologic treatment tailored to individual risk. Histologic and therapeutic correlation is essential for an optimal prognosis.

Keywords: Follicular lymphoma, Non-Hodgkin's lymphoma, Renal pelvis, Left da Vinci ureteronephrectomy

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CASE REPORT: WHEN OSTEOGENESIS IMPERFECTA MEETS ARTHROGRYPOSIS – A RARE PRESENTATION OF BRUCK SYNDROME

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Introduction: Osteogenesis imperfecta (OI) reunites a series of genetic conditions that present bone fragility and

abnormal skeletal growth. In general, they are autosomal dominant diseases caused by the mutation of collagen type I. Bruck syndrome, also called OI type XI, is a sporadic form. It combines characteristics of OI with congenital arthrogryposis and joint contractures, while classic OI does not show these features. Various medical articles have demonstrated a link between the disease and mutations in the FKBP10 or PLOD2 genes (which play a role in collagen I stability). However, the genetic pathways of this illness are not fully understood. This case report could help us better understand the pathological processes behind this syndrome. **Case Report:** We report the case of a 5-month-old boy, born from a physiological pregnancy at 37 weeks by cesarean section. There is no medical history of bone diseases in his family. The radiography showed bilateral healed tibial fractures. Using next-generation sequencing (NGS), two heterozygous variants were found in the PLOD2 gene (c.1958C>G, p.Pro653Arg and c.1A>G, p.Met1?). These parentally inherited mutations are classified as VUS (Variant of Uncertain Significance), but in silico prediction algorithms suggest detrimental effects in the cellular phenotype. Therefore, Bruck syndrome is suspected. **Discussions :** This case report stands out because of its rarity and important medical features. The unique aspects of the syndrome are arthrogryposis and joint contractures, with absent hyperacusis and dentinogenesis imperfecta. Bruck syndrome has been rarely described in scientific literature (approximately 20 cases), with patients showing various symptoms. The presence of PLOD2 mutations in patients with severe skeletal deformities has been highlighted in different studies. In opposition, this case shows a moderate phenotype, suggesting only a partial loss of gene function and a possible interaction with other environmental factors. Furthermore, this case is unique because the two mutations identified have not been reported in any other article. The medical history of this case proves the utility of molecular testing in patients with atypical phenotypes, which could help us uncover new pathological pathways. **Conclusions:** This case report is important due to the coexistence of OI and arthrogryposis. The discovery of VUS mutations with possible pathogeny shows the necessity of genetic testing in medical care. More extensive studies on PLOD2 mutations are necessary to understand the genetic mechanisms behind these rare cases - research crucial for improving screening tests and creating new treatment plans.

Keywords: Bruck syndrome, Osteogenesis imperfecta, PLOD2 mutation, NGS testing

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OLIGOSYMPTOMATIC CECAL ADENOCARCINOMA

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Introduction: Colorectal adenocarcinoma is one of the most frequent neoplasia worldwide, with around 20% of the tumours being in the cecum. Recently, an increase in the incidence of cecal adenocarcinomas has been recorded. The clinical presentation of these tumours differs from the left-sided colorectal cancer, by being mostly nonspecific. Their localization often causes the tumours to grow larger, leading to late-stage diagnosis and a worse prognosis compared to adenocarcinomas located in the left side of the colon. **Case Report:** A 78-year-old female patient, with a history of cholecystectomy, undergoes a gastroenterological examination due to changes in her bowel movements consisting of 3 weeks of diarrhoea (5-7 stools/day, 7 on the Bristol scale), borboygmi and bloating, along with urinary tract infection. She presents no apetite changes or weight loss. Coproculture and Clostridium difficile testing were negative, ruling out an infectious cause of diarrhea. Symptomatic treatment was administered. Laboratory tests indicated an inflammatory syndrome with increased VSH, fibrinogen and alkaline phosphatase, normal CRP and normal complete blood count. The tumour markers CA19-9, CEA and AFP were within normal range; however, faecal calprotectin was higher than the usual laboratory limits. Given the persistent diarrhea without an evident infectious cause, despite its acute onset, a colonoscopy was recommended. Colonoscopy revealed a 2 cm infiltrative lesion with central ulceration, in the cecum. Its histopathological examination revealed dysplasia consistent with well-/moderate-differentiated adenocarcinoma (G1/G2) NOS type, intratumoral necrosis and peritumoral lymphoplasmacytic and neutrophilic infiltrate. The computed tomography showed no abnormalities. A right hemicolectomy with ileo-colic anastomosis and a segmentary ileum resection with ileo-ileal anastomosis have been successfully executed. **Discussions :** Commonly, the symptoms of proximal colon cancer are anaemia, occult blood in stool, fatigue, weakness, and abdominal pain or discomfort. Cecal localisation of such tumours is uncommon, and the large diameter of the right colon makes their clinical manifestation late. Moreover, adding the challenges of investigation, most diagnosed cases are advanced cancers. The early, atypical manifestation of symptoms in cecal adenocarcinoma, alongside the nonspecific laboratory results and the absence of CT scan modifications emphasize the particularity of this case. It is worth mentioning the association between cholecystectomy as a risk factor and the occurrence of colorectal adenocarcinoma. **Conclusions:** This case highlights the necessity of early endoscopic evaluation in elderly patients with seemingly benign symptoms,

facilitating timely diagnosis and potentially improving outcomes in right-sided colorectal malignancies.

Keywords: cecal adenocarcinoma, changes in bowel movements, colonoscopy, infiltrative lesion

THE COMPLEX INTERACTION BETWEEN GASTROINTESTINAL, PSYCHIATRIC AND AUTOIMMUNE DISORDERS: CASE REPORT

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Introduction: The interplay between chronic gastrointestinal disorders, psychiatric comorbidities, and metabolic disturbances presents unique clinical challenges. This case underscores the complexity of managing overlapping pathologies and highlights the critical need for integrated care to address severe nutritional and systemic sequelae. **Case Report:** A 35 year old female with a 15 year medical history marked by recurrent Helicobacter pylori infections (2010, 2019), pelvic inflammatory disease (2018), and severe protein caloric malnutrition (2021) developed progressive GI and metabolic dysfunction. Notably, digestive symptoms emerged post-antibiotic therapy for pelvic inflammatory disease (2018), contributing to persistent dysbiosis. Psychiatric comorbidities, including anxiety-depressive disorder (2021), were managed with Cipralex and Olanzapine, the latter correlating with paradoxical weight gain (15 kg in 2022) despite minimal dietary changes. Subsequent diagnoses included fungal esophagitis (2022), SIBO (2023), vitamin D deficiency (2023), autoimmune gastritis (2025), and osteopenia. Rapid weight loss (10 kg in 2 months (2024), 33-34 kg by 2025) ensued alongside new-onset food intolerances (gluten, dairy, fats) and amenorrhea. Investigations (normal Entero-MRI, fecal calprotectin) ruled out inflammatory bowel disease. Chronic treatments (Controloc, Cipralex, Detrical) provided limited relief, necessitating urgent therapeutic reevaluation. **Discussions :** This case illustrates the cascading effects of chronic GI inflammation, dysbiosis, and psychotropic interventions. Recurrent antibiotic use likely exacerbated gut dysbiosis, contributing to SIBO and malabsorption. Olanzapine induced metabolic shifts may have masked underlying nutritional deficits, while Cipralex discontinuation (2024) and workplace stress precipitated rapid decompensation. Autoimmune gastritis, potentially linked to chronic Helicobacter pylori exposure, compounded malabsorption and food intolerances. Normal imaging despite profound weight loss suggests multifactorial etiology, including psychosomatic influences and dysregulated gut-brain axis signaling. **Conclusions:** This complex case highlights the critical interplay between chronic Helicobacter pylori induced gastrointestinal damage, autoimmune gastritis, psychiatric comorbidities, and severe malnutrition. It underscores the necessity of integrated gastroenterological, psychiatric, and nutritional interventions to address multifactorial deterioration. Proactive, multidisciplinary frameworks prioritizing gut brain axis modulation, micronutrient repletion, and personalized dietary strategies are essential to halt systemic decline and improve outcomes in such high risk patients.

Keywords: Autoimmune gastritis, Helicobacter pylori, SIBO, Dysbiosis

GALLBLADDER ADENOCARCINOMA WITH CONCURRENT RECTAL SCHWANNOMA: CASE REPORT

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Introduction: Gallbladder adenocarcinoma, an aggressive mucosal malignancy, often presents late with serosal invasion. Rectal schwannoma, a benign nerve sheath tumor, mimics malignancy histologically. Their coexistence underscores diagnostic challenges, requiring precise differentiation to guide appropriate management. **Case Report:** A 68 year old female presented with a middle rectal stenosing tumor and grade IV genital prolapse, her primary complaints being rectal obstruction, pelvic discomfort, and bowel dysfunction. During evaluation, she was also diagnosed with gallbladder lithiasis, which contributed to the surgical decision making. The patient underwent laparoscopic exploration, initially focusing on the rectal and pelvic pathology. A colossal rectal mass (75×50×50 mm), causing total luminal obstruction, was resected via rectosigmoidectomy with T-T colorectal anastomosis, while total hysterectomy with bilateral adnexectomy (Wiart technique) addressed the severe prolapse. Additionally, left inguinal hernia repair (Lawson Tait technique) was performed, along with peritoneal lavage and dual drainage (sacral excavation and subhepatic) to minimize postoperative complications. Unexpectedly, intraoperative findings revealed a friable, exophytic gallbladder tumor (50 mm), prompting retrograde cholecystectomy. Histopathology confirmed intracystic papillary neoplasm with invasive tubular adenocarcinoma (pT3N0LV1Pn1R1), displaying

serosal breach, vascular, lymphatic, and perineural invasion, raising concerns for residual disease. Notably, histologic findings of the rectal tumor excluded malignancy, identifying a rare schwannoma, characterized by well demarcated spindle cells, degenerative nuclear atypia, and minimal proliferative activity (Ki67 1%). Immunohistochemical analysis showed strong positivity for S-100 and SOX10, with negativity for CD34, DOG1, SMA, and Neurofilament, confirming its neural crest origin. The Ki-67 proliferation index was approximately 1%, indicating a low proliferative rate. **Discussions :** This complex clinical scenario highlights the challenges of addressing synchronous, histopathologically distinct lesions requiring coordinated therapeutic strategies. The case demonstrates the necessity of integrating multidisciplinary surgical approaches with precise diagnostic evaluation, particularly when confronting both aggressive malignancies and benign neoplasms within the same clinical context. Notable features include the uncommon simultaneous presentation of invasive gallbladder adenocarcinoma and a benign rectal schwannoma, each demanding distinct management approaches to optimize oncological outcomes and functional preservation. **Conclusions:** The coexistence of gallbladder adenocarcinoma and rectal schwannoma exemplifies the necessity of multidisciplinary collaboration, where precise diagnostics guide tailored interventions to address malignancy while preserving conservative management for benign pathology.

Keywords: Gallbladder adenocarcinoma, Rectal schwannoma, Immunohistochemistry, Perineural invasion

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PARANEOPLASTIC AUTOIMMUNE ENCEPHALITIS: A CASE REPORT ON DIAGNOSIS, TREATMENT, AND RESPONSE TO PLASMAPHERESIS.

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Introduction: Autoimmune encephalitis (AE) is an autoimmune disease that affects the brain and leads to its inflammation. It is caused by an abnormal reaction of the immune system that develops autoantibodies, with the majority of cases involving anti-N-methyl-D-aspartate (NMDA) receptor or anti-leucine-rich glioma inactivated protein 1 (LGI1), which target host neurons. AE is often associated with tumors, previous infections, or other autoimmune diseases, such as Guillain-Barré syndrome or optic neuromyelitis. **Case Report:** We present the case of a 60-year-old female patient diagnosed with autoimmune encephalitis, followed by an anxiety-depressive neurological condition, axonal polyneuropathy, ataxic tetraparesis, myoclonic seizures, and a neurocognitive disorder. During the clinical examination, the patient did not show any signs of meningitis or pupil disturbances, but exhibited ataxic tetra paresis in all limbs, with a more severe deficit in her right lower limb. Regarding autoantibodies, the panel for anti-NMDA receptors was negative. The brain MRI appearance was characteristic of limbic encephalitis, and antibodies against onconeural antigens tested positive. Initially, the patient received a course of corticosteroid therapy, but without significant improvement. Our patient was hospitalized for further investigations; a full-body CT scan was performed, which did not reveal a tumour, and she underwent four sessions of plasmapheresis. Chronic treatment with levetiracetam was then initiated. **Discussions :** In our case, we can observe probable paraneoplastic autoimmune encephalitis but without evidence of a primary tumour in the paraclinical examinations performed. The patient was scheduled for PET-CT and will return with the results. After plasmapheresis, the evolution was favourable, showing significant regression of myoclonic seizures and improvement in cognitive and affective functions state. **Conclusions:** Unlike other paraneoplastic disorders, autoimmune encephalitis often responds well to treatment, resulting in a favourable prognosis with either complete or significant recovery for patients. Recovery can occur as quickly as the start of treatment.

Keywords: Autoimmune, encephalitis, autoantibodies, plamapheresis

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SEVERE HYPOKALEMIA TRIGGERED BY LONG-ACTING BETA-AGONISTS IN A DIALYSIS PATIENT: A CASE REPORT

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Introduction: Potassium shifts into the intracellular space via β2-adrenergic receptor stimulation are a well-documented side effect of beta-agonist therapy, particularly in the case of short-acting beta-agonists (SABAs). However, hypokalemia associated with long-acting beta-agonists (LABAs) remains an uncommon and likely underrecognized clinical issue. LABAs are widely prescribed for the management of chronic obstructive pulmonary

disease (COPD) and asthma, yet their potential to induce significant potassium depletion is often overlooked, especially in vulnerable populations such as dialysis-dependent patients. The following case highlights a scenario in which recurrent, severe hypokalemia developed after LABA initiation in an end-stage renal disease (ESRD) patient on maintenance hemodialysis an observation that remains sparsely reported in current medical literature. **Case Report:** We report the case of a 50-year-old male, a heavy smoker with a 40-pack-year history, diagnosed with ESRD and maintained on chronic hemodialysis for five years. The patient was admitted for progressive shortness of breath and repeated episodes of severe hypokalemia. His medical history was significant for COPD, managed with tiotropium. Notably, the patient experienced multiple episodes of profound hypokalemia (with serum potassium dropping as low as 2.7 mmol/L) each time long-acting beta-agonists such as formoterol or salmeterol were initiated. These episodes required prompt potassium supplementation and careful monitoring. Despite optimal dialysis and absence of other obvious contributing factors for hypokalemia, the electrolyte disturbances recurred consistently following the reintroduction of LABAs, strongly suggesting a drug-induced cause. The clinical course was further complicated by uremic pneumonitis, which exacerbated his respiratory symptoms. Once LABAs were discontinued, serum potassium stabilized, reinforcing the suspicion of a causal relationship. **Discussions :** This case draws attention to the potential for LABAs to trigger severe hypokalemia, especially in patients with compromised renal function. While β2-receptor-mediated intracellular potassium shifts are a known effect of SABAs, this case underlines the fact that long-acting agents can induce recurrent and clinically significant hypokalemia in dialysis patients, who already have limited capacity for electrolyte regulation. Given the risk of arrhythmias, this observation raises an important clinical question: should routine potassium monitoring be considered for all patients receiving beta-agonists, particularly those on dialysis? Current guidelines do not recommend such surveillance, but this case suggests the need to reconsider this approach. **Conclusions:** This case highlights the importance of recognizing LABA-induced hypokalemia in ESRD patients and underscores the value of monitoring electrolytes in high-risk populations to prevent severe complications.

Keywords: beta-agonists, dialysis, hypokalemia, long-acting beta-agonists

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A CHALLENGING CASE OF COMPLEX CONDUCTION DISTURBANCES FOLLOWING TRANSCATHETER AORTIC VALVE IMPLANTATION: MANAGEMENT AND CLINICAL IMPLICATIONS

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Introduction: Transcatheter aortic valve implantation (TAVI) represents a significant advancement in managing severe aortic stenosis (AS). Yet, it remains associated with conduction disturbances despite technological improvements. The progression and timing of these electrical disturbances post-TAVI remain uncertain, raising substantial post-procedural management difficulties. This case highlights the challenges in risk stratification and post-procedural rhythm surveillance in this population. **Case Report:** A 72-year-old female with chronic coronary syndrome, prior inferior myocardial infarction, chronic right coronary artery occlusion, and percutaneous coronary intervention with drug-eluting stent implantation in the left anterior descending artery was admitted for severe symptomatic AS. On admission, ECG showed sinus rhythm, a PR interval of 160 ms, QRS duration of 100 ms, and an intermediate QRS axis, with no major conduction disturbances. The case was discussed with the Heart Team, which decided to perform TAVI. A balloon-expandable Edwards Sapien 3 23 mm valve was implanted uneventfully. Intermittent, new-onset left bundle branch block with first-degree atrioventricular block (AVB) was noticed at 24 hours post-TAVI, under beta-blocker therapy. In postoperative days 2-5, the patient remained stable, with no further ECG abnormalities. Despite beta-blocker discontinuation, on the 6th postoperative day, first-degree AVB reappeared, subsequently progressing to intermittent, type two, second-degree AVB. Repeat ECG Holter monitoring confirmed complete AV block, correlated with a syncope. A dual-chamber cardiac pacemaker was implanted, without any periprocedural complications. **Discussions :** This case underscores the critical importance of extended ECG monitoring after TAVI procedures, as conduction abnormalities may develop gradually, even in patients without pre-existing conduction disease. The late presentation of AVB challenges the conventional understanding that balloon-expandable valves carry a lower risk of conduction abnormalities compared to self-expandable valves. While established risk factors include pre-TAVI conduction abnormalities and several anatomical factors, this case demonstrates that conduction disturbances can occur unpredictably in their absence. Currently, there are no reliable predictive models for patients lacking these established risk factors, emphasizing the need for individualized post-procedural monitoring protocols. **Conclusions:** This case highlights the challenges related to late-onset conduction disturbances post-TAVI, demonstrating that cautious approaches to early

discharge are warranted even in patients without pre-procedural ECG abnormalities. Future research should focus on developing refined predictive models for post-TAVI conduction disturbances to better optimize risk stratification and management strategies in this population.

Keywords: aortic stenosis, atrioventricular block, pacemaker implantation, transcatheter aortic valve implantation

UNLOCKING THE GENETIC PUZZLE - WGS IN A PEDIATRIC PATIENT WITH DEVELOPMENTAL DELAY AND MULTISYSTEM ANOMALIES

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Introduction: Whole genome sequencing (WGS) has emerged as a powerful tool for identifying genetic variants associated with complex phenotypes, particularly in pediatric patients with unexplained developmental and multisystem anomalies. This case report describes the genetic findings in a 9-year-old female patient presenting with psychomotor developmental delay, speech delay, growth failure, cerebellar hypoplasia, and multiple dysmorphic features. **Case Report:** The patient, adopted at an early age, presented with multiple clinical features, including brachydactyly, hyperlaxity, unilateral breast growth at five years old, and neurodevelopmental impairment. Magnetic resonance imaging (MRI) revealed reduced pituitary size and possible right cerebellar hemisphere hypoplasia. Previous genetic investigations, including microarray analysis and multiplex ligation-dependent probe amplification (MLPA), did not provide a definitive diagnosis. Whole genome sequencing was performed to identify potential pathogenic variants. **Discussions :** WGS identified multiple genetic variants with clinical relevance: 1. A heterozygous likely pathogenic (class 4) variant in PGAP1, associated with autosomal recessive neurodevelopmental disorders with dysmorphic features; 2. A homoplasmic pathogenic (class 5) variant in MT-ND4, commonly linked to Leber's hereditary optic neuropathy and mitochondrial complex I deficiency; 3. A heterozygous pathogenic (class 5) variant in POLRMT, associated with oxidative phosphorylation deficiency; 4. A heterozygous pathogenic (class 5) variant in CYP11B2, linked to hypoaldosteronism and suspected uniparental disomy. Additional risk-associated variants in CHEK2, GALK1, and SRD5A2, which contribute to susceptibility for various conditions, including cancer predisposition and metabolic disorders were also found **Conclusions:** The identified PGAP1 variant suggests carrier status, while the MT-ND4 variant presents a potential risk for mitochondrial dysfunction. Given the heterozygous state of the POLRMT and CYP11B2 variants, they may contribute to a complex genetic predisposition rather than a monogenic disease.

Keywords: Whole Genome Sequencing, Developmental Delay, Genetic Variants, Pediatric Neurodevelopment

RENAL TUBULAR DYSGENESIS IN A PRETERM NEWBORN: THE ROLE OF GENETIC TESTING

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Introduction: Renal Tubular Dysgenesis (RTD) is a rare and severe fetal defect in which the proximal tubules are deficiently developed, resulting in severe renal insufficiency, oligohydramnios, and anuria. The most common causes are genetic mutations, which are transmitted in an autosomal recessive manner, but RTD can also be acquired during fetal development. **Case Report:** We describe a case of a moderately preterm newborn, with intrauterine suspicion of renal and bladder agenesis, delivered through c-section due to fetal distress at the Emergency Clinical Hospital Targu Mures and further hospitalized in the Neonatal Intensive Care Unit (NICU). The impossibility of finding the kidneys and bladder on prenatal ultrasound investigation led to the suspicion of kidney and bladder agenesis. Furthermore, the suspicion was strengthened by the fact that the mother had a history of intrauterine fetal death due to renal pathology. At birth, the child had a poor postpartum adaptation with moderate hypotonia and acrocyanosis. The patient was later transferred to the NICU for further monitoring and specialty treatment. Further, the baby presented with oliguria, arterial hypotension, and transmitted rales. The general condition of the patient progressively deteriorated, presenting significant respiratory effort due to pulmonary hypertension and right pneumothorax. After nephrological investigations, the initial diagnosis of acute kidney injury was caused by low kidney perfusion. Adrenaline and dopamine were administered as treatment, and the drainage of the pneumothorax was performed, but the unfavorable evolution persisted, the diuresis remaining absent,

followed by the appearance of massive edemas and high urea and creatinine values, which accentuated the present renal insufficiency. On the 27th day, the state of the patient became critical, the newborn entered acute cardiorespiratory insufficiency, unresponsive to resuscitation maneuvers, leading to the baby's death. Postmortem, the Pathology Department confirmed the final diagnosis and cause of death due to RTD. **Discussions :** RTD is an extremely rare condition with an unknown incidence, but new studies approximate the incidence at 1/100.000 births and show that the most common causes of this condition are genetic mutations in the genes encoding components of the renin-angiotensin system. **Conclusions:** In conclusion, based on the presented findings and the similarity of renal symptoms in both children, there's a strong suspicion of the presence of a genetic condition within the family, thus emphasizing the importance of genetic testing, especially in cases with a history of rare diseases. Such testing can reduce the risk of complex pathological conditions arising.

Keywords: agenesis, acute kidney injury, pulmonary hypertension

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MANAGEMENT OF POSTHEMORRHAGIC VENTRICULOMEGALY IN A VLBW PRETERM NEWBORN

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Introduction: Posthemorrhagic Ventriculomegaly (PHVD) is a severe condition characterized by the dilatation of the cerebral ventricles, secondary to intraventricular hemorrhage (IVH) caused by complications during childbirth through placental abruption (PA). In this pathology, ventriculomegaly is not associated with a rise in intracranial pressure, but in severe cases, it can evolve into hydrocephalus. **Case Report:** We present the case of a very low birthweight, early preterm newborn delivered via emergency c-section due to metrorrhagia and PA. Born at 28/29 weeks of gestation, the infant weighed 1100g and showed postpartum adaptation deficits with moderate respiratory distress. Stabilized at delivery, the newborn was transferred to the neonatal intensive care unit for specialized care. Post-haemorrhagic anemia was diagnosed through paraclinical evaluations, prompting the administration of Iso-group and iso-Rh fresh frozen plasma, without transfusion incidents. Transfontanellar ultrasound (TFUS) investigations described the presence of grade 1 IVH on the left side and grade 2 on the right as early as the 3rd day of life, without ventriculomegaly. By day 5, bilateral grade III IVH had developed, accompanied by ventriculomegaly by day 12. To prevent hydrocephalus, lumbar punctures (LPs) were initiated following increased resistance index values. At 19 days old, the infant was moved to the premature unit for nutritional rehabilitation and monitoring. Daily TFUSs consistently showed an overflowed ventricular system with rounded, enlarged ventricles necessitating repeated LPs. A favorable recovery process appeared after 3 LPs, the ventriculomegaly becoming moderate, of small diameter, without IVH, and with a symmetric and communicative ventricular system. **Discussions :** PHVD can be strongly associated with the apparition of cerebral lesions and delayed brain development. Different studies show that this pathology is directly linked to IVH, being one of its most common complications in preterm babies. Additionally, other studies show that around 20-25% of newborns develop PHVD, with the highest risk observed in those born before 32 weeks of gestation. **Conclusions:** PHVD in small preterm infants continues to represent a significant problem due to the high risk and incidence of hemorrhage in PA. The management of this pathology presents intense complexity, not only because of the complications that can arise rapidly and cause brain injuries but also due to the necessity of a multidisciplinary approach involving the neonatologist, pediatric neurologist, and neurosurgeon.

Keywords: intraventricular hemorrhage, hydrocephalus, respiratory distress

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HPV-RELATED CERVICAL CANCER: TWO CASE REPORTS HIGHLIGHTING THE IMPORTANCE OF PREVENTION

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Introduction: Cervical cancer ranks fourth worldwide in terms of incidence and mortality, according to WHO data. These tumors are divided into two main categories: HPV-dependent and HPV-independent cervical cancer. The majority of cervical cancers are HPV-dependent, 95% of which are squamous and only a small proportion (5%) are glandular. Both types can be detected by screening, but while Babeș-Papanicolau cytology is sufficient to detect

precancerous squamous cells, HPV testing is better for diagnosing adenocarcinoma. **Case Report:** We would like to present two fatal cases of cervical carcinoma in young patients (40 years old), one of whom was diagnosed with HPV-associated squamous cell carcinoma of the cervix, underwent surgery and subsequent oncological treatment, but despite therapeutic efforts, multi-organ metastases (bone, lung, liver and lymph nodes) were detected, leading to the patient's death. The second patient was diagnosed with HPV-associated cervical mucinous adenocarcinoma, which at the time of diagnosis already showed direct invasion of adjacent organs and the omentum. The patient received complex oncotherapy (total hysterectomy with bilateral salpingo-oophorectomy and radio-chemotherapy) without favourable results, and shortly afterwards developed multi-organ metastases (cerebral, cerebellar and bone) and died. **Discussions :** Cervical cancer most often occurs in young patients under the age of 45, and the prognosis depends heavily on the stage of the tumor at the time of diagnosis. Cervical carcinomas diagnosed at an early or precancerous stage have a 5-year survival rate of almost 100%, which decreases significantly with the development of stage and the presence of metastases. **Conclusions:** Vaccination is the most effective method of primary prevention of HPV-associated cervical cancers (squamous cell carcinoma and adenocarcinoma), but regular screening (cytology and HPV testing) is very important for secondary prevention, allowing most forms of cervical cancer to be detected and treated in time.

Keywords: Cervical carcinoma, HPV-associate, vaccine, screening

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PNEUMOTHORAX INDUCED BY NON-INVASIVE VENTILATION IN A PATIENT WITH EMPHYSEMATOUS BULLAE: A CASE REPORT

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Introduction: Pneumothorax is a rare complication of non-invasive ventilation (NIV), more frequently observed in patients with bullous emphysema. Increased intrathoracic pressure can lead to the rupture of preexisting bullae. We present a case of spontaneous pneumothorax induced by NIV in a patient with severe eosinophilic asthma and bullous emphysema. **Case Report:** A 59-year-old patient with a known history of severe eosinophilic asthma, arterial hypertension, and bullous emphysema - without any history of smoking or exposure to respiratory toxins - was admitted with acute hypercapnic respiratory failure and respiratory acidosis (pH: 7.169, pCO2: 77 mmHg). Non-invasive ventilation (NIV) was initiated; however, this led to the development of a spontaneous left-sided pneumothorax, which was confirmed by chest radiography. The patient required pleural drainage and was transferred to the intensive care unit (ICU) for close monitoring. The clinical course was favorable, and five days later, the chest tube was successfully removed following the complete resolution of the pneumothorax. **Discussions :** NIV-induced barotrauma is a rare complication in patients with bullous emphysema, as positive pressure ventilation may favor the rupture of fragile pulmonary structures. Pre-NIV imaging screening can help identify high-risk patients, and personalized ventilatory strategies may reduce the incidence of barotrauma. Severe emphysema in a non-smoking patient without exposure to respiratory toxins suggests a genetic predisposition. Alpha-1 antitrypsin deficiency (AATD) should be ruled out, as it has implications for prognosis and family screening. Other rare genetic causes, such as Birt-Hogg-Dubé syndrome, Marfan syndrome, or vascular Ehlers-Danlos syndrome, should be considered, especially in the presence of a suggestive family history. **Conclusions:** NIV in patients with bullous emphysema should be used with caution due to the risk of barotrauma. Early identification of patients with genetic predisposition to emphysema is essential, and testing for AATD is recommended in the absence of classical risk factors. Additionally, personalized biologic therapy with Dupilumab may improve the management of severe eosinophilic asthma, reducing respiratory complications. Optimal management requires a multidisciplinary approach to prevent and treat pulmonary complications.

Keywords: barotrauma, emphysematous bullae, non-invasive ventilation, pneumothorax,

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PRECORDIAL PAIN AS THE FIRST SIGN OF NON-SMALL CELL LUNG CANCER: A CASE REPORT

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Introduction: Non-Small Cell Lung Cancer (NSCLC) constitutes the predominant form of lung cancer, originating

at the cellular level and resulting in the rapid and uncontrolled proliferation of abnormal lung cells. Each year, approximately 135,000 individuals succumb to this disease, making it the leading cause of cancer-related fatalities among men and the second most prevalent cause among women. **Case Report:** We present the case of a sixty-two-year-old male patient, a former heavy smoker with a history of hypertension and NYHA II, who presented to the emergency room with precordial pain and exertional dyspnea, which initially suggested an ischemic heart disease. Clinical evaluation, including ECG and echocardiography, did not reveal significant cardiac pathology, however, the patient returned after one month, during which his condition worsened, complaining of progressive fatigue, weight loss of over 10 kg and severe dyspnea. A chest X-ray and subsequent CT scan revealed a large left lung mass with multiple mediastinal lymphadenopathies and pleural involvement, which was confirmed to be a non-small cell cancer classified as T3N3M1c with numerous distant metastases. In the upcoming 4 to 6 weeks, the patient's health deteriorated significantly due to several complications, including bacterial paraneoplastic pneumonia, pleurisy, brain masses, subdiaphragmatic issues, a persistent cough syndrome, and hepatocytic cytolysis syndrome. **Discussions :** This type of cancer is particularly concerning, as its symptoms are frequently misinterpreted as typical ailments or attributed to chronic smoking. Consequently, 80% of individuals diagnosed with non-small cell lung cancer (NSCLC) have reached advanced stages by the time of diagnosis, complicating treatment efforts due to its "silent" nature. Furthermore, if a tumor encroaches upon the pleura or mediastinum, it may induce cardiac pain in patients who possess existing cardiovascular risks. **Conclusions:** This patient presented with a tumor at an advanced stage (T3N3M1c). More than 70% of lung cancer diagnoses occur during stages III or IV, making curative interventions generally impractical. This highlights the vital role of screening; utilizing low-dose computed tomography (LDCT) for lung cancer detection could potentially reduce mortality rates linked to this disease by approximately 20-26%.

Keywords: Non-Small Cell Lung Cancer, distant metastases, T3N3M1c, low-dose computed tomography

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AORTIC DISSECTION OR MYOCARDITIS? CHALLENGES OF DIAGNOSIS IN ACUTE CARDIOVASCULAR PATHOLOGIES: A CASE REPORT

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Introduction: Myocarditis is an inflammatory condition of the myocardium which can mimic other Cardiovascular pathologies. It is often caused by viral infections, autoimmune diseases, or toxic exposures. The clinical presentation varies from mild to severe forms. Arrhythmias, heart failure, or sudden cardiac death can occur. Due to its nonspecific presentation, distinguishing myocarditis from acute coronary syndrome in the Emergency Department can sometimes be challenging. Laboratory findings, imaging studies, and a clear clinical understanding are important for accurate diagnosis and further management. **Case Report:** A 26-year-old heavy smoking, normostenic male with no prior medical conditions, was referred from a territorial hospital for coronary angiography. The patient initially presented with acute chest pain radiating to both shoulders, armpits, and back for three days, with a blood pressure reading difference between both arms. Given the clinical suspicion of aortic dissection, a computer tomography scan was performed, showing no pathological findings. The patient was admitted to the cardiology department with diagnosis of STEMI for further follow-up and treatment. This was based on the electrocardiographic findings and the elevated cardiac enzymes. Coronary angiography was performed and despite the clinical and paraclinical abnormalities, it revealed no stenotic lesion. Other laboratory findings included elevated Quick Time and prolonged activated partial thromboplastin time (APTT), suggesting some kind of coagulation problem potentially liked with systemic inflammation. Elevated C reactive Protein and increased level of monocytes also point in the direction of inflammation. The elevated Creatine Kinase, aspartate aminotransferase and lactate dehydrogenase all indicate muscular or myocardial damage. All of these findings in combination with the clinical presentation lead to the final diagnosis of myocarditis. **Discussions :** The overlapping symptoms between myocarditis and myocardial infarction, emphasise the challenges of correctly diagnosing cardiovascular pathologies. Elevated High-sensitive troponin levels and changes in the ECG point towards myocardial infarction, whereas the absence of coronary lesions on the angiography, alongside the elevated inflammatory markers, suggested myocarditis. Cardiac magnetic resonance imaging could have been used to provide additional information. Endomyocardial biopsy, although invasive, would have given a definitive histopathological diagnosis. **Conclusions:** This case highlights the importance of a comprehensive diagnostic approach in young patients with chest pain presented in the Emergency Department. While ST-elevation and laboratory tests point towards myocardial infarction, myocarditis remains an important differential diagnosis. A complete clinical and paraclinical assessment allows for accurate differentiation between acute cardiovascular pathologies, ensuring appropriate

patient treatment and care.

Keywords: Myocarditis, Acute Coronary syndrome, differential diagnosis, emergency department

UNRAVELLING CENTRAL PONTINE MYELINOLYSIS: A CASE OF ALCOHOLISM, HYPONATREMIA, AND ICU COMPLICATIONS

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Introduction: Central Pontine Myelinolysis (CPM) is an uncommon neurological disorder that usually affects patients with alcoholism or malnutrition. It can complicate prolonged hyponatremia, improper IV fluid therapy with hypertonic solutions, or the rise of serum sodium during treatment. Symptoms range from confusion and decreased alertness to death. **Case Report:** We report the case of a 51-year-old male with a significant history of chronic alcohol use and two prior episodes of acute alcohol-induced pancreatitis. He presented to the Emergency Department with psychomotor agitation and altered mental status. Initial full-body CT imaging was unremarkable, and he was admitted to the psychiatric clinic with a preliminary diagnosis of alcohol withdrawal syndrome and documented hyponatremia (serum sodium: 133 mmol/L). Within 24 hours, the patient developed new neurological symptoms including verbal dysfunction, neck stiffness, and a Glasgow Coma Scale (GCS) score of 10. His oxygen saturation dropped to 85%, and he was febrile (39°C). Given the acute neurological changes, he was transferred to the ED for stroke evaluation, which was ruled out by cranial CT and neurological consultation. Despite the absence of a clear infectious source, systemic deterioration and elevated inflammatory markers (P-SEP: 239 pg/ml) prompted ICU transfer. During his ICU stay, his sodium levels remained persistently low (lowest recorded value: 126 mmol/L) despite careful administration of hypertonic saline (5.85% NaCl). He required intubation and sedation due to declining consciousness. A follow-up cranial CT on day 5 showed no abnormalities. Patient's sodium levels dropped from 135 to 126 mmol/L, staying below 130 for 2 days despite treatment. However, neurological status continued to worsen, prompting repeat neuroimaging on day 14, which revealed multiple hypodense lesions in the periventricular area, cerebral peduncles, and brainstem, suggestive of osmotic demyelination. A lumbar puncture was performed to exclude infectious or inflammatory causes and returned negative. **Discussions :** Given the patient's history of alcoholism, hepatocytolysis syndrome, and hyponatremia, CPM is likely to have occurred at some point during his admission. Fluctuating sodium levels despite treatment highlight the challenge of managing electrolytes in critically ill patients. Careful monitoring and controlled correction are essential to prevent severe CPM complications. **Conclusions:** Monitoring sodium levels is crucial for patients with alcoholism and liver dysfunction, keeping a very close eye on its correction, since such patients are at a very high risk of developing CPM. This work was supported by the George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș Research Grant number 170/1/09.01.2024.

Keywords: Central Pontine Myelinolysis (CPM), hyponatremia, alcoholism, neurological disorder

SYNOVIAL SARCOMA: MORPHOLOGICAL AND MOLECULAR ASPECTS. A CASE REPORT

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Introduction: Synovial sarcoma (SS) is a rare soft tissue malignancy that typically presents as a mass near a large joint, but can occur in or around any tissue in the body. It is most common in adolescents aged 10-18 years and accounts for 15% of all paediatric soft tissue sarcomas. Despite its misleading name, synovial sarcoma does not originate from synovial tissue but from mesenchymal cells. The diagnostic challenge lies in its heterogeneous histology - monophasic, biphasic or poorly differentiated - and the need for molecular confirmation. This case focuses on the recurrence tendency of a synovial sarcoma with an unusual localisation. **Case Report:** A pediatric female patient was initially diagnosed with intra-abdominal synovial sarcoma. Due to the diagnostic complexity of SS, a paraffin-embedded tissue block was sent for molecular/cytogenetic testing. Fluorescence in situ hybridisation (FISH) revealed the presence of the SS18 fusion gene in the tumour cells, confirming the final diagnosis. Following confirmation, the patient underwent nine cycles of chemotherapy. The post-treatment PET-CT showed no obvious oncological substrate at that time. However, a local recurrence was observed two months after the evaluation. The histopathology of the excised recurrent tumour showed features consistent with synovial sarcoma recurrence,

which correlated with the clinical and imaging findings. **Discussions :** Recurrent synovial sarcoma remains a major concern due to its potential for increasingly aggressive behaviour. The SS18 fusion gene plays a key role in the pathogenesis of SS by altering chromatin remodelling and oncogenesis. Immunohistochemical markers such as TLE1 aid in microscopic differentiation, but molecular techniques remain the gold standard for diagnosis. Compared to the initial tumour, the recurrent lesion has a higher mitotic index, suggesting a more aggressive phenotype. **Conclusions:** This case illustrates the importance of integrating histopathology and molecular diagnostics in the identification of SS and recurrence. The detection of the SS18 fusion gene highlights the need for molecular testing to confirm the diagnosis and potential therapeutic implications. As a rare malignancy with potential for recurrence, a multidisciplinary team is essential for optimal patient management and improved long-term outcomes.

Keywords: synovial sarcoma, recurrent tumor, molecular diagnostics, pediatric sarcoma

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SURVIVING AGAINST ALL ODDS - AN ATYPICAL CASE OF SUCCESSFUL RESUSCITATION

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Introduction: Immediate medical resuscitation is vital for increasing the chances of complete recovery without neurological sequelae. The chances of full rehabilitation decrease with each passing minute of resuscitation. After 20-30 minutes, neurological damage can become irreversible. **Case Report:** We present the case of a 66-year-old man with three-vessel coronary artery disease ,stable angina pectoris, and congestive heart failure with a LVEF = 55%,who was hospitalized on 23.01.2025, for coronary angioplasty at the Cardiology 2 Section in Târgu Mureș. During the intervention, the patient experienced precordial pain.An acute myocardial infarction occurred ,which manifested itself with ST-segment elevation in the lateral leads. It was caused by an iatrogenic dissection of the second diagonal artery during the procedure. This complication was managed with balloon angioplasty and stenting of the left anterior descending artery. On 10.02.2025 the patient suffered a secondary anterior myocardial infarction due to acute in-stent thrombosis, which was complicated by cardiogenic shock and cardiorespiratory arrest, classified as Killip class IV. The ECG showed ventricular tachycardia, which rapidly deteriorated into ventricular fibrillation. Blood flow was restored after 150 minutes of resuscitation, which included endotracheal intubation, mechanical ventilation, quadruple support with inotropes and vasopressors, intrastent dilation, and thrombus aspiration. Eventually, the patient received ECMO with levosimendan preconditioning. ECMO was discontinued on 15.02.2025 ,when the patient met the following criteria: a mean arterial pressure of 60-70 mmHg, SvO2 >70%, arterial lactate <2 mmol/L, an inotropic score below 10, imaging showing no pulmonary edema, and a hematocrit >35% with a platelet count >100,000 and fibrinogen <150 mg/dL. The patient was discharged on 11.03.2025. His LVEF was 45%, and he was cooperative and oriented to time and place. **Discussions :** Despite the patient's prolonged resuscitation, the outcome was remarkable. The successful rehabilitation was made possible by the timely use of ECMO, inotropic support, and aggressive management. This case highlights the importance of a multidisciplinary approach and individualized care in optimizing patient survival and recovery. **Conclusions:** Advanced resuscitation techniques are vital for stabilizing critically ill patients, yet neurological damage remains a significant risk. Early intervention, combined with optimal organ support and a skilled medical team, can significantly improve the chances of recovery and prevent the long-term neurological sequelae.

Keywords: Resuscitation, Myocardial infarction, ECMO, Coronary artery disease

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THE EVOLUTION OF URINARY PROTEINS IN DIABETIC NEPHROPATHY

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Introduction: Diabetes mellitus is one of the most common causes of chronic kidney disease (CKD). The accumulation of extracellular matrix and modifications in the glomeruli leads to renal dysfunction characterized by protein loss and increasing creatinine levels. The underlying disease requires multidisciplinary management due to the increasing number of complications that arise during its progression.The aim of the study is to present a case report of a young patient with CKD in which GFR estimation and urinary protein levels are specific for two different CKD stages. **Case Report:** The case presented is a 35 years-old female patient, known with type 1 diabetes for

28 years, stage 2 CKD and hypothyroidism since 2022. The patient also required a DEXCOM ONE TRANSMITTER system to continuously monitor her glycemia while receiving insulin treatment. The patient has undergone regular check-ups for CKD since 2022, which have revealed significant proteinuria, with protein levels in the urine rising by 50% annually (up to more than 11000 mg/24h) **Discussions :** Although the patient is currently in stage 2 of CKD by creatinine levels (defined by an eGFR above 60 ml/min/1.73m2), her protein levels classify her as stage A3, which is a known marker for the progression of diabetic nephropathy. The patient's young age suggests that the renal alterations are primarily attributable to her diabetes. Moreover, the presence of significant proteinuria highlights not only the rapid progression of the disease in this form of diabetes but also the importance of routine proteinuria screening for the early detection and effective management of diabetic nephropathy. **Conclusions:** Monitoring urinary protein levels, even when creatinine and eGFR remain within normal ranges, can serve as a valuable marker for the prognosis of renal dysfunction and the complications that may arise as a result.

Keywords: diabetic nephropathy, proteinuria, glycemia, CKD

THE EVOLUTION OF CUTANEOUS MELANOMA'S METASTASES

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Introduction: Melanoma represents the most aggressive form of skin cancers. It originates from the melanocytes residing the basal layer of the epidermis. The most common areas affected by its metastases are the skin, liver, central nervous system, lungs, and the gastrointestinal (GI) tract. **Case Report:** This case report presents a 57 years-old male patient who was admitted in the Emergency Room accusing non-specific GI symptoms. The patient had a history of cutaneous nodular melanoma, for which he underwent both surgical and oncological treatment one year before the current presentation. After subsequent radiological investigations a large tumoral mass was identified in the small bowel wall, for which the patient was referred for surgical intervention. The resected specimen was sent and further processed in the Department of Pathology of Mureș County Clinical Hospital. **Discussions :** Grossing examination showed a 75x85x75 mm multinodular heterogenous tumor mass, with whitish-grayish zones alternating with tan, brown areas, infiltrating both the small intestine's wall and its mesentery. At microscopy the neoplastic proliferation exhibited a solid architecture, being composed of pleomorphic cells with varied dimensions, arranged in nests, with pale eosinophilic cytoplasm, irregular nuclei, prominent nucleoli and numerous atypical mitoses. Multiple lymphatic emboli, necrosis and hemorrhagic areas were observed. The neoplastic cells showed positivity for immunohistochemical markers SOX-10 and Melan A. The final diagnosis was mesenteric and intestinal metastases of melanoma with lymphatic emboli. **Conclusions:** Although most melanomas are identified in their initial stages, some individuals develop metastatic disease in the subsequent years, following an initial diagnosis. Melanoma metastases most commonly occur in the skin, lungs, liver, and GI tract. In recent years, the prognosis of metastatic melanoma had dramatically improved with the advances made regarding new targeted therapies.

Keywords: melanoma, metastases, lymphatic emboli

MANAGEMENT OF COMPLEX CROHN’S DISEASE WITH FISTULIZING COMPLICATIONS: A CASE REPORT

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Introduction: Crohn's Disease (CD) is a chronic inflammatory condition of the gastrointestinal tract, characterized by diffuse or granulomatous inflammation. It can affect any part of the digestive system, with the terminal ileum and colon being the most commonly affected sites. CD is often associated with severe intestinal complications, including strictures and fistulas. This case is particularly significant due to the rapid progression of the disease and the complex treatment required. **Case Report:** A 39-year-old female patient was diagnosed with ileum Crohn's Disease in March 2021. She presented with a variety of symptoms, including nausea, bilious vomiting, abdominal pain in the epigastrium and right hypochondrium, bloating, diarrhea (which began in May 2020), intermittent fever (up to 38.2°C), dorso-lumbar pain, and a substantial weight loss of 21 kg over five months. Diagnostic

investigations confirmed the diagnosis: endoscopic examination with biopsy, fecal calprotectin level of 608 mcg/g, and a CT scan showing evidence of terminal ileitis. Initial treatment consisted of intravenous corticosteroid therapy, followed by oral Prednisone (35 mg as the initial dose) and 5-ASA derivatives, alongside Imuran. **Discussions :** Within a short time, the patient developed a fistulizing form of the disease, including entero-enteric fistulas, necessitating the initiation of biological therapy with Infliximab (Zessly). Three doses were administered between May and July 2021. Due to allergic reactions, the concomitant use of Imuran was discontinued, and Infliximab was used as monotherapy. Abdominopelvic MRI revealed inflammatory changes in the terminal ileum, along with vesico-ileal and sigmoido-ileal fistulas and an abscess associated with the vesico-ileal fistula. Treatment with Infliximab was suspended, and the patient underwent major surgery, including exploratory laparotomy, adhesiolysis, right hemicolectomy, colonic stump closure, terminal ileostomy, segmental resection of the sigmoid colon, and colo-colic anastomosis. Following surgery, Infliximab therapy was resumed, and the patient's condition has since improved. **Conclusions:** This case highlights the complexity of managing patients with Crohn's Disease, especially in those with complicated forms involving fistulas and abscesses. Despite biological therapy, the patient required surgical intervention due to the rapid progression of the disease. Continuous monitoring and integrated management are crucial to prevent complications and recurrences.

Keywords: Crohn’s Disease, fistulas, Infliximab, ileostomy

22Q11.2 DELETION SYNDROME AND TETRALOGY OF FALLOT - A MULTIDISCIPLINARY APPROACH

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Introduction: Microdeletion of 22q11.2 causes DiGeorge syndrome , a clinical condition that includes complex conotruncal anomalies, craniofacial dysmorphisms, and thymic and parathyroid hypoplasia. An early diagnostic and a multimodal therapeutic approach are essential to improve long-term prognosis and optimize clinical outcomes. **Case Report:** We report the case of a 7-year-old girl with a prenatal diagnosis of DiGeorge syndrome, confirmed by fluorescence in situ hybridization (FISH). At birth, she presented with neonatal hypotonia, tachypnea, chronic cyanosis. Clinical evaluation revealed craniofacial dysmorphic features, including a smooth philtrum, micrognathia, and hypertelorism. She has a history of polymorphic dyslexia, delayed expressive language development, and epilepsy with generalized seizures, likely of genetic origin. Since 2018, no seizures have been reported, and she continues antiepileptic treatment with valproate (Depakine), 6 ml/day, given a normal EEG. At the age of 1 year and 3 months, she underwent surgical correction of tetralogy of Fallot, consisting of relief of the right ventricular outflow tract obstruction and patch closure of the septal defect. Further imaging identified moderate bilateral peripheral pulmonary artery stenosis and aortopulmonary collateral vessels, confirming the diagnosis. An echocardiogram at 6 years old showed situs solitus, levocardia, and dilated right heart chambers. The tricuspid valve demonstrated mild regurgitation, while the monocuspid pulmonary valve showed moderate stenosis (max gradient 36 mmHg) and severe pulmonary regurgitation. Left ventricular ejection fraction was preserved (60%), with a LVEDD of 39.7 mm and right ventricular size at the upper limit of normal (39 mm). The interventricular septum was thin (6.8 mm), but within normal limits. The ECG revealed sinus rhythm, a QRS duration of 120 ms consistent with complete right bundle branch block, and secondary repolarization changes. The PR interval was within normal limits (100 ms). Genetic testing confirmed a deletion at 22q11.21, involving two critical regions. The CSF-22A region deletion includes genes such as CLTCL1, HIRA, CDC45, CLDN5, and GP1BB, implicated in embryonic development, coagulation, and endothelial integrity. The CSF-22B region deletion involves ZNF74, KLHDC2, and MED15, associated with transcriptional regulation and neuronal function. **Discussions :** This case is particularly notable due to the combination of DiGeorge syndrome, tetralogy of Fallot, and epilepsy with developmental delays. Despite early intervention with surgery to correct the heart defect, the patient continues to experience challenges, including cardiac and neurological issues. **Conclusions:** Given the relationship between DiGeorge syndrome and tetralogy of Fallot, a comprehensive interdisciplinary approach is required to prevent metabolic, immunologic and cardiovascular complications.

Keywords: DiGeorge Syndrome, Tetralogy of Fallot, Epilepsy

SEVERE CERVICAL TRAUMA IN CHILDREN: MULTIDISCIPLINARY MANAGEMENT AND RECOVERY CHALLENGES- A CASE REPORT

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Introduction: Spinal cord injury is a serious neurologic trauma that significantly affects autonomic, sensory, and motor faculties. C4-C5 fracture-dislocations are often linked to tetraplegia and systemic problems, necessitating multimodal medical care. A young child suffered severe cervical trauma in this instance, which led to the development of several neurological and infectious conditions. **Case Report:** We present the case of a 13-year-old boy with complete SCI showed signs of urine retention, loss of all distal sensory modalities below C4, and flaccid areflexic tetraplegia (ASIA A, Frankel A). A C4-C5 fracture-dislocation, spinal cord contusion, and related prevertebral soft tissue edema were discovered by neuroimaging. Magnetic resonance imaging results: A Diving Accident (DCI) with fractures of the C4 and C5 vertebral bodies ; Straightness of the cervical vertebral segment with discrete retrolisthesis of the C4 on C5 and C5 on C6 vertebral bodies; Vertical split in the C4 and C5 vertebral bodies, with reduction in the height of the two vertebrae and extensive bone edema over their entire surface. The adjacent intervertebral disks show decreased signal in T2-weighted and preserved height, but protrude (bulge) circumferentially posteriorly. Intramedullary lesions are visible on T2 (HT2) and STIR (Short Tau Inversion Recovery - a special edema-sensitive sequence) hyperseminal T2 (HT2) hypersemographic MRI sequences, inhomogeneous in appearance, with portions in T2 (HT2) hyperseminal showing extensive edema both cranial and caudal . These lesions extend from a plane through the C2-C3 intervertebral disc to a plane through the upper third of the C7 vertebral body. In order to reduce the danger of deep vein thrombosis and autonomic dysreflexia, the initial course of treatment involved spinal moibilization, cardiovascular stabilization, and preventative anticoagulation. The patient needed targeted antibiotic treatment with gentamicin after developing a catheterization-associated urinary tract infection while in the hospital due to multidrug-resistant bacteria (Enterobacter aerogenes, Providencia rettgeri). **Discussions :** This case highlights the irreversible nature of total spinal cord transection and the catastrophic effects of high cervical SCI in the pediatric population. Cervical axial stress during shallow-water impact represents a common but preventable cause of SCI in adolescents. Urinary tract infections from prolonged catheterization with multidrug-resistant bacteria also complicate recovery in patients with spinal cord injuries. **Conclusions:** The case study illustrates the intricacy of pediatric cervical spinal cord injury and the necessity of a multidisciplinary approach to improve prognosis.

Keywords: Spinal cord injury, Tetraplegia, Pediatric trauma

PRECISION MEDICINE IN THE TREATMENT OF ACUTE MYELOID LEUKEMIA

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Introduction: A wide variety of cytogenetic and molecular abnormalities are implicated in the pathogenesis of acute myeloid leukemia (AML). Among the most common gene mutations in patients with AML are alterations in nucleophosmin 1 (NPM1) and fms-related tyrosine kinase 3 (FLT3) genes, both of which have been shown to be prognostic of therapeutic outcomes and survival. **Case Report:** A 71-year old female patient presented in the hospital with fever and dry cough, associated with asthenia and sweating. A peripheral smear test was performed: white blood cells 43,380/uL (M 73.5%, L 12.5%, N 13.6%), hemoglobin 9.9 g/dL, platelets 70. 000/uL. A bone marrow evaluation was performed, revealing acute myeloid leukemia with an NPM1 mutation. The patient was treated with a cycle of induction chemotherapy and 2 cycles of consolidation chemotherapy. At the last evaluation the leukemia relapsed. Molecular exam showed FLT3-ITD gene mutation. The patient was treated with FLT3 inhibitor Gilteritinib. **Discussions :** NPM1 and FLT3 are the most common genetic mutations in AML. AML with NPM1 mutations and in the absence of FLT3 mutation, or with FLT3-ITD at a low allelic ratio, are classified as favorable and are responsive to intensive chemotherapy. Conversely, the presence of FLT3-ITD mutation is associated with a poorer prognosis. In our case, since the favorable prognosis and the absence of FLT3-ITD at diagnosis, the patient was treated with only intensive chemotherapy. At relapse, the presence of FLT3-ITD

indicates the evolution of a more aggressive AML. In fact, up to 30% of patients who are FLT3-ITD negative at diagnosis relapse with FTL3-ITD positivity. Given the FLT3-ITD positive relapse, the patient was treated with the FLT3 inhibitor Gilteritinib. This is a type of targeted cancer therapy called a tyrosine kinase inhibitor, kills leukemia cells by binding to the mutant FLT3 protein and blocking its activity. Gilteritinib has been the most successful in the treatment of FLT3 mutated AML in terms of its response rate as a single agent, its tolerability, the duration of response, and its ability to avoid some of the common resistance mechanisms to FLT3 inhibitors. **Conclusions:** This case report highlights the importance of FLT3-ITD retesting at relapse in the era of the tailored therapy on patient's mutational profile.

Keywords: NPM1, FLT3-ITD, Tailored therapy

A RARE CHROMOSOME 18Q DELETION SYNDROME: CASE REPORT

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Introduction: About 1 in 40,000 babies has a deletion of chromosome 18. Most pregnancies with 18q deletions experienced no complications and were diagnosed after birth. The 18q deletion syndrome features clinical heterogeneity, including developmental delay in early childhood, intellectual disability, autistic features, learning difficulties, language impairment, short stature, skeletal anomalies and distinctive facial features with ear anomalies and thin lips. **Case Report:** We report a 15-year-old male patient diagnosed with 18q microdeletion syndrome presenting global developmental delay, cerebellar syndrome (poor coordination, wide-based gait) and autism spectrum disorder since the age of 1 year and 9 months. The patient was born at term from unrelated parents, with a family history of epilepsy and intellectual disability. Clinical genetic evaluation revealed craniofacial dysmorphism, congenital nystagmus, small hands with fusiform fingers, thoracic scoliosis and bilateral genu valgum. Cytogenetic analysis showed a normal karyotype, and the Multiplex Ligation-dependent Probe Amplification (MLPA) technique detected a heterozygous deletion of the 18q22.3-q23 region. Endocrinological assessment revealed secondary hyperparathyroidism likely due to vitamin D deficiency, with normal thyroid function. The patient later developed a food allergy, confirmed by allergological tests. Genetic counselling was offered to the family. **Discussions :** The patient's phenotype includes common neurodevelopmental features of 18q deletion syndrome, such as hypotonia, delayed motor milestones, cerebellar syndrome, intellectual disability, and autism, linked to abnormal myelination of white matter, and the key candidate gene in the microdeletion region is the MBP gene. Our patient's normal thyroid function contrasts with typical cases, which often show hypothyroidism (candidate gene is TSHZ1). The presence of food allergy without immunoglobulin deficiency (typically seen in this syndrome) indicates immune variability, with literature suggesting allergies may reflect immune dysfunction due to cumulative effects of deleted genes and environmental factors. The GALR1 gene's deletion may disrupt neuroendocrine regulation and immune homeostasis, while TNFRSF11A gene affects regulatory T cells, increasing immune response. Short stature, absent in our patient, may relate to the GALR1 gene's role in growth hormone secretion. These findings indicate significant clinical heterogeneity determined by the complex gene-gene interactions and the microdeletion breaking points on clinical outcomes. **Conclusions:** Our case report emphasizes the clinical variability of 18q deletion syndrome and the importance of molecular genetic testing in understanding the origins of patient phenotypes. Accurate diagnosis and multidisciplinary management are essential for the best long-term care.

Keywords: 18q deletion syndrome, intellectual disability, MLPA, autism

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POLYMYALGIA RHEUMATICA - THE GREAT IMITATOR

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Introduction: Polymyalgia rheumatica (PMR) represents an inflammatory condition which produces non-specific symptoms that resemble infectious or neoplastic diseases primarily affecting older adults. The diagnostic process becomes more complicated when patients receive treatments that hide their clinical development or when they decline hospital admission. **Case Report:** The patient involved in this case study was a 63-year-old male who experienced continuous low-grade fever together with general illness symptoms and worsening musculoskeletal discomfort. The preliminary laboratory tests indicated bacterial infection through elevated CRP (8.26mg/dl),

elevated ESR (62mm) and (90mm), neutrophilia, low hemoglobyn levels (13.10g/dl) , and high PCT which resulted in extensive antibiotic treatment that failed to produce any noticeable improvement. The imaging results showed a soft tissue collection which suggested the possibility of a psoas abscess. The diagnosis of polymyalgia rheumatica became apparent through additional testing which included soft tissue ultrasound and rheumatologic evaluation. Even though ideally the patient should have been hospitalised for hemoculture withdrawal and a targeted treatment, we encountered the patients refusal.The patient experienced swift clinical and laboratory recovery after receiving corticosteroid treatment. **Discussions :** The case demonstrates how polymyalgia rheumatica often presents with diagnostic uncertainty because it can mimic various infectious or malignant illnesses. The combination of systemic infection-like presentation with non-specific inflammatory markers that elevate ESR and CRP leads clinicians to start antibiotic treatment prematurely without appropriate diagnosis. The combination of imaging results and hospital admission refusal made the diagnosis more difficult to determine. The case demonstrates why healthcare providers should maintain a strong suspicion for PMR when elderly patients show non-specific systemic symptoms and musculoskeletal pain that does not improve with antibiotics. The successful diagnosis of this patient depends on rheumatology involvement and thorough evaluation of imaging results and laboratory tests. The positive reaction to corticosteroids functions both as a diagnostic tool and therapeutic treatment which supports the practice of starting selected patients on empirical steroid therapy after excluding serious infections. **Conclusions:** The presented case demonstrates why PMR should be included in the diagnostic considerations for fever of unknown origin (FUO) when standard infection tests produce no results. The diagnosis of PMR requires prompt rheumatologic evaluation to prevent unnecessary antibiotic use and ensure proper treatment.

Keywords: Polymyalgia rheumatica, Bacterial infection, Differential diagnosis, Fever of unknown origin

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THE MODIFICATIONS OF CARDIAC ENZYMES OF A PREMATURE BABY

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Introduction: During pregnancy, preeclampsia may affect the mother and the newborn. The condition may lead to premature birth and can affect the liver, brain and kidneys of the newborn. Some conditions may increase the risk of developing preeclampsia such as: diabetes, chronic high blood pressure, autoimmune conditions and thrombophilia. **Case Report:** Our objective is to present the modification of cardiac enzymes and biochemical markers in very low birth premature baby. This case report presents a very low birth weight premature baby born at 550g with a very low APGAR score(5/1, 8/5) . The mother was known with: thrombophilia, gestational hypertension and preeclampsia. In order to identify the current condition of the baby, cardiac and other biochemical markers were performed: CK-MB, high-sensitive troponin and nTPro-BNP. **Discussions :** The markers were crucial to diagnose the heart condition of the premature baby suggested by the extreme rise of nT Pro-BNP and a very moderate increase of CK-MB and troponin. **Conclusions:** The heart status of the premature babies with very low birth rate could be better diagnosed using NT proBNP rather than markers for acute destruction of the heart muscle like troponin and CK-MB

Keywords: heart condition, premature birth, preeclamsia

SOLITARY ADRENAL METASTASIS OF CUTANEOUS MELANOMA: A CASE-BASED PERSPECTIVE

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Introduction: Melanoma is an aggressive malignancy with a high potential for distant metastasis. Adrenal gland involvement is relatively uncommon, occurring in approximately 4-6% of clinically detected cases. Adrenal metastases are often asymptomatic and discovered incidentally during routine surveillance imaging, making early recognition challenging but clinically relevant. We aimed to describe the histopathological characteristics of adrenal melanoma metastasis and highlight its diagnostic relevance **Case Report:** We present the case of a 68-year-old female with a history of surgically treated malignant melanoma, who presented for routine follow-up. Imaging revealed a tumoral mass in the left adrenal gland. The patient subsequently underwent surgical resection, and the specimen was sent for histopathological examination. **Discussions :** Macroscopic examination revealed a well-

circumscribed, encapsulated nodular mass exhibiting areas of haemorrhage. The lesion was located within the adrenal parenchyma and consisted of a solid proliferation of tumour cells arranged in nests and cords. The neoplastic cells were medium to large in size, displaying eosinophilic to pale cytoplasm, marked nuclear pleomorphism, prominent nucleoli, and frequent atypical mitotic figures. Intracytoplasmic melanin pigment was identified. Immunohistochemical analysis showed strong positivity for SOX-10 and Melan-A, supporting the diagnosis of metastatic melanoma **Conclusions:** Adrenal metastasis from malignant melanoma is uncommon and often asymptomatic, requiring careful surveillance. Histopathological confirmation is essential, and treatment involves systemic therapy, with surgery considered in selected cases. Early detection and a multidisciplinary approach are key to optimal management.

Keywords: malanoma, adrenal gland, metastasis

MIXED GERM CELL TUMORS OF THE TESTIS: AN AGGRESSIVE FORM OF TESTICULAR CANCER

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Introduction: Mixed germ cell tumors (MGCTs) are heterogeneous testicular neoplasms originating from germ cells, primarily affecting young men between 20 and 40 years-old. The presence of a choriocarcinoma component is associated with an aggressive behavior. We aimed to highlight the distinctive histopathological features of MGCTs, emphasizing tumor heterogeneity, diagnostic challenges, and prognostic implications. **Case Report:** A 20-year-old male with a six-month history of right-sided testicular swelling and a painful scrotal mass, presented with hematemesis and melena. Further investigations reveled elevated serum HCG and multiple metastatic nodules in the ileal mesentery, cecum, liver, bones, and brain. The patient underwent right-sided orchiectomy and extensive right hemicolectomy, with specimens sent for histopathological evaluation. Gross examination of the right testis revealed a solid, heterogeneous mass displaying whitish and gray-hemorrhagic areas along with small cystic spaces. Similar tumor nodules were identified in the ileal mesentery and cecum. Microscopically, two components were identified. The first one, with solid architecture, extensive hemorrhage and necrosis; the hemorrhagic spaces were lined by medium sized-cells with pale, clear cytoplasm, well defined borders and irregular nuclei (cytotrophoblasts and intermediate trophoblasts); along large cells with abundant eosinophilic cytoplasm, with multiple pleomorphic nuclei and atypical mitoses (syncytiotrophoblasts). Lympho-vascular invasion was observed. Immunohistochemically, the neoplastic cells were positive for β-HCG and p63, while CD30 and AFP were negative, confirming the diagnosis of choriocarcinoma. The second component consisted of multiple cystic structures, lined either by squamous epithelium or by simple columnar intestinal-type epithelium, embedded in a mesenchymal stroma (teratoma). **Discussions :** Microscopic examination of the tumor nodules in the ileal mesentery and cecum revealed histological features similar to those observed in the testis. The final diagnosis was mixed germ cell tumor (80% choriocarcinoma and 20% teratoma) of the right testis, with intestinal and mesenteric metastases, stage pT2N0M1. **Conclusions:** MGCTs with a choriocarcinoma component is an aggressive neoplasm with a high risk of early hematogenous spread. Due to a lack of awareness or social stigma many patients seek medical attention late, often presenting with severe complications. Early diagnosis of testicular neoplasms is crucial to improving patient outcomes.

Keywords: tumor, metastasis, choriocarcinoma, teratoma

AMPULLARY ADENOCARCINOMA. PATHOLOGICAL ANALYSIS OF A RARE CASE.

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Introduction: Ampullary cancers originate from the Ampulla of Vater and account for approximately 0.2-0.5% of gastrointestinal malignancies. Morphologically, they are subdivided into nine categories, whereas most ampullary adenocarcinomas fall into one of two broad histological subtypes: intestinal or pancreatobiliary, each with unique characteristics. **Case Report:** Our main objective was to highlight the microscopic features, imunohistochemical profile and prognostic values of ampullary adenocarcioma. Matherial and metods: We report the case of a 70-year old woman who presented to the Surgical department for a six months history of weight loss and upper digestive tract symptoms. Following complementary investigations (computed tomography and

esophagogastroduodenoscopy) the suspicion for a neoplastic process of the proximal duodenum was raised. In the upcoming weeks the pacient was reffered for surgical intervention (Whipple procedure). The resected specimen was further processed and examined in the Pathology Department of Mureș County Clinical Hospital. **Discussions :** Gross examination of the dueodenopancreatectomy specimen revealed a concentric ulcerative tumor mass with slightly elevated borders around the ampullary orifice, measuring 15x15x11 mm, with consequent obstruction of the pancreatic outflow (marked dilatation of Wirsung duct). On microscopy, the tumor was composed of small irregular glandular structures displaced in a desmoplastic stroma. The neoplastic glands were lined by pleomorphic cuboidal cells with hyperchromatic, round nuclei, without substantial pseudostratification. Immunohistochemical profile, confirmed the pancreatobiliary phenotype of the malignant proliferation: glandular epithelium exhibited positivity for Cytokeratine 7, while Cytokeratine 20 and CDX2 markers were negative. In terms of invasion depth and dissemination, the tumor invaded microscopically the adjacent pancreatic tissue, while five lymph nodes were positive for metastasis. According to WHO Classification of digestive tract tumors the final diagnosis was Ampullary adenocarcinoma, pancreatobiliary stubtype, stage pT3aN2. **Conclusions:** The Ampulla of Vater is a complex anatomical and histological region. Although ampullary adenocarcinoma is rare, distinguishing between the intestinal and pancreatobiliary subtypes is crucial due to different biological behavior. A precise morphological profile of adenocarcinoma arising in the duodeno-pancreatic region has significant clinical value for oncologic treatment strategies.

Keywords: ampulla, duodenopancreatectomy, gallbladder, pancreas

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CORRECTING LOWER LIMB DEFORMITIES IN PEDIATRIC X-LINKED HYPOPHOSPHATEMIA: A CASE REPORT ON BUROSUMAB'S EFFECT

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Introduction: Burosumab is a fully human IgG1 monoclonal antibody targeting fibroblast growth factor 23 (FGF23), used to treat X-linked hypophosphatemia (XLH), a condition linked to excessive FGF23 production. By binding to FGF23 and inhibiting its signaling, Burosumab improves phosphate absorption in the gut and reabsorption in the kidneys, enhancing serum phosphate levels, bone mineralization, and reducing bone disease risk. **Case Report:** A 4-year and 11-month-old female patient, diagnosed with familial hypophosphatemic rickets in November 2022, presented for clinical reevaluation. Genetic testing revealed a *PHEX* gene mutation (c.2104>T, p.Arg702*) and a potential pathogenic variant in the *DSC2* gene, linked to Arrhythmogenic Right Ventricular Dysplasia Type 11. Treatment with Burosumab was initiated in February 2023, resulting in improved bone deformities and no adverse effects. The patient's mother, who has the same mutation, started treatment at the same time but showed no improvement. The patient's development was appropriate for her age, with minor growth delays noted. Clinical examination showed significant improvement in coxa vara and genu varum, with no abnormalities in other systems. Laboratory tests indicated normal calcium-phosphate metabolism and no signs of systemic issues. The patient's condition remains stable under Burosumab therapy. The recommended ongoing treatment is Burosumab 10 mg every 2 weeks via subcutaneous injection. **Discussions :** Several studies have shown that Burosumab significantly improves lower limb deformities in X-linked hypophosphatemia (XLH), including torsion, rickets severity score (RSS), and other bone malformations. Burosumab treatment led to reductions in RSS, indicating better bone alignment, and faster correction of deformities like femoral and tibial torsion compared to conventional therapies. Additionally, improvements were seen in long bone malformations, with faster bone healing and consolidation post-osteotomy. Some studies also showed that combining Burosumab with growth hormone therapy further enhanced outcomes, accelerating bone deformity correction and promoting better growth. These findings highlight Burosumab's effectiveness in correcting metabolic imbalances and improving bone structure, with even greater benefits when used alongside growth hormone therapy. **Conclusions:** In conclusion, Burosumab provides substantial benefits in XLH, improving biochemical markers, promoting bone healing, and enhancing physical function. Although some deformities persist, its ability to slow progression and accelerate correction offers significant advantages over traditional treatments. Overall, lasting monoclonal antibody treatment in children with XLH led to significant clinical improvements across various outcomes and showed a favorable benefit-risk profile.

Keywords: Burosumab, X-linked hypophosphatemia, FGF23, bone deformities

COMPREHENSIVE MANAGEMENT OF A PATIENT WITH PSORIATIC ARTHRITIS AND MULTIPLE COMORBIDITIES: FROM DIAGNOSIS TO TREATMENT.

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Introduction: Psoriatic arthritis is a complex systemic inflammatory disease that not only affects peripheral joints and skin(psoriasis)but also leads to inflammation at entheseal sites, digits (dactylitis), and the axial skeleton. It is the most significant comorbidity of psoriasis, as delayed treatment increases the risk of functional impairment and permanent disability. **Case Report:** We present the case of a male patient from an urban area with a severe form of psoriatic arthropathy, confirmed in 2012, resistant and with multiple therapeutic failures. Conventional disease-modifying therapy was initiated with Sulfasalazine 2g/day and subsequently replaced with Methotrexate 20mg/day. He was included in a 1-year clinical trial, then different chains (anti-TNF alpha blockers, IL-17, IL-23) with varying mechanisms of action regarding biological therapy were tried . Due to comorbidities there were also periods of disruption in the continuity of treatment administration (numerous intercurrent infections, a gluteal abscess in 2021, surgical interventions - hernia repair surgery in 2022, aorto-femoral bypass in 2024). **Discussions :** Achieving remission or minimal disease activity in psoriatic arthropathy can sometimes be a challenge for the medical team and also the patient. The presence of severe skin disease and an expressed inflammatory syndrome are predictors of a severe progression of the disease. In this case frequent interruption of biological therapy may have affected the response to treatment. **Conclusions:** The therapeutic response was different, depending on the type of biological therapy chosen, some therapies proved ineffective from the first weeks, or the therapeutic response was lost over time.

Keywords: psoriasis, arthritis, clinical case, biological therapy

CANCER AND COAGULATION: TROUSSEAU WITNESSES LETHAL CONNECTION

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Introduction: In 1865, Armand Trousseau first described a thrombotic syndrome associated with cancer, characterized by cerebral embolism caused by a hypercoagulable state resulting from malignant tumours. Trousseau syndrome is defined as a cancer-related thrombotic event including cerebral infarction, deep vein thrombosis or pulmonary embolism. Thromboembolism in the lower limbs, lungs, brain, heart, heart, kidneys or spleen can lead to death in patients with this syndrome. **Case Report:** A 46-year-old female patient with no pathologic history presents to the smurd UPU on 15.01.2025 for edema in the left latero-cervical, left upper limb and left lower limb, associated with pain and limited mobility. There is left latero-cervical adenopathy of hard consistency, painful upon palpation. Histopathologic examination of the lymph node biopsy revealed lymph node metastases of adenocarcinoma of pulmonary origin and almost complete replacement of lymphoid tissue by tumor tissue. Prior to biopsy, the patient presented with a same-level drop with left hemiparesis due to a cerebral infarction by multiple thrombosis. Echo Doppler showed acute deep venous thrombosis of the left axillary and brachial vein, acute venous thrombosis of the left internal and external jugular vein. Neurologic re-evaluation showed right silvian ischemic stroke, left hemiparesis, and left parietal and left cerebellar intracranial expansive processes. Anticoagulation was initiated with unfractionated Heparin with aPTT monitoring. Laboratory analysis revealed Ddimer > 5000ng/ml, negative troponin, leukocytosis with neutrophilia. Subsequently, anticoagulant treatment with LMWH was introduced. The patient was oncologically discharged with recommendations for continued treatment and periodic re-evaluations. **Discussions :** While thrombotic complications such as venous thromboembolism are the most common, the pathophysiology of Trousseau syndrome involves all components of Virchow's triad. Their interaction is determined by stagnant or turbulent blood flow, vascular wall changes and hypercoagulable state. Cancer cells contribute to the procoagulant state by producing tissue factor (TF), an initiator of the extrinsic coagulation pathway, which is essential for both thrombus formation and tumor progression. In addition, cancer cells also secrete proinflammatory cytokines and express thrombin receptors, resulting in endothelial activation induced by direct interaction with the vascular endothelium, ultimately triggering the release of proinflammatory and procoagulant molecules. **Conclusions:** Trousseau syndrome is a severe manifestation with major implications for the prognosis of cancer patients. Early diagnosis and appropriate management require

a multidisciplinary approach. Understanding the underlying pathophysiological mechanisms is essential for optimizing therapy. The identification of procoagulant biomarkers and the implementation of personalized anticoagulant measures may contribute to reduce thromboembolic risk and improve clinical outcomes.

Keywords: Trousseau’s syndrome, Virchow's triad, hypercoagulable, Ddimeri

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CRT - A LIFE CHANGING PROCEDURE IN A CASE OF NON-ISCHEMIC DILATED CARDIOPATHY

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Introduction: The syndrome known as heart failure (HF) defines the heart's inability to meet the peripheral metabolic demands secondary to structural and/or functional abnormalities. In selected patients, in the presence of ventricular dyssynchrony cardiac resynchronization therapy (CRT) can facilitate the simultaneous contraction of the ventricles, enhancing the volume of blood ejected by the heart, with a direct effect on HF symptoms. **Case Report:** We present the case of a 59-year-old male patient with a history of non-ischemic dilated cardiomyopathy, severe mitral regurgitation, chronic heart failure with severely reduced ejection fraction (EF) who is admitted to the cardiology clinic for dyspnoea and fatigue. Prior to admission, the patient received optimal medical treatment for HF consisting of ARNI, beta-blockers, spironolactone and SGLT2 inhibitors. Laboratory tests were within the normal range, with the exception of NT-proBNP which presented an elevated value of 2628 pg/ml. The EKG showed sinus rhythm, with a heart rate of 78bpm and a major left bundle branch block (LBBB). The echocardiographic exam revealed a dilated left ventricle with severely depressed global ejection fraction, left ventricle apical rocking, septal flash, positive dyssynchrony criteria on echo (SPWMD of 160msec (N under 130msec), difference in the pre-ejection times between the aortic and pulmonic valves of 57 msec (N under 40msec), severe functional mitral regurgitation. Given the clinical and paraclinical circumstances, the patient underwent cardiac resynchronisation therapy, with an immediate improvement of the ejection fraction, reduction of ventricular dyssynchronism (SPWMD 30msec, difference in pre-ejection times of 20msec), reduction of the mitral regurgitation and an overall improvement of symptoms. **Discussions :** For patients in sinus rhythm, with HF symptoms, reduced EF and LBBB with a QRS duration of over 150msec and more than 3 months of optimal medical therapy who have persistent symptoms, CRT is a class I recommendation. The fact that 30% to 40% of patients do not respond to CRT may be a barrier of referral. Thus, continuous educational programmes and scientific sessions are required to ensure dissemination of novel therapies and an increase in the number of candidates who receive optimal treatment. **Conclusions:** CRT is a life-changing therapeutic option for the correction of ventricular dyssynchrony, which worsens or induces HF symptoms in patients with LBBB. Future perspectives include His pacing and left bundle branch area pacing, with promising results in ongoing trials.

Keywords: heart failure, cardiac resynchronization therapy, left bundle branch block, apical rocking

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CLINICOPATHOLOGIC LANDSCAPE OF TENOSYNOVIAL GIANT CELL TUMOR: CASE REPORT OF A COMPLEX ENTITY

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Introduction: Tenosynovial giant cell tumor (TGCT) is an uncommon benign proliferative and inflammatory neoplasm arising from synovia of joints, bursae, or tendon sheaths. Epidemiology points out a wide age spectrum with a peak between 3rd and 4th decades and a predominance among women. In terms of anatomical distribution, it mostly involves the digits and large joints, with rare cases being reported in the spine and neck area. Based on histology and clinical presentation, TGCT are mainly divided in two categories: localized and diffuse type. Our aim was to highlight the key histologic features of TGCT while also presenting the diagnostic challenges related to soft tissue neoplasms. **Case Report:** We report the case of a 67 years-old male patient who presented to the Plastic Surgery Department for a firm, painless nodular mass on his right middle finger, which had gradually increased in size over a one-year period. After subsequent investigations, the patient was referred to surgery. The resected specimen was sent and further processed in the Pathology Department of Mureș County Clinical Hospital, Târgu Mureș. Tissue paraffin-embedded sections were stained using routine Hematoxylin and Eosin stain, and complementary immunohistochemical reactions were performed. Microscopic examination revealed a dermal

based unencapsulated nodular tumor composed of two major cell populations dysplayed in an abundant collagenous stroma: small to medium-sized histiocyte-like cells with pale-eosinophilic cytoplasm and round nuclei along with large epithelioid cells with vesicular nuclei. Among these, numerous 'osteoclast-like' giant cells and focal hemosiderin deposits were noted. Immunohistochemically, the tumor cells expressed CD68 and Desmin, while Ki-67 proliferation index was around 20-30%. The anatomical site, histological appearance and immunophenotype of the tumor cells were compatible with the diagnosis of localized-type TGCT. **Discussions :** TGCT is an umbrella term that encompass a large group of benign fibro-histiocytic tumors. Despite identical histology, diffuse and localized forms have different clinical behavior and management, with the latter being more indolent. In recent years, molecular advances showed that TGCT are characterised by genomic aberrations involving the colony-stimulating factor 1 gene (CSF1). **Conclusions:** Since TGCTs can clinically resemble a wide spectrum of soft tissue lesions, posing difficulties for both clinicians and pathologists, histopathology remains the gold standard diagnostic method for these tumors.

Keywords: soft tissue, benign, tumor, giant cells

A GIANT RIGHT CORONARY ANEURYSM IN THE SHADOW OF ACUTE PULMONARY EMBOLISM - AN EXCEPTIONAL CASE

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Introduction: Coronary artery aneurysms, with an incidence of 0.3% to 5%, are more prevalent in men and typically affect the proximal coronary arteries, especially the right coronary artery. Their causes are multifactorial, including genetic factors, atherosclerosis, vasculitis, and connective tissue disorders like Marfan syndrome. **Case Report:** This report discusses a case involving a 65-year-old male patient presenting with chest pain lasting four days and dyspnea mainly when standing. His medical history includes rheumatoid arthritis (since 2003), renal neoplasm surgery (2016), pulmonary TB (2017) and SARS-CoV-2 infection two months prior. An electrocardiogram revealed sinus rhythm, negative Q and T waves in DIII and aVF and ST depression in V3-V6. Cardiac enzymes were elevated, D-dimers were >500ng/ml, and CT scans confirmed bilateral pulmonary thromboembolism. The scans also showed a large oval formation (60/61/76 mm) originating from the right ventricle, with iodophilia and calcifications, suggesting a partially thrombosed coronary fistula, right ventricle aneurysm, or neoplastic process. **Discussions :** Initial treatment included anticoagulants, dual antiplatelet therapy, antibiotics, diuretics, hepatoprotective agents, beta-blockers, PPIs, trimetazidine, and intermittent oxygen. The patient developed fever and a drop in oxygen saturation to 91%, testing positive for COVID-19. After isolation, monoclonal antibodies were administered, leading to gradual improvement. Post-coronary angiography, ARNI, SGLT2 inhibitors, fibrates and statins were prescribed. Given the patient's high perioperative risk due to TB, recent pulmonary embolism, and obesity, a conservative approach was taken, with regular follow-up using coronary angio-CT or MRI. **Conclusions:** This case underscores the rarity and diagnostic complexities associated with giant coronary aneurysms. The interplay between the patient's extensive medical history and the development of the aneurysm raises important considerations for clinical practice. In March of last year, surgical treatment was successfully performed in Cluj Napoca to exclude the aneurysm and perform coronary bypass.

Keywords: giant coronary aneurysm, fistula, conservative approach, coronary bypass

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WHEN IMMUNODEFICIENCY MEETS INFECTION: CMV ESOPHAGITIS IN A CHILD WITH DIGEORGE SYNDROME

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Introduction: Infectious esophagitis is an esophageal inflammation caused by viral, bacterial, fungal, or parasitic infections. It primarily affects immunocompromised individuals. Common pathogens include *Candida albicans*, *Herpes simplex virus*, and *Cytomegalovirus* (CMV) - a Herpesviridae virus that is typically asymptomatic in healthy individuals yet severe in immunosuppressed patients.DiGeorge Syndrome, a genetic disorder caused by a deletion

on chromosome 22q11.2, presents with congenital heart defects, thymic hypoplasia resulting in immune deficiencies, hypocalcemia due to parathyroid abnormalities, and distinct craniofacial characteristics. **Case Report:** A 7-year-old male patient was hospitalised for odyophagia, retrosternal chest pain, and slight fever. Based on his medical record, he was diagnosed with a mild form of DiGeorge Syndrome. He underwent a series of paraclinical examinations, including Blood Tests, an Esophagogastroduodenoscopy (EGD), followed by Biopsy and Histopathological Investigation. EGD revealed a large ulceration. Cytomegalic cells - enlarged cells with intranuclear inclusions - were identified in the Histophatological Examination.Excluding other causes of Infectious Esophagitis (*Helicobacter pylori* - in case of Barret Esophagitis - *Candida albicans* and *Herpes simplex virus* presenting dissimilar EGD and HPE characteristics), the patient was diagnosed with Infectious Esophagitis with CMV. **Discussions :** The treatment involves Antiviral Therapy with Ganciclovir. Notwithstanding, Ganciclovir may be accompanied by a series of adverse effects, presenting a challenge for pediatric gastroenterologists. In this case, DiGeorge Syndrome led to CMV infection. Due to the patient presenting thymic hypoplasia, it offered the status of an immunocompromised host, which allowed the activation of CMV. As CMV can reoccur, regular monitoring and maintenance of optimal immune function are crucial, especially in patients with DiGeorge Syndrome. **Conclusions:** The evolution of CMV infection is often unfavorable, with multi-organ involvement. Nonetheless, in this case, the prognosis is favorable if the treatment is followed and side effects are strictly supervised. In immunocompromised children with DiGeorge syndrome, CMV esophagitis requires vigilant antiviral therapy and regular monitoring of recurrence.

Keywords: CMV esophagitis, DiGeorge syndrome, immunocompromised antiviral therapy

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THE DOMINO EFFECT: A RARE CARDIAC ANOMALY, THE SILENT ARCHITECT BEHIND A CASCADE OF COMPLICATIONS

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Introduction: Cor triatriatum is an exceptionally rare congenital cardiac anomaly, accounting for 0.1% of all congenital heart defects. It is characterized by a fibromuscular membrane that creates chambers in the atrium, most commonly in the left atrium, potentially disrupting normal intracardiac blood flow and predisposing to thromboembolic events. This condition can trigger a cascade of complications, including recurrent ischemic strokes. The combination of neurologic vulnerability and chronic cardiomyopathy can contribute to a reduced quality of life, making management both medically and emotionally challenging. **Case Report:** A 72-year-old male patient with grade III hypertension, dyslipidemia, grade II obesity and a history of chronic smoking presented with a background of two ischemic strokes in the right sylvian territory and a transient ischemic attack in the right carotid region. Cardiac assessment revealed cor triatriatum sinistrum, alongside left atrial dilation, left ventricular diastolic dysfunction and atrial and ventricular extrasystolic arrythmias. Stroke prevention was recommended by a team composed of neurologist and cardiologist and began with dual antithrombotic therapy. After the initiation of this therapy, the patient developed occult gastrointestinal (GI) bleeding, confirmed by endoscopic findings of duodenal and jejunal angiodysplasias, chronic erosive pangastritis and previously resected colonic polyps. Despite the absence of frank bleeding, the patient progressively developed fatigue, pallor and exertional dyspnea and finally a syncope has appeared. Laboratory findings revealed severe hypochromic microcytic anemia. The anemia was attributed to chronic blood loss secondary to GI bleeding, worsened by ongoing antithrombic therapy. **Discussions :** This wasn't just a case of anemia; it was the end result of a cascade. This case illustrates a cardio-neuro-gastrointestinal pathophysiological sequence: a congenital structural defect increased the risk of embolic strokes, leading to initiation of anticoagulant and antiplatelet therapy. In a clinical case with unknown mucosal angiodysplasias and inflammatory lesions, these medications triggered GI bleeding. The slow, persistent blood loss resulted in iron-deficiency anemia, which became severe enough to require repeated transfusions and intravenous iron therapy. The diagnostic process involved thorough endoscopic evaluations and haematological work-up, ruling out primary marrow disorders. **Conclusions:** This case reminds us that in medicine, one cause rarely walks without consequences. A heart anomaly led to a stroke. The stroke led to treatment. The treatment led to bleeding. And the bleeding led to anemia. In elderly patients with layered pathologies, every choice must look forward to its ripple effects. Multisystem care isn't optional; it's essential.

Keywords: Cor triatriatum, Ischemic stroke, Gastrointestinal bleeding, Iron-deficiency anemia

DIABETIC FOOT- AN ONGOING THERAPEUTIC CHALLANGE

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Introduction: In the 21st century, diabetic foot problems, although preventable, represent one of the most common causes of hospitalization for diabetic patients. Diabetic foot is a chronic diabetic complication that consists of infection, ulceration, or destruction of foot tissues, including bone deformities associated with neuropathy and/or peripheral arterial disease in the lower extremity. It is developed as a consequence of a combination of factors, most commonly peripheral neuropathy and peripheral arterial disease. **Case Report:** We hereby report a case of a 71-years-old male patient diagnosed with Type 2 Diabetes Mellitus (T2DM) for about 8 years on insulin treatment with basal-bolus regimen, chronic alcoholic and smoker for 30 years, was admitted into Diabetology Department for nausea, vomiting, loss of appetite, dyspnea for the last 3 days and high glycemic values (530 mg/dL) caused by non-compliance to diabetic treatment. The physical examination revealed wet gangrene of left forefoot. Computed angiotomography (Angio-CT) of both lower limbs was performed. Regarding the left lower limb extremity, the Angio-CT revealed moderated and severe stenosis on multiple levels and total occlusion of anterior and posterior tibial arteries and total occlusions of peroneal artery. On the right lower limb were found multiple moderate to severe stenosis and partial occlusion of popliteal artery. Vascular Surgery recommended amputation of the left forefoot, but the patient refused the intervention and requested discharge on his own responsibility. **Discussions :** The diabetic foot has a prevalence of approximately 18.6 million people worldwide each year and is associated with increased rates of amputation and death. Diabetic foot is a clinical manifestation of diabetes with a wide range of symptoms including ulceration, osteomyelitis, osteoarticular destruction and gangrene. It is associated with significant impairment of quality of life, increased morbidity and mortality, and represents a huge drain on health care resources. The decision of amputation of a limb is difficult for both medical staff and patient, even if it might be necessary to save life. The fear of losing a visible part of the body leads to a true sense of body disintegration. Probably, the psychological factor was the most important factor that made the patient to refuse the amputation even with the risk of losing his life. **Conclusions:** There should be a paradigm shift towards diabetic foot prevention and health equity is needed to obtain significant reductions of incidence of similar cases regarding diabetic foot, major lower limb amputations, and mortality.

Keywords: Type 2 diabetes mellitus, Diabetic foot, Gangrene

THE SILENCE OF THE LIMBS – AN ECHO LEFT BEHIND BY ENCEPHALITIS

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Introduction: Encephalitis is characterized by the inflammation of the brain parenchyma which leads to severe neurological alteration for more than 24 hours. Most of the patients present a complete recovery after encephalitis, however some unfortunate cases never recover and remain with serious neuropsychological deficits requiring thorough multidisciplinary management for the rest of their lives. **Case Report:** We report a case of a 6 month male infant, born full-term (38 weeks of gestation), weighing 2470 g, healthy, with proper neurological and psychical development until the age of six months when he experienced high fever and agitation treated with antipyretics and antibiotics at home but without any improvement. After six days his status worsened and he was brought to the emergency room with multiple paroxysmal manifestations as fixed gaze and tonic contracture, but also fever (40°C) and maculopapular lesions on the head and neck. Laboratory tests revealed a microcytic hypochromic anemia, thrombocytopenia, increased levels of transaminases, and normal inflammatory biomarkers. The transfontanelar ultrasound revealed a mild ventriculomegaly. Given the pandemics situation, we collected a nasopharyngeal sample and both rapid antigen test and RT-PCR were positive for SARS-CoV-2 infection. Based on the infant's signs and symptoms, we considered the diagnosis of acute encephalitis, but due to his unstable condition, we could not perform a lumbar puncture at that moment. Thus, we initiated treatment with a third-generation cephalosporin, antiviral treatment, as well as depletive treatment, but his condition continued to deteriorate, presenting severe psychomotor agitation, swallowing disorders, uncontrolled movements of the upper limbs, perioral cyanosis and muscular hypotonia. After seven days of hospitalizations the infection was solved, but

the significant impact on nervous system persisted, and unfortunately at the age of 3 years, the patient's follow-up revealed flaccid tetraplegia and severe mental regression with no signs of improvement. **Discussions :** Most of the pediatric cases detected with SARS-CoV-2 infection during the early pandemics commonly presented mild gastrointestinal and respiratory symptoms or were even asymptomatic. Neurological complications were associated with SARS-CoV-2 after a period of time. Further research during the pandemics reported that this virus can be responsible for lesions throughout the central nervous system associating a wide-spectrum of neurological manifestations starting from the mildest ones to really devastating neurological complications. **Conclusions:** Our case highlights the profound impact that Covid-19 had on the young patients and the importance of a detailed follow-up for these patients to enhance our understandings of the neurological impact of this virus in pediatric patients.

Keywords: SARSCoV2, flaccid tetraplegia, neurological alteration

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GRANULOMATOUS APPENDICITIS IN A 15-YEAR-OLD BOY: IS IT TUBERCULOSIS?

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Introduction: Acute appendicitis is very common in children and teenagers. Granulomatous inflammation of the appendix, on the other hand, is a rare finding in appendectomy specimens. The etiology varies widely, ranging from infectious to systemic diseases. Despite this, the histopathological features of the various causes leading to granulomatous appendicitis can often appear strikingly similar. **Case Report:** A 15-year-old boy presented to the emergency unit for the third time in three weeks, following several months of recurrent respiratory infections. His third admission, though, was due to severe abdominal pain, nausea, and fever. Ultrasound examination revealed an appendix with a thickened wall and an appendicolith at the base. The patient underwent laparoscopic appendectomy and a diagnosis of acute phlegmonous appendicitis was made. Histopathological studies showed at first sight the typical features of acute phlegmonous appendicitis: a dense, transmural neutrophilic infiltrate and fibrino-leukocytic exudate in the lumen. What was uncommon was the presence of numerous granulomas in the subserosa and serosa. The granulomas were relatively large, some coalescing, and composed of epithelioid histiocytes surrounded by lymphocytes and giant multinucleated cells. Some exhibited central non-suppurative necrosis. Ziehl-Neelsen, GMS and PAS stains revealed no microorganisms and PCR testing of the biopsy specimen was negative for Mycobacterium tuberculosis. However, one week later, IGRA testing showed Mycobacterium tuberculosis positivity in the blood sample. **Discussions :** The differential diagnosis of granulomatous appendicitis is extensive. In this case, the presence of central necrosis within some of the granulomas made Crohn's disease and sarcoidosis less likely. Parasitic and fungal infections were also ruled out - the typical eosinophilic granulomas were absent, and GMS staining was negative, respectively. Yersinia infection, another relatively common cause, usually presents with suppurative granulomas, which were not seen in this case. Histologically, Mycobacterium tuberculosis infection closely resembles our case, with caseous necrosis being the key finding. Although Ziehl-Neelsen staining and the PCR test were negative, the positive IGRA result raises a question mark. This scenario has been previously reported in the literature, with tuberculosis still being considered a possible diagnosis. **Conclusions:** Although Ziehl-Neelsen staining and PCR testing of biopsy specimens are valuable tools for diagnosing appendiceal tuberculosis, our case highlights their limitations. Thus, clinical and histopathological correlation remains essential in answering the question "Is it tuberculosis?"

Keywords: Granulomatous appendicitis, Intestinal tuberculosis, Mycobacterium tuberculosis

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ISOLATED SPINAL ROSAI-DORFMAN DISEASE: THE ROLE OF HISTOPATHOLOGY AND IMMUNOHISTOCHEMISTRY

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Introduction: Rosai-Dorfman Disease is a rare, benign histiocytic disorder that usually presents as massive, bilateral and painless cervical lymphadenopathy. Extranodal involvement occurs in nearly half of cases, with the most frequent sites affected being skin, bone, sinuses, central nervous system, orbits and retroperitoneum.

Isolated spinal Rosai-Dorfman disease is rare, occurring in less than 1% of all cases with extranodal localization. **Case Report:** A 24-year-old male presented with a 20-day history of bilateral paraparesis of the lower limbs and urinary hesitancy. Cervicodorsal MRI revealed a heterogenous, solid, and infiltrative mass in the epidural space. The lesion extended circumferentially between T1-T6, with a left posterolateral predominance, causing spinal cord compression. Mild oedema was also noted. The patient then underwent T1-T5 laminectomy with complete excision of the mass. Histopathological examination demonstrated abundant histiocytic proliferation in multiple tissue fragments. The histiocytes exhibited ample, foamy cytoplasm and large nuclei, some with prominent nucleoli. This infiltrate was set against a background of lymphocytes, plasma cells and fibrosis. The sample showed important emperipolesis, with no evidence of granulomatous inflammation or necrosis. Immunohistochemistry showed positivity for CD45, CD68, S100, Cyclin D1 and OCT-2 in the atypical histiocytes, with CD138, IgG, IgG4 positive in plasma cells, with an IgG4/IgG ratio of less than 40%. Factor XIIIa, CD1a and Langerin were negative, as were Ziehl-Neelsen, GMS, PAS and Giemsa stains. **Discussions :** The key to diagnosing histiocytic lesions in the spinal epidural space lies in the histopathological and, most importantly, immunohistochemistry studies. Given their rarity and non-specific imaging studies, understanding the differences in immunohistochemistry patterns is essential for an accurate diagnosis. The hallmark feature of RDD - emperipolesis - can be also observed in other conditions, leading to the necessity of further immunohistochemical studies. Negativity for CD1a, Langerin, and Factor XIIIa plays a critical role in differentiating this entity from Langerhans cell histiocytosis and Erdheim-Chester disease. Furthermore, despite the presence of plasma cell infiltration, the IgG4/IgG ratio effectively excludes a diagnosis of IgG4-related disease. Additional staining aids in ruling out mycobacterial, fungal and parasitic infections. **Conclusions:** This case highlights an unusual presentation of Rosai-Dorfman disease, involving the spine without systemic lymphadenopathy. Recognizing this rare entity through histopathological and immunohistochemical evaluation is critical for ensuring timely intervention.

Keywords: Rosai-Dorfman Disease, Histiocytosis, Epidural, Immunohistochemistry

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THE” BROWN TUMOR”: A MANIFESTATION OF SECONDARY HYPERPARATHYROIDISM

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Introduction: The brown tumor characterized by bone lesions is not in fact a "tumor", but a mass, which can occur in patients with chronic kidney disease (CKD) and hyperparathyroidism. This bone disease caused by the parathyroid hormone (PTH) in CKD patients will initiate fibrosis, hemorrhage, and hemosiderin accumulation, producing a specific brown appearance. **Case Report:** We present the case of a 44-year-old male patient with a history of CKD stage 5, undergoing hemodialysis since 2009, multiple bone fractures and severe secondary hyperparathyroidism (HPT) under calcimimetics medication. Due to severe anemia (Hgb 7.4 g/dl), the patient was suspected of malignancy. The clinical examination revealed the lateral diameter of the thorax progressively narrowed, giving a cone-like appearance. Also, the PTH serum level exceeded 2000 pg/mL. On X-ray examination, multiple opacities in the lung or pleural areas were described. Anemia did not respond to rising doses of erythropoietin and no digestive bleeding or other hematological causes were found related. CT scan confirmed multiple costal lesions invading the pleura. Thoracic Ultrasound (US) described the bone lesions more accurately, confirming the costal origin. **Discussions :** The brown tumor is a bone lesion that arises due to excessive osteoclast activity. This form of osteitis fibrosa cystica occurs in severe CKD-HPT patients, especially the ones receiving long-term hemodialysis. The location may vary from case to case, but usually it is found in the mandible or maxilla. In this case, the patient presented the entire thorax deformed, due to bone remodeling. Biochemistry did not reveal increased tumor markers, but remarkably elevated PTH and ALP levels. Considering that and integrating the imaging, scintigraphy and patient's suggestive medical history, the diagnosis of brown tumor with atypical costal origin was confirmed, thus excluding malignancy. Biopsy was not performed, due to the difficulty of histopathological interpretation. The treatment consists of calcimimetics, aiming to balance Calcium and Phosphorus and maintain PTH at an accepted level, suppressing bone turnover. Additionally, parathyroidectomy remains an alternative treatment option, which may lead to the reversal of the lesion, especially in the early stages. However, if an advanced stage is present, medication can be used to promote complete healing of the bone (Bisphosphonates/Denosumab) along with surgical treatment **Conclusions:** This case reveals one of the complications of CKD, bone lesions, in the context of secondary hyperparathyroidism. The brown tumors can mimic remarkably other conditions, such as true tumors and metastases, so the differential diagnosis is based on the suggestive clinical examination and specific imaging modalities.

Keywords: brown tumor, secondary hyperparathyroidism, chronic kidney disease, hypercalcemia

DELUSIONAL DISORDER COMORBID WITH SCHIZOTYPAL PERSONALITY TRAITS

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Introduction: The structure of personality plays a central role in the development of mental illnesses. The presence of pronounced personality traits or even a personality disorder creates a vulnerable foundation on which various psychiatric pathologies may later emerge. **Case Report:** A 43-year-old patient with documented psychiatric history since the age of 21 is brought in as an emergency case, presenting with a psychopathological picture dominated by: delusional ideas of being followed, persecution, harm, interpretative thoughts, suspicion, physical and verbal heteroaggression toward family members, and a delirious-hallucinatory behavior along with mixed insomnia. The first psychopathological episode occurred during military service, due to the inability to cope with the imposed demands, and the patient interrupted the military service to undergo specialized treatment. Following a period of 20 years without psychiatric treatment, according to the heteroanamnesis, the patient has always been more withdrawn, with reduced social interaction abilities, being immersed in his own world.Personality analysis from a dimensional perspective using the DECAS personality inventory reveals low scores in the dimensions of openness, extraversion, and emotional stability, and normal-range scores in the dimensions of conscientiousness and agreeableness. From a categorical perspective, the structured clinical interview for personality disorders - SCID, highlighted pronounced schizotypal personality traits.The paraclinical tests performed reveal elevated levels of triglycerides and cholesterol, with no other changes; EEG - no changes; cranial CT - no changes. **Discussions :** The patient exhibits social withdrawal with greatly diminished relational affinities and possible abstract concerns, aspects explained by the analysis of the profile, which reveals introversion, detachment in relationships, low sociability, and a tendency to idealize. Against the background of his nature, a delusional disorder has overlapped, with an uncertain onset. The introverted temperament combined with difficulty expressing emotions predisposes him to adaptive difficulties.The particularity of the case lies in the uncertain onset of the pathology, which appears on a preexisting background, consequently, schizotypal personality traits. Additionally, it is interesting how the patient adapts to the delusional world as well as to reality, managing for a long time to carry out his professional activities. **Conclusions:** The delusional disorder, which began on the background of schizotypal personality traits, is a complex pathology that requires careful and personalized management to address the symptoms and restore the patient's functionality in as many areas of life roles as possible.

Keywords: Delusional disorder, Schizotypal personality, Delusional ideas

CASE REPORT - A RARE CASE OF BACTERIAL MENINGITIS IN A CHILD WITH A CONCOMITANT VARICELLA-ZOSTER VIRUS INFECTION

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Introduction: Meningitis and infectious encephalitis are serious diseases that can have fatal consequences, mostly in children, especially the bacterial meningitis. Molecular biology test by testing nucleic acids make a fast diagnosis and create the possibility of introducing an appropriate treatment that is more specific in the evolution of the disease. **Case Report:** In our case, a 13-year-old patient presents to the Emergency Department from Sighișoara with headache, fatigue, vomiting and fever. The initial diagnosis is a probable meningitis of bacterial etiology. An antibiotic treatment is started with Cefort and the patient is transferred to the Infectious Diseases Clinic from Târgu Mureș. Afterwards, clinical, radiological and laboratory examinations are carried out, including molecular biology tests that complete the definitive diagnosis. Paraclinical : the cranial computed tomography examination (CT) revealed large fluid collections in the sphenoid, left frontal, left maxillary sinuses and in the ethmoid cells. Examination of the cerebrospinal fluid (CSF) revealed the following: cloudy color, pleocytosis with a predominance of neutrophilic leukocytes, increased proteinuria and low glycouria. Examination of the Gram and Giemsa stained smear indicated the presence of neutrophilic leukocytes and gram-negative cocci with diplo intragranulocyte disposition, raising the suspicion of infection with Neisseria Meningitidis. Bacterial cultivations on specific cultures didn't reveal bacterial growth, the CSF being considered sterile. For a fast diagnosis with high sensitivity and specificity, an automated panel with multiple agents implicated in meningitis / encephalitis was

chosen, which measures genetic material (RNA or DNA) and allows the exact identification of microorganisms even in the absence of a viable bacterial culture. The FilmArray Meningitis / Encephalitis Polymerase Chain Reaction (PCR) panel (BioFire Diagnostics) was used and has revealed the presence of Neisseria Meningitidis infection, accompanied by an infection with the varicella-zoster virus, although the child hasn't showed any suggestive signs of this infection. Following appropriate antibiotic treatment and careful monitoring of the case, the evolution was favorable, the patient being discharged without further complications. **Discussions :** Report of a case of bacterial meningitis with Neisseria Meningitidis in a child, difficult to diagnose clinically, possibly due to a viral infection associated with the disease. **Conclusions:** This case highlights the importance of microbiological diagnosis, especially the molecular one. This technique can be used to diagnose sensitive forms of bacterial meningitis compared to the conventional techniques, allowing a fast and efficient treatment for the patient.

Keywords: meningitis, encephalitis, PCR multiplex, varicella-zoster virus

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A RARE CASE REPORT OF RENAL TUBULAR DYSGENESIS (RTD) IN NEONATE

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Introduction: Renal Tubular Dysgenesis (RTD) is a rare autosomal recessive heterogenous condition acquired during fetal development. Through mutations of the RAS genes responsible for encoding the renin-angiotensin system components, such as AGT, REN, ACE, AGTR1, RTD is characterised by life-threatening systemic afflictions. The essential histological feature is represented by the underdevelopment of proximal tubules, resulting in oligohydraminos. **Case Report:** We report the case of a 27-day-old female patient who was born prematurely at the gestational age of 33/34 weeks. She was diagnosed after birth with severe renal failure. The suspicion of a genetic syndrome and RTD was raised. Immediately after birth, the patient was transferred to the Intensive Care Unit, and invasive ventilatory support was given. The patient's condition worsened throughout the hospitalization, with refractory hypotension and pulmonary hypertension. Death occurred due to severe respiratory failure, and an autopsy was requested. The autopsy revealed the corpse of a premature female newborn with 51 cm length and 4991 g weight with generalized edema. The histopathological examination of the pulmonary parenchyma revealed congested blood vessels and extravasated erythrocytes at the alveolar level. Occasionally, central intraalveolar eosinophilic material and the appearance of "fibrin balls" were noted, indicating acute fibrinous pneumonia, alveolar hemorrhage, and pulmonary edema. Thus, it explained the severe pulmonary hypertension and severe respiratory failure. The microscopic examination of the renal parenchyma revealed numerous immature glomeruli and a reduced number of irregular tubular structures, without visualization of the proximal tubules. PAS-Alcian staining also highlighted the absence of the brush border at the level of proximal tubules. **Discussions :** Literature describes refractory arterial hypotension in case of a RTD, as reported in our case. The clinical course of RTD is severe, as it illustrates anuria, refractory arterial hypotension, and severe cardio-respiratory failure. In the majority of the cases, it leads to early postnatal death. **Conclusions:** Genetic and functional analysis of the renin-angiotensin are essential for a correct etiology and diagnosis, especially in case of a fetal RTD suspicion. In our case, the fetal autopsy confirmed the histopathological aspects of a RTD diagnosis.

Keywords: Renin-angiotensis system, Renal tubular dysgenesis, Oligohydramnios, Inherited

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LYMPHOEPITHELIAL SIALADENITIS (LESA) MIMICKING A TUMOR OF THE PAROTID GLAND CASE REPORT

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Introduction: Lymphoepithelial sialadenitis (LESA), formerly known as benign lymphoepithelial lesion (BLEL), represents an autoimmune inflammatory condition affecting more frequently the major, followed by the minor salivary glands, more common in women, characterized by histological association of lymphoid infiltrate with ductal epithelial hyperplasia, forming lymphoepithelial islands. LESA can be isolated or associated with Sjögren syndrome. **Case Report:** A 51-year-old female patient presented to the Oral and Maxillofacial Surgery Department accusing left parotid gland enlargement. A benign tumor was suspected and a left superficial parotidectomy was performed. Together with two lateral cervical lymph nodes, the superficial lobe of the left

parotid gland was sent to the Pathology Department for histopathological evaluation. Macroscopic evaluation revealed two lymph nodes covered with adipose tissue measuring 40x15x10 mm, and a 45x30x15 mm salivary gland lobe with an irregular surface, presenting a 17x12x10 mm whitish area on the cut section. Microscopically, the parotid salivary gland parenchyma was mostly replaced by lymphoid tissue partially organized in follicles with germinal centers which surrounded epimyoepithelial islands. These islands were formed from ductal cells and myoepithelial cells, showing a positive reaction for the following immunohistochemical (IHC) markers: cytokeratin 7, p63, and SMA. Necrosis, cytonuclear atypia, or atypical mitoses were not observed. The lymphoid infiltrate was mostly represented by CD20+ B lymphocytes, focally with plasmacytoid appearance, without restriction for kappa and lambda light chains, along with CD3+ T lymphocytes, focally organized in follicles with germinal centers, and infiltrating the epimyoepithelial islands. The bcl2 marker was diffusely positive outside of the germinal centers, while the Ki67 proliferation index marked the germinal centers' lymphocytes, thus proving a normal distribution. At the periphery, normal-appearing salivary gland lobules and a few intra-parenchymatous lymph nodes were observed. **Discussions :** LESA can progress to extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue. The histological aspect evaluated on the Hematoxylin-Eosin stain, complemented by the IHC phenotype, confirmed the reactive nature of the lymphoid infiltrate in the current case. **Conclusions:** Histopathological evaluation, supported by IHC determinations, is crucial in differentiating the presence of lymphoepithelial lesions in a reactive versus neoplastic context. Due to the high risk of lymphomatous transformation, follow-up is recommended.

Keywords: lymphoepithelial sialadenitis, lymphoma, Sjögren syndrome

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ACQUIRED THROMBOCYTOPENIC PURPURA: DIAGNOSTIC COMPLEXITY WITH ATYPICAL SYMPTOMATOLOGY CASE REPORT

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Introduction: Thrombotic thrombocytopenic purpura (TTP) is a rare, life-threatening hematologic emergency characterized by the formation of microthrombi in small blood vessels throughout the body. It may be congenital (Upshaw-Schulman syndrome) due to ADAMTS13 deficiency or acquired through autoantibodies that inhibit this enzyme. ADAMTS13 is a von Willebrand factor-cleaving protease that regulates platelet adhesion by breaking down ultra-large vWF multimers. Its measurement is crucial in the diagnostic workup of thrombotic microangiopathies, as severe deficiency strongly supports TTP. Its absence can lead to serious complications such as microangiopathic hemolytic anemia, thrombocytopenia, and acute kidney injury. **Case Report:** Young patient presented to the emergency department with diffuse abdominal pain, nausea, and bloating. Laboratory findings revealed thrombocytopenia, neutrophilia, mild anemia (Hb 11 g/dl), elevated LDH (574 U/L), hyperbilirubinemia (1.43 mg%), and raised inflammatory markers (CRP, ferritin, fibrinogen). Suspecting acute leukemia, the patient was admitted to the hematology department. Clinical examination showed abdominal tenderness, a hyperemic pharynx, bleeding signs, and oral lesions resembling herpangina with white patches on the tongue and buccal mucosa. History revealed consumption of quinine-containing drinks, possible rodenticide exposure, and a family history of cardiovascular diseases. Peripheral blood smear indicated increased schistocytes and reticulocytosis. Bone marrow aspiration ruled out leukemia. Other findings included a negative Coombs test, high D-dimers, normal PT/APTT, low haptoglobin, and ADAMTS13 activity at 0%. Complement testing showed low Factor H (0.32 mg/L), helping to rule out HUS and autoimmune causes. Treatment included corticosteroids, plasmapheresis, and prophylactic anticoagulation with continued monitoring for hemolysis markers. **Discussions :** This case highlights the diagnostic complexity of acquired TTP with atypical symptoms that initially mimicked acute leukemia. Gastrointestinal symptoms, oral mucosal lesions, and misleading lab findings complicated the clinical picture. ADAMTS13 deficiency, as a defining diagnostic feature, along with the complement profile and clinical signs, ultimately confirmed the diagnosis and ruled out alternative possibilities like HUS or autoimmune diseases. **Conclusions:** Acquired TTP requires prompt recognition and immediate treatment to avoid fatal outcomes. This case underlines the importance of considering atypical presentations and using key diagnostic tools like ADAMTS13 and complement testing to ensure early and accurate diagnosis.

Keywords: acquired thrombocytopenic purpura, ADAMTS13, Microangiopathic hemolytic anemia

PSYCHOLOGICAL IMPACT OF BARIATRIC SURGERY – PREOPERATIVE CASE STUDIES

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Introduction: Emotional health and balance are essential for overall wellbeing and performance in lifetime period. Depression experienced before surgery can be linked to several factors, such as low self-esteem due to obesity, social isolation, weight-related discrimination, previous failures in weight loss attempts, and fear of physical and social changes after surgery. Various factors can impact emotional wellbeing throughout life, directly implicated in obesity. **Case Report:** The aim of our study was to evaluate the psychological impact of the bariatric surgery procedure for five patients at "Medical Center TOPMED" in Tg Mureș, particularly in terms of their adherence to post-intervention dietary recommendations. A psychological evaluation was conducted in 2025, using Beck's Depression Inventory, the Depression Scale (DASS-21R), the EDI-3 from Cognitrom, as well as interviews and observations. The study monitored the depression score for preoperative period, in five patients scheduled for bariatric surgery. Results: All patients aged between 20 to 48 reported a chaotic lifestyle, based on unhealthy eating habits, sedentarism and sleep disorders. All patients mentioned subjectively a recent history of depression, but the pre-surgery depression inventory results indicated normal attitudes, with no significant depression present at the time of evaluation. However, emotional regulation and emotional balance were still precarious. Patients reported anxiety related to the uncertainty surrounding the surgery, concerns about body changes, and the fear of losing autonomy post-surgery. The five case studies indicated that the causes of preoperative depression normalized in this small group of patients. Nevertheless, emotional balance was influenced by changes in behaviors such as diet, physical activity, rest, communication, and preventive strategies aimed at controlling any negative changes that may arise. **Discussions :** Psychological evaluation before bariatric surgery is crucial for identifying emotional vulnerabilities and supporting mental readiness for the postoperative lifestyle. The patient's psychological profile reflected both the burden of chronic obesity and the psychological resilience necessary for change. This may be attributed to hope and the positive changes that were anticipated following the surgery, which appeared to foster a sense of optimism and engagement in the process. These findings suggest that a well-structured psychological support system can significantly enhance patient preparedness and long-term outcomes. **Conclusions:** Ongoing support is essential for long-term success, including preoperative counseling to help patients manage the psychological risks of surgery and also postoperative support to help them adjust to new lifestyle changes and the realities of their altered body image.

Keywords: obesity, bariatric surgery, depression, diet

THE LONG-TERM EFFICACY OF LEVODOPA INTESTINAL GEL TREATMENT

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Introduction: Parkinson's disease (PD) is a progressive movement disorder that affects the nervous system. It leads to the weakening, degeneration, and death of neurons in specific areas of the brain, resulting in four main symptoms: tremor, muscle rigidity, bradykinesia (slowness of movement), and postural instability. Levodopa intestinal gel infusion is an effective treatment for both motor and non-motor complications in patients with Parkinson's disease. This method provides stable plasma concentrations of levodopa and reduces motor complications in patients with advanced PD, demonstrating superior motor outcomes compared to oral levodopa therapy. **Case Report:** We report the case of a 66-year-old female patient diagnosed with Parkinson's disease in 2004, with associated cardiac and osteoarticular conditions. Initially, the patient was treated with oral antiparkinsonian medications including Stalevo, Isicom, Azilect, Mirapexin, and Viregyt. In September 2014, the patient presented to the Neurology Clinic II of the Emergency County Clinical Hospital (SCJU) with end-of-dose akinesia and severe peak-dose dyskinesias, ongoing for approximately two years. Given the symptoms, testing and initiation of continuous 24-hour therapy with Duodopa (intestinal levodopa gel via pump - 1x1.2 cassettes/day) was considered. The set dosage was: morning dose (MD)-9.0 ml, continuous rate (CR)-5.1 ml/h, extra dose (ED)-3.0 ml, up to a maximum of 5 ED/day, in combination with Azilect. In March 2018, the patient returned to SCJU complaining of worsening tremor, nausea, and abdominal pain, leading to an increased infusion rate (CR-9 ml). In March 2025, the patient again presented to SCJU with aggravated tremor, bradykinesia, and gait disturbances. As

a result, the therapy was switched to LECIG gel (Levodopa/Carbidopa/Entacapone-1.16 cartridges/day, administered continuously 24h/day, with dosage: continuous rate (CR)-1.8 ml/h, extra dose (ED)-1.5 ml, maximum 5 ED/day), in combination with Hiperavia, Rivotril, Amitriptyline, and Gabaran. Under this treatment, a significant improvement in symptoms was observed. **Discussions :** This case illustrates the complexity of managing Parkinson's disease and the necessity of continuous treatment adjustment. In this context, the beneficial effects of Levodopa intestinal gel therapy are evident, providing the patient with sustained symptom relief without frequent dose modifications. This approach contributed to delaying functional decline and the onset of complications, leading to an overall improvement in quality of life. **Conclusions:** This case supports the therapeutic value of intestinal Levodopa gel administration as an effective and sustainable option in the long-term management of advanced Parkinson's disease, demonstrating significant improvement in motor symptoms and a notable reduction in the frequency of exacerbation episodes.

Keywords: ,,Parkinson’s disease”, ,,Levodopa intestinal gel”, ,,Motor complications”, ,,Dyskinesia”

INVESTIGATING HYPERTHERMIA DEATHS: FORENSIC INSIGHTS INTO FATAL HEAT EXPOSURE

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Introduction: Thermal homeostasis is maintained through a balance of heat production and heat dissipation, and disruptions in this balance can lead to the entire body being exposed to elevated temperatures, resulting in hyperthermia. It can range in severity from heat cramps and heat syncope, to heatstroke, leading to confusion, unconsciousness, seizures, cerebral edema with intracranial hypertension, coma, or even death. Except for the skin modifications consisting in first and second degree burns, autopsy findings are not specific and include multiorgan and vascular congestion, petechial hemorrhages, pulmonary and brain edema. Most fatalities resulting from prolonged exposure to high temperatures in forensic practice typically involve young children who are either left unattended in cars or accidentally become trapped inside a vehicle. **Case Report:** The Forensic Department of Târgu Mureș reported two cases. One of a 48-year-old man who was found dead inside his car directly exposed to the sun, the toxicology test indicating a blood alcohol level of 2.50 g/L, and and one of a 3-year-old girl, who according to the investigation data, was also found dead, trapped inside a car after a game of hide-and-seek. In both cases, the autopsy reports concluded that death was violent due to hyperthermia after prolonged exposure to elevated temperatures. **Discussions :** On sunny days, the inside of a vehicle can rapidly reach hazardous temperatures, as cars parked in direct sunlight heat up quickly due to the greenhouse effect. Children are more prone to heat stress due to their immature temperature regulation systems, faster metabolism, and a higher surface area relative to their body mass. Alcohol consumption can significantly increase the risk and severity of hyperthermia. The combination of alcohol and environmental heat can impair the body's ability to cool itself, leading to dangerous consequences. **Conclusions:** Incidents of child hyperthermia inside cars are entirely avoidable. Caregivers should be encouraged to always keep parked vehicles locked and educate children on the dangers of getting into an unattended vehicle, explaining that cars are unsafe play areas. Corroborating the autopsy findings with the investigation data is of paramount importance for establishing the accurate cause of death in forensic medicine.

Keywords: hyperthermia, forensic medicine, trapped child

CLASSIC FINDINGS IN OSTEOPOROSIS - CASE REPORT

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Introduction: Many physiological changes submerge as people age, some of them being harder to bear with compared to others. Given the risk factors that the patients have, the treatment should be personalised in order to ensure a better quality of life. Besides hypertension and vision loss, the most common causes for elder women to present into a doctor's office are joint pain and bone fractures. The majority of the fractures found in women past the menopausal age are caused by the loss of BMD which is due to the hormonal imbalance. **Case Report:** This case presents an 84 year old woman diagnosed with type II diabetes mellitus and essential arterial hypertension, who has suffered a left peritrochanteric hip fracture a few weeks prior to the present follow up. The fracture was

stabilised using a gamma nail and osteosynthesis. However the patient continues to complain about pain in both hips, worse in the left, along with the inability to move her left thigh. On the clinical exam there was noticed the presence of accentuated thoracic kyphosis and degenerative aspect of the lumbar vertebrae and calcification of the femoral artery bilaterally. The modified Schober test could not be performed due to pain in the lumbar and pelvic areas, the Lasegue test was negative and the Patrick test was positive on the right and on the left side it could not be performed due to pain. **Discussions :** After the surgery, the team requested an X-ray which showed an unconsolidated hip fracture with metal osteosynthesis (DHS rod), diffuse osteoporosis, advanced coxarthrosis on the left side and moderate on the right and a 2 cm calcified uterine fibroid. Given the altered calcium and phosphate metabolism along with stage 3 kidney failure which implies low metabolism of vitamin D, the patient's condition did not improve since the surgery. A CT-scan was requested after 4 weeks , due to increasing pain. This showed a condition of unconsolidated past fracture in the left peritrochanteric area, fixed by metal osteosynthesis with gamma nail and bone fragment detached, internally displaced. **Conclusions:** Osteoporosis overlaid with old age is the most difficult pathology to deal with. Although the rehabilitation process takes much longer for these patients compared to patients who do not have a background of osteoporosis, their life quality can be improved not just surgically but also with the right physiotherapy and medication.

Keywords: osteoporosis, fracture, osteosynthesis, menopause

IMPORTANCE OF PATIENT CLINICAL EXAM IN DIAGNOSTIC RADIOLOGY

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Introduction: The treatment plan for every patient is based on the main diagnosis and the risk factors associated. But many times our patients have multiple hard to manage illnesses that raise the difficulty bar of each case. It is important to be aware of the patient's medical history and keep in mind which treatments could improve or worsen their condition. **Case Report:** This case presents an 82 year old female patient who was admitted to the clinic with the following complaints: walking and moving with difficulty and left thigh drug-resistant pain. Her medical history includes: essential arterial hypertension, recently resected malignant colon tumor, herniated lumbar disk, left coxofemoral artery prosthesis and a stent placed on the right ureter. During the clinical exam the main findings were: a hypersthenic patient, shortened right leg by approximately 1.5 cm and a post-thrombotic syndrome of both lower limbs. The patient has difficulty moving in and out of bed, anosmia, hearing loss, possible pain-free walking over short distances, abolished deep-tendon reflexes in the distal lower limbs, hypoesthesia of the left L4 dermatome. Paraclinical findings include: hyperuricemia, atherosclerotic angiopathy and senile cataract. **Discussions :** There was a head CT scan performed which revealed a few hypodense lesions of old ischemic appearance at the level of the semioval centers, minimal leukoaraiosis, calcified atheromas at the level of the ICA and bilateral distal vertebral arteries, osteolytic lesion at the level of the frontal cranial calotte on the left side that interrupts the internal bone plate, of approximately 16/10mm that seems to infiltrate the cerebral cortex. The team was concerned about the differential diagnosis between a possible solitary skull plasmacytoma (based on native CT/absence of Bence Jones proteins/age) and/or metastasis given the history of colon cancer. However after the surgical procedure of the lesion with the pathology examination of the resected area and other imaging findings it was proven that the patient indeed had metastases. **Conclusions:** In many situations when the patient's life quality has improved, a wild turn is not expected. When the laboratory or imaging findings are suspicious the medical team is prepared for the worst case scenario and they work among multiple specialties in order to ensure the most beneficial treatment plan.

Keywords: plasmacytoma, metastasis, malignant, diagnosis

NEUROFIBROMA OF THE HYPOPHARYNGEAL-LARYNGEAL REGION: A CASE REPORT

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Introduction: Neurofibroma is a benign nerve sheath tumour that is characterized by a neural component that consists of non-malignant fibroblastic tissue and transformed Schwann cells. Clinical features can include the development of soft, painless, skin coloured lesions across the skin, while the deeper tissue involvement is present in NF-1 associated neurofibromas. They can either be sporadic or, as in our case, as part of Neurofibromatosis

type-1 (NF-1). Due to the rarity of laryngeal localisation of neurofibromas, there are delays and challenges in the diagnosis and symptoms can easily mimic more frequent upper airway pathologies. **Case Report:** We present this case report of a 42-year-old woman who presented to the Otorhinolaryngology department complaining of progressive dyspnea and globus sensation in the throat. From her medical history it is notable to mention that the patient presented skin lesions with the same microscopic aspect as neurofibroma. A laryngoscopic examination was performed and a hypopharyngeal-laryngeal mass was excised for further histopathological analysis in the pathology department. Macroscopically, the excised mass has a round-ovoid shape, unencapsulated, elastic consistency and dimensions of 33x22x16 mm. Microscopically, we note the presence of spindle cells with elongated wavy nuclei, characteristic for neurofibroma. Immunohistochemically, S100 and CD34 marked the thin nerve fibers and the vascular structures were positive for SMA, therefore confirming the diagnosis. Furthermore, following the histopathological report, the patient tested genetically positive for Neurofibromatosis type 1. **Discussions :** Primary mesenchymal laryngeal lesions are rare, and even more so the ones with nervous differentiation such as neurofibroma. They are usually associated with NF-1 and can be potentially life-threatening due to airflow obstruction. Neurofibroma must be taken into account more often in the differential diagnosis of other laryngeal tumours, as well as nerve sheath tumours such as Schwannomas. Immunohistochemical markers, including S100, SOX10, CD34, EMA or NFP, play a key role in establishing a correct and prompt diagnosis. **Conclusions:** Given the rarity of laryngeal involvement in Neurofibromatosis type 1, our case highlights the importance of thorough immunohistochemical, histological and genetic examination for NF1 in making the distinction from other benign mesenchymal tumours that can exhibit overlapping features.

Keywords: Neurofibroma, Laryngeal neurofibroma, Neurofibromatosis type 1

GAVE SYNDROME IN A PATIENT WITH RELAPSED DIFFUSE LARGE B-CELL LYMPHOMA: A RARE ASSOCIATION

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Introduction: Gastric Antral Vascular Ectasia (GAVE) is one of the rarest causes of chronic gastrointestinal bleeding and is mostly associated with liver cirrhosis, autoimmune conditions and iron deficiency anemia, but uncommonly linked to hematologic malignancies. It may present with a "watermelon" aspect in males with cirrhosis or with a "honeycomb stomach" aspect in females associating autoimmune diseases. **Case Report:** We present the case of a 76-year-old woman with GAVE syndrome as a manifestation of a recurrent lymphoma, making it a rare association. She presented in the ER accusing marked fatigue that progressed over the course of a week. The patient's history reveals GAVE syndrome previously treated with multiple argon plasma (APC) settings (last one in 2023), important cardiovascular diseases, previous stroke, previously chemo treated diffuse non-Hodgkin lymphoma (DLBCL). Upon admission, the laboratory tests underlined severe iron deficiency anemia (6.05 g/dL), elevated inflammatory markers (ferritin, ESR) and elevated levels of LDH (470 U/L). Taking into account her history of GAVE syndrome and melena, associated with severe iron deficiency anemia, we decided to admit the patient into the gastroenterology clinic for further investigations and treatment. The upper digestive endoscopy revealed multiple pseudopolypoid elevations in D2 and fibrin that covers the entire gastric mucosa. From the gastric angle to the cardia, infiltrative elevated gastric lesions were observed, circumferentially involving the entire corpus and fundus, with necrotic and haemorrhagic areas. Multiple biopsies were taken to confirm the suspicion of gastric lymphoma. Moreover, a head CT effectuated upon admission revealed a space-occupying extracranial process in the temporal lobe with dimensions of 15x12 mm with parafluid densities, without acute lesions. **Discussions :** Subsequently, the histopathology report confirmed the diagnosis of Diffuse large B-cell lymphoma, non-germinal center subtype of the gastric and duodenal mucosa. Since GAVE is not usually linked to lymphoma, this case suggests either a paraneoplastic phenomenon or a mucosal involvement by lymphoma recurrence. Possible mechanisms of this link might involve endothelial changes from cytokines or direct infiltration. The pseudopolypoid and fibrin-covered mucosa formations found by EGD complicate the diagnosis, which is also easy to miss when GAVE masks an underlying lymphoma. **Conclusions:** To sum up, GAVE syndrome is rarely installed on a lymphoma recurrence, underlining the need for vigilance in unexplained cases of anemia in elderly patients, even with a history of cancer in remission. The multimodal diagnosis is crucial - clinical, endoscopic, histological and imagistic.

Keywords: GAVE Syndrome, Gastric antral vascular ectasia, Diffuse large B-cell lymphoma

MISPLACED AND RELENTLESS: A RARE TUMOR'S UNUSUAL JOURNEY

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Introduction: Liposarcomas are neoplasms that arise from adipose tissue and they represent 1% of all newly diagnosed malignancies. Among these, primary retroperitoneal sarcomas account for 20%, of which 5% are the myxoid type. **Case Report:** We report the case of a 64 year-old woman who presented to the Surgery Department accusing diffuse back pain. A CT was performed and revealed a large retroperitoneal mass, measuring 260x250x150mm and 3.8kg. The patient underwent en bloc resection. Sectioning through the mass showed a polynodular structure with heterogenous appearance: yellow-tan color with areas of fibrosis. Microscopic sections showed a predominant growth of variably sized adipocytes, tumoral cells with marked cyto-nuclear pleomorphism, as well as the presence of fibrous septa. The final diagnosis was well differentiated giant retroperitoneal liposarcoma. One and then 3 years later, there was a local recurrence of the tumor with the same diagnosis, but then it relapsed again after just 1 year. This time, the microscopy showed signs of myxoid liposarcoma: a "chicken wire fencing" look alike network made of thin-walled, arborized and curving capillaries and fusiform-shaped tumoral cells with marked pleomorphism. **Discussions :** Generally, liposarcomas are a rare type of cancer that appear in the arm and leg muscles, although, they can begin in the fat cells anywhere in the body, as in this case, in the retroperitoneum. Due to its localization, the tumour can grow to massive sizes without getting noticed, because it does not cause any symptoms. It infiltrates easily, it is difficult to obtain complete surgical resection and so the risk of reccurence is very high. The majority of liposarcomas are well differentiated, being hard to tell apart from the benign tumors, but they can worsen progressively to myxoid and then dedifferentiated liposarcomas. The particularity of the case is emphasized by the uncommon localization of the tumour, its numerous recurrences and its subtype. **Conclusions:** The case illustrates the uncertainty of one tumor and the importance of a great interdisciplinary management for a correct and complete diagnosis and plan of treatment.

Keywords: myxoid liposarcoma, retroperitoneal liposarcoma, multiple recurrence, chicken wire fencing

ALTERATION OF ENZYME LEVELS IN THE CONTEXT OF EMBOLISM

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Introduction: Acute upper limb ischemia is a serious condition resulting from the abrupt interruption of arterial blood flow to the upper extremity, threatening both the limb and the patient's life. While it's less common than lower limb ischemia, its recognition and prompt treatment are essential. The most common cause is embolism, typically cardiac in origin, such as atrial fibrillation, myocardial infarction, or infective endocarditis followed by thrombosis, arterial dissection or trauma. A key aspect of assessing ischemia severity lies in biochemical and enzymatic changes, which reflect ongoing tissue injury. Enzyme levels like creatine kinase (CK) and lactate dehydrogenase (LDH) rise in response to muscle cell damage from prolonged lack of blood flow. These elevated enzyme levels help diagnose the condition and monitor treatment effectiveness. **Case Report:** We present the case of an 83-year-old female with a history of hypertensive heart disease, grade 2/3 mitral and tricuspid insufficiency, poorly controlled blood glucose, prior ischemic stroke in the right Sylvian region with left-sided hemiparesis, grade 3 arterial hypertension, and non-anticoagulated atrial fibrillation of an unknown onset. On 01.03.2025, she arrived at the Emergency Department with severe pain, numbness, and limited movement in her left arm. Laboratory results showed marked elevations in CPK (47,254*URL), APTT (111.2*URL) and AST (540*URL). Imaging confirmed acute ischemia of the left upper limb, leading to urgent surgical intervention to restore blood flow to the subclavian, radial, and ulnar arterial axis. **Discussions :** On March 10, the patient began anticoagulant treatment. Her condition improved, with stable vital signs, no fever, reduced swelling in her left arm, and almost full recovery of arm movement. The absence of anticoagulation likely contributed to the embolic event, leading to critical arterial obstruction. The marked elevation in muscle and liver enzymes, particularly creatine phosphokinase and aspartate aminotransferase indicated serious muscle damage. Quick diagnosis, prompt imaging and surgery were crucial to saving the limb. The patient was recommended to attend occasional follow-up consultations. **Conclusions:** This case highlights the severe and potentially limb-threatening consequences of acute upper limb ischemia in a high-

risk, elderly patient with multiple cardiovascular comorbidities and untreated atrial fibrillation. It emphasizes the importance of early recognition, treatment and management of embolic complications in patients with atrial fibrillation, as well as the critical role of anticoagulation in preventing strokes and embolic events.

Keywords: Acute upper limb ischemia, Embolism, Atrial fibrillation, Muscle enzyme elevation

THE RELEVANCE OF GENETIC TESTING IN CHILDREN WITH SEIZURES

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Introduction: Epileptic encephalopathy represents a severe form of epilepsy usually refractory to treatment. The clinical picture involves frequent refractory seizures that lead to global development disorders. Therefore, children with epileptic encephalopathy should benefit by a multidisciplinary approach, the only one that can improve the long-term patient's outcome. **Case Report:** We present the case of a 4-year-old male patient, previously diagnosed with epilepsy since the age of 2 years. Despite the fact that he received multiple anticonvulsant drugs such as phenobarbital, carbamazepine, levetiracetam, sodium valproate and clobazam, the seizures persisted. The seizures were manifested during both night and day, commonly triggered by fever, but were also not related with fever. The patient presented a wide spectrum of seizures from focal to generalized ones. Although initially, he presented a normal neurological development, after the onset of the seizures without proper response to treatment, the patient's neuro-psychological condition kept worsening with each seizure presenting developmental regress and retardation. The awake electroencephalogram (EEG) revealed synchronous or asynchronous spike waves with focal character, while the sleeping electroencephalogram pointed out the augmentation of these waves with the same focal aspect, but especially on the right derivations. The brain magnetic resonance imaging was normal. Based on all the aforementioned facts, the pediatric neurologist raised the suspicion of an epileptic encephalopathy with genetic determinism. The whole exome sequencing detected a pathogen variant KCNA2:c.1214C>T, rs876657389, heterozygous genotype, gene that was associated with type 32 development epileptic encephalopathy (type 32 DEE). Based on the literature evidence, the pediatric neurologist added acetazolamide to the patient's treatment. **Discussions :** Type 32 DEE is a neurological disorder characterized by the onset of different types of seizures including febrile and myoclonic seizures. Initially, the seizures were reported to be refractory in several cases, but they can disappear during childhood. Nevertheless, the neurological deficits persist, the patients presenting the impairment of the intellectual and language development. The EEG changes were variable including multifocal sharp waves, slow sharp waves, polispike and generalized spike waves. The treatment with acetazolamide was suggested to improve the signs and symptoms in patients with type 32 DEE. **Conclusions:** The management of patients with epileptic encephalopathy represents a real challenge for the pediatric neurologist, especially in cases who are refractory to treatment. Therefore, the involvement of a multidisciplinary team including also a pediatrician and genetic specialist is the best choice for the patient's further development.

Keywords: seizures, children, developmental epileptic encephalopathy

BEYOND THE MIRROR: UNCOVERING AN UNUSUAL CAUSE OF ANOREXIA NERVOSA IN A TEENAGE GIRL – A CASE REPORT

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Introduction: Anorexia Nervosa is a severe psychiatric disorder with high mortality, often linked to significant medical complications. While its exact cause remains unclear, a combination of social, biological, and psychological factors is believed to contribute. This report presents a case where a 16-year-old female, initially diagnosed with anorexia nervosa, was later found to have an undetected HIV infection, leading to severe malnutrition and cachexia. **Case Report:** The patient, who presented with nasal discharge, cough, abdominal pain, and a history of recurrent upper respiratory infections, had lost 15 kg over the past year. She was initially treated for psychiatric anorexia but was found to be severely underweight, dehydrated, and anxious, with an oral Candida infection and laboratory evidence of anemia and thrombocytopenia. HIV testing revealed a positive result, with an HIV-1 and HIV-2 antigen-antibody level of 178.67 S/CO and a CD4 count of 103/µL. She was started on antiretroviral therapy (Emtricitabine/Tenofovir and Dolutegravir) and tolerated it well. **Discussions :** HIV can lead

to significant weight loss through mechanisms like anorexia, malabsorption, and metabolic disruptions, contributing to cachexia. The immune system's compromise can also lead to opportunistic infections and gastrointestinal complications, worsening the patient's condition. **Conclusions:** In this case, the diagnosis of anorexia nervosa initially delayed the identification of HIV, underlining the importance of routine HIV testing in patients with unexplained weight loss. Antiretroviral therapy proved essential in this case, and although medications like Dronabinol and Megestrol acetate may be used for anorexia in HIV patients, their drawbacks must be carefully considered.

Keywords: Anorexia Nervosa, Weightloss, HIV

POST - NEPHRECTOMY PSEUDOANEURYSM OF THE RENAL ARTERY: A CASE OF ENDOVASCULAR EMBOLIZATION MANAGEMENT

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Introduction: The renal arteries are two major large vessels arising directly from the abdominal aorta. Although pseudoaneurysms that may occur at this level are rare, they can be life - threatening due to their potential rupture and massive peritoneal hemorrhage. This case highlights the success of a minimally invasive procedure, using the cyanoacrylate (Magic Glue™) embolization as an effective treatment technique. **Case Report:** We present a case of a 59-year-old male patient with a history of anterior renal tumor resection, who underwent radiological and imaging investigations at the Interventional Radiology Department after presenting with macroscopic hematuria. Angio - CT revealed a pseudoaneurysm of the renal artery, causing compression of the renal parenchyma. For treatment, it was decided to perform an endovascular intervention, with renal artery catheterization using a Cobra 2 4F catheter, after it was cleared with 33% glucose solution to prevent the risk of clogging. The pseudoaneurysm was successfully embolized using cyanoacrylate (Magic Glue™), leading to definitive hemostasis and a good outcome for the patient. **Discussions :** Although the renal artery pseudoaneurysms are rare, they can lead to severe complications that can endanger the patient's life. Endovascular embolization with cyanoacrylate is a good technique for treatment as it provides an effective - durable occlusion of the aneurysm and reduces the adjacent renal parenchyma damage. Proper clearing of the microcatheter with glucose was crucial to avoid its clogging, a common complication that can occur when using an embolic agent. **Conclusions:** This case emphasizes the importance of detecting the pseudoaneurysms as quickly as possible and understanding its complications. A correctly performed minimally invasive endovascular treatment ensures not only the resolution of the pseudoaneurysm itself, but also the best possible outcome for the patient.

Keywords: pseudoaneurysm, hematuria, embolization, microcatheter

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MIXED PULMONARY EMBOLISM IN A PATIENT WITH COPD: DIAGNOSTIC CHALLENGES AND IMAGING INSIGHTS

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Introduction: Pulmonary embolism is the third most common cardiovascular cause of death after myocardial infarction and stroke. When acute emboli occur on a background of chronic thromboembolic disease diagnosis becomes challenging, particularly in patients with chronic obstructive pulmonary disease (COPD), where baseline symptoms can mask acute decompensation. **Case Report:** A 71-year-old male with GOLD II COPD, a 33 pack-year smoking history, hypertension, recent urologic surgery, and a history of COVID-19 presented with resting dyspnea, pleuritic chest pain, dry cough, hemoptysis, and asthenia. Initial chest radiography showed right basal consolidation suggestive of pneumonia. CT pulmonary angiography revealed: central and segmental filling defects (acute thrombi), pulmonary artery dilation, mosaic perfusion pattern indicating heterogeneous pulmonary blood flow, caliber reduction of peripheral pulmonary vessels, linear scarring and post-infarction changes , all consistent with chronic embolism. Transthoracic echocardiography demonstrated right ventricular dilation (40 mm), mild pericardial effusion, and a left ventricular ejection fraction of 40-45%. Laboratory testing showed elevated D-dimer levels (770 mg/mL), though interpretation was limited by chronic inflammation. Lower-limb Doppler ultrasound excluded deep vein thrombosis. Malignancy and thrombophilia screening were negative. **Discussions :** The patient received therapeutic anticoagulation with low-molecular-weight heparin (clexane 2 x 0,6 ml) later

transitioned to long-term apixaban (5 mg twice daily). Supportive therapy included bronchodilators, macrolide antibiotics, and cardiovascular optimization. Additionally, influenza and pneumococcal vaccinations were administered. Clinical improvement was observed, with resolution of respiratory symptoms and stable discharge on chronic anticoagulation. **Conclusions:** This case illustrates the diagnostic difficulty of acute-on-chronic PE in patients with COPD and overlapping symptoms. CT angiography was key in identifying chronic embolic changes such as pulmonary artery dilation and caliber reduction of peripheral vessels. In the context of non-specific D-dimer elevation, imaging remains the cornerstone of diagnosis. Long-term anticoagulation and risk factor management are essential to prevent recurrence.

Keywords: mixed pulmonary thromboembolism, CT angiography, COPD, Pulmonary dilatation

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TRAUMATIC BRAIN INJURY: TRIGGER AND CURE FOR PANHYPOPITUITARISM - A CASE REPORT

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Introduction: Panhypopituitarism (PHP) is a rare condition that involves a lack of all hormones secreted by the pituitary gland: growth hormone (GH), thyroid-stimulating hormone (TSH), adrenocorticotropic hormone (ACTH), gonadotropins and prolactin. PHP can be caused by various factors such as pituitary tumors, trauma, infections, or genetic conditions. **Case Report:** We report a case of a 62-year-old male with history of traumatic brain injury (TBI) presented with fatigue, weight loss, decreased appetite, fever, chills, myalgia, temporo-parietal headache, polydipsia and polyuria. On examination there were observed: pallor and dehydration of the skin and mucosae and a blood pressure of 95/75 mmHg. After lab test were done, the patient was diagnosed with PHP and a MRI showed a calcified stationary pituitary adenoma (PA). Further investigations on the case showed that the tumor was present on a previous emergency CT-scan done for a TBI, but it was not diagnosed at that moment. A neurosurgical exam established that a non-surgical approach of the case is optimal because the tumoral growth was stopped by a second TBI. At the moment the patient is following a substitution therapy for steroid and thyroid hormones. **Discussions :** The presented case is rare due to the association of a TBI with a PA, possible induced by the TBI. Moreover, a second TBI is thought to be responsible for the impairment of the tumor progression. Even though the majority of PAs are surgically solved, in this particular case of PHP, a surgical procedure was not needed because the patient presented with a stationary calcified tumor. TBI might trigger changes in the pituitary gland's cellular structure, possibly leading to the development of PAs, although the exact mechanisms are not fully understood. Although extremely rare, in some cases, trauma may trigger changes in the pituitary tumor's environment that could cause the tumor to shrink. This could happen through various mechanisms such as hemorrhage within the tumor. **Conclusions:** In this specific case of PA, TBI seems to be the one responsible for both the evolution and involution of the tumor. The patient gradually developed PHP without noticing any symptoms due to slow progression of the tumor which led to a late diagnosis. Fortunately the second TBI stopped the evolution of the tumor, preventing this way the classical complications and making the surgery unnecessary.

Keywords: Traumatic Brain Injury, Pituitary Adenoma, Panhypopituitarism

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THE MODIFICATION OF D-DIMERS IN THROMBOPHILIA – A CASE REPORT

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Introduction: D-dimers are a product of cross-linked fibrin degradation that are used as a biomarker for assessing the state of hypercoagulability. Some of the most important clinical usages are for detecting deep vein thrombosis, pulmonary embolism, disseminated intravascular coagulation, and stroke. This case report intends to highlight the correlation between elevated D-dimers levels and the onset of clinical exacerbations in a pediatric patient. **Case Report:** We report the case of a 4-year-old girl with bilateral superior and inferior limb amputations, diagnosed with systemic lupus erythematosus and antiphospholipid syndrome. The patient presented neurological, cutaneous, and serosal manifestations (tonico-clonic seizures, hemorrhagic lesions, and pleural and pericardial effusions). To support this diagnosis, several tests were conducted, and the findings confirmed: positive Anti-nuclear Antibodies (ANA), Anti-double-stranded DNA (dsDNA), and Anticardiolipin Antibodies (aCL), decreased C3 levels, a positive Coombs test and thrombocytopenia. The patient was admitted multiple times to the hospital during 2023-2025, the

last admission being in February 2025 for a clinical and biological reevaluation. The levels of D-dimers during the hospitalizations were constantly increased, with two values being remarkably high (6384 and 7617 ng/mL). These numbers were correlated with the dimensions of the degraded thrombus. The smallest entry was 254 ng/mL, with 56 units over the normal upper limit. This value was measured 3 months after the first amputation, showing an improvement of the patient's clinical state. Every spike in the trend of D-dimers can be correlated with notable clinical consequences, which consist of ischemia and the need for subsequent surgical intervention. Considering the patient's hypercoagulability and her clinical history, D-dimers levels were assessed regularly. Repeatedly elevated levels were interpreted as potential indicators of thrombotic activity and led to the decision to perform Doppler ultrasonography for imaging confirmation and, also, to adjust the patient's anticoagulant treatment. **Discussions :** D-dimers have been reported in medical literature as an additional investigation for assessing the duration of the anticoagulant treatment and the recurrence of hypercoagulability complications. This case report highlights the necessity of further studies that may explore the predictive value of D-dimers variation and the possibility of using these fluctuations for preventive strategies in at-risk patients. **Conclusions:** It is important to underline the increased D-dimers levels manifested in the period the patient needed surgical interventions. Furthermore, it helped the clinicians to decide when to perform imagistic investigations, especially Doppler ultrasonography. In conclusion, the regular reassessment of D-dimers served as an important tool for determining the patient's risks.

Keywords: D-dimer, thrombosis, antiphospholipid syndrome, limb amputations

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PERSONALIZED MANAGEMENT OF SEVERE UNCONTROLLED ASTHMA: A CASE STUDY EMPHASIZING GINA GUIDELINES AND BIOLOGIC THERAPY INTEGRATION

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Introduction: Severe uncontrolled asthma (SUA) represents a significant healthcare challenge, characterized by persistent symptoms and frequent exacerbations despite optimal treatment. This condition affects a substantial subset of individuals with asthma, leading to decreased quality of life, increased morbidity, and elevated healthcare expenditures. The complex and heterogeneous nature of SUA often necessitates a multi-faceted approach to management, including advanced pharmacotherapy, education, and lifestyle modifications. An in-depth understanding of the underlying pathophysiology, potential triggers, and the psychosocial implications of living with SUA is crucial for developing effective interventions and improving patient outcomes. **Case Report:** A 52-year-old female with severe uncontrolled asthma (SUA), characterized by longstanding, inadequately managed treatment with an inhaled corticosteroid (ICS) and a long-acting Beta-2 agonist, allergic rhinitis, sinusitis, anxiety-depressive syndrome, hypertension, and dyslipidemia experiences now dyspnea upon minimal exertion, with nocturnal paroxysmal episodes occurring 2-3 times per week, and 2-3 exacerbations annually requiring systemic corticosteroid intervention. Clinical findings indicate bilateral wheezing and crackles, with a resting SpO2 of 90%, decreasing to 87% during exertion. The Asthma Control test (ACT) - 15 points, indicates a poorly controlled disease. The spirometry indicated severe obstructive ventilatory dysfunction and her lab results showed eosinophils count at 233 cells/uL and specific IgE 210 U/L. The revised management plan according to GINA guidelines includes increasing the dose of inhaled corticosteroid (ICS) + the long-acting Beta-2 agonist, supplemented with daily inhaled Tiotropium and nightly Desloratadine, alongside with oxygen therapy for SpO2 levels below 92%. **Discussions :** In the patient's management, accurately phenotyping of asthma is essential for optimizing biological treatment, especially in the context of chronic rhinitis and sinusitis. A comprehensive assessment of the asthma phenotype should include evaluation of biomarkers such as serum eosinophil counts and specific IgE levels. This approach will facilitate the identification of an allergic or eosinophilic component, informing the selection of targeted biologic therapies. **Conclusions:** Comprehensive recommendations emphasize allergen avoidance and increasing physical activity. This case underscores the complex nature of SUA and highlights the need for an integrated, closely monitored therapeutic approach to enhance patient outcomes and life quality.

Keywords: Asthma, Allergy, Eosinophils, Biological treatment

UNMASKING A HIDDEN TRAUMATIC SUPERIOR RENAL ARTERY RUPTURE : A CASE STUDY ON RETROPERITONEAL HEMATOMA ENDOVASCULAR MANAGEMENT

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Introduction: Retroperitoneal hematomas represent serious conditions, although infrequent, that can be life-threatening. They are usually the result of traumas, anticoagulation, or vessel anomalies. The traumatic injuries of the renal arteries are particularly rare, necessitating prompt diagnosis and intervention due to the active bleeding. This case highlights the successfully managed traumatic rupture of a superior polar artery of the kidney with selective endovascular embolization. **Case Report:** We present the case of a 63-year-old male patient with a medical history of hypertension and prostate adenoma, paired with lumbar trauma in the past days. He presented with a new-onset macroscopic hematuria, needing further evaluation. A retroperitoneal hematoma and a left pararenal mass with late enhancement from a superior capsular artery were discovered through a CT scan, highly suggesting a traumatic rupture of a superior polar artery. An endovascular intervention was performed due to the continuous hemorrhage. The catheterization of the renal artery was accomplished by using a Cobra 2 (5F) catheter, followed by utilizing a Progreat 2.4F system to achieve a supraselective catheterization of the capsular/polar artery. Embolization was successfully achieved by using polyvinyl alcohol (PVA) particles, which led to hemostasis. A favorable post-procedural outcome was fulfilled, without further signs of bleeding and a good clinical course for the patient. **Discussions :** Although rare, traumatic renal artery injuries are a significant challenge in both diagnosis and treatment. The macroscopic hematuria in context of trauma raises suspicion for renal injury and warrants prompt imaging and intervention. For hemodynamically stable patients, conservative management is an option, but when active bleeding occurred, interventional radiology became essential. To achieve proper hemostasis with renal function preservation, selective endovascular embolization was used as an effective and minimally invasive procedure .To prevent further hemorrhage, the Cobra 2 was used for arterial access and the Progreat 2.4F system for supraselective catheterization embolization, ensuring a good outcome. **Conclusions:** This case highlights the importance of early diagnosis and intervention upon traumatic renal artery injuries. For vascular complications management, endovascular embolization holds the benefit, offering a minimally invasive yet effective treatment approach. As for the renal arterial laceration, the established use of selective embolization achieved a definitive hemostasis, thus preserving renal function successfully.

Keywords: retroperitoneal hematoma, renal artery injury, endovascular embolization, selective catheterization

KRABBE DISEASE: HISTOPATHOLOGICAL DESCRIPTION OF AN INTERESTING ILLUSTRATIVE PEDIATRIC CASE

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Introduction: Krabbe disease, also known as globoid cell leukodystrophy, is a rare and progressive disorder. The pathophysiological mechanism involves the demyelination of nerve cells, leading to neurodegeneration. It is a lysosomal storage disorder characterized by the presence of distinctive globoid cells in the brain. In most cases, the disease is fatal within the first two years of life. **Case Report:** A four-month-old baby with a family history of Krabbe disease (sister) presented to the pediatric neurology department with neurological and motor developmental regression. Genetic testing revealed a mutation in the GALC gene. The child died at home at the age of one year. A full autopsy was performed at the Institute of Forensic Medicine Târgu Mureș, Romania. The gross examination of the brain revealed moderate atrophy and weight reduction. On cut section and palpation, the firm white matter surrounded by normal cortex gave the characteristic impression of a "iron fist in a velvet glove". The white matter appeared discolored, with a spongy appearance. Microscopically, extensive myelin loss was seen. The white matter consisted of numerous macrophages with foamy cytoplasm, perivascular clusters of multinucleated cells with peripheral nuclei, and intense reactive gliosis. Additionally, areas of dystrophic calcifications were observed. The macroscopic and microscopic appearance were suggestive for the diagnosis of infantile leukodystrophy with globoid cells. **Discussions :** The Krabbe disease is a very rare disorder. Differential diagnosis with other neurodegenerative disorders is particularly challenging, especially in clinical settings. Its etiology is linked to a mutation that results in a deficiency of the enzyme galactocerebrosidase. Physiologically, this

enzyme plays an essential role in the catabolism of galactocerebrosides and sphingolipids. The resulting enzymatic deficiency leads to the accumulation of toxic levels of galactosylsphingosine in oligodendrocytes and Schwann cells, causing demyelination in both the central and peripheral nervous systems. For a histopathological diagnosis, two key criteria are essential: the microscopic identification of demyelinating lesions and globoid cells. **Conclusions:** The prognosis of Krabbe disease is poor, often being fatal within the first few years of life. Illustrating rare diseases can be incredibly valuable in aiding diagnosis and increasing awareness among specialists.

Keywords: Krabbe disease, globoid cell leukodystrophy, white matter, demyelinating lesions

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UNCOMMON CAUSES, COMMON SYMPTOMS: A CASE REPORT OF SECONDARY HYPERTENSION FROM PRIMARY HYPERALDOSTERONISM AND MULTIPLE RENAL ARTERIES

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Introduction: Secondary hypertension refers to elevated blood pressure with an identifiable and potentially reversible underlying cause. Although less common than essential hypertension, identifying and treating the cause of secondary hypertension can lead to significant improvements in blood pressure control and overall prognosis. It is especially important to consider secondary causes in younger patients with early-onset or treatment-resistant hypertension. **Case Report:** We present the case report of a 36-year-old male patient who was diagnosed with hypertension at the age of 31 years old, with the highest tensional values of 160/90 mmHg. He was initiated on an angiotensin-converting enzyme (ACE) inhibitor without further etiological evaluation. The patient later presented for an endocrinological assessment due to night sweats, anxiety, and partially controlled tensional values. Family history revealed that his father had hypertension and suffered a myocardial infarction at 42. During the clinical examination, obesity grade I was noted as the sole pathological finding. An Echo-Doppler of the renal vascularization has been ordered, showing low resistance flow with an index between 0,50-0,70, which is considered to be within the normal range. The laboratory findings showed normal screening tests for Cushing's syndrome, acromegaly, and pheochromocytoma. However, the aldosterone/renin ratio was suggestive of primary hyperaldosteronism, with an aldosterone level of 20.5 ng/dL (2.21-3.59) and a renin level of 3.69 uUI/mL (4.4-46.14) under ACE inhibitor therapy. Abdominal CT imaging revealed no adrenal abnormalities but showed triple arterial and double venous vascularization of the right kidney and double arterial supply to the left kidney. The findings support a rare combination of primary hyperaldosteronism and multiple renal artery anomalies contributing to secondary hypertension. **Discussions :** Young patients with newly diagnosed or treatment-resistant hypertension need to have a comprehensive evaluation to rule out reversible causes. The presence of both primary hyperaldosteronism and renal vascular anomalies in this patient emphasizes the importance of multidisciplinary assessment and individualized diagnostic workup. **Conclusions:** This case highlights the clinical value of investigating secondary causes of hypertension in younger populations. Early identification of underlying causes can significantly improve the long-term outcomes. Greater awareness among clinicians can facilitate timely diagnosis and improve patient outcomes in this often-overlooked subgroup.

Keywords: Secondary hypertension, Primary hyperaldosteronism, Multiple renal arteries, Young adult hypertension

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LUMBALGIA HIDING A MORE SERIOUS CONDITION; THE IMPORTANCE OF LABORATORY TESTS IN THE DETECTION OF MALIGNANCIES

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Introduction: The prostate gland is located below the urinary bladder and in front of the rectum in men. The pathogenesis of prostate cancer involves uncontrolled cell proliferation. Most cancers exhibit slow growth, and early detection leads to less serious complications. This highlights the importance of screening tests, such as the prostate-specific antigen (PSA) measurement. The PSA test is the most commonly used marker to detect prostate cancer, but elevated values can also be seen in benign prostatic diseases (i.e., adenoma, prostatitis). **Case Report:**

A 72-year-old patient with periumbilical and low back pain underwent computed tomography (CT) 10 years ago, and he received physiotherapy for some time without improvement. The family sought a second opinion in Târgu Mureș from a radiologist, who, in collaboration with a laboratory specialist, requested a list of analyses aimed at identifying the patient's condition. In addition to routine biochemistry tests, serum PSA measurement was performed, which revealed a value of 23.41 ng/ml (normal range: 0.22-6.16 ng/ml corrected for his age group). The patient was referred to urology for further evaluation, where additional investigations were carried out, including ultrasonography and digital rectal examination (DRE). Taking the patient's family history - brother diagnosed with prostate cancer - into consideration, the possible diagnoses were prostatitis or prostatic tumour. The patient's IPSS (international prostate symptom score) was 8. The patient received treatment with ciprofloxacin and diclofenac for 10 days, followed by another PSA test. The obtained value was 23.11 ng/ml. Biopsy revealed an inoperable prostate carcinoma, involving both right and left lobes, and seminal vesicle invasion (Gleason Score 8, cT3bN0M0). Oncotherapy was recommended, thus the patient was admitted to the Amethyst medical unit in Cluj-Napoca. The evolution of the case was favourable after hormone and radiotherapy (including brachytherapy), resulting in barely detectable PSA values on the latest evaluations. **Discussions :** Patients with early-stage prostate cancer are typically asymptomatic. In this particular case, despite the advanced stage, the patient did not exhibit typical symptoms, making the diagnosis more challenging. Abdominal pain and lumbalgia are often linked to less serious conditions, which could've contributed to the initial misdiagnosis. Utilising PSA measurement played a crucial role in identifying the malignancy. **Conclusions:** Although the PSA test is nonspecific, it has an important role in diagnosing prostate cancer. If performed in time, it can help the detection of malignant disease before symptoms appear, resulting in improved diagnostic accuracy and patient outcomes.

Keywords: lumbalgia, prostate-specific antigen, prostate carcinoma, oncotherapy

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STERILIZE OR COMPROMISE? CHALLENGES IN 3D-PRINTED BIOPOLYMERS FOR CARDIOVASCULAR APPLICATIONS

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Introduction: A constant challenge in cardiovascular surgery is the identification of suitable materials for fabricating patches used in revascularization and reconstructive interventions, and a viable solution is offered by polylactic acid (PLA) and thermoplastic polyurethane (TPU), valued for their biocompatibility and mechanical properties. Establishing a sterilization method that preserves both structural and functional integrity is critical for clinical translation. This study compares three sterilization methods: UV radiation, ethylene oxide (EtO) and 100% ethanol immersion, to observe their effects on polymer morphology, macroscopic and microscopic structure, physicochemical properties and structural integrity. **Case Report:** The patches were 3D printed using the Fused Deposition Modeling method in three variants, differing in polymer composition (TPU:PLA ratio) and design pattern. To prevent contamination during the sterilization process, the samples were handled under strictly aseptic conditions. UV sterilization was performed for 1 hour and 45 minutes with two HNS L 36W 2G11 lamps, placed 100 cm from the samples. The exposure time was optimized with the OSRAM HNS UV-C Calculator. After sterilization, samples were incubated in liquid culture medium for 72 hours to assess microbial contamination. Structural changes were evaluated microscopically at different magnifications of: 10x, 20x, 40x. **Discussions :** The results indicated that UV sterilization was the only method that preserved the microscopic integrity of both polymers without causing significant structural changes. Although EtO sterilization did not cause visible macroscopic alterations, subtle microstructural alterations were observed under optical microscopy. PLA exhibited higher mechanical resistance than TPU, due to its higher melting point and longer degradation time. Conversely, TPU showed increased porosity; its fibers were slightly degraded by the thermal process, leading to excessive permeability and potential leakage after implantation. Sterilization with 100% ethanol immersion compromised the layered structure of the grafts, causing delamination and disintegration, suggesting that ethanol disrupts polymeric bonds and compromises material stability. Following inoculation, all eight UV-sterilized samples showed no microbial growth, demonstrating effective sterilization. **Conclusions:** UV sterilization proved to be the most effective method for sterilizing polymer patches intended for reconstructive vascular procedures, maintaining scaffold architecture while ensuring sterility. In contrast, thermal and ethanol-based method compromise the structural and functional performance of biocompatible materials, potentially undermining clinical outcomes despite adequate antimicrobial action.

Keywords: UV sterilization, Biocompatible materials, 3D printing, Polymer degradation

BALANCING BLEEDING AND ANTICOAGULATION IN GAVE SYNDROME: A CASE REPORT

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Introduction: Non-variceal upper gastrointestinal bleeding (UGIB) is a common complication in patients with significant comorbidities, particularly those with gastrointestinal and cardiovascular diseases. Gastric antral vascular ectasia (GAVE), although rare, is a notable cause of UGIB and is frequently associated with chronic anemia. Recurrent bleeding and the need for long-term anticoagulation in elderly, frail patients present unique therapeutic challenges. **Case Report:** We present the case of a 76-year-old female with a history of GAVE syndrome and multiple comorbidities, including previously treated diffuse large B-cell non-Hodgkin lymphoma. She was admitted with symptoms of fatigue, dizziness, and dark semi-solid stools. Laboratory tests revealed severe anemia (Hb 6.05 g/dL). Abdominal imaging showed a lesion on the lesser curvature of the stomach and necrotic-appearing lymph nodes. The patient's GAVE had been previously managed with multiple sessions of argon plasma coagulation (APC). During hospitalization, her management included discontinuation of oral anticoagulation therapy, administration of intravenous proton pump inhibitors, iron supplementation, packed red blood cell transfusions, and close hematologic monitoring. A new APC session was performed to address ongoing bleeding. The patient stabilized, though she remained at high risk of recurrence due to frailty and underlying conditions. **Discussions :** In this patient, the recurrence of bleeding episodes despite multiple sessions of APC underscores the challenges in managing GAVE, particularly in individuals with significant comorbidities. APC is considered a first-line endoscopic treatment for GAVE; however, its efficacy can be limited, necessitating repeated interventions . Alternative endoscopic therapies, such as radiofrequency ablation and cryotherapy, have shown promise in refractory cases, although data are limited and primarily derived from case reports and small series . The management becomes even more complex in patients requiring chronic anticoagulation. Balancing the risk of thromboembolic events against the potential for recurrent gastrointestinal bleeding is a significant clinical dilemma. **Conclusions:** Effective management of UGIB in GAVE syndrome requires a tailored, multidisciplinary strategy. In patients with severe comorbidities and anticoagulation needs, repeated endoscopic treatment and close monitoring are crucial to maintaining hemodynamic stability and improving outcomes.

Keywords: upper gastrointestinal bleeding, GAVE syndrome, chronic anticoagulation, APC

PULMONARY MASS WITH IRREGULAR MARGINS: THE IMAGING DILEMMA BETWEEN FIBROSIS AND NEOPLASIA

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Introduction: The differential diagnosis of a pulmonary mass with irregular margins can be challenging, particularly in patients with chronic respiratory conditions such as COPD or bronchiectasis, where inflammatory or infectious processes may mimic malignancy on imaging. Post-infectious pulmonary fibrosis may generate suspicious radiological findings, necessitating thorough evaluation to avoid oncological overdiagnosis. **Case Report:** We present the case of a 65-year-old male patient, heavy smoker (80 pack-years), diagnosed with stage III GOLD COPD, risk group E (exacerbated), and right basal bronchiectasis. The patient had a history of multiple respiratory complications and was under regular imaging surveillance with serial chest radiographs. During a moderate form of COVID-19 infection, a chest computed tomography (CT) was performed, revealing an atypical consolidation in the right lower lobe, raising suspicion of an underlying lesion of uncertain etiology. The thoracic CT confirmed a homogeneous pulmonary mass measuring 51 × 32 × 48 mm, with irregular margins, traction bronchiectasis, no contrast enhancement, and adjacent parenchymal architectural distortion. Based on these findings, a diagnosis of pulmonary fibrosis of uncertain origin was made, and follow-up imaging was recommended. A repeat CT scan after three years demonstrated stability and confirmed the fibrotic nature of the lesion. **Discussions :** Distinguishing pulmonary fibrosis from a malignant tumor on CT relies on key imaging characteristics. Fibrosis typically shows irregular but well-defined margins and homogeneous high density. In contrast, malignant tumors often present with spiculated, infiltrative margins and heterogeneous density. Fibrosis is usually bilateral, subpleural, and located in the lower lobes, whereas malignant lesions are typically solitary and

found in the upper lobes. Additionally, fibrosis generally lacks significant contrast uptake, whereas malignant tumors show heterogeneous enhancement, sometimes accompanied by satellite nodules or lymph node metastases. Fibrotic changes evolve slowly over time, unlike the rapid growth seen in malignancies. Positron emission tomography (PET-CT) can provide further information on metabolic activity and the potential malignancy of the lesion. **Conclusions:** In patients with underlying bronchiectasis and COPD, an atypical pulmonary lesion requires a multidisciplinary diagnostic approach to differentiate between infection, fibrosis, and malignancy. Advanced imaging, combined with histopathological evaluation when necessary, is crucial to avoid delayed diagnosis and ensure timely therapeutic intervention.

Keywords: Thoracic CT, Differential diagnosis, Pulmonary fibrosis, Lung neoplasm.

FROM PALLIATIVE BANDING TO BIVENTRICULAR REPAIR: THE COMPLEX JOURNEY OF A CHILD WITH CAVC, DOWN SYNDROME AND PULMONARY HYPERTENSION

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Introduction: Complete atrioventricular canal (CAVC) is a complex congenital heart malformation, involving septal defects and valvular abnormalities, generating significant intracardiac shunts and early pulmonary hypertension. Due to the high risks of heart failure, developmental delay and irreversible pulmonary hypertension, surgical intervention is recommended, ideally, in the first 6 months of life, as delayed correction significantly increases morbidity and mortality. **Case Report:** We present the case of a young child, who presented to our tertiary center at the age of 2 years and 2 months, with the diagnosis of complete CAVC Rastelli A type, Down syndrome, severe pulmonary hypertension, heart failure, gastrostomy for severe feeding difficulties and moderate weight-stature dystrophy. Initially, the patient benefited from palliative intervention - pulmonary artery banding at the age of 7 months. Echocardiographic evaluation revealed CAVC Rastelli type A with a large ventricular component, predominantly left-to-right bidirectional shunt, wide inlet ventricular septal defect with malformed atrioventricular junction, right atrioventricular orifice overriding, multiple chordae with abnormal insertion, accessory atrioventricular tissue projected into the ejection tract of the left ventricle, common atrioventricular valve with moderate right atrioventricular regurgitation, maximum gradient of 40 mmHg at the level of the pulmonary artery banding.In the context of the prolonged evolutionary course of a congenital heart lesion with hemodynamically significant left-right shunt and associated pathologies, the invasive hemodynamic evaluation and the pulmonary vasoreactivity test with a vasodilator (NO) were performed, which demonstrated severe pulmonary arterial hypertension (mean PAP 31 mmHg, PVR 3.7 UW/m²), with a favorable response to the nitric oxide test (reduction of PVR to 2.85 UW/m² and increase in the ratio Qp/Qs from 1.28 to 1.76). In the context of hemodynamics and complex anatomy, biventricular surgical correction was performed, choosing the "double patch" technique based on specific anatomical features. **Discussions :** This case highlights the critical role of invasive hemodynamic assessment in challenging therapeutic management situations. The associated genetic syndrome adds significant additional risks, influencing therapeutic decisions and prognosis. The invasive documentation of severe, high-flow, pulmonary arterial hypertension, which was reactive to pulmonary vasodilator administration, enabled successful biventricular surgical correction. Despite the highly complex intracardiac anatomy, the surgical outcome was favorable, with postoperative hemodynamic stability. **Conclusions:** Our case emphasizes the importance of a rigorous approach, based on highly accurate echocardiographic measurements, precise hemodynamic assessments and exceptional surgical technique, underlining the need for personalized management and a complex multidisciplinary approach to optimize long-term outcomes.

Keywords: Complete atrioventricular canal, Pulmonary hypertension, Biventricular surgical correction, Invasive hemodynamic assessment

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UNCOVERING THE SOURCES OF UPPER GI BLEEDING : A CASE REPORT

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Introduction: Upper gastrointestinal bleeding (UGIB) is a prevalent condition with an estimated mortality rate between 2% and 10%. UGIB refers to any blood loss above the ligament of Treitz; for example esophagus, stomach, or duodenum.UGIB can manifest as hematemesis, hematochezia or melena. Additional symptoms, such

as fatigue and syncope, may occur due to the blood loss. **Case Report:** A 72-years old hypertensive woman presented to the emergency room with a two month old history of asthenia, excessive sweating and dark stools.The patient had self-administered oral iron therapy. Initial lab results showed severe anemia (hemoglobin of 4,28 g/dl), elevated urea (147,66 mg/dl), leukocytosis (18.500) and fever (38°C). Following hydroelectric rebalancing, gastroscopy revealed a large hemorrhagic duodenal diverticulum and Schatzki ring.Abdominal CT scan identified a 36mm hiatal hernia, thickened gastric walls and a duodenal diverticulum with mixed content, but in absence of extravasation. The patient was transferred to the Gastroenterology Departement for further management. Successful hemostasis was achieved using Carbazocrome and Etamsylate. Anemia was rectified with four units of packed red blood cells. She was discharged in a stable condition, afebrile and free of upper gastrointestinal bleeding. **Discussions :** Most duodenal diverticula are asymptomatic, often being detected incidentally during imaging. However, a small percentage of them can present with complications such as mechanical obstruction of biliary tract, perforation , inflammation or hemorrhage. In our case , gastrointestinal bleeding may have been precipitated by underlying inflammation of the duodenal diverticulum , a mechanism that cannot be excluded given the presence of an inflammatory status. **Conclusions:** Bleeding duodenal diverticulum are a rare, but potentially life-threatening condition, often overlooked due to their occult nature. This case highlights the importance of maintaining a high index of suspicion in cases of gastrointestinal bleeding with unclear etiology.

Keywords: diverticulum, duodenal, hemorrhage

ATYPICAL PRESENTATION OF DIABETES IN A YOUNG PATIENT – DIAGNOSTIC CHALLENGES AND CLINICAL IMPLICATIONS

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Introduction: The main categories of diabetes mellitus are type 1 and type 2 diabetes, but in some cases, features of both conditions may overlap. We report the case of a 24-year-old male patient admitted to the Diabetology Department with a mild form of diabetic ketoacidosis, severe weight loss, polyuria, and polydipsia. Notably, he had normal anti-GAD antibody levels and a significant family history of type 2 diabetes. Due to this atypical clinical presentation, establishing the correct diagnosis and treatment plan was challenging. **Case Report:** A 24-year-old male patient with a significant family history of type 2 diabetes and a personal medical history of chronic gastritis and hiatal hernia presented to the Emergency Room with polyuria, polydipsia, significant weight loss (11 kg in 3 months), fatigue, nausea, and diarrhea. Initial investigations revealed mild diabetic ketoacidosis (pH 7.29, bicarbonate: 14.2 mmol/L, blood glucose level: 381 mg/dL, urinary ketones: 150 mg/dL). Notably, the patient was underweight (BMI: 18.2 kg/m²) and had uncontrolled glycemic values (HbA1C: 15.7%). Anti-GAD antibodies were negative (8.19 U/mL), and the C-peptide level was within the normal range (1.65 ng/mL), suggesting residual insulin secretion. The presence of microvascular complications was ruled out through a diabetic foot exam and normal urine albumin-to-creatinine ratio (UACR), creatinine, and GFR levels. After fluid replacement therapy and intravenous insulin infusion, the patient required low doses of a basal-bolus insulin regimen for glycemic control and was discharged with a recommendation for an extended panel of autoantibody testing **Discussions :** The precise diagnosis in this case remains uncertain, as the patient presents characteristics of both type 1 and type 2 diabetes. Features suggestive of type 1 diabetes include young age, low BMI, an acute clinical presentation with ketoacidosis, significant weight loss, and the need for a basal-bolus insulin regimen at discharge. However, a diagnosis of type 2 diabetes is also possible due to the significant family history of the disease, normal anti-GAD antibody levels, and normal C-peptide levels. Further investigation with an extended autoantibody panel and close monitoring of glycemia are necessary to clarify the diagnosis and guide appropriate treatment. **Conclusions:** In young adults presenting with an atypical clinical form of diabetes at onset, a comprehensive diagnostic approach is essential to establish an accurate diagnosis and determine the most appropriate treatment strategy.

Keywords: Atypical diabetes, Diabetic ketoacidosis, Autoantibody testing

WHEN BRADYCARDIA DOES NOT EXPLAIN EVERYTHING: INVESTIGATING RECURRENT SYNCOPE

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Introduction: Recurrent syncope in adolescents poses a significant diagnostic challenge for practicing physicians, making it essential to understand its etiological and clinical characteristics in children. **Case Report:** We present the case of a 13-year-old female patient with significant medical history, including infective endocarditis of the mitral valve caused by Staphylococcus aureus MSSA, mitral valve repair for valvular abscess and severe post-endocarditis mitral regurgitation, surgically treated mitral valve aneurysm, and infection-related polyarteritis. She presents with vertigo and two episodes of syncope in the last four months (lasting 1 minute), occurring in the context of severe bradycardia (36 bpm). On admission: HR = 75 bpm, BP = 125/70 mmHg, SpO = 98%. ECG: sinus rhythm, heart rate of 70 bpm, respiratory arrhythmia, intermediate QRS axis, no ST-T changes. Laboratory tests showed no pathological findings and neither did the Holter ECG or the Tilt test. Given the uncertain etiology of the syncope episodes, an Implantable Loop Recorder (ILR) was placed for long-term rhythm monitoring. Two months after the implantation of the ILR, a first-degree atrioventricular block was detected during a syncopal episode. Subsequently, during the electrophysiological study, a second-degree AV block, type Mobitz II, was induced. **Discussions :** Syncope of uncertain etiology, likely related to the identified atrioventricular block, requires a broad differential diagnosis, including cardiac causes (arrhythmias, sinus node dysfunction, tachycardia-bradycardia syndrome), reflex-mediated mechanisms (vasovagal syncope, carotid sinus hypersensitivity), and neurological conditions. Given the patient's complex cardiovascular history, it is essential to exclude postoperative sinus node dysfunction or autonomically mediated bradycardia. Although initial investigations (Holter ECG, Tilt test) did not reveal significant abnormalities, continuous monitoring with an ILR was crucial for correlating symptoms with potential rhythm disturbances and guiding therapeutic decisions. **Conclusions:** According to ESC guidelines, given the progression of conduction disturbance from first-degree AV block to second-degree AV block (Mobitz II) and the associated risk factors, permanent pacemaker implantation is warranted. This case highlights the necessity of a thorough evaluation, diagnostic, and therapeutic work-up in patients with recurrent syncope of uncertain etiology and a complex cardiovascular history. The use of the ILR in pediatric patients can improve our ability to demonstrate symptom-rhythm correlation during infrequent episodes of unexplained syncope.

Keywords: bradycardia, implantable loop recorder, pediatric syncope, atrioventricular block

THE INTERSECTION OF ARRHYTHMOGENIC BIVENTRICULAR CARDIOMYOPATHY AND AUTOIMMUNE HEPATITIS: CHALLENGES IN MANAGING ADVANCED HEART FAILURE

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Introduction: Arrhythmogenic biventricular cardiomyopathy is a rare disease characterized by the progressive degeneration of the myocardium and its replacement with fibro-fatty tissue, initially affecting the right ventricle and, in advanced forms, the left ventricle aswell. This condition can lead to severe ventricular dysfunction, advanced heart failure and an increased risk of malignant ventricular arrhythmias, being one of the leading causes of sudden cardiac death in young patients. Progression to advanced heart failure is common, and its association with autoimmune hepatitis (AIH) further complicates patient management. With an estimated prevalence of 1:2000-1:5000, arrhytmogenic biventricular cardiomyopathy is classified as a rare disease. **Case Report:** We present the case of a 32-year-old patient known to have arrhythmogenic biventricular cardiomyopathy with severe right ventricular dysfunction and moderate left ventricular dysfunction, implanted with a cardiac resynchronization therapy defibrillator (CRT-D) device for primary prevention of sudden cardiac death, heart failure (New York Heart Association [NYHA] class IV) and known to have autoimmune hepatitis (antinuclear antibodies [ANA] positive). The patient presented with severe heart failure decompensation and anasarca. Clinical examination revealed hypotension (BP = 80/57 mmHg), pulmonary congestion with basal rales, massive ascites, and bilateral lower limb edema. ECG showed biventricular pacing rhythm with atrial paralysis. Laboratory findings indicated hepatocellular injury, hypoalbuminemia, and hypoproteinemia. A paracentesis was performed, draining 4.8 liters of ascitic fluid. Treatment included diuretics (Furosemide, Spironolactone), beta-blockers, an sodium-glucose cotransporter-2

(SGLT2) inhibitor and hepatic support therapy. After drainage of ascitic fluid through therapeutic paracentesis, the patient showed a favorable evolution with symptom improvement. **Discussions :** Advanced heart failure can lead to severe congestive hepatopathy, and in this patient, the concomitant presence of autoimmune hepatitis further complicated the clinical course. A particular aspect of this case is the coexistence of heart failure with congestive hepatopathy and autoimmune hepatitis (ANA+). Congestive hepatopathy is a frequent consequence of right heart failure, caused by elevated central venous pressure and hepatic hypoperfusion. The massive ascites observed in this patient suggests a mixed mechanism of ascitic fluid accumulation. This dual hepatic involvement complicates the therapeutic strategy for heart failure management. **Conclusions:** This case illustrates the complexity of severe heart failure in the context of biventricular arrhythmogenic cardiomyopathy with advanced hepatic involvement. The management required a multidisciplinary approach, as optimizing cardiac therapy had to be done cautiously in the context of hepatic impairment and the risk of renal hypoperfusion. Massive ascites in heart failure necessitates careful evaluation to exclude a predominant hepatic mechanism.

Keywords: arrhytmogenic cardiomyopathy, autoimmune hepatitis, heart failure, ascites

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THE CHALLENGES OF TREATING ACUTE MYELOID LEUKEMIA DURING PREGNANCY: A CASE REPORT

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Introduction: Acute myeloid leukemia (AML) is a rare hematological malignancy characterized by the presence of more than 20% blasts in the peripheral blood or bone marrow and it is associated with a dismal prognosis. The occurrence of AML in pregnant women is very rare and is associated with a high risk of death for both the mother and the fetus. **Case Report:** A 38-year-old female patient, 15 weeks pregnant, presents to 'Prof. Dr. Ion Chiricuta' Oncology Institute's Haematology Department to investigate a hyperleukocytosis discovered during one of her routine check-ups. A complete blood count confirmed the leukocytosis ($190x10^9$/L) with neutrophilia and monocytosis, while also revealing severe anemia (hemoglobin - 6,8 g/dl) and thrombocytopenia ($38x10^9$/L). The peripheral blood smear showed the presence of 77% blasts and the immunophenotyping demonstrated a characteristic profile of AML with CD7 abnormally expressed. Cytogenetics revealed a normal karyotype and molecular biology showed the presence of the FMS-like tyrosine kinase 3, internal tandem duplication (FLT3-ITD) mutation. Given the pregnancy, the patient refused aggressive chemotherapy or having an elective abortion. Thus, even though not optimal, we chose to treat the patient with 5 single agent 5-azacytidine (aza). The patient received 5 cycles of aza without achieving complete remission. However, at 34 weeks of gestation the patient underwent an elective caesarean section, giving birth to a 2200 g boy, with no apparent anomalies. The patient is now scheduled to receive intensive chemotherapy, a 7+3 regimen, combined with a FLT3 inhibitor. **Discussions :** AML during pregnancy is very rare, having an incidence of 1 in 75,000 to 100,000 cases. Most patients with AML either choose elective abortion or undergo intensive chemotherapy. However, the patient chose a 'softer' treatment, commonly used for treating elderly, unfit patients, that has a lower risk of affecting the fetus. One the other hand, the teratogenic effect of hypomethylating agents such as aza has been assessed only in some case reports. **Conclusions:** A multidisciplinary team is needed to manage such a complex case and to give the patient the treatment option that best fits their needs. Overall, Aza seems like a safe treatment option for pregnant AML patients, at least in the second and third trimester.

Keywords: Acute Myeloid Leukemia, FLT3-ITD mutation, Pregnancy

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FROM ADENOMA TO CARCINOMA: A CASE OF RECURRENT HYPERCORTISOLISM UNVEILING ADRENOCORTICAL CARCINOMA

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Introduction: Adrenocortical carcinoma (ACC) is a very rare endocrine malignancy correlated with poor overall survival. In most cases, ACC is non-functional and presents itself as an incidental finding or an abdominal mass, although it might be functional, in which case it may be related to Cushing's syndrome, virilization, or feminization. Conditions associated with ACC may involve Li-Fraumeni syndrome, multiple endocrine neoplasia type 1 (MEN1),

and familial adenomatous polyposis (FAP). **Case Report:** We report the case of a 54-year-old female patient with a past history of ACTH-independent Cushing's syndrome complicated by secondary hypertension, secondary amenorrhea, and secondary diabetes mellitus, caused by a left adrenocortical adenoma for which she underwent a left laparoscopic adrenalectomy in 2018. Postoperatively, the patient demonstrated restoration of menstrual function, improved glycemic control, and normalization of blood pressure and cortisol levels. During the follow-up, after 4 years, the laboratory investigations revealed the relapse of endogenous hypercortisolism, while the imaging evaluation revealed tumoral recurrence in the left adrenal gland area. Consequently, another surgical procedure was performed. Histopathological examination confirmed the presence of a nodular structure measuring 38/13/10 mm, comprised of epithelial cells with eosinophilic cytoplasm and large nuclei (Fuhrman grade 3-4). Based on these findings, a positive diagnosis of adrenocortical carcinoma (Weiss score 6) was established. Therefore, chemotherapy medication with etoposide and carboplatin was initiated, alongside mitotane, an adrenal cortex inhibitor. In addition to adrenal insufficiency, which is a common side effect of the adrenolytic treatment, central hypothyroidism developed as well, thereupon requiring optimal glucocorticoid and thyroid hormone replacement therapy. Contrast abdominal and pelvic MRI showed locoregional invasion in the area extending from the left upper quadrant to the flank region, which has been stationary since its discovery. **Discussions :** This case raises important diagnostic considerations, as the recurrence of hypercortisolism and subsequent identification of adrenocortical carcinoma several years after adrenalectomy might suggest the potential for malignant transformation of a previously benign lesion. Given the rarity of such progression, this highlights the critical role of long-term follow-up. Additionally, complications such as adrenal insufficiency and central hypothyroidism highlight the complexity of mitotane therapy, which requires maintaining therapeutic plasma levels (14-20 mg/L) to minimize drug-related adverse effects and reduce the risk of tumor recurrence. **Conclusions:** Although ACC is a rare entity, its gravity cannot be overstated; therefore, a multidisciplinary approach plays an essential role in providing excellent, up-to-date care for these patients.

Keywords: adrenocortical carcinoma, hypercortisolism, tumor recurrence, mitotane therapy

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PERSPECTIVES ON EBSTEIN'S ANOMALY IN CHILDREN: CASE PRESENTATION AND MODERN THERAPEUTIC APPROACHES

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Introduction: Ebstein's disease is a rare and complex congenital heart disease characterized by the malformation of the tricuspid valve and structural abnormalities of the right ventricle. The diversity of anatomical forms implies the clinical severity, which can vary from mild, asymptomatic cases to severe forms, which progress to right heart failure and arrhythmias. In severe cases, corrective surgery is necessary. One promising approach for tricuspid valve replacement in pediatric patients is the use of the CorMatrix® Tricuspid Valve, a bioengineered tissue valve designed to replace the dysfunctional tricuspid valve providing growth potential by encouraging revascularization and tissue reconstruction. **Case Report:** We report the case of a child admitted to our tertiary center at the age of 2-year-old with clinical signs of heart failure. Echocardiographic examination revealed type C Ebstein`s anomaly. EKG showed accessory pathway with intermittent conduction. Initially, she underwent Carpentier reconstruction of the tricuspid valve. Due to postoperative hemodynamic instability, in the context of right ventricular dysfunction secondary to significant residual tricuspid regurgitation, she required surgical reintervention. The dysfunctional tricuspid valve was replaced using a hand-constructed single tube of CorMatrix Extracellular Matrix(ECM). In the immediate postoperative course, implantation of a dual-chamber pacemaker was necessary for postoperative atrioventricular block. Serial postoperative echocardiographic evaluations revealed improvement in right ventricular dysfunction and a excellent functioning of the CorMatrix® Tricuspid Valve. **Discussions :** Tricuspid valve replacement in patients with Ebstein's anomaly can be a challenging decision. This case highlights the safety and benefit of new modern surgical techniques such as CorMatrix® Tricuspid Valve replacement in pediatric patients with extensive tricuspid valve destruction. **Conclusions:** Ebstein's anomaly in children requires individualized and multidisciplinary management. Advances in diagnostic and treatment technologies continue to improve outcomes in these patients.

Keywords: Ebstein’s anomaly, CorMatrix® Tricuspid Valve, children

ATRIAL SEPTAL DEFECT IN AN ELDERLY PATIENT – CASE REPORT

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Introduction: Atrial septal defect (ASD) is a commonly encountered congenital heart anomaly. This malformation can remain asymptomatic for a long period, even until adulthood. The result of this defect is a communication between the two atria, leading to a left-to-right shunt. There are different types of ASDs, with the most commonly encountered being the ostium secundum type. In most cases, these defects close spontaneously, but if the defect is significant, it will not correct itself. Over time, this will lead to right heart overload, pulmonary hypertension, cardiac arrhythmias, and many other complications (1,2). We present the case of an elderly patient with an untreated ASD associated with multiple complications. **Case Report:** A 73-year-old male patient presented to the emergency department with dyspnea on mild exertion, fatigue, chills, and moderate bilateral lower leg edema that began approximately 10 days ago. Paraclinical investigations: a resting electrocardiogram showed sinus rhythm, left anterior fascicular block, negative T waves in the lateral leads, occasional ventricular extrasystoles. Transthoracic echocardiography showed dilated chambers, severely depressed left ventricular ejection fraction, an atrial septal defect with a left-to-right shunt, dilated inferior vena cava, severe mitral and tricuspid regurgitation, and mild pulmonary hypertension. Repeated 24-hour Holter monitoring revealed multiple episodes of multifocal idioventricular rhythm as well as P-waves with different morphologies, sometimes absent, along with occasional paroxysmal atrial fibrillation episodes with aberrant conduction. Since we do not have documentation of a coronary angiography at present, we recommend repeating it to assess the status of the coronary arteries. Based on clinical and paraclinical data, we interpret the case as an acute decompensation of cardiac pathology with a favorable outcome with oral and intravenous treatment. **Discussions :** The ASD was incidentally discovered on echocardiography, and the patient's clinical picture was primarily focused on acute congestive decompensation. Other complications associated with the persistence of the congenital defect were also found: rhythm disturbances and right heart overload with secondary pulmonary hypertension. **Conclusions:** An elderly patient with an incidentally discovered ASD presents a clinical picture suggestive of the natural progression of an untreated ASD, which is associated with multiple comorbidities that significantly impact the quality of life.

Keywords: atrial septal defect, congenital heart malformations, pulmonary hypertension, cardiac arrhythmias

DIAGNOSTIC AND THERAPEUTIC CHALLENGES IN CONGENITAL GENERALIZED LIPODYSTROPHY TYPE 4: A CASE REPORT

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Introduction: Congenital Generalized Lipodystrophy type 4 (CGL4) is a rare metabolic disorder, inherited in an autosomal recessive pattern, characterized by the near-total loss of adipose tissue. Diagnosis is primarily based on clinical examination, metabolic profile, and associated complications, genetic testing not being routinely performed. Therefore, a multidisciplinary approach is required for timely diagnosis. **Case Report:** A 7-year-old boy was referred to the endocrinology department for re-evaluation and treatment of CGL4 diagnosed at the age of 1 year and two months. He was born via normal delivery at 37 weeks with a body height of 52 cm, weight of 4300 g and laboratory tests revealed increased TGO, TGP and CK levels. In the following year he underwent surgery for pyloric stenosis at 3 months and was neurologically evaluated at 7 months for axial hypotonia and lower limb hypertonia. Taking into consideration the clinical manifestations and persistent increased levels of CK (2086 UI), LDH (644 U/L), TGO (82 U/L), TGP (63 U/L), a neuromuscular disease or a lipid storage disorder was suspected, although neither confirmed. The child was kept under observation and further investigations revealed decreased leptin levels. Clinical evaluation identified significant loss of adipose tissue, increased muscle mass, splenomegaly, rickets sequelae, delayed expressive language, but otherwise normal somatic development. Therefore, a whole-genome sequencing was performed revealing a homozygous mutation in the CAVIN1 gene, confirming the diagnosis of CGL4. Subsequently he was referred to the paediatric endocrinology department due to complications of CGL4: mild hepatic steatosis, microcystic goitre, grade I mitral and tricuspid insufficiency, hypercholesterolemia, and treatment with Metreleptin, an analogue of human leptin, was initiated. **Discussions :** Lipodystrophy

syndromes are characterised by adipose tissue loss, generalized muscularity and metabolic abnormalities, but in some cases the initial signs and symptoms may be subtle. In our patient, the first manifestations that made his parents seek medical attention were related to pyloric stenosis, a particular complication of CGL4, which, along with elevated levels of CK, LDH, TGO, and TGP, should raise the suspicion of CGL. **Conclusions:** This case highlights the importance of a multidisciplinary approach for timely diagnosis and proper treatment of rare diseases like CGL4, with only about 300 cases reported worldwide. For these patients, preventing and managing complications is crucial. Human leptin analogues represent a novel therapeutic option that significantly improve metabolic parameters and, in long term, enhance the quality of life.

Keywords: Congenital Generalized Lipodystrophy type 4, CAVIN1 gene, Leptin

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SEVERE AORTIC STENOSIS DIAGNOSED PRENATALLY: CASE REPORT

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Introduction: Aortic stenosis resulting from a bicuspid or bicommisural aortic valve stands among the most prevalent forms of left ventricular outflow tract (LVOT) obstruction in neonates and the management is conditioned by the extent of the obstruction. In severe cases, it may lead to life-threatening conditions, therefore needing to be urgently acted upon in the first 12 months of life. **Case Report:** We present the case of a 9 day old newborn conceived through in vitro fertilization, prenatally diagnosed with severe valvular aortic stenosis, bicuspid aortic valve and poststenotic aortic dilatation. Immediately after birth, the echocardiographic investigation confirmed the severe aortic valvular stenosis due to a bicuspid aortic valve (maximum suprasternal gradient:82mmHg, velocity:4m/s and mean gradient:38mmHg),ascending aorta dilatation(ascending aorta gradient:24mmHg, velocity:2.4m/s), a mild atrial septal defect with a left-to-right shunt and an indication for surgery. A percutaneous aortic valvuloplasty with a 6x20 Tyshak balloon was perfomed. The response was favorable with a marked reduction in the maximum suprasternal gradient(58mmHg) and in the mean gradient(35-38mmHg), minor residual aortic insufficiency and a moderate secondary left ventricular hypertrophy. At one month follow-up, transthoracic echocardiography showed a preserved left ventricular function with no pericardial or pleural effusion. The left ventricle remained hyperthrophied, with minor mitral insuffiency and an E/A ratio>1, suggesting a preserved diastolic function. Tricuspid recurgitation was mild, and an atrial septal defect with a left-to-right shunt was noted. Residual aortic insufficiency was low, and ascending aortic dilatation persisted(1.13cm). Aortic gradients remained elevated with a maximum suprasternal gradient of 78mmHg and a mean gradient of 41mmHg. **Discussions :** The particularity of this case is given by its severity and timing. While an aortic stenosis due to a congenital malformation such as a bicuspid aortic valve is a common cause, it seldom arrives to such critical degrees of obstruction in the prenatal period, which makes it extremely important to be solved as it can evolve into conditions that can endager the life of the newborn in a short time. Moreover, the reduction in the mean transvalvular aortic gradient postprocedurally highlights the success of balloon valvuloplasty, a procedure that is minimally invasive compared to the classic surgery. Despite partial improvement, persistent aortic gradients and valve insufficiency emphasize the need for continued follow-up to monitor long-term outcomes and potential further interventions. **Conclusions:** This case highlights the importance of integrating a prenatal diagnosis. Aortic balloon valvuloplasty is the first therapeutic option because it is less harmful.

Keywords: Severe aortic stenosis, bicuspid aortic valve, percutaneous aortic valvuloplasty

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AN UNUSUAL ASSOCIATION BETWEEN PERSISTENT PNEUMONIA AND FOREIGN BODY ASPIRATION: CASE REPORT

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Introduction: Foreign body aspiration does not frequently appear in adults as it occurs most commonly in children. However, aspirated foreign bodies in adult patients are challenging, being misdiagnosed as some patients do not remember the aspiration of the foreign body, and leading to serious complications such as pneumonia, lung abscess, and atelectasis. **Case Report:** We report the case of a 65-year-old man, a former smoker (ten packages/year), with a medical history of recurrent pneumonia, who presented to the hospital for dry cough (with some productive episodes), dyspnea on exertion, persisting for two years, without any clinical improvement. On

auscultation, vesicular breath sounds are decreased at the base of the right lung. The laboratory investigations indicated an inflammatory syndrome. A CT scan revealed a pulmonary consolidation with air bronchogram, suggestive of pneumonia. After 4 months, despite the treatment, the patient's condition did not improve, and another CT scan was performed. This scan outlined a right posterobasal consolidation associated with the obstruction of the tributary bronchus. These findings revealed an evolving pattern raising the suspicion of an abnormal proliferative activity. Therefore, the patient underwent a bronchoscopy with endobronchial biopsy. During the procedure, a foreign body (1,53 cm pig bone) was unexpectedly found at 1,5 cm from the emergence of the right middle lobar bronchus, surrounded by significant granulation tissue, causing substantial bronchial obstruction. After the removal of the foreign body, the patient was prescribed Prednisone and after a week, a second bronchoscopy showcased the reduction of the granulation tissue, allowing endoscopic passage and confirming the improvement of his condition. **Discussions :** Obstruction of a bronchus with a foreign body often induces recurrent obstructive pneumonia. Foreign bodies are localized especially in the right middle lobar bronchus. In this case, the failure to detect and remove the foreign body from the beginning leads to chronic lung complications. The excessive granulation tissue resulted from the inability of macrophages to absorb the foreign body, due to its size, causing the worsening of the patient's condition, as the stenosis of the bronchial lumen was progressively increasing. **Conclusions:** Undiagnosed foreign bodies may lead to serious complications and should be taken into consideration for patients with recurrent pneumonia and persistent cough. Moreover, this case report highlights the importance of medical history and thorough imaging examination to avoid further complications.

Keywords: foreign body aspiration, pneumonia, bronchoscopy

ISCHEMIC STROKE AS A RARE MANIFESTATION OF AUTOIMMUNE VASCULITIS: A CASE REPORT

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Introduction: Ischemic stroke represents an important cause of mortality and morbidity worldwide, being a medical emergency caused by the interruption or reduction of blood supply in a part of the brain. This is due to the obstruction of a blood vessel and it results in the sudden onset of focal neurological deficits. A rare cause of ischemic stroke is represented by vasculitis. Vasculitis is a group of autoimmune diseases which causes the inflammation of blood vessels. **Case Report:** We report the case of a 40-year-old female patient, who was admitted to the Neurology Clinic for intense frontal headache with bilateral periorbital pain and occipital radiation, motor deficits, and paresthesia on the left side. The patient presents a medical history of thrombosis and ischemic stroke with hemorrhagic changes in the territory of the middle cerebral artery, with the mention that she was under contraceptive treatment when she had the stroke. We performed a CT-angiography which indicated important stenosis of the cervical and petrous segments, the occlusion of C3-C5 segments, and the retrograde permeation of the C6-C7 segments of the right internal carotid artery. The CT-scan findings also revealed an evolving pattern compared to the previous examination, as the stenosis of clinoid and cavernous segments was significantly increased. This raised the suspicion of an autoimmune disease, for instance, a vasculitis or arteritis that affects the right internal carotid artery. The laboratory tests indicated positive lupus anticoagulant and antinuclear antibodies. At the ophthalmological consultation, the patient was diagnosed with nodular episcleritis (with the congestion of the episcleral anterior vessels). **Discussions :** The progressing pattern showcased by the angio-CT, laboratory investigations, thrombophilia, and nodular episcleritis are suggestive of an autoimmune disease that caused the ischemic stroke. The episcleritis is often idiopathic, but it can be associated with autoimmune diseases and systemic collagen-vascular diseases. Autoimmune diseases can cause the inflammation of blood vessels from the nervous system with the thrombosis of the vessels which can lead to ischemic stroke. **Conclusions:** To conclude, it is essential to take into consideration the possibility of an autoimmune disease as a cause of ischemic stroke in young female patients that present other suggestive comorbidities. The progression of vascular stenosis observed on imaging, along with positive autoimmune serology and associated episcleritis, strongly suggests an underlying autoimmune disease affecting the cerebral vasculature

Keywords: autoimmune disease, ischemic stroke, episcleritis

HEMORRHAGIC VARICELLA IN A CHILD WITH ACUTE LYMPHOBLASTIC LEUKEMIA

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Introduction: Most of the time, infection with varicella-zoster virus manifests with self-limited forms in pediatric patients, but the situation can change if immunosuppressed hosts are involved. In this specific group of patients, infection with varicella-zoster virus can lead to severe complications, one of them being hemorrhagic varicella. This condition is characterized by diffuse hemorrhagic skin lesions and if left untreated, it can cause disseminated visceral invasions, which can determine multiple organ failure. **Case Report:** A 5-year-old child, known to have medium risk, T cell acute lymphoblastic leukemia, treated according to ALL BFM 2002 protocol, presents for ongoing management of his cytostatic treatment. Given his clinical condition and the hematological evaluation from admission, the treatment was suspended. His blood work showed severe leukopenia and thrombocytopenia. One week after admission, the patient developed disseminated hemorrhagic eruptions and reported diffuse abdominal pain. An abdominal and thoracic CT scan was made, which ruled out both acute abdominal pathology and septic aspergillosis metastasis. Medical team suspected hemorrhagic varicella and initiated treatment with IV acyclovir and broad-spectrum antibiotics. During the treatment, the patient experienced multiple episodes of severe anemia and thrombocytopenia, for which substitution treatment was needed, but upon completion of therapy his condition improved, and the boy was discharged in stable condition. **Discussions :** An opportunistic infection should always be considered in immunocompromised patients. Furthermore, due to their immune system condition, such infections can present with atypical forms, which can make reaching the diagnosis difficult. A prompt diagnosis is necessary since the patient is extremely vulnerable to infections and their complications might be lethal. Additionally, it is vital to begin therapy as soon as possible considering life threatening consequences if left untreated. **Conclusions:** Hemorrhagic varicella is a rare form of varicella-zoster virus infection, which can be fatal if the diagnosis is delayed and the treatment with IV acyclovir is not started immediately.

Keywords: hemorrhagic varicella, acute lymphoblastic leukemia, cytostatic treatment, immunosuppressed patients

FROM THE NATURAL BIRTH OF A PERFECT CHILD TO A RARE GENETIC CONDITION

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Introduction: Genetic disorders often cause severe phenotypes, particularly in children. Associated neurodevelopmental disorders and mitochondrial complex 1 deficiencies have an important impact on cognitive, motor and metabolic functions. *KDM6B* mutation causes global developmental delay, hypotonia, and poor speech acquisition. *FOXRED1* encodes a protein involved in mitochondrial complex 1 deficiency, a common defect in oxidative phosphorylation disorders. **Case Report:** We present the case of a 14-month-old (MO) female patient with a particular phenotype: plagiocephaly, high forehead, flattened nasal bridge, ears slightly rotated to the front, ogival palate, strabismus, hands clenched into fists, delay in motor acquisitions, inability to walk independently, balance disorders, facial grimaces present, hypotonia and gastrointestinal reflux. She is the second child of this family, born via C-section, Apgar score 10, but presented prolonged jaundice after birth. At 4-5 MO her mother noticed a lack of hand coordination and drowsiness. She started physiotherapy at 6 MO, later she developed motor skills in the hands and she managed to sit with assistance, later independently. By 11 months, she could transition from prone to sitting, and by 14 months, she began crawling and sitting with support. Following physical, cognitive and motor examinations, head MRI, cardiac ultrasound and whole exome sequencing (WES) were performed. The MRI showed slightly delayed cerebral myelination. The WES result indicated a mutation in the *KDM6B* gene, with autosomal inheritance, and 2 different mutations in the *FOXRED1* gene, both having autosomal received inheritance. All of the mutations are associated with neurodevelopmental disorders and mitochondrial complex 1 deficiency. **Discussions :** Due to the rarity of this condition, research on the association between mutations in *KDM6B* and *FOXRED1* is limited. WES is not able to determine if the 2 mutations found in the *FOXRED1* gene are affecting both copies of the gene causing compound heterozygosity. The parents will undergo Next-Generation Sequencing (NGS) for the discovered mutations, and metabolic markers for mitochondrial diseases will be

assessed in the patient. Proper management requires a multidisciplinary, patient-centered approach and further steps for an exact diagnosis. **Conclusions:** This case highlights the complexity of genetic counseling in the association of rare *KDM6B* and *FOXRED1* mutations, emphasizing personalized treatment for neurodevelopmental and mitochondrial dysfunctions. Comprehensive clinical evaluation, genetic analysis and therapeutic measures are essential for increasing quality of life in neurodevelopmental disorders.

Keywords: KDM6B, FOXRED1, delayed neurodevelopment, mitochondrial disease

UNUSUAL INTESTINAL INVOLVEMENT IN LOW-GRADE SEROUS CARCINOMA: A CASE REPORT

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Introduction: Low-grade serous carcinoma (LGSC) is a rare subtype of serous carcinoma, accounting for approximately 5% to 10% of serous ovarian cancers. Unlike its high-grade counterpart, LGSC typically exhibits a less aggressive clinical course but demonstrates relative resistance to conventional oncological treatment. **Case Report:** We present the case of a 66-year-old female patient who underwent surgery with the clinical diagnosis of abscessed tumor of the transverse colon penetrating the left abdominal wall, peritoneal carcinomatosis, abdominal wall abscess in the left hypochondrium. Histopathological examination revealed the following macroscopical findings: a tumoral mass measuring 120x70x60 mm, located at the level of the mesocolon (outside the intestinal lumen), protruding from the exterior into the wall of the large intestine. On cut sections, the tumor displays a multinodular, compact, solid appearance, with a whitish-yellow coloration. On the surface, an area of abscess formation is observed, with a fibrino-purulent exudate, measuring 30x40 mm. Microscopically the tumoral proliferation shows predominantly papillary and micropapillary architecture, with tumor cells arranged around a fibroconnective core, as well as solid areas composed of tumor nodules of various shapes and sizes, containing central slit-like pseudoglandular spaces. The tumor cells display moderate cyto-nuclear atypia and mitotic figures. An associated marked desmoplastic reaction is observed, along with numerous psammoma bodies. The tumor produces angiolymphatic emboli and perineural invasion. Immunohistochemistry: Estrogen receptors - positive in 100% of tumor cells and wild type positivity for p53. Based on the histological and imunohistochemical features the final diagnosis was of intestinal metastasis of low-grade serous carcinoma. **Discussions :** Low-grade serous carcinoma (LGSC) typically exhibits an indolent progression but has the potential to metastasize, commonly involving the peritoneal surfaces and omentum. The timeframe for metastatic development varies, with cases reporting metastases occurring months to years after the initial diagnosis. Instances of LGSC metastasizing to the colon are exceedingly rare, with only a limited number of case reports documented in the medical literature. **Conclusions:** In conclusion, low-grade serous carcinoma remains a rare but distinct entity with a typically slow progression and limited responsiveness to standard chemotherapy. Although metastasis most often involves peritoneal structures, unusual sites such as the colon can be affected, emphasizing the need for awareness and thorough diagnostic evaluation in atypical presentations.

Keywords: Low-grade serous carcinoma, metastasis, imunohistochemical, intestinal

INCIDENTAL HIGH-GRADE SEROUS CARCINOMA OF THE FALLOPIAN TUBE IN A PATIENT WITH UTERINE LEIOMYOMAS: A CASE REPORT

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Introduction: High-grade serous carcinoma (HGSC) is the most common and lethal subtype of epithelial ovarian cancer. Recent evidence suggests that many HGSCs originate from the fallopian tube epithelium, particularly the fimbrial region, rather than the ovarian surface epithelium or peritoneal serosa. **Case Report:** We present the case of a 57-year-old woman who underwent a hysterectomy with bilateral adnexectomy. Microscopic examination revealed the following: the right fallopian tube measured 45x32x12 mm, with a hyperemic, tense, and intact serosa. On sectioning, the tube showed a dilated lumen containing an intraluminal, nodular, solid, whitish tumor measuring 23 mm in diameter. The intraluminal tumor described macroscopically displayed features of a high-

grade serous carcinoma. The tumor had a partially solid architecture, with the presence of glandular "slit-like" spaces and papillary areas. It was composed of tumor cells with marked pleomorphism, high mitotic activity, showing 19 mitoses per 10 high-power fields (HPF). The tumor was associated with a precursor lesion of the STIC type - serous tubal intraepithelial carcinoma. The tumor cells showed strong and diffuse expression of Estrogen Receptors and a mutant-type p53 immunostaining pattern (nuclear expression in more than 80% of the tumoral cells). Nodular, solid, fasciculated tumor formations located in the lower uterine segment and intramural, submucosal, and subserosal areas of the uterine body were also identified. These tumor formations consisted of a proliferation of spindle-shaped cells arranged in fascicles. The diagnosis was high-grade serous adenocarcinoma of the right fallopian tube, with tumor cells present on the serosal surface, associated with serous tubal intraepithelial carcinoma (STIC), tumor stage: pT1c2, FIGO: IC, uterine leiomyomas (subserosal, submucosal, and intramural), without atypia. **Discussions :** High-grade serous carcinoma (HGSC) predominantly affects postmenopausal women, with the majority of cases diagnosed in individuals over 50 years of age. Recent studies have indicated a potential association between uterine leiomyomas (fibroids) and an increased risk of ovarian cancer, including high-grade serous carcinoma (HGSC). Notably, those who underwent surgical interventions such as myomectomy or hysterectomy exhibited a reduced risk. These findings suggest a potential link between uterine leiomyomas and the development of ovarian cancer, including HGSC, though further research is necessary to elucidate the underlying mechanisms. **Conclusions:** This case emphasizes the incidental discovery of high-grade serous carcinoma of the fallopian tube in a patient with multiple uterine leiomyomas, highlighting the importance of thorough pathological evaluation, even when benign conditions are suspected.

Keywords: High-grade serous carcinoma, leiomyomas, cancer, fallopian tube

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DERMATOFIBROSARCOMA PROTUBERANS: A UNIQUE CASE REPORT AND REVIEW OF THE LITERATURE

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Introduction: Dermatofibrosarcoma protuberans (DFSP) is a rare slow-growing connective tissue tumor of fibroblastic origin that appears as a robust pink or violet plaque. It typically occurs on the trunk and proximal extremities, while involvement of the facial region is highly uncommon. Despite being classified as a low-grade malignancy, its locally invasive nature and high recurrence rate require clinical vigilance. **Case Report:** This case involves a 77-year-old male patient with no relevant medical history. He presents with a rare form of dermatofibrosarcoma protuberans - a robust violaceous plaque located in the right genian region of the face. Despite its rare location, the diagnostic biopsy confirmed DFSP. Additionally, the patient underwent a thoracic, abdominal, and pelvic CT scan, along with a head and neck MRI, fore a more comprehensive evaluation. However, based on the clinical examination and diagnostic biopsy, the patient was deemed inoperable, with targeted therapy using imatinib being the only treatment option. **Discussions :** Current guidelines report that DFSP has an estimated incidence of 4.5 cases per million people annually, with head and neck involvement in only 10-15% of cases. Originating in the dermis, DFSP infiltrates deeper tissues, including the subcutaneous fat, fascia, and occasionally muscle and bone. Histologically, it consists of spindle-shaped fibroblast-like cells arranged in a storiform pattern, embedded in collagen. While innitially asymptomatic, long-standing tumors can become highly locally invasive by progresively developing nodules. Diagnosis and the assessment of tumor extent rely on clinical examination, histopathology, and imaging (MRI/CT). Surgical excision, including Mohs Micrographic Surgery (MMS) or staged wide excision (Slow Mohs), remains the primary treatment to achieve maximal tissue preservation and clear margins. Unfortunately, in this case or in recurrent cases, targeted therapy with imatinib mesylate, a tyrosine kinase inhibitor that targets platelet-derived growth factor (PDGF) receptors, may be the only viable option. Adjuvant radiotherapy may also be considered, though its role remains debated. **Conclusions:** DFSP, especially in the facial region, is a rare but challenging malignancy, requiring precise diagnosis and a multimodal treatment approach. Histopathological and immunohistochemical evaluation are necessary for diagnosis. Acknowledging that targeted therapies such as imatinib provide additional options for complex or recurrent cases is essential, and long-term follow-up remains crucial for optimizing patient outcomes.

Keywords: Dermatofibrosarcoma Protuberans, locally invasive nature, inoperable, imatinib

PARVOVIRUS B19 INDUCED APLASTIC CRISIS IN A PATIENT WITH HEREDITARY MICROSPHEROCITOSIS: A CASE REPORT

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Introduction: Infection with Parvovirus B19 is a common viral condition that usually has a self-limiting evolution in healthy individuals, however, in patients with pre-existing hematological disorders, such as hereditary spherocytosis (HS), Parvovirus B19 infection can lead to severe complications, including aplastic crisis(AP). Aplastic crisis is characterized by a temporary suppression of red blood cell production in the bone marrow, which can be particularly dangerous in patients with an already increased rate of erythrocyte destruction due to HS. In some cases, an AP induced by Parvovirus B19 can even be the first clinical manifestation of hereditary spherocytosis. **Case Report:** We report the case of a 10-year-old patient, known with a unique right kidney and her famiy history reveals that her father underwent splenectomy in childhood. She was admitted presenting with fever, fatigue, asthenia, inappetence, and cutaneous pallor approximately 6 days prior to admission. Investigations revealed anemia, mucocutaneous jaundice, and splenomegaly. Further examination of the peripheral blood smear identified microspherocytes, while the positive osmotic fragility test supported the diagnosis of hereditary microspherocytosis.In addition, IgM serology for Parvovirus B19 was positive, suggesting it as the underlying cause of the fever. The final diagnosis was aplastic crisis induced by Parvovirus B19 in a patient with hereditary microspherocytosis. During the hospitalization, the patient received folic acid, a red blood cell mass transfusion and intravenous corticosteroid therapy. After 3 days of treatment, a reappearance of medullary activity in the red series with marked reticulocytosis (170%) was observed. **Discussions :** This case describes a transient aplastic crisis triggered by parvovirus B19 in a newly diagnosed hereditary microspherocytosis patient. Parvovirus B19 impairs erythroid progenitors, worsening anemia in conditions with increased hemolysis like HS. The diagnosis was confirmed with positive Parvovirus B19 IgM serology and a characteristic blood smear, supported by an osmotic fragility test and rapid reticulocytosis recovery after supportive treatment is typical of parvovirus-induced transient aplastic crises. **Conclusions:** This case highlights the importance of considering Parvovirus B19 infection as a cause of aplastic crisis in patients with hereditary spherocytosis and it also demonstrates how a viral infection can lead to this diagnosis in previously undiagnosed patients. Given these considerations, promptly establishing the etiological diagnosis is essential for the appropriate management of these patients.

Keywords: Hereditary spherocytosis, Aplastic crisis, Parvovirus B19, reticulocytosis

HENOCH-SCHÖNLEIN PURPURA: THERAPEUTIC APPROACH IN A PEDIATRIC CASE WITH SEVERE SYMPTOMS

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Introduction: Henoch-Schönlein purpura (HSP) is an IgA-mediated small vessel vasculitis, primarily affecting the skin, gastrointestinal tract, joints, and kidneys. It is often preceded by upper respiratory tract infections, with Streptococcus being a common pathogen. Early diagnosis and prompt treatment are crucial to prevent complications, particularly renal involvement. **Case Report:** We report the case of a 15-year-old male with a history of recurrent upper respiratory infections during childhood. The patient presented with lower abdominal pain radiating to the right iliac fossa and right renal area, along with peri-umbilical colic and a petechial rash on the lower limbs and forearms. Laboratory investigations revealed elevated C-reactive protein (CRP), urine abnormalities including erythrocytes, altered urine density, and a positive occult blood test. Abdominal ultrasound showed mild hepatosplenomegaly. The patient experienced recurrent flare-ups of purpura, arthralgia, and microscopic hematuria during hospitalization. Treatment included supportive care, symptomatic management, and corticosteroid therapy (intravenous Solu-Medrol and oral Medrol). The patient showed favorable clinical improvement and was discharged in stable condition with complete resolution of symptoms. **Discussions :** HSP is frequently triggered by upper respiratory infections, with Streptococcus being a common pathogen. The classic clinical triad includes purpura, abdominal pain, and arthralgia, while renal involvement is a significant concern due to its impact on long-term prognosis. Diagnosis is based on clinical criteria, supported by laboratory findings such as elevated CRP and urine analysis abnormalities. The first-line treatment consists of supportive care,

symptomatic treatment, and corticosteroids to control inflammation. Close monitoring of renal function is essential for early detection of nephritis. **Conclusions:** Henoch-Schönlein purpura is a rare but treatable systemic vasculitis in pediatric patients. Early recognition and appropriate management with supportive care, symptomatic treatment, and corticosteroid therapy can lead to favorable outcomes, as demonstrated in this case. Ongoing monitoring and timely intervention are crucial to prevent long-term complications and improve prognosis.

Keywords: Henoch-Schönlein purpura, IgA vasculitis, respiratory infections, pediatric nephritis

A RARE INDICATION FOR PEDIATRIC CHOLECYSTECTOMY: HEREDITARY SPHEROCYTOSIS COMPLICATED BY CHOLELITHIASIS

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Introduction: Hereditary spherocytosis is the most commonly diagnosed type of hemolytic anemia, with autosomal dominant inheritance in 80% of most cases. Proteins implicated in the pathogenesis of the disease are spectrin, ankyrin, band 3, and band 4.2 protein. Typical clinical aspects present as the triad of icterus-anemia-splenomegaly; however, 20-30% of cases are asymptomatic, which makes establishing the correct diagnosis more challenging. **Case Report:** In 2014, a 3-year-old female patient presented at our Pediatric Clinic with throat pain, persistent and productive coughing, nasal congestion and moderate fever. Laboratory and paraclinical examination for determining acute bronchiolitis showed incidentally on the complete blood count (CBC), peripheral blood smear and biochemistry test results indicative of hereditary spherocytosis, with the patient being asymptomatic for this disease at the time of discovery. CBC shows a low hematocrit of 32.6%, a slightly decreased MCV of 78.44 fL, and an increased reticulocyte count of 96%0 due to bone marrow compensation. Biochemical examination indicates hyperbilirubinemia (BiT/BiD: 3.18/0.25 mg/dl) and slightly increased lactate dehydrogenase of 335 U/L, suggestive of chronic hemolysis. The peripheral blood smear demonstrates anisocytosis and anisochromia, with the presence of microspherocytes (9-10/100 erythrocytes) and polichromatophylic cells; isolated and grouped thrombocytes can be observed. The examinations above confirm the presumptive diagnosis of spherocytosis; our patient was discharged with recommendations of avoiding the risk of viral infections and intense physical exertion, refraining from iron supplementation, and a prescription for 5mg of folic acid, one tablet every two days continuously. Following a gallbladder attack, discovering cholelithiasis and chronic hemolysis, in May 2017 our patient underwent cholecystectomy, after which between 2017-2024, she returns for periodic follow-ups, clinical workup and treatment adjustments. **Discussions :** Although hereditary spherocytosis is the most frequently-found form of hemolytic anemia, cholelithiasis occurs in only 1.9-4% of young patients, with an even lower prevalence in prepubescent children, thus indication for pediatric cholecystectomy is uncommon. The average values of bilirubin (BiD: 0.275; BiT: 3.345) increased by 52.27% (BiD: 0.41875) and by 153.62% (BiT: 8.48375) post-operatively-these results being unexpected, as significant worsening of hemolysis are not usual after cholecystectomy. **Conclusions:** This case reflects on the fact that one-third of cases are asymptomatic until the moment of discovery, therefore appropriate screening for the parents and other family members and frequent pediatric consultations are necessary for minimizing long-term complications, such as chronic severe hemolysis and the development of pigment gallstones.

Keywords: hereditary spherocystosis, cholelithiasis, pediatric cholecystectomy, asymptomatic presentation

EMERGENCY MANAGEMENT OF SHARP FOREIGN BODY ASPIRATION AND INGESTION: A CRITICAL CASE

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Introduction: Foreign body aspiration and ingestion are rare but potentially life-threatening medical emergencies that require prompt recognition and multidisciplinary intervention. While accidental inhalation is more common in pediatric patients, cases involving sharp metallic objects in young adults are exceptionally rare and present considerable risks. **Case Report:** We present the case of a 19-year-old female, non-smoker, with no prior medical history, which presented to the emergency department with mild pharyngeal pain and significant anxiety following the accidental inhalation and ingestion of two metallic needles, each approximately 5 cm in length. There was no

evidence to suggest that the patient was under the influence of narcotics, alcoholic beverages, or any other psychoactive substances that could affect the level of consciousness. Initial ear-nose-throat (ENT) examination revealed no foreign bodies in the upper airway which led to other investigations. Biochemical tests showed no pathological abnormalities. A computed tomography (CT) scan revealed the presence of one needle lodged at the carina, extending into the left main bronchus, while the second needle was located in the cecum, partially embedded in the ileocecal valve. Given the complexity of the case, a multidisciplinary team including pulmonologists, gastroenterologists, and surgeons was assembled to develop a strategic treatment approach. Bronchoscopy was performed to extract the needle from the bronchial tree. However, an initial attempt with forceps caused the needle to migrate into the right bronchial tree, increasing the risk of complications. Fortunately, it was successfully retrieved through bronchoscopic aspiration without further incidents. The patient remained hemodynamically stable with no pulmonary complications. The second needle, located in the cecum, was closely monitored, and surgical intervention was postponed in favor of planned endoscopic retrieval under gastroenterological supervision. **Discussions :** This case highlights the severe risks associated with sharp metallic foreign body aspiration and ingestion. The dual localization of the needles in both the respiratory and gastrointestinal tracts is an uncommon occurrence, necessitating a precise, multidisciplinary management strategy. Improper treatment could lead to tracheobronchial rupture, pulmonary hemorrhage, pneumothorax, gastrointestinal perforation, and peritonitis. **Conclusions:** This presentation underscores the critical role of early diagnosis, a collaborative treatment approach, and the effectiveness of interventional pulmonology and gastroenterology in managing and retrieving foreign bodies. It also highlights the importance of careful monitoring and proactive management to prevent complications.

Keywords: Foreign body aspiration, Foreign body ingestion, Bronchoscopy, Endoscopic retrieval

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IMMUNOTHERAPY IN ADVANCED SMALL CELL LUNG CANCER: A CASE OF COMPLETE REMISSION WITH DURVALUMAB AND THE CLINICAL CHALLENGES OF IMMUNE-RELATED ADVERSE EFFECTS

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Introduction: Small cell lung cancer (SCLC) is a high-grade neuroendocrine malignancy with a generally poor prognosis, particularly in advanced stages, characterized by its aggressive progression, accelerated tumor proliferation, early metastatic potential and frequent association with paraneoplastic syndromes. This case report presents the clinical course of a patient with extensive disease stage SCLC, who achieved and maintained complete remission under Durvalumab in combination with chemotherapy, despite encountering multiple immune-related adverse effects and pre-existing comorbidities. **Case Report:** A 62-year-old female, with a history of 40 pack-years of smoking, grade I obesity, and grade II hypertension, presented in July 2022 with recurrent hemoptysis. She had a documented history of SARS-CoV-2 infection in January 2022. Bronchoscopy revealed a proliferative, infiltrative process causing stenosis of the right lower lobe bronchus. CT imaging identified two tumor masses in the right lung (upper and lower lobes), along with subcarinal and paratracheal lymphadenopathy. A diagnosis of extensive disease stage SCLC (cT3N2M0) was established. The patient underwent four cycles of chemotherapy (Carboplatin and Etoposide) combined with immunotherapy (Durvalumab), leading to complete remission without detectable metastases. Immunotherapy was continued as maintenance, but immune-related adverse reactions occurred: hypothyroidism and type 2 diabetes mellitus (February 2023), perivascular dermatitis (June 2023), and paraneoplastic acanthosis nigricans (December 2023). Each adverse event required temporary discontinuation of immunotherapy, with multidisciplinary management including levothyroxine, oral antidiabetic agents, and systemic/topical corticosteroid therapy. Durvalumab was successfully resumed after the resolution of each symptom. To date, the patient has completed 33 cycles of Durvalumab and remains in complete remission with no evidence of progression or metastasis. **Discussions :** This patient's outcome illustrates not only the potential of Durvalumab to maintain complete remission, but also the clinical impact of immune-mediated toxicities. The co-existence of endocrine, cutaneous, and metabolic manifestations, underscores the need for constant monitoring and multi-specialty involvement throughout long-term checkpoint inhibitor therapy. **Conclusions:** The benefits of immunotherapy can outweigh its risks when adverse effects are promptly identified and effectively managed, as demonstrated in this case. Collaborative efforts across specialties, along with the patient's proactive engagement, played a crucial role in navigating challenges and achieving a remarkable result.

Keywords: Immunotherapy, Durvalumab, Immune-mediated toxicities

NODULAR KAPOSI'S SARCOMA WITH DEEP MARGIN INFILTRATION: A CASE REPORT

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Introduction: Kaposi's Sarcoma (KS) is a multicentric vascular tumor associated with infection by human herpesvirus 8 (HHV-8). It primarily affects individuals with compromised immune systems, including patients with HIV/AIDS, organ transplant recipients, and older adults. KS manifests in four primary forms: classic, endemic, iatrogenic, and epidemic. The classic type typically presents in elderly Mediterranean or Eastern European men, with indolent skin lesions appearing predominantly on the lower extremities. Histologically, KS is defined by vascular channels that are lined with spindle-shaped tumor cells, with immunohistochemical staining for HHV-8 and CD34. **Case Report:** We present the case of a 64-year-old man with a gradually increasing, purplish nodular lesion on the lower limb of several months' duration. The excised tissue was 17×15×6 mm in measurement with an 8×6 mm base of implantation. Gross examination was nodular with yellowish and purplish spots. Microscopically, it consisted of stratified keratinized squamous epithelium with ulceration and fibrino-hemato-leukocytic exudate. Beneath it, there was a nodular, infiltrative growth of spindle-shaped cells of the tumor with vesicular nuclei of large size, diminished pleomorphism, and numerous atypical mitoses (18 mitoses/10 high-power fields). Vascular slits containing erythrocytes and a lymphocytic inflammatory infiltrate were observed between the neoplastic cells. Tumor invaded the deep surgical margin. The tumor cells were immunohistochemically positive for HHV-8 and CD34, and SMA was negative. The diagnosis of Kaposi's Sarcoma was made. **Discussions :** Kaposi's Sarcoma has a variable clinical course ranging from indolent cutaneous lesions to highly aggressive systemic disease. Prognosis varies with the extent of the disease, the immune status, and the existence of visceral disease. Classic KS follows a usual indolent course, but tumor invasion through deep surgical margins, as in this case, carries a risk for local recurrence. Treatment for localized KS involves surgery, irradiation, and intralesional chemotherapy. For more extensive or chronic disease, systemic therapy in the form of pegylated liposomal doxorubicin or paclitaxel is warranted. In immunocompromised patients, treatment of the underlying immunosuppression is necessary. In this patient, the positive deep margin needs close follow-up and consideration of adjuvant therapy to reduce the risk of recurrence. **Conclusions:** Kaposi's Sarcoma is a vascular neoplasm with diverse clinical presentations and prognosis. Histopathological examination and HHV-8 immunohistochemical staining are essential for the diagnosis. Wide local excision with clear margins is essential in the treatment of localized disease to minimize the risk of recurrence. Multidisciplinary management is necessary for optimal patient outcomes, particularly in disease with deep margin involvement.

Keywords: Kaposi's Sarcoma, Malignancy, Neoplasm, Diagnostic

CARCINOMA EX PLEOMORPHIC ADENOMA OF THE PAROTID GLAND: A CASE REPORT AND REVIEW OF DIAGNOSTIC AND THERAPEUTIC CHALLENGES

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Introduction: Carcinoma ex pleomorphic adenoma (CXPA) is a rare and aggressive malignancy arising from the malignant transformation of a pre-existing pleomorphic adenoma, the most common benign salivary gland tumor. This transformation typically occurs after many years, with studies reporting an average duration of 23.3 years before malignant change. Most often diagnosed in people between the sixth and eighth decades of life, CXPA mostly affects the parotid gland. **Case Report:** We present the case of a 61-year-old female who was evaluated for a left parotid lobar superficial tumoral lesion. Initial histopathological assessment suggested inflammatory changes. However, further examination of tissue fragments revealed a relatively well delimited tumoral proliferation reaching to the inked surgical margins, with areas of capsular discontinuity. The tumor exhibited regions characteristic of pleomorphic adenoma alongside features indicative of malignant transformation, including cytonuclear atypia, numerous mitoses, and comedonecrosis. Immunohistochemical analysis demonstrated intense CK7 positivity in the cytoplasm and membrane of tumor cells, highlighting the ductal component. Focal p63 positivity marked residual myoepithelial cells. The Ki67 proliferation index was notably elevated at approximately

35-40% in the malignant areas. These findings led to a diagnosis of carcinoma ex pleomorphic adenoma, favoring salivary duct **Discussions :** Carcinoma ex pleomorphic adenoma (CXPA) is a rare, aggressive cancer arising from the malignant transformation of a long-standing pleomorphic adenoma, especially after 15 years. It typically presents as a previously stable mass that begins to grow rapidly, sometimes causing pain or facial nerve palsy. Poor prognostic factors include tumor size over 4 cm, multiple positive lymph nodes, and distant metastases. The degree of invasion beyond the tumor capsule also signals a worse prognosis. Treatment primarily involves surgical excision through partial or total parotidectomy, depending on tumor size, location, and structural involvement. In high-risk cases, adjuvant radiotherapy is recommended to reduce recurrence. Chemotherapy is reserved for metastatic or unresectable disease, as its role remains less certain. **Conclusions:** Carcinoma ex pleomorphic adenoma is an aggressive and rare neoplasm that mandates a high degree of suspicion, especially in the context of a patient with long-standing salivary gland masses who presents with rapid growth. Accurate and timely diagnosis, followed by complete surgical treatment and therapy consideration, is essential to optimize patient results. Because CXPA is such a rare and challenging entity, multidisciplinary management is most crucial in treating this challenging lesion

Keywords: Carcinoma ex pleomorphic adenoma, Malignancy, Neoplasm, Diagnostic

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CARDIOVASCULAR DISEASES CAUSED BY PROFESSIONAL STRESS IN THE INTERNAL AFFAIRS MINISTRY'S EMPLOYEES

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Introduction: The actuality of the topic is given, first of all, by the approach to "occupational stress", a topic of major importance, but very little analyzed, especially in workers of the Ministry of Internal Affairs (MAI), who are highly exposed to professional stress through the nature and specificity of the military environment.This study's aim was to identify problems at the institution caused by certain aspects of organizational effectiveness: individual and group performance, ongoing labor conditions, the general performance of the institution, identifying stress factors, as well as possibly establishing an efficient stress management plan in these structures without affecting the results of work performed. **Case Report:** 272 employees of MAI were tested during 60 days, divided into two lots, as follows: 1. The group to be investigated (A) consists of 141 subjects, M.A.I. operative personnel, exposed to aggressive stressors (increased responsibility and dangerousness). 2. The control group (B), consisting of a number of 131 subjects, is similar in structure to the group to be investigated (A) in terms of distribution by gender, age, salary, level of education, living environment, but is exposed to a comparatively lower level of stress. The following parameters were investigated to attest the effects of professional stress: heart rate, blood pressure, heart rhythm, electrocardiographic aspect. **Discussions :** The determination of some cardiovascular parameters reveals that there is a positive, statistically significant correlation between the cardiovascular changes and the investigated group, compared to the control group. The main causes of the effects mentioned above are related to stress: neuropsychological overload, fatigue, contact with the public in conditions of permanent overcrowding of work points and others. The differences in the association of symptoms in the two analyzed batches (the investigated batch and the control batch) are statistically significant, the response of the body of the workers in the investigated batch being much more pronounced. **Conclusions:** Professional stress is present in this national organization represented by the MAI and is a risk factor for diseases related to the profession. In order to be able to intervene effectively in reducing the harmful effects of this risk factor, it is necessary to adopt unitary, concrete, clear, incisive measures, applicable to this type of organization.

Keywords: professional stress, objective methods, MAI

THE TICKING CLOCK: TIMELY ATROPINE ADMINISTRATION IN A LIFE-THREATENING EMERGENCY

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Introduction: Organophosphates are chemical compounds widely used as pesticides and herbicides, but they have the potential to cause systemic toxicity when introduced into the body. Once they are absorbed, they inhibit

the acetylcholinesterase enzyme, leading to an accumulation of acetylcholine in autonomic and neuromuscular synapses, which results in overstimulation of muscarinic and nicotinic receptors. **Case Report:** We present a case of a 52-year-old male, with no available medical documents, who ingested approximately 1L of insecticide (Pirimiphos-methyl) and 500 mL of herbicide (Glyphosate) at 11:30 on February 13th. At 12:18, when the intensive care ambulance arrived at the scene, the patient was psychomotor agitated and presented with muscle fasciculations, bilateral miosis, abundant sialorrhea, profuse sweating and a characteristic pungent odor. The team immediately removed the patient's clothing and initiated monitoring, while two peripheral IV lines (16G) were inserted. When it was first assessed, the patient's GCS was 15, with a 90% SaO2, 25 breaths/minute, 151/100 mmHg blood pressure, heart rate of 100 bpm, 85 mg/dL blood glucose and temperature of 36.5 °C. Pulmonary auscultation revealed bilateral basal crackles and global wheezing, indicating possible respiratory distress. Because clear signs of cholinergic toxidrome were present, the administration of atropine is initiated, with a beginning dose of 2 mg IV. As no significant improvement was observed, the dose was doubled to 4 mg after 5 minutes, alleviating muscarinic symptoms. Due to continued respiratory distress, the team proceeded with endotracheal intubation, using as premedication Granisetron, as for sedation and analgesia Propofol and Fentanyl and for neuromuscular blocking agent Rocuronium. At 13:05, the patient arrived at the emergency room, where he was re-evaluated, closely monitored, continuously ventilated and provided with an ongoing atropine infusion (0.02 mg/kg/h). Later on the same day, the patient was transferred to the Intensive Care Unit, where his condition stabilized and no signs of cholinergic toxidrome were present anymore. The patient was successfully extubated on February 14th. He was discharged home on February 17th, without any signs of residual toxicity or complications. **Discussions :** Cholinergic toxidrome resulting from organophosphate poisoning presents with "SLUDGE" symptoms (Salivation, Urination, Defecation, Gastric Emesis, Bronchorrhea, Bronchospasm, Bradycardia). The prompt administration of atropine alleviates the symptoms by blocking muscarinic receptors, preventing further accumulation of acetylcholine, and reversing the toxicity. **Conclusions:** This case proves the importance of timely intervention in cases of suspected pesticide or herbicide poisoning. Early recognition, decontamination and administration of atropine can make the difference between life and death.

Keywords: organophosphate, atropine, cholinergic toxidrome, acetylcholinesterase

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AN OVERVIEW OF A SEEMINGLY HARMLESS GASTROINTESTINAL DISORDER AMONG PAEDIATRIC PATIENTS: A CASE PRESENTATION OF A CHILD WITH CHRONIC CONSTIPATION

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Introduction: Constipation, which could be an acute or persistent gastrointestinal disturbance, is a prevailing and expanding issue among children and teenagers. In the eventuality in which constipation (classified as organic type or functional type) becomes chronic, retaining practices can occur (sometimes this action can even last for days) with subsequent costiveness and suffering that strengthens the fright for the ejection act (1,2). **Case Report:** The case of a male patient, aged 11 years and 4 months old, who presented to emergency hospital service from Târgu Mureș, Romania because of eight days without stool transit, abdominal meteorism and notably turgid abdomen with diffuse pain, especially in the hypogastrium and in the periumbilical region. His past medical history included a mild neuropsychological delay, and a history of chronic constipation for about one year, which can be strongly related to his dietary habits (meals rich in carbohydrates but poor in fibers and vegetables, insufficient liquid intake). The patient received a surgical consult because there was suspicion of an acute abdomen which was excluded at that time. Given his marked abdominal pain and lack of stool transit for the past 8 days, the patient was hospitalised in the paediatric ward. An abdominal ultrasound was performed, which showed a 5.5 cm fecaloma in his rectal ampulla. Enemas were performed during the admission, and pharmacological treatment was prescribed, which included trimebutine, macrogol 4000, fibre supplements and probiotics, which led to the daily elimination of bigger stools, with visible diminution in abdominal distention and an echographic improvement of colonic impaction. This resulted in a total weight loss of more than 1 kg bodyweight. The patient was then dismissed with the pharmacological and behavioural recommendations he has to follow at home. **Discussions :** Correct medical interventions performed on time lead to a favourable evolution of the patient. This report emphasizes the significance of a prompt and accurate treatment. **Conclusions:** This case highlighted a clinical presentation of a chronically constipated patient, with severe abdominal pain and prolonged absence of stool transit, which was initially suspected for an acute surgical abdomen. For managing this disorder in the most appropriate way, it is significantly important to act in the immediate with pharmacological treatment, including

enemas, laxatives and probiotics, as well as to follow a correct nutrition and behavioural modifications as long style modifications.

Keywords: chronic constipation, fecaloma, acute abdomen, colonic impactation

CLINICAL CHALLENGES IN A PRETERM NEONATE WITH THORACOABDOMINAL DEFECT AND CARDIAC DEXTROPOSITION – A CASE REPORT

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Introduction: Thoracoabdominal wall defects are congenital malformations characterized by structural discontinuities affecting various anatomical components. These defects are often associated with herniation of organs and displacement of chest structures, such as cardiac dextroposition. **Case Report:** We present the case of a premature female infant, delivered at 32 weeks of gestation via emergency C-section due to abnormal results from a Non-Stress Test performed on a 41-year-old multiparous mother diagnosed with preeclampsia. The fetal ultrasound conducted in the OB/GYN Department revealed no anomalies. During the prenatal period, the mother did not undergo regular evaluations, but took folic acid supplements. She had no history of smoking, alcohol and medication use, or radiation exposure. The clinical examination of the newborn revealed a weight of 1800 g and a length of 41 cm. Heart sounds were most clearly heard in the right hemithorax. The infant exhibited respiratory distress and a parietal defect at the thoracoabdominal boundary, located under the left nipple area. A hyperemic, tumorous structure, approximately 3 cm in size, was herniated through the polypoid margins of the defect, suspected to be a segment of the stomach. This structure demonstrated reducibility and expansion with increased intra-abdominal pressure. The patient was evaluated by the Pediatric Surgery Department, and a conservative approach was adopted, using a wet sterile cloth to preserve the vitality of the underlying structures. This technique aimed to provide appropriate wall resistance against expansion and facilitate the passive reduction of the hernia. A subsequent reassessment confirmed the feasibility of enteral feeding and the need for ongoing antibiotic therapy. A cardiovascular examination revealed mild mitral valve prolapse, a patent foramen ovale, and dextroposition. Due to the premature birth, the patient was referred for an ophthalmological consultation for retinopathy of prematurity, which showed increased vascular dilatation in zone 2. After a 30-day hospitalization with appropriate medical care in the Neonatal Intensive Care Unit, the baby was discharged for follow-up at the outpatient clinic. **Discussions :** Although the family has two other children with no medical history, genetic test results are still pending. The parents are known to be second-degree relatives, and their ages (41 and 42 years) raise some genetic concerns. **Conclusions:** This case highlights the importance of vigilant monitoring during pregnancy and genetic counseling in consanguineous marriages. While herniation of abdominal organs is commonly seen with abdominal wall defects, herniation of abdominal organs through chest deformities is very rare and requires careful clinical assessment and management.

Keywords: thoracoabdominal wall defect, premature, cardiac dextroposition, consanguine marriages

PRADER-WILLI LOOKALIKE: UNCOVERING A CHROMOSOMAL STRUCTURAL ANOMALY

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Introduction: It is widely known that patients suffering from Prader-Willi syndrome exhibit severe hypotonia, hyperphagia accompanied by progressive onset of severe obesity, hypogonadism and delayed attainment of motor and language milestones. However, the typical Prader-Willi 15q11.2-q13 deletion is not always the determining factor of the phenotypic traits mentioned, as they can manifest in individuals with an intact chromosome 15 due to other genetic mutations. **Case Report:** A 31-year-old male presented with obesity of noticeable extent, psychomotor retardation, polilalia with speech articulation disorders, spastic tetraparesis, almond shaped eyes, triangular face with a small bitemporal diameter, small hands and feet, hypogonadism with reduced facial hair. A perimembranous VSD (ventricular septal defect) was also mentioned alongside the milestone of independent walking from the age of 5 after a surgical intervention. Articulate speech has been present since the age of 6 and some behavioural and autism spectrum disorders were conspicuous as well. The phenotype indicated Prader-Willi

syndrome, therefore a SNP (Single Nucleotide Polymorphism)-array has been conducted. The result was rather unexpected, as it suggested a terminal deletion of the short arm of chromosome 2 measuring 2,7 Mb (Megabase), along with a terminal duplication of the short arm of chromosome 20, therefore observing an unbalanced translocation. The region missing from chromosome 2 includes the MYT1L (Myelin Transcription Factor 1-Like) gene. A karyotype with G-banding was performed for the brother and parents, as well as for the paternal grandmother. The results were found to be normal for the female patients and revealed a balanced translocation between chromosomes 2 and 20 in the male patients, thus exposing the hereditary pattern of our patient's condition. **Discussions :** The MYT1L gene is found in region 2p25.3 and is linked to intellectual disability and behavioural problems. According to literature, it is also associated with autism and varying degrees of obesity, suggesting its critical role in neurodevelopment and weight regulation. Moreover, the 20p partial trisomy determines the speech delay, dysmorphic facial features and cardiac anomalies. All of these contribute to the clinical manifestations of the patient, making this case an exceptionally rare one. **Conclusions:** In conclusion, the case provides valuable insights into the phenotypic expression of MYT1L gene mutations, particularly in patients with intellectual impairment and obesity. It also contributes to the growing body of evidence on MYT1L and 20p duplication disorders, emphasizing the importance of early genetic testing and the necessity for further research to better understand the broader clinical implications of these mutations.

Keywords: Prader-Willi syndrome, MYT1L gene, 20p partial trisomy, unbalanced translocation

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SEVERE COPD EXACERBATION WITH MULTISYSTEM INVOLVEMENT IN AN ELDERLY POLYMORBID PATIENT

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Introduction: Chronic obstructive pulmonary disease (COPD) in elderly patients with multiple comorbidities poses significant clinical challenges, particularly when primarily caused by occupational asbestos exposure. Asbestos, a potent respiratory irritant, can directly lead to COPD through chronic airway and parenchymal damage. This case examines the management of a severe COPD exacerbation in a 69-year-old male with asbestos-induced COPD, complicated by pneumonia and multiple metabolic imbalances, highlighting the necessity of integrated, multidisciplinary care. **Case Report:** A 69-year-old retired male with COPD, primarily caused by occupational asbestos exposure, with a secondary contribution from a 40-year smoking history, presented with a severe exacerbation. His medical history included grade 2 hypertension, type 2 diabetes mellitus, chronic kidney disease (CKD), and atherosclerosis. He reported occasional alcohol use and inconsistent adherence to his treatment plan. On admission, he exhibited profound dyspnea, cyanosis, somnolence, and tachypnea (20-22 breaths/min). Oxygen saturation was 84% on room air, improving to 91% with a nasal cannula, indicating severe hypoxemia and hypercapnia with subsequent respiratory acidosis (pH of 7.15). Examination revealed an emphysematous thorax, fine crepitant rales, bilaterally diminished breath sounds, prolonged expiratory phase and gynecomastia. Chest X-ray demonstrated cardiomegaly, aortic ring calcification, reticulo-micronodular opacities consistent with asbestos-induced lung damage, and right cardiophrenic sinus opacity. ECG showed sinus rhythm, right bundle branch block and supraventricular extrasystoles, consistent with right atrial hypertrophy. The FEV1 was reduced by 48%, indicating significant airway obstruction. The FEV1/FVC ratio, also known as the Tiffeneau index, was decreased by 42%, confirming a severe obstructive pattern. Additionally, the maximum expiratory flow at 50% of forced vital capacity (MEF 50) was reduced by 42%, highlighting pronounced obstruction in the small airways, a hallmark of asbestos-related lung damage. Treatment involved oxygen therapy (1-4 L/min), salbutamol, prednisone, levofloxacin for pneumonia and furosemide for fluid overload. **Discussions :** This case highlights the complexity of managing severe exacerbations of asbestos-induced COPD. Asbestos-related lung damage, with a secondary contribution from smoking, severely impaired respiratory function, while the pneumonia and consequent metabolic imbalances further complicated the clinical course. Seasonal vaccination against influenza and pneumococcus, combined with chronic antibiotic administration, oxygen therapy, and diuretics when needed, can reduce exacerbation risk. **Conclusions:** Studies emphasize the importance of long-term oxygen therapy, smoking cessation, and bronchodilation in preventing exacerbations of asbestos-related COPD. This patient's severe respiratory acidosis and small airway obstruction highlight the need for consistent treatment adherence, protection from further occupational exposures, and malignancy screening to improve outcomes in complex cases

Keywords: COPD, asbestos, acidosis, pneumonia

PARTICULARITIES AND INCURSIONS IN CONGENITAL MYOPATHIES OF THE CHILD STARTING FROM A CLINICAL CASE

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Introduction: Myopathies are a heterogeneous group of conditions that affect skeletal muscles, characterized by force deficiency and muscle tone disorder with possible contractions, without affecting the nervous system. It is classified into: congenital myopathies, congenital muscular dystrophies, progressive muscular dystrophies, metabolic myopathies, inflammatory myopathies and myopathies in systemic diseases. Genetic tests, histochemical methods and muscle biopsy are necessary investigations to specify a certain diagnosis. **Case Report:** We are starting from the case of a 4-year-old boy with myopathic complex phenotype: the absence of appropriate motor purchases until the age of 1 year and 6 months, when he manages to maintain the sitting position, then the slow independent walking at the age of 2 years and 6 months, swinging walk, with hyperlordosis, on short distances, minimal muscle amyotendinous reflexes present, global, severe axial muscle hypotonia and upper limbs with ligament hyperlaxity with minimal osteotendinous contractures (achilean tendon, finger flexors with claw-like fingers), a myotonic and hypomobile facies. He's not suffering from brain damage, has normal muscle enzymes, and the electromyographic test indicates a myogenic appearance. He has no positive family history of muscle disease, no ante-, peri- or postnatal distress with cognitive purchases below age. **Discussions :** The clinical picture suggests a congenital myopathy, but congenital muscular dystrophy (Bethlem Myopathy) or progressive muscular dystrophy (Laminopathies, Emery Dreifuss), due to the presence of contractures and amyotrophies, cannot be excluded. The clinical picture is in the process of diagnosis. **Conclusions:** In the absence of histopathological and immunohistochemical examination, genetic testing is essential to establish a diagnosis, the evolution and prognosis of the disease. Also, in addition to the clinical picture, investigations such as cardiological, ophthalmological, endocrinological examination and psychological evaluation with IQ level are required.

Keywords: Myopathies, Genetic tests, Neurology

HYPERCOAGULABILITY SYNDROME AND NONSPECIFIC SYSTEMIC INFLAMMATORY SYNDROME IN THE CONTEXT OF INFECTIVE ENDOCARDITIS

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Introduction: Hypercoagulability syndrome, together with nonspecific systemic inflammation, can arise as a result of infective endocarditis, amplifying the risk of severe thromboembolic complications due to the procoagulant state and systemic inflammatory response triggered by the ongoing infection. **Case Report:** Patient B.P., a 73-year-old woman with a history of Parkinson's disease, type 2 diabetes, hypertension, and ischemic coronary artery disease, presented with diffuse abdominal pain, significant weight loss, fever, and chills over the past year. Further investigations revealed splenomegaly (14 cm in diameter), stenosis of the splenic branch of the portal vein, and stenosis of the right renal artery. Following a cardiology consultation, infective endocarditis was suspected, supported by episodes of fever and chills. Transthoracic and transesophageal echocardiography confirmed the diagnosis of infective endocarditis, revealing vegetations on the aortic and mitral valves. Blood cultures were positive for Enterococcus faecalis and Staphylococcus aureus in the urine. Following the specialty consultations, Endoscopic Ultrasound revealed esophageal varices. **Discussions :** Infective endocarditis can promote septic embolization, leading to splenic and renal infarcts through the migration of infected vegetation fragments. The procoagulant status induced by the infection could serve as the starting point for a systemic infection, including infective endocarditis, in the context of hematogenous bacterial dissemination.The differential diagnosis included the possibility of a neoplasm, considering the weight loss and anemia; however, imaging investigations and colonoscopy revealed colitis (with areas of self-limiting bleeding alternating with areas without inflammation) and hemorrhoids, findings not suggestive of malignancy. These results further supported the diagnosis of infective endocarditis with thromboembolic complications.The patient was transferred to the Cardiology department for treatment of infective endocarditis with ampicillin and ceftriaxone. Additionally, biological samples showed a hepatocellular syndrome, indicating a septic context. **Conclusions:** The case highlights the importance of early

recognition of infective endocarditis in the context of a systemic inflammatory syndrome and hypercoagulability, as early diagnosis and intervention are crucial in preventing severe complications, such as thromboembolic events, and significantly improving the long-term prognosis of the patient. Additionally, a multidisciplinary management approach involving cardiology, infectious diseases, and other specialties is essential for optimal patient care, ensuring comprehensive treatment and better outcomes.

Keywords: hypercoagulability, septic emboli, splenic infarct, renal infarct

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ONGOING CASE REPORT OF SPONDYLODISCITIS ASSOCIATED WITH RETROPERITONEAL FIBROSIS

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Introduction: Spondylodiscitis (SD) is the inflammation of the intervertebral disc and adjacent vertebrae. Retroperitoneal fibrosis (RPF) represents the growth of scar-like tissue around organs located in the retroperitoneum and it typically presents with ureteric obstruction; it can lead to kidney failure if left untreated. Both are rare occurrences, the incidence of SD being approximately 4-24 cases/million inhabitants/year[1] and that of RPF at 13 cases/million inhabitants/year[2]. The co-occurrence of these two conditions remains poorly documented in the literature. **Case Report:** A 72-year-old male presented to his physician with complaints of intense lower abdominal pain irradiating to the inguinal region, pollakiuria, dysuria and constipation. Imaging findings revealed spondylodiscitis features at the level of L2-L3 vertebrae as well as a retroperitoneal proliferative process causing grade 3 left ureterohydronephrosis. Enlarged intra and retroperitoneal lymph nodes were also present. Inflammatory markers were slightly increased but blood and urine cultures were negative. All tumor markers yielded negative results. The QuantiFERON-TB Gold test was positive but thoracic imaging findings showed no tuberculosis-specific lesions. Wide-range antibiotic therapy with vancomycin and ceftriaxone was initiated until the discovery of the etiology. The dose of medication was adjusted to account for the decreased glomerular filtration rate in the context of chronic kidney disease most likely caused by the RPF. During the following days, the inflammation markers marginally decreased and pain diminished significantly. Short after, the patient was declared temporarily stable and discharged home for a limited time with instructions to continue treatment. He will return for a ureteral stent placement and a retroperitoneal biopsy soon. **Discussions :** Mycobacterium tuberculosis is known to occasionally cause SD in cases of spinal tuberculosis (Pott's disease). However, in this scenario, the scan results did not support this diagnosis and antituberculosis therapy was therefore not initiated. Additionally, the negative results of the tumor markers do not suggest the possibility of malignancy at present, but a certain diagnosis can be made only after histopathological assessment. According to the guidelines, the first-line empiric antibiotic treatment in SD is vancomycin and ceftriaxone; their administration to this patient appears to have significantly reduced his discomfort. After the histopathological report, specific treatment will be commenced based on the determined etiology. **Conclusions:** This rare SD-RPF association highlights possible pathophysiological correlations between the two conditions. It also raises the question as to what the nature of their association could be: in the case of this patient, might one have caused another, or are they separate entities manifesting simultaneously?

Keywords: spondylodiscitis, retroperitoneal fibrosis, ureterohydronephrosis

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A RARE CASE OF SEVERE HYPOCAPNIA: WHEN ABCDE-POCUS ASSESSMENT BEATS TRACHEAL INTUBATION

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Introduction: Acute metabolic acidosis is a severe electrolyte imbalance which can induce acidemia, impaired cerebral circulation with major neurological decline, cardio-respiratory insufficiency and even death. Hyperventilation as a compensatory mechanism of metabolic acidosis leads to decrease in arterial carbon dioxide pressure (PaCO2). These effects are reflected in increased respiratory effort, respiratory muscle fatigue to exhaustion and the need for tracheal intubation and ventilatory support. The particularity of this case refers to the challenges regarding the diagnosis and therapy of the cause of metabolic acidosis, in the face of severe

hypocapnia without neurological impairment (values not found in the literature). **Case Report:** An 80-year-old male was admitted to emergency room (ER) complaining of severe dyspnea, oligo-anuria and malaise for three days. Medical history revealed left frontal glioblastoma under post-operative chemoradiotherapy and prostate adenoma. The ABCDE approach showed tachypnea with 40 bpm, marked respiratory effort, impaired respiratory volume under oxygen therapy and needs for tracheal intubation and mechanical ventilation, tachycardia with hemodynamic stability, neurological integrity with 15 points on the Glasgow Coma Scale. Exposure assessment revealed peripheral edema without chest-abdominal pain or other complaints. The arterial gas analysis showed acidemia (pH=7.1) with high anion gap (21 mmol/L), severe hypocapnia (PaCO2=6.4 mmHg) and extremely low bicarbonate level (2.2 mmol/L). The CAT-MUDPILES approach to identifying causes of metabolic acidosis with high anion gap and point-of-care ultrasonography evaluation delayed the invasive maneuver of hypnosis and mechanical ventilation (with the possibility of causing cardio-respiratory arrest in the induction sequence). POCUS showed immediately bilateral grade I hydronephrosis and urinary bladder globe. Further lab blood tests indicated a serum creatinine of 16.69 mg/dL, urea of 318 mg/dL and potassium of 5.93 mmol/L. The final diagnoses were post-renal acute kidney injury, acute urinary retention secondary to prostate adenoma. ER treatment included intravenous sodium bicarbonate, urethral catheterisation (3300 mL of diuresis) and improvement in ASTRUP parameters after 40 minutes. **Discussions :** Structured ABCDE-POCUS assessment of the critically ill patient provides valuable clues in the management of life-threatening situations. Moreover it offers non-invasive solutions with minimal side effects in the evolution of patients. To our knowledge, this is the first reported case of extreme hypocapnia in an elderly patient with intact neurological function, caused by acute metabolic acidosis. **Conclusions:** Severe hypocapnia poses diagnostic and therapeutic challenges with clues in the ABCDE-POCUS assessment.

Keywords: severe hypocapnia, metabolic acidosis, ABCDE assessment, POCUS

PTEN MUTATIONS LINKING AUTISM SPECTRUM DISORDER AND CANCER: INSIGHTS FROM A PEDIATRIC CASE OF COWDEN SYNDROME

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Introduction: PTEN, a tumor suppressor gene, is a common genetic risk factor for cancer and autism spectrum disorder (ASD). PTEN dysfunction can cause a wide range of phenotypes including macrocephaly, benign overgrowths and malignant neoplasia, and neurodevelopmental disorders (NDD), such as ASD and developmental delay (DD). Two common, but seemingly disparate, clinical phenotypes of individuals with PTEN hamartoma tumor syndrome (PHTS), defined as having germline PTEN variants, are cancer and ASD/DD. Cowden syndrome (CS), part of the PTEN Hamartoma Tumor Syndrome (PHTS), is an autosomal dominant disorder characterized by multiple hamartomas and an elevated risk of various cancers, notably breast, thyroid, and endometrial cancers. Comprehensive PTEN testing in individuals with autism and macrocephaly is essential for early detection of CS. Early diagnosis allows for timely cancer surveillance and prevention, significantly improving long-term outcomes.
Case Report: We present the case of an 8-year-old boy diagnosed with ASD, exhibiting clinical features of macrocephaly, growth and developmental delay, moderate intellectual disability, hamartomas and a right thyroid nodule measuring 2 cm. The patient's mother, aged 43, with no known family history of cancer, was recently diagnosed with breast cancer (invasive ductal carcinoma, Luminal B subtype, TNM stage T2N1M0). Extended molecular testing of the mother, performed to assess hereditary cancer risk, Next-Generation Sequencing (NGS) panel including 125 genes, revealed a pathogenic mutation in the PTEN gene. The same pathogenic variant (PTEN c.414T>G, p.Tyr138*, heterozygous) was identified in the child, confirming a diagnosis of PHTS. **Discussions :** This case highlights the importance of extended genetic testing in children with autism spectrum disorder (ASD) and macrocephaly. The co-occurrence of DD, thyroid nodule, and hamartomas in the child raised suspicion for CS. Literature indicates that up to 20% of individuals with ASD and macrocephaly carry germline PTEN mutations. The maternal diagnosis of invasive ductal carcinoma and the discovery of a PTEN mutation confirm an autosomal dominant inheritance pattern and broaden the clinical picture. Despite the absence of a family cancer history, this case exemplifies how PHTS may present variably across generations. **Conclusions:** This case reinforces the need for early PTEN testing in children with ASD and macrocephaly. Key learning points include recognizing atypical cancer syndromes despite negative family history, the utility of multigene panel testing, and the benefits of cascade testing. By linking neurodevelopmental and oncologic features, this case contributes to medical knowledge by emphasizing the importance of integrated, proactive care in hereditary cancer syndromes with pediatric presentations.

Keywords: PTEN mutation, Cowden syndrome, ASD, NGS panel

SAPHO SYNDROME IN THE ABSENCE OF GUIDELINES - NAVIGATING THE CHALLENGES OF DIAGNOSIS AND THERAPY: A CASE REPORT

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Introduction: Synovitis-Acne-Pustulosis-Hyperostosis-Osteitis (SAPHO) syndrome is an acronym comprising a rare and complex inflammatory disorder. It is characterized by a simultaneous onset of osteoarticular and dermatological manifestations. The pathogenesis of SAPHO syndrome is uncertain, however bacterial and immunological etiologies are associated. Current treatment options are empirical, aiming to relieve painful symptoms but show mixed efficacy. Our case report targets a paradoxical disease evolution and limited response to currently available treatment, highlighting the diagnostic and therapeutic challenges. **Case Report:** We present a 35-year-old male from an urban environment with multiple nodular-cystic lesions located on the face, scalp, and the thorax. He has a history of pustular acne since adolescence, with progressively worsening osteoarticular symptoms. In 2007, he reported occasional lumbar pain, which was relieved with analgesics. In 2010, the patient developed severe pain in the hand and sternoclavicular joints, with drug-resistant lumbar pain and severe acne. Rheumatological consultation revealed sternoclavicular joint hyperostosis and sacroiliitis. Dermatological consultation found multiple painful abscessing nodular-cystic lesions. Imagistic results confirmed the suspicion of SAPHO syndrome. Initial therapy with Lornoxicam, Doxycycline, Sotret, Methotrexate and Diprogenta resulted in minimal improvement on cutaneous lesions. Additive biologic therapy with Etanercept managed to relieve the patient's osteoarticular pains, but the cutaneous lesions remained refractory. Due to treatment costs, Etanercept therapy was discontinued after 12 weeks. **Discussions :** SAPHO syndrome affects roughly 1 in 10,000 individuals. Associations with other rheumatological and dermatological conditions were made but vary worldwide. Our patient's rare and severe late onset of osteoarticular manifestations preceded by a long history of pustular acne complicated our early diagnostic and therapeutic approach. There currently are no standardized treatment regimes in literature for SAPHO syndrome. Recent studies suggest the use of TNF-α inhibitors and empirical therapy significantly alleviated joint pain but had limited effect on cutaneous lesions (Nguyen et al., 2012; Kishimoto et al., 2022). This challenges the efficacy of currently proposed treatment options in managing the cutaneous manifestations seen in our case. Furthermore, our patient's inability to continue biologic therapy due to financial difficulties proved to be a significant obstacle in improving symptoms. **Conclusions:** Our case emphasizes that early diagnosis and multidisciplinary management of SAPHO syndrome is extremely important and should be individually evaluated in all affected patients due to the clinical heterogeneity of the disease. While our patient's partial response to additive biologic therapy proposes potential in managing osteoarticular manifestations, there remains further need for clinical studies to develop specific standardized treatment plans.

Keywords: SAPHO syndrome, pustular acne, hyperostosis, biologic therapy

FROM LENTIGINES TO SQUAMOUS-CELL CARCINOMA: UNVEILING XERODERMA PIGMENTOSUM - A CASE REPORT

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Introduction: Xeroderma Pigmentosum (XP) is a rare, hereditary autosomal-recessive disorder defined by photosensitivity, increased susceptibility to sunburn following minimal exposure, abnormal lentigines pigmentation and a proneness to develop skin cancer. Mutations in any of the eight XP-related genes lead to a dysfunction in the DNA repair mechanism, resulting in the accumulation of UV-induced photoproducts, a process which lies at the foundation of this disease. In addition to cutaneous manifestations, Xeroderma Pigmentosum can also manifest through ocular abnormalities and neurological degenerations, including cognitive impairment and hearing loss, particularly in patients with *XPA* mutations. **Case Report:** A 7-year-old patient, diagnosed with Xeroderma Pigmentosum (*XPA* mutation) at the age of 2, presents with an exophytic ulcerated tumour formation in the frontal and orbital region. The lesion appeared in June 2024 and was rapidly growing, reaching 31x67x66 mm. Paraclinical investigations (MRI) revealed a frontal bone edema, a mucosal thickening in the paranasal sinuses, and bilateral cervical lymph nodes measuring up to 12 mm. Further laboratory findings showed leucocytosis with

neutrophilia, hypercalcemia and a mildly elevated CRP. In August of the same year, the tumour was surgically excised, followed by reconstruction with a partial-thickness skin graft harvested from the left thigh. Histopathological examination confirmed a well-differentiated invasive squamous cell carcinoma (SCC) G1, pT3 LO VO Pn1 R0, along with a completely excised low-grade dysplastic nevus. Immunohistochemical analysis (PRAME staining) was negative, and no tumour emboli were identified in angiolymphatic vessels via routine or reticulin-CD34 staining. **Discussions :** For children diagnosed with XP, the chance of developing non-melanoma skin cancer has increased 10,000-fold, and that of melanoma 2,000-fold, with SCC and BCC being the most frequent ones. These tumours mainly affect the face, head and neck and have a high chance of recurrence. In this case, despite complete tumour excision, a post-surgical CT revealed bilateral cervical adenomegaly, with symmetric distribution, more prominent in the upper jugular group, with a reactive-inflammatory character. Given the parents' refusal of a sentinel lymph node biopsy due to associated risks, monthly ultrasound was recommended. **Conclusions:** Although Xeroderma Pigmentosum remains an incurable disease, early diagnosis and proper preventive measures, including limiting sun exposure and using sunscreen, can significantly prolong life expectancy. Metastatic malignant melanoma and SCC represent the leading causes of mortality, highlighting the crucial importance of early detection and prompt intervention.

Keywords: Xeroderma Pigmentosum, Squamous Cell Carcinoma, XPA mutations

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FROM A COMMON SYSTOLIC MURMUR TO A RARE GENETIC DISORDER: LOEYS-DITZ SYNDROME

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Introduction: Loeys-Dietz syndrome (LDS) is a connective tissue disorder with an autosomal dominant inheritance pattern, marked by vascular anomalies (cerebral, thoracic, and abdominal aortic aneurysms and/or tortuosity and dissection), skeletal features like pectus excavatum or carinatum, hypermobile joints, arachnodactyly, and dysmorphic features such as hypertelorism, 'bifid' uvula/cleft palate or craniosynostosis. Cutaneous manifestations consist in scant, velvety, and translucent skin, easy bruising, and dystrophic scars. These patients have high predisposition for gastrointestinal complications, like eosinophilic esophagitis, gastritis, or inflammatory bowel disease. **Case Report:** We present a 17-years-old male patient diagnosed with Loeys-Dietz syndrome at the age of 13 years and the evolution of cardiovascular manifestations. At the age of 13 years, the patient experienced three episodes of dizziness and scotoma and the last episode was associated with loss of consciousness. He was evaluated in the outpatient clinic of the clinic Pediatrics I Cluj-Napoca for syncope. He presented facial dysmorphism (hypertelorism), pectus carinatum, arachnodactyly, dolichocephaly, thoraco-lumbar scoliosis, systolic murmur. Echocardiography revealed dilatation of the aortic root (Z score = 2,96) and crosa (Z score = 2,13). ECG revealed monomorphic ventricular extrasystoles (bigeminy, trigeminy, couplets, 3%). Based on the symptoms and signs, a suspicion of an FBN1 gene mutation was raised, and genetic testing is recommended. Thoracic and abdominal angioCT did not detect any vascular dilatation. A pathogen heterozygous mutation of the TGFB2 gene (c.896G>A; p.Arg299Gln) was detected. Oral beta-blockers (Propranolol) and mild physical activity were recommended. The compliance of the patients was reduced. Four years later, the cardiovascular assessment revealed similar dilatation of the aortic root (Z score 2.4), but many ventricular ectopic beats were detected (9%, bigeminy, trigeminy, couplets and triplets). The family was informed about the risks of aortic dissection if exertion of physical activity continues. Oral beta-blockers therapy (Bisoprolol) was reinitiated with favorable evolution. **Discussions :** The particularity of this case is represented by the association of ventricular ectopic beats and atypical onset by syncope caused by arrhythmia. **Conclusions:** Patients with LDS have a worrying tendency towards the development of aggressive and diffuse arterial aneurysms. Arrhythmia is a rare complication and Holter ECG monitoring is necessary in patients with LDS. Differential diagnosis between LDS and other syndromes like Marfan syndrome or Ehlers-Danlos syndrome is difficult, but it is facilitated by genetic analysis.

Keywords: Loeys-Dietz syndrome, aortic dilatation, syncope, ventricular ectopic beats

UNEXPECTED RIGHT-HEART FAILURE FOLLOWING LEFT PNEUMONECTOMY: A CASE REPORT

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Introduction: Cor pulmonale, or pulmonary heart disease, refers to right ventricular dysfunction resulting from respiratory system disorders. While right heart failure (RHF) is commonly linked to right pneumonectomy, it is a rare complication following left pneumonectomy. This case report details a 71-year-old male with a history of left pneumonectomy who developed RHF. **Case Report:** A 71-year-old male, former glassblower, presented to the emergency department with complaints of abdominal discomfort, bloating and shortness of breath. He was admitted to the Internal Medicine department with anasarca due to RHF.His symptoms began insidiously in 2019 after undergoing a left pneumonectomy for squamous cell carcinoma. Over time, he reported progressive dyspnea, fatigue, headaches and swelling of the lower limbs.On general examination, the patient exhibited jaundice, jugular vein distention and extensive oedema. During respiratory assessment, a peculiar finding occurred: left-sided bronchial breath sounds; while cardiovascular examination revealed arrhythmic heart sounds and an intense tricuspid regurgitation murmur.Chest radiography revealed severe mediastinal shift and tracheal displacement, a rare post-pneumonectomy complication occurring in approximately 2% of cases.Based on clinical and imaging findings, cor pulmonale was diagnosed. Treatment was initiated, including diuretics, beta-blockers, anticoagulants and oxygen therapy, leading to symptomatic improvement. The patient's condition stabilised and he was discharged with recommendations for continued management. **Discussions :** The development of RHF following left pneumonectomy is an uncommon but recognised complication. Studies have demonstrated that pneumonectomy can lead to increased pulmonary artery systolic pressure and right ventricular dilation, with a considerably higher incidence observed after right pneumonectomy. In this case, additional considerations include the possibility of pre-existing cardiac impairment, linked to the patient's occupational exposure as a glassblower- a profession known to carry a high risk of pulmonary complications. **Conclusions:** This case highlights the rare, but clinically significant development of RHF following a left pneumonectomy. It underscores the importance of early recognition and management of post-pneumonectomy hemodynamic changes and shows how multidisciplinary collaboration is crucial in optimising patient outcomes in such complex cases.

Keywords: cor pulmonale, pneumonectomy, mediastinal shift, right heart failure

CD20-TARGETED RITUXIMAB AND LOW-DOSE STEROID THERAPY IN A YOUNG WOMAN WITH PODOCYTOPATHY: A CASE REPORT

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Introduction: Podocytopathies are diseases which cause nephrotic syndrome, represented as either minimal change disease (MCD) or focal segmental glomerulosclerosis (FSGS) on kidney biopsy. After conventional agents have failed in the management of steroid-dependent (SD) or steroid-resistant (SR) podocytopathies, Rituximab can be used as a last resort as it also has a safer toxicity profile. The following case highlights a possible way of curing a possible autoimmune disease (Lupus Podocytopathy) with Rituximab. Here is presented a case of a 30-year-old patient with a history of autoimmune thyroiditis and mild hypothyroidism, severe eyelid and calf oedema and bilateral ankle arthralgia, symptoms most likely triggered by an upper respiratory tract infection. **Case Report:** Laboratory results showed the presence of anti-dsDNA-antibodies. However, the patient did not meet the criteria for Lupus. A kidney biopsy was deemed necessary. Optical microscopy showed kidney structures within normal limits, without proliferation, inflammation or interstitial fibrosis (IF). Electron microscopy showed glomerular capillaries with high permeability, fenestrated endothelium in most lumens, few lumens with endotheliosis, turgescent podocytes with damaged pedicels and rare, dense mesangial and epimembranous deposits. **Discussions :** The diagnosis given was of Minimal Lesions Podocytopathy. The patient's kidney function was preserved. Treatment with Rituximab 500 mg alongside methylprednisolone 250 mg as an immunosuppressant was administered twice, one month apart, without peri- infusional adverse reactions. A small dose of

Methylprednisolone (16 mg) was initiated with dose tapering over 20 weeks. The stark reduction of proteinuria was observed (<0.3 g) without changes to the eGFR, with albumin within normal limits, and fast relief of the symptoms of nephrotic syndrome. As such the evolution was considered excellent (KDIGO complete remission criteria were met). Maintenance therapy with Rituximab in small doses is taken into consideration with the complete removal of corticosteroids from the treatment. Renoprotective treatment with ACEI (angiotensin-converting enzyme inhibitors) will be continued. The patient remains under observation for a possible autoimmune disease (Lupus Podocytopathy) because of the positive anti-dsDNA-antibodies immunology test result (although the quantity dropped substantially after Rituximab therapy was started). **Conclusions:** CD20-targeted Rituximab therapy may not only be effective in the treatment of podocytopathy, but also in maintaining remission, without steroids and even in an autoimmune disease such as Lupus Podocytopathy.

Keywords: podocytopathy, rituximab, lupus, corticosteroids

MALE BREAST CANCER: INVASIVE CARCINOMA NST WITH MICROPAPILLARY INTRADUCTAL COMPONENTS

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Introduction: Microscopic examination plays a pivotal role in tumor diagnosis, particularly for rare malignancies such as male breast cancer (MBC), which accounts for less than 1% of all breast cancer cases . Men are typically diagnosed with breast cancer at an older age compared to women, with a median age of presentation around 63 years . Often, patients present with painless masses, leading to diagnoses during routine medical examinations or upon noticing physical changes. **Case Report:** A 70-year-old male patient presented with a retroareolar breast mass. Macroscopic examination identified a poorly circumscribed, whitish tumor with spiculated borders in the retroareolar region, measuring 21 × 22 mm. Microscopic examination (H&E staining) revealed a lesion composed of medium-to-large neoplastic cells displaying abundant cytoplasm, moderate nuclear pleomorphism, and frequent mitotic figures. The tumor stroma exhibited prominent desmoplasia accompanied by chronic inflammatory infiltrates. Importantly, residual tumor infiltration was observed in the nipple region despite attempted surgical resection. Histopathological analysis confirmed an invasive carcinoma of no special type (NST), histological grade 2, exhibiting a micropapillary solid, cribriform, and comedo-type patterns of in situ ductal carcinoma. The tumor was staged as pT2 LVI1 Pn1 Mx N1, reflecting limited local infiltration (pT2), metastasis to 3 out of 5 sampled axillary lymph nodes (N1), lymphovascular invasion (LVI1), and perineural involvement (Pn1). **Discussions :** This case wants to put in light an uncommon presentation of MBC, characterized by invasive carcinoma of no special type (NST) with micropapillary intraductal components. Such histological features are rare and are and indicator of a more aggressive tumor behavior. The presence of tumor cells at the level of the nipple post-resection highlights the challenge of achieving clear surgical margins, emphasizing the necessity for comprehensive surgical planning and the consideration of adjuvant therapies. Given the tumor's characteristics and lymph node involvement, adjuvant chemotherapy and radiation therapy are recommended to decrease the risk of recurrence and the appearance of metastatic disease. **Conclusions:** Although male breast cancer is a rare pathology, its incidence increases with age, particularly after 60, highlighting the importance of early recognition of symptoms. A rapid medical evaluation and a correct histopathological assessment are essential for accurate diagnosis and appropriate treatment.

Keywords: Invasive Carcinoma NST, Micropapillary Intraductal Components, Lymphovascular Invasion, Male Breast Cancer Prognosis

SURGICAL TREATMENT AND HISTOPATHOLOGICAL EXAMINATION RECOMMENDED IN A 61-YEAR-OLD WOMAN WITH SYNCHRONOUS BILATERAL BREAST CANCER: A CASE REPORT

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Introduction: The following case is about a 61-year-old female patient with synchronous bilateral breast cancer

(SBBC), a disease which is predicted to rise as a direct result of improved detection capabilities. The ultrasonography and digital mammography revealed a predominantly hyperechoic, heterogeneous breast parenchymal pattern.There has been observed an increase in the incidence of bilateral breast cancer (BBC) as its frequency is between 2% and 11% among all breast cancers nowadays. Taking into account the time interval between the occurrence of the first and the second breast cancer, BBC can be divided into synchronous bilateral breast cancer (SBBC) and metachronous bilateral breast cancer (MBBC). **Case Report:** The ultrasound and mammographic examination revealed tumour formations in both breasts which are suggestive for bilateral malignancy (BIRADS:5). Suspicious adenopathies in the left armpit were also found. Following ultrasonographic analysis and histopathological examination, malignancy of the structures was confirmed, and a decision was made to excise both breasts. **Discussions :** Contralateral breast cancer can occur either as metastatic lesions or as a metachronous second primary malignancy. Simultaneous breast carcinomas are defined as synchronous tumors that arise within 3-6 months. Although conficting results have been published, the majority of studies have found that SBBC patients more often have invasive lobular carcinomas (ILC) and estrogen receptor (ER)-positive carcinomas than unilateral breast cancer (UBC) patients. Using the right techniques, bilateral breast cancer can be identified and treated properly, and family members can be made aware of risks they may present. **Conclusions:** In spite of scarce data, there are speculated several predictive factors for bilateral breast cancer development such as: BC familial history, BRCA gene mutations, HER-2/Neu positivity, excess weight, lobular histology, and metropolitan residence. It is important to know the cause of this pathology in order to be able to warn family members about the possibility of having a predisposition to its occurrence and to try to prevent it in time using screening tests.

Keywords: Synchronous bilateral breast cancer, Histopathological exam, Mammographic examination

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TUBERCULOSIS: THE INFLUENCE OF SMOKING ON THE TREATMENT AND MANIFESTATION OF THE DISEASE

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Introduction: Tuberculosis is an infectious-contagious disease affecting millions of people annually. The earliest infections caused by Mycobacterium tuberculosis date back over 8000 years, although effective treatment for tuberculosis became available only in the modern era with the discovery of streptomycin in 1943. Beyond pharmacological treatment, managing tuberculosis also requires maintaining a healthy lifestyle: proper nutrition, adequate hydration, and most importantly, avoiding smoking, whether active or passive. Numerous studies indicate that smoking during tuberculosis treatment is a major impediment that complicates patient recovery. **Case Report:** A 62-year-old woman presents to the pulmonology clinic with the following symptoms: intermittent dry cough with mucoid expectoration, fatigue, and a weight loss of 8 kg. Following microscopic examination of the sputum and chest X-rays, the patient is diagnosed with secondary pulmonary tuberculosis, with a caseous-polycavitary area in the right upper lobe. After a positive sputum test, she is admitted to the tuberculosis unit. Secondary diagnoses include eating disorders and chronic smoking with a history of 70 (PA). On physical examination, the patient is 147 cm tall, weighs 32 kg, has a BMI of 14.81, displays hypotonic muscles tone and cachexia. The treatment at the dispensary consists of: Rifampicin, Pyrazinamide, Ethambutol and Vitamin B6. After following the treatment, the patient requests discharge. **Discussions :** During the body's fight against tuberculosis, the release of inflammatory cytokines (TNF-α, IL-1, IL-6) is triggered, which inhibit appetite and stimulate the degradation of muscle proteins and fats. In the presented case, weight loss is accelerated by smoking, which inhibits the sensation of hunger at the hypothalamic level. Smoking affects the respiratory system's defense by paralyzing the cilia in the airways and impairing alveolar macrophages cells that play a crucial role in defending against tuberculosis. Inhaled smoke not only slows down the respiratory defense system but also worsens the manifestation of the disease, leading, as in our case, to a caseous-polycavitary area. The efficacy of pharmacological treatment for tuberculosis is delayed because smoking influences the absorption, metabolism, and elimination of medications from the body, particularly rifampicin, the drug prescribed in this case. Both rifampicin and the substances absorbed through smoking accelerate the activity of hepatic enzymes (CYP450), leading to rapid metabolism of medications, which can reduce their plasma concentration and efficacy. Lastly, tobacco consumption complicates sputum conversion, with smokers remaining contagious for a longer period. **Conclusions:** Smoking and tuberculosis act synergistically in the process of weight loss and treatment resistance, complicating and prolonging the recovery process.

Keywords: Tuberculosis, Smoking, Health

ELECTIVE HEMODIALYSIS IN ADPKD WITH MULTIMORBIDITY: A CASE REPORT

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Introduction: Autosomal dominant polycystic kidney disease (ADPKD) is one of the most common genetic disorders that can lead to end-stage renal disease (ESRD) in adults. Typically, patients require renal replacement therapy (RRT) around midlife due to progressive loss of kidney function. Managing these patients can be particularly challenging, as they often have multiple comorbidities such as hypertension, cardiac dysfunction, anemia and electrolyte disturbances. Starting hemodialysis in an elective, well-planned manner is essential to avoid the risks associated with urgent dialysis initiation. **Case Report:** We describe the case of a 56-year-old male diagnosed with ADPKD who developed chronic kidney disease (CKD) stage G5A3 KDIGO. The patient's medical history included long-standing hypertension, mild chronic heart failure, renal anemia, secondary hyperparathyroidism, hyperuricemia and recurrent episodes of hyperkalemia. Due to progressive renal function decline, the patient was evaluated for the initiation of chronic hemodialysis. A multidisciplinary team worked to optimize the management of his comorbid conditions. Blood pressure was controlled using antihypertensive therapy, anemia was managed with erythropoiesis-stimulating agents and electrolyte imbalances were corrected as needed. Cardiologic evaluation included ECG and echocardiography to assess cardiovascular stability. Importantly, a functional brachiocephalic arteriovenous fistula (AVF) was established well in advance, ensuring safe vascular access for hemodialysis. Once the patient's clinical condition was stabilized, chronic hemodialysis was started electively. The patient demonstrated good tolerance to the procedure and maintained stable hemodynamics throughout the procedure. The structured, proactive approach prevented the need for emergency dialysis and minimized the risk of dialysis-related complications. **Discussions :** This case highlights the importance of early planning when initiating hemodialysis in patients with ADPKD and multiple comorbidities. Elective dialysis start, guided by careful medical management and timely vascular access preparation, reduces the risk of adverse outcomes compared to unplanned ("crash") dialysis. Moreover, multidisciplinary care, involving nephrology, cardiology, as well as vascular surgery, played a critical role in stabilizing the patient before initiating RRT. Such a coordinated approach not only enhances safety, but also contributes to better long-term patient outcomes. **Conclusions:** Early, well-planned initiation of hemodialysis in patients with ADPKD and complex comorbidity profiles is essential for improving clinical outcomes. Multidisciplinary coordination and proactive management of cardiovascular and metabolic complications significantly reduce the risks associated with starting dialysis in an emergency context. Implementing such an approach as standard practice may enhance patient's quality of life and reduce healthcare burden.

Keywords: ADPKD, Chronic kidney disease, Elective Hemodialysis, Renal replacement therapy

CIC-REARRANGED ROUND CELL SARCOMA OF THE SACRUM: A RARE CASE EMPHASIZING DIAGNOSTIC AND THERAPEUTIC CHALLENGES

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Introduction: Undifferentiated round cell sarcomas (URCS) represent a rare and aggressive category of mesenchymal tumors composed of small, primitive round cells. These tumors predominantly affect adolescents and young adults, although cases in middle-aged patients have also been reported. The most frequent site of origin is soft tissue. **Case Report:** We report the case of a 47-year-old male who presented with an extensive osteolytic lesion in the sacrum, identified through imaging studies. Due to the aggressive nature of the lesion, a biopsy was performed, and multiple small fragments of the tumor were submitted for histopathological evaluation. Macroscopic Findings: The biopsy specimen consisted of tissue fragments measuring 20×10×3 mm in total, with a gray to violet coloration. Microscopically we observed a neoplastic proliferation composed of small, round, densely packed cells exhibiting hyperchromatic, round to oval nuclei and scant eosinophilic cytoplasm. Atypical mitotic figures were variably present. The tumor was interspersed with delicate vascular channels containing erythrocytes. Notably, one of the fragments included normal bone tissue that was unaffected by the malignant process.

Immunohistochemical Results: The tumor cells were positive for vimentin and WT1, markers commonly associated with mesenchymal and certain soft tissue tumors. Focal positivity for CD99 was observed. The tumor cells were negative for pan-cytokeratin (panCK), S100, TTF-1, and CD5, ruling out other malignancies such as carcinomas, neurogenic tumors, and lymphomas. **Discussions :** In the case presented, the tumor's WT1 positivity, alongside the absence of markers typically associated with other diagnoses, strongly supports the diagnosis of CIC-rearranged sarcoma. The involvement of the sacrum is uncommon. Surgical excision remains the primary treatment modality when feasible, often combined with radiation therapy to address local control. The role of chemotherapy remains a subject of debate, and emerging treatment options may include targeted therapies or enrollment in clinical trials. The significance of chemotherapy in improving survival outcomes is still under investigation. CIC-rearranged sarcomas have been recently classified as a distinct genetic entity by the World Health Organization in its fifth edition of the Classification of Tumors of Soft Tissue and Bone. Although they may share overlapping clinical and morphological features with Ewing sarcoma, CIC-rearranged sarcomas exhibit unique molecular characteristics. **Conclusions:** This case highlights a rare and aggressive CIC-rearranged round cell sarcoma of the sacrum in a 47-year-old man, emphasizing the importance of molecular diagnosis and multidisciplinary care for better outcome

Keywords: CIC-rearranged sarcoma, Undifferentiated round cell tumor, WT1 positive tumor

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THE ROLE OF IMMUNOHISTOCHEMISTRY IN IDENTIFYING THE PRIMARY SITE OF METASTATIC LUNG ADENOCARCINOMA

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Introduction: Originating from glandular structures in epithelial tissue, adenocarcinomas are a diverse category of malignant epithelial tumors. They can develop in the bile ducts, lungs, pancreas, and gastrointestinal tract, among other organs. The lung is one of the most frequent secondary locations where these malignancies spread. For focused treatment and a better prognosis, it is essential to determine the initial origin of a metastatic adenocarcinoma. **Case Report:** We describe a 47-year-old woman who had several tiny pulmonary biopsy fragments sent for histological examination after questionable lung lesions were found. The entire tissue was 14 x 1 mm in size.Microscopically, fibrotic tissue partially lined with nearly typical respiratory-type epithelium was observed. A gland-forming tumoral proliferation with pleomorphic expanded nuclei, numerous mitoses, and eosinophilic or transparent cytoplasm was found in the underlying stroma. These characteristics are typical of adenocarcinoma.Tumor cells were shown to be positive for CK7 by immunohistochemical labeling, but negative for TTF-1, CK20, Vimentin, WT1, and GATA3. **Discussions :** The immunohistochemical profile of this patient's tumor - positive for CK7 and negative for TTF-1, CK20, vimentin, WT1, and GATA3 - provides significant insights into its origin. The absence of TTF-1 expression effectively rules out a primary lung adenocarcinoma, as TTF-1 positivity is typically observed in primary lung tumors.TTF-1 is not expressed in all lung tumors - particularly squamous cell carcinomas - so a negative result does not fully exclude a pulmonary origin. The negative staining for WT1, GATA3, and vimentin further excludes origins from serous ovarian/tubal, urothelial/breast, and endometrial tissues, respectively. This immunoprofile is most consistent with a primary tumor originating from the biliary tract, pancreas, or upper gastrointestinal tract. Therefore, comprehensive radiologic and endoscopic evaluations of these regions are warranted to identify the primary tumor site **Conclusions:** This case underscores the critical role of immunohistochemistry in the diagnostic evaluation of metastatic adenocarcinomas with an unknown primary. The tumor's immunoprofile, particularly the expression of CK7 and the absence of TTF-1, CK20, vimentin, WT1, and GATA3, suggests a primary origin in the gastric, pancreatic, or biliary tract. Accurate determination of the primary site is vital for appropriate staging and the formulation of an effective oncologic treatment plan.

Keywords: Metastatic adenocarcinoma, Immunohistochemistry, Unknown primary tumor

ECZEMA HERPETICUM IN A 9-YEAR-OLD WITH ATOPIC DERMATITIS: A CASE OF MISLEADING CLINICAL FEATURES AND DELAYED DIAGNOSIS

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Introduction: Atopic dermatitis is a chronic, inflammatory skin disorder in children and is often associated with secondary infections. Eczema herpeticum is acute disseminated herpes simplex virus (HSV) infection in patients with atopic dermatitis. The significance of this case comes from the patient's age at which the primary infection with HSV took place, in association with the misinterpretation of multiple clinical features. **Case Report:** We report the case of a 9-year-old boy diagnosed with atopic dermatitis at the age of six months, presenting extensive necrotic and hemorrhagic lesions on the skin. The patient was initially treated with local antibiotics for presumed impetigo, but showed no response and worsening of symptoms. Physical examination showed the following: bilateral lymphadenopathy in the laterocervical and retroauricular regions, extensive facial infection with painful, widespread, punched-out lesions and crusts extending onto the ears and antecubital fossae, no signs of eye involvement, a mildly altered general state, but afebrile. He had no known allergies or intolerances. The described clinical features suggested a case of eczema herpeticum. The patient was prescribed a 7-day course of oral aciclovir and returned 2 days after for a follow-up, showing responsiveness to the medication. 14 days after treatment, there were no facial or auricular lesions present, only signs of atopic dermatitis, including mild erythema, lichenification and scratch marks in the flexural areas. **Discussions :** Eczema herpeticum typically has the highest incidence among patients with atopic dermatitis in the first 2-3 years of life. This case is unusual due to the patient's age, which has led to a misinterpretation of the clinical features and a delayed diagnosis. However, the painful, widespread, punched-out lesions and the absence of ocular infection suggest a viral etiology, as a bacterial infection usually causes less painful, superficial vesicles without hemorrhage or necrosis, along with conjunctivitis and keratitis. **Conclusions:** Eczema herpeticum should be considered in any atopic dermatitis patient with painful, widespread, punched-out lesions, regardless of age, as highlighted in this particular case. Differential diagnosis between bacterial and viral etiology lesions is important, leading to early recognition, treatment, and the prevention of further severe complications.

Keywords: eczema herpeticum, atopic dermatitis, HSV

LATE-ONSET ULCERATIVE COLITIS WITH MULTIPLE COMPLICATIONS: A THERAPEUTIC CHALLENGE

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Introduction: Ulcerative colitis (UC) is a chronic inflammatory bowel disease that has shown a significant increase in both incidence and prevalence over the past six decades. However, the incidence of acute severe ulcerative colitis has remained relatively stable, likely due to improved disease control achieved through modern therapeutic strategies. Epidemiologically, tends to affect males slightly more frequently than females and it also exhibits a bimodal age distribution, with a primary peak between 15 and 30 years, and a less common secondary peak between 60 and 70 years. **Case Report:** A 68-year-old male presented in 2021 with hematochezia and abdominal pain. Emergency endoscopy revealed colitis and toxic megacolon, prompting urgent Hartmann's procedure and sigmoidectomy. Postoperative recovery was complicated by delayed wound healing. The patient was initially treated with 5-aminosalicylic acid (5-ASA), but three months later, he developed Clostridioides difficile colitis, leading to persistent exacerbations of ulcerative colitis and the initiation of azathioprine therapy. During treatment with azathioprine, mesalasine and corticosteroids, a Quantiferon Gold test for latent tuberculosis was positive, requiring the discontinuation of biologic agents. Latent tuberculosis was treated for eight months, with continued budesonide for his Ulcerative Colitis. Following the completion of tuberculosis treatment, biologic therapy with vedolizumab was initiated. Two years later, the patient underwent colostomy reversal surgery; however, an anastomotic fistula developed two weeks postoperatively. One year thereafter, a follow-up colonoscopy revealed pancolitis, prompting initiation of treatment with Ustekinumab. **Discussions :** Cases complicated by infectious

agents such as Clostridioides difficile and Mycobacterium tuberculosis highlight the critical need for therapeutic strategies that reduce infection risk in patients who are already immunocompromised. Traditional immunosuppressive therapies, including immunomodulators and biologics, increase susceptibility to infections and malignancies. So, newer treatment modalities have emerged, including: Ustekinumab (monoclonal antibody targeting the p40 subunit of IL-12 and IL-23), Risankizumab (monoclonal antibody specific to the p19 subunit of IL-23 with moew selective immunomodulation than Ustekinumab), Natalizumab (inhibits both α4β7- and α4β1-integrins), Vedolizumab (α4β7-integrin). These therapies target inflammatory pathways with varying specificity, aiming to minimize systemic immunosuppression and therefore representing favorable options for patients at increased risk of infection. **Conclusions:** Although late-onset UC is uncommon, appropriate management is crucial due to the heightened risks associated with age and concurrent infections. This case underscores the need for emerging therapies that reduce systemic immunosuppression and enable more personalized treatment strategies.

Keywords: Ulcerative Colitis, Latent Tuberculosis, Clostridioides difficile, Biologic therapy

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RARE NEUROLOGICAL PATHOLOGY IN THE BACKGROUND OF PSYCHOORGANIC SYNDROME: A CASE REPORT OF SUSAC SYNDROME

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Introduction: Susac syndrome is a rare neurological disorder characterised by the triad of acute encephalopathy, sensoneural hearing loss and branch retinal arterial occluisions. The underlying pathological mechanism is believed to be an immune-mediated small vessel vasculitis. The diagnosis of Susac syndrome is challenging due to its rarity and highly variable clinical presentation. However, early recognition is essential for initiating appropriate treatment and preventing comorbidities. **Case Report:** A 37-year-old female patient was admitted to the Kaposvár Psychiatric Unit for suspected severe depression and dissociative disorders. Her clinical symptoms included oneiroid state, spatial and temporal disorientation, hypersomnia and lack of spontaneous speech. No psychiatric history was known. EEG examination showed diffuse slow activity with frontal delta elements. Neurological consultation revealed moderately vivid deep reflexes and bilateral positive Babinski's sign. Multiple hyperintense lesions were identified on T2-weighted and FLAIR sequences of brain MRI scans in the frontal and posterior scales, brainstem lobules and corpus callosum (2-9 mm foci, partly with contrast enhancement), initially raising the possibility of autoimmune encephalitis. Laboratory tests for autoimmune encephalitis and onconeural antibodies were also negative. An audiological and ophthalmological examination was performed to confirm the diagnosis. Audiometric examination revealed moderate to severe hearing loss on the right and mild hearing loss on the left, mainly in the low frequencies. Ophthalmoscopic examination revealed 1-2 yellow dots along the superior temporal artery on both sides and occlusion of a branch of the left temporal artery. A diagnosis of Susac's syndrome was made based on the results of clinical, imaging and audiovisual examinations. **Discussions :** The patient was treated with immunomodulatory therapy with a combination of methylprednisolone and azathioprine, supplemented with ketoapine for psychotic symptoms. A six-month follow-up MRI showed no fresh lesions, and the previously described lesions showed partial regression. The patient's hearing remained stable, and on ophthalmological examination the previous abnormalities had resolved, with only minimal dioptric deviation remaining. **Conclusions:** Patients with Susac syndrome do not always present with the classic symptom triad, which makes differential diagnosis considerably more difficult. The psychiatric symptoms often associated with the syndrome may further delay accurate diagnosis and timely initiation of appropriate treatment. Neuroimaging plays an important role in the detection of organic psychiatric pathologies and in Susac syndrome, its effectiveness is enhanced by the addition of ophthalmological and audiological examinations.

Keywords: Susac syndrome, neuropsychiatric, auroimmune encephalitis, MRI

INFLAMMATORY NEUROPATHY OF THE COMMON OCULOMOTOR NERVE – ETIOLOGICAL CHALLENGES AND THERAPEUTIC RESPONSE

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Introduction: Common oculomotor nerve neuropathy can have several causes, including metabolic diseases (such as diabetes mellitus), pituitary apoplexy, inflammatory conditions, infectious and autoimmune diseases (like myasthenia gravis, Miller Fisher syndrome, and multiple sclerosis), migraine attacks, local compression of the oculomotor nerve from vascular issues (such as aneurysms and fistulas), brain trauma (including hematomas and hemorrhages), vascular ischemia, benign or malignant tumors causing compression, or systemic conditions with neurological manifestations (like vasculitis). To determine the appropriate therapeutic approach, extensive investigations are essential for a thorough differential diagnosis. **Case Report:** We present the case of a 57-year-old patient who, in January 2025, developed diplopia and left palpebral ptosis, symptoms that had also existed 16 years ago (spontaneously remitted). The collected serum samples did not indicate a clear autoimmune or infectious etiology, and the brain magnetic resonance imaging (MRI) ruled out cerebrovascular or tumor pathology. CSF analysis showed mild hyperproteinorrhagia (391 mg/dL) without other significant pathological findings or changes. Electromyography with repetitive stimulation did not reveal any dysfunction at the neuromuscular junction level on either the pre- or postsynaptic side. **Discussions :** The symptomatology was interpreted as a bilateral common oculomotor nerve neuropathy of inflammatory or infectious origin, with no clear etiology revealed. Under corticotherapy, the clinical evolution was favorable, showing nearly complete regression of the neurological symptoms. **Conclusions:** Recurrent paresis of the common oculomotor nerves can sometimes occur in apparently healthy individuals, with the pathogenesis remaining obscure and not accompanied by other symptoms, suggesting that the manifestations are not indicative of a severe underlying disease. This case underscores the importance of conducting a rigorous differential diagnosis for cranial nerve neuropathies and highlights the positive response to corticosteroid therapy in the context of inflammatory or infectious conditions.

Keywords: oculomotor nerve paresis, cranial nerve neuropathy, corticosteroid therapy, inflammatory etiology

TRIPLE THREAT IN THE RIGHT COLON: A CASE REPORT ABOUT SYNCRONOUS ADENOCARCINOMA, MUCINOUS NEOPLASM, AND GANGRENOUS APPENDICITIS

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Introduction: Colon adenocarcinoma is the most frequent type of colorectal cancer, accounting for over 95% of cases. Appendiceal mucinous neoplasm is a rare tumor characterized by excessive mucus secretion. Both involve alterations of mucus-secreting cells. In this case, the patient simultaneously presents both conditions, alongside acute gangrenous appendicitis with periappendicitis. The main question is whether these entities are interrelated, whether one caused the other, or if their association is purely coincidental. **Case Report:** In this case report, an 82-year-old patient underwent surgery for the removal of an ulcerative-vegetative, stenosing tumor (25×30×16 mm) located at the hepatic flexure. Adjacent to the cecum, a 40×40×20 mm tumoral mass was discovered, involving the appendix and periappendiceal fat, with purulent content observed in the lumen. Initially, synchronous tumors were suspected. Histopathological analysis revealed a moderately differentiated adenocarcinoma (G2), infiltrating the colonic wall up to the subserosa, with metastasis in 1 out of 41 regional lymph nodes (pT3N1a). Microscopically, the appendiceal mucosa showed villous and tubular epithelial proliferation, lined with tall mucinous columnar cells with apical mucin vacuoles and basal oval nuclei. Minimal atypia and rare mitoses were noted. Focally, epithelial thinning and absence of the lamina propria and muscularis mucosae exposed the epithelium directly on the muscularis propria. The appendiceal wall displayed polymorphic inflammatory infiltrate, neutrophils, fibrosis, and necrosis, extending into the mesoappendix. The anatomical site and histological appearance of the appendiceal lesion were compatible with the final diagnosis of a low-grade mucinous neoplasm (pTis), complicated with acute gangrenous appendicitis and periappendicitis. There is no information available regarding the patient's follow-up. **Discussions :** While the patient's prognosis is relatively favorable compared to advanced stages, the advanced age must be taken into account. Colon adenocarcinoma and appendiceal mucinous neoplasms may share molecular pathways, involving APC, KRAS, or β-catenin, although no direct causality is established. A shared

inflammatory or genetic background might explain their co-occurrence.The gangrenous appendicitis was likely caused by mucus overproduction obstructing the appendiceal lumen, leading to inflammation and necrosis. **Conclusions:** This case presents three distinct lesions that may or may not be causally linked, raising important questions about their simultaneous presence and possible interrelation.

Keywords: adenocarcinoma, acute gangrenous appendicitis, appendiceal mucinous neoplasm

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EARLY-ONSET COLORECTAL CANCER IN THE CONTEXT OF RECENTLY DIAGNOSED LEFT-SIDED ULCERATIVE COLITIS

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Introduction: Ulcerative colitis (UC), also referred to as chronic ulcerative colitis or ulcerative hemorrhagic rectocolitis, is a type of inflammatory bowel disease (IBD) characterized by alternating periods of activity and remission. Its etiopathogenesis remains partially understood, with genetic predisposition, environmental factors, gut microbiota, and immune system dysfunction all playing potential roles. **Case Report:** We report the case of a 54-year-old female patient with a known history of type II diabetes mellitus, arterial hypertension, and obesity, who presented to the gastroenterology department with complaints of rectal bleeding, diarrhea, abdominal bloating, and a 10-kg weight loss over the past two years. Laboratory tests revealed mildly elevated ESR and CRP, along with thrombocytosis. Abdominal MRI identified a polypoid expansive lesion in the lower rectum, rounded perirectal and presacral lymphadenopathy, and acute colitis. Colonoscopy revealed a hyperemic colonic mucosa with loss of sheen and vascular pattern, marked edema, erosions, and superficial ulcerations covered with white fibrinous exudate. At 10 cm from the anal verge, a 15 mm sessile polypoid formation with an irregular and multilobulated surface was identified. Histopathological examination confirmed a well-differentiated (low-grade) infiltrative adenocarcinoma, tubular adenoma, and acute inflammatory colitis. The patient underwent chemotherapy and laparoscopic anterior rectosigmoid resection with colorectal anastomosis, with a favorable postoperative course. **Discussions :** According to clinical studies, the risk of developing colorectal cancer increases with the duration of inflammatory bowel disease, typically after 8-10 years from the initial diagnosis. We present a rare case of early rectosigmoid adenocarcinoma occurring at the onset of left-sided ulcerative colitis, highlighting the importance of early endoscopic evaluation in newly diagnosed IBD cases. **Conclusions:** This case highlights the importance of early endoscopic evaluation in newly diagnosed ulcerative colitis, as neoplastic changes may occur even at disease onset. Prompt diagnosis and treatment are essential for favorable outcomes.

Keywords: ulcerative-colitis, early-onset colorectal cancer, endoscopic evaluation

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SEVERE INVASIVE INFECTION IN A PEDIATRIC PATIENT: A CASE OF COMPARTMENT SYNDROME, DEEP VEIN THROMBOSIS, AND MULTIORGAN FAILURE

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Introduction: Streptococcal infections are common among children and can rapidly evolve into severe systemic complications. Streptococcus pyogenes, a gram-positive bacterium, is responsible for various invasive infections, including toxic shock syndrome, necrotizing fasciitis, and compartment syndrome, though these manifestations are rare **Case Report:** A previously healthy 10-year-old girl presented to the Emergency Department with diffuse abdominal pain, low-grade fever, odynophagia, and significant fatigue, with symptoms persisting for 4-5 days. She subsequently developed a vesicular rash on the chest, which progressed to a widespread pustular rash on the abdomen, accompanied by a burning sensation and pruritus. On the day of admission, her condition worsened, manifesting as a generalized petechial rash, left lower limb ecchymosis, localized edema, and cutaneous inflammatory signs. A rapid test for Group A Streptococcus was positive, and the Infectious Diseases team confirmed the diagnosis of an invasive streptococcal infection. The patient was promptly admitted to the Pediatric ICU for intensive monitoring, empirical antibiotic therapy, and advanced supportive care. Due to rapid deterioration of the left lower limb, she underwent an emergency decompressive fasciotomy and local lavage in the Plastic Surgery Department. Supportive therapy included controlled mechanical ventilation, fluid-electrolyte balance correction, and continuous venovenous hemodiafiltration (CVVHDF) to aid renal function and reduce inflammatory mediators. A vascular assessment revealed inflammatory lymphadenopathy in the left inguinal-femoral region and

acute left femoral vein thrombosis. Doppler ultrasound-guided anticoagulant therapy to prevent thromboembolic complications. Over the following days, the patient showed progressive clinical improvement, with negative follow-up blood cultures confirming infection clearance **Discussions :** Invasive streptococcal infections require rapid recognition and aggressive treatment. Early diagnosis through point-of-care testing and confirmatory blood cultures enabled prompt initiation of appropriate antibiotics, significantly impacting disease progression. **Conclusions:** This case highlights a rare but severe presentation of invasive streptococcal infection in a child, complicated by compartment syndrome and deep vein thrombosis. Timely intervention, including broad-spectrum antibiotics and surgical decompression, contributed to a successful outcome. This underscores the importance of early diagnosis and multidisciplinary management in life-threatening streptococcal infections

Keywords: Pediatric intensive care, Streptococcus pyogenes, Compartment syndrome, Deep vein thrombosis

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FROM ISCHEMIA TO HEMORRHAGE: FATAL STROKE AND BRAIN DEATH FOLLOWING ANABOLIC STEROID ABUSE - A CASE REPORT

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Introduction: Anabolic androgenic steroids (AAS) are widely used among athletes and bodybuilders to enhance muscle mass and performance. However, their use has been associated with serious cardiovascular complications, including arterial and venous thrombosis, myocardial infarction, and ischemic stroke. **Case Report:** We present a case of a 39-year-old male with no known vascular risk factors who developed a massive ischemic stroke following chronic AAS abuse, leading to malignant cerebral edema, hemorrhagic transformation, and brain death despite aggressive treatment. The patient was brought to the emergency department after experiencing a sudden tonic-clonic seizure, right-sided hemiplegia, and global aphasia. Non-contrast computed tomography (CT) was initially unremarkable, but CT angiography revealed complete occlusion of the left internal carotid artery and the left middle cerebral artery (MCA). Despite an urgent attempt at endovascular recanalization via mechanical thrombectomy and aspiration, the procedure was unsuccessful, likely due to the hypercoagulable state induced by AAS use. Over the next 48 hours, serial imaging demonstrated extensive ischemic damage with progressive cerebral edema, midline shift, and hemorrhagic transformation. The patient subsequently developed brainstem herniation, refractory intracranial hypertension, and ultimately, brain death on hospital day five. **Discussions :** This case highlights the potentially fatal cerebrovascular risks associated with AAS use, particularly in young individuals without traditional stroke risk factors. AAS's hypercoagulable and proinflammatory effects may contribute to increased arterial thrombotic events, poor collateral circulation, and treatment-resistant large vessel occlusions. Additionally, the failure of endovascular recanalization and the rapid progression to malignant edema suggest a complex interplay between vascular dysfunction, coagulopathy, and endothelial damage in AAS users. **Conclusions:** This report underscores the urgent need for awareness regarding the cerebrovascular consequences of anabolic steroid abuse. Physicians should recognize AAS as a potential risk factor for stroke, particularly in otherwise healthy young individuals presenting with acute neurological symptoms. Further research is necessary to elucidate the underlying pathophysiological mechanisms and optimize stroke management in this unique patient population.

Keywords: anabolic steroids, ischemic stroke, hemorrhagic transformation, brain death

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ISOLATED THIRD NERVE PALSY AS THE FIRST MANIFESTATION OF A SYSTEMIC CONDITION: EVOLUTION TOWARDS MULTI-ORGAN FAILURE

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Introduction: Isolated oculomotor nerve palsy is a rare manifestation of severe systemic conditions, with various potential causes, including vascular, inflammatory, infectious, or neoplastic factors, with a diagnosis which requires a complex evaluation. **Case Report:** A 67-year-old male patient, second-degree Mobitz type II atrioventricular block, was admitted for diplopia and unilateral ptosis, with an initial diagnosis of isolated third nerve palsy. Brain imaging showed no abnormalities, but laboratory tests revealed elevated inflammatory markers (PCR: 62.6 mg/L, VSH: 3 mm/h, fibrinogen: 207.12 mg/dL, LDH: 939 U/L) and progressive cytopenia (platelets: 81,000/µL, hemoglobin: 10.6 g/dL). Medical history revealed significant fatigue and weight loss over the past 3-4 months,

suggesting a possible underlying systemic condition.During hospitalization, the patient developed severe bradycardia (<30 bpm), requiring the urgent implantation of a permanent pacemaker. ECG and Holter monitoring did not identify a clear cardiac cause, suggesting a possible paraneoplastic or infiltrative mechanism. Following pacemaker implantation, corticosteroid therapy was initiated, and the third nerve palsy improved. The disease progressed with a gradual increase in leukocytes (from 11,600/µL to 85,740/µL), marked monocytosis (69,780/µL), fever, and fatigue, raising suspicion of a systemic infection. Despite antibiotic treatment, the clinical condition worsened, and the presence of multiple adenopathies raised suspicion of a lymphoproliferative disorder. Lymph node biopsy confirmed the diagnosis of NK-cell lymphoma, a rare and aggressive form of non-Hodgkin lymphoma. Subsequently, the patient developed rapid hepatic (bilirubin: 4.5 mg/dL, AST: 220 U/L, ALT: 180 U/L) and renal failure (creatinine: 6.01 mg/dL, urea: 175.48 mg/dL), along with hyponatremia (127.3 mmol/L) and hyperkalemia (6.91 mmol/L), indicating severe systemic involvement. Due to the rapid progression, oncologic therapy could not be initiated, and the patient died a few weeks after the onset of symptoms. **Discussions :** This case highlights the diagnostic challenges associated with isolated third nerve palsy, emphasizing the need for a multidisciplinary approach to early identification of underlying systemic causes, especially in the context of rapid disease progression. **Conclusions:** Isolated third nerve palsy, typically a condition with a favorable prognosis, can be the expression of severe underlying pathology, which can rapidly progress to multi-organ failure and death. This case underscores the importance of thorough investigation of isolated third nerve palsy without obvious causes to enable early identification of serious systemic conditions.

Keywords: third nerve palsy, lymphoma, pacemaker, multi-organ failure

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ONE LUNG MUTE, THE OTHER RESOLUTE: MULTISYSTEMIC INVOLVEMENT IN A SEVERE PEDIATRIC PNEUMONIA CASE

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Introduction: Pneumonia is a frequent and severe complication of upper respiratory tract infections in pediatric patients, characterized by inflammation of the lung parenchyma, alveolar consolidation, and subsequent ventilation-perfusion mismatch. The clinical presentation typically includes fever, cough, dyspnea, and chest pain. In certain cases, pneumonia can progress to involve other organ systems, particularly the gastrointestinal tract, leading to further clinical challenges. Extrapulmonary complications, such as septic involvement of the intestines, are more common in immunocompromised children or those with underlying conditions. **Case Report:** We report the case of a 3-year-old female with a complex medical history, including rotavirus gastroenteritis, Methicillin-resistant Staphylococcus aureus, impetigo, and suspected immunodeficiency. The patient initially presented with high fever (up to 40°C), dry cough, abdominal pain, and nausea. Despite empirical oseltamivir therapy for presumed influenza, her condition aggravated. On emergency department presentation, she exhibited hypoxemia (SaO2 88-90%), tachypnea (50 breaths/min), and abdominal distension with tenderness on palpation. Laboratory investigations revealed leukocytosis, neutrophilia (84.6%), and markedly elevated C-reactive protein (175 mg/dL). Chest radiography showed extensive left lower lobe consolidation, with hydroaeric levels in the middle abdominal region. The presumptive diagnosis is pronounced as pneumonia complicated by a possible bowel obstruction, leading to initiate the intravenous administration of ceftriaxone and amikacin. The patient's clinical course deteriorated, prompting her transfer to our clinic for further management. Upon reassessment, abdominal ultrasound confirmed inflammation consistent with septic pneumonia. A contrast-enhanced chest CT demonstrated extensive consolidation of the left lung and pleural effusion. Urine antigen testing for Streptococcus pneumoniae was positive, supporting a bacterial ethology. Despite continued therapy with broad-spectrum antibiotics, corticosteroids, and supportive measures, the patient developed progressive respiratory distress and systemic instability, necessitating intensive care management, including albumin supplementation and anticoagulation. **Discussions :** This case underscores the complexities in managing severe pneumonia with concomitant abdominal involvement in a pediatric patient. The massive congestion can progress to pleural effusion and cavitary lung lesions, suggestive of necrotizing pneumonia highlighting the importance of early and aggressive intervention. Prompt identification of the causative pathogen and targeted therapy are crucial in mitigating morbidity in such complicated cases. **Conclusions:** Pneumonia in pediatric patients may be complicated by systemic manifestations, including abdominal complications. Early diagnosis and multidisciplinary management, including appropriate antimicrobial therapy, corticosteroids, and intensive care support, are critical to improving clinical outcomes. Surgical intervention may be necessary for patients with necrotizing pneumonia and pleural involvement.

Keywords: Pneumonia, pediatrics, pleural effusion, pneumococcal infection

BETWEEN THROMBUS AND HEMORRHAGE: A HIGH-STAKES BATTLE OF SEPSIS, ANTICOAGULATION, AND MULTI-ORGAN FAILURE

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Introduction: Thromboembolic events require the administration of a therapy in the form of anticoagulants, but when it comes to elderly patients with many comorbidities, side effects are quite serious, including internal bleeding. Clotting and bleeding can be readily changed so that instead of attempting to obtain a desired therapy for the thromboembolic event, we end up activating a significant hemorrhage. The case is not rare from the point of view of the individual pathologies, but rather through their interconnection, through the problematic evolution and complications that arose as a result of the pathologies developed during the patient's hospitalization. **Case Report:** An 84-year-old patient was hospitalized for biliary dyspeptic syndrome, dyslipidemia and respiratory disorders. Based on clinical suspicion of pulmonary thromboembolism and the patient's risk profile, prophylactic anticoagulation therapy was initiated prior to the CT angiography. Laboratory tests were conducted, and CT angiography ruled out thromboembolism, however, anticoagulation treatment was maintained due to the patient's high thrombotic risk. The patient subsequently developed bilateral pleural collection, acute cholecystitis, hemorrhage and peripheral atherosclerosis. Based on laboratory findings, the diagnoses included: moderate acute renal failure, severe post-hemorrhagic anemia, sepsis in evolution, cytolysis and hypoalbuminemia, electrolyte and metabolic imbalances and muscle damage with potential coronary syndrome or rhabdomyolysis. Treatment includes the administration of antibiotics for sepsis, biliary drainage of cholecystitis in case of lack of improvement, correction of anemia, and if hemoglobin drops below 7 g/dL, blood transfusion will be performed. Anticoagulant treatment has been temporarily stopped due to the bleeding complication, but the risk of thrombosis remained high. **Discussions :** In people with various comorbidities, and more so older in age, the risk of developing complications is extremely high. In our case, similar to previously documented cases, the most likely effects as a result of this treatment are hemorrhage, sepsis, multiple organ failure and metabolic disturbances. **Conclusions:** Geriatric patients on anticoagulation treatment require strict follow-up due to the risk of bleeding. The case highlights unpredictability of anticoagulation-associated complications and the necessity of an interdisciplinary management regimen with internal medicine, intensive care, and surgical skills. The case also refers to the necessity of individualized anticoagulation treatment in order not to cross the fine line between thrombosis and hemorrhage. Prophylactic decisions must weigh thrombotic risk against bleeding potential, especially in vulnerable populations.

Keywords: anticoagulation, thromboembolism, multi-organ failure, hemorrhage

CHEMORESISTANT AND REFRACTORY LYMPHOMA: A RELENTLESS FOE IN HEMATOLOGIC ONCOLOGY

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Introduction: Subcutaneous panniculitis-like T-cell lymphoma (SPTCL) is a rare primary cutaneous lymphoma with an indolent course, characterized by subcutaneous infiltration of cytotoxic alpha-beta T-cells and clinical features that can resemble inflammatory panniculitis. This disease is responsible for less than 1% of non-Hodgkin lymphomas, hence most information gathered to this day on SPTCL has its source in case reports and small cohort studies. **Case Report:** We present the case of a 47-year-old female, who was diagnosed with SPTCL (stage IV) in 2023 and has no comorbidities. Immediate treatment was imperative, and it started at the Clinical Institute Fundeni, Bucharest, where the first line of treatment consisted of six cycles of CHOP-Etoposide, the standard regimen used for aggressive lymphomas. However, this did not prove to be clinically successful, so the patient underwent two more cycles of Gemcitabine-Oxaliplatin, used as a second line treatment. After another failed therapy, she was admitted into the Oncology Institute of Cluj-Napoca where the starting treatment of four cycles of ICE did not show any signs of improvement either. Finally, after 6 cycles of Peginterferon, we realized that immune modulation was the answer to destroying the cancerous cell, but we still lacked the ideal treatment. Hence, the patient is currently on monotherapy with Besremi (Ropeginterferon alfa-2b) and she finally proves to be

in hematological remission. Due to its challenging nature, the lyphoma treatment needed to be followed by an urgent bone marrow transplant, which luckily the patient's sister was a good candidate for. **Discussions :** We faced a rather interesting case of SPTCL, given that despite the aggressive interventions, the lymphoma did not seem to respond well to any of the cycles of treatment. Moreover, it exhibited chemoresistance, so the uniqueness of the case doesn't only stand in its rarity, but also in how atypical its presentation was. Most cases of SPTCL in existent literature were reported to have been treated either by local surgical excision, chemotherapy or multi-modality treatment mainly with chemotherapy. **Conclusions:** This case provides valuable insights into the treatment challenges associated with SPTCL, particularly in patients exhibiting chemoresistance. Given the rarity of the disease and the limited available data, the documentation of this patient's treatment journey highlights the importance of personalized treatment strategies and encourages further investigation into novel therapeutic pathways for rare cutaneous lymphomas.

Keywords: Lymphoma, Chemoresistance, Interferon

EARLY RECOGNITION OF UTI IN INFANTS PRE-EMPTS SEPSIS EVOLUTION: A CASE REPORT

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Introduction: Urinary tract infections(UTI's) are inflamatory conditions that affect various parts of the urinary system, frequently caused by Gram-negative aerobic enteric bacteria such as Escherichia Coli. In small children, symptoms may be harder to identify. The aim of this case report is to highlight the importance of early recognition of UTI's in infants and we aim to emphasize the challenges posed by the presence of atypical symptoms that may occur in such cases. **Case Report:** The present paper is a case report of a 5-month-old female patient who presented to the Emergency Department with fever for 18 hours, shivering and two vomiting episodes during the day. The patient's history revealed that she was recently diagnosed with cow's milk protein allergy presenting diarrheal stools with mucus and blood for approximately two months. At the emergency department, paraclinical investigations were initiated. The complete blood count indicated leukocytosis with neutrophilia, thrombocytosis, and anemia, and elevated C-reactive protein. Urinalysis revealed leukocyturia, positive nitrites, and proteinuria, the urine culture later revealed the presence of Escherichia coli. Considering the gastrointestinal symptoms, stool samples were tested for viral antigens, with negative results. The patient was admitted to the Pediatrics Clinic of the Clinical County Hospital of Târgu Mureș for more investigations and treatment. Considering the clinical and biological context, antibiotic treatment with Cefuroxime was initiated. On the first day of hospitalization, the patient associated influenced general status, tachycardia, tachypnea, reduced urine output and psychomotor restlessness. Given the patient's unfavorable evolution, the antibiotic treatment was switched to Ceftriaxone. Presepsin level were assessed, which was severely increased (1903 pg/mL).The patient's evolution was gradually favorable, her clinical status improved within the next 48 hours, while the inflammatory biomarkers became normal after 5 days of treatment. **Discussions :** This case highlights the critical importance of early recognition and prompt treatment of UTI in infants. The patient's clinical evolution emphasizes the need for careful monitoring and timely adjustments to antibiotic therapy, particularly in the context of severe infection. This case serves as a reminder of the challenges in diagnosing UTIs in young patients and the need for vigilance in managing such conditions. **Conclusions:** This case emphasizes the importance of early recognition and management of urinary tract infections in infants and our patient fulminant progression to sepsis reinforces the need for prompt antibiotic therapy and close monitoring, which ultimately led to a favorable clinical outcome.

Keywords: Urosepsis, Antibiotic therapy, Cow’s milk protein allergy

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THE OVERLAP OF AUTOIMMUNE DISORDERS: A CASE OF POLYMYALGIA RHEUMATICA AND GRAVES’ DISEASE

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Introduction: Autoimmune illnesses are defined as an aberrant and damaging response of the immune system directed against its own internal structures. Polymyalgia rheumatica is an autoimmune disease characterized by

chronic systemic inflammation, pain and muscle rigidity in the shoulder, neck and hip, commonly associated with giant cell arteritis. **Case Report:** We report the case of a 56-year-old woman suffering from diabetes mellitus, Graves disease and hypercholesterolemia who has been taking Dapagliflozin, Sitagliptin, Rosuvastatin, Gliclazide, Methimazole. The patient's symptoms, which had persisted for more than two years, included exhaustion, nausea, dizziness, loss of appetite and weight loss. The patient was admitted to the gastroenterology department. The objective examination showed a patient with a body mass index of 31.2 and bilateral discomfort of moderate intensity in the neck and hips. The upper digestive endoscopy revealed inflammation in the antral part of the stomach, in contrast with the rest of the tissues, which appeared normal. Laboratory results indicated anemia with B12 deficiency, high levels of glycated hemoglobin, C-peptide, erythrocyte sedimentation rate and immunoglobulin G. Rheumatoid factor was found to be negative, whereas TSH-receptor antibodies were positive as well as anti-thyroid peroxidase antibodies. Considering the patient's numerous autoimmune conditions, further antibody testing was performed, but the findings were negative. Recognising the combination of inflammatory signs with isolated muscle pain in the hip and neck area, the diagnosis of polymyalgia rheumatica was identified. The prescription, which was determined after speaking with an endocrinologist, included 12 units of insulin glargine 100 IU/ml, 4/4/4 units of insulin aspart 100 IU/ml, B12 intravenously, prednisolone 5 mg and methimazole 5 mg. The patient's health had significantly improved after three days; therefore, she was sent home with the previously mentioned drugs in addition to oral vitamin B12 and Betahistine. **Discussions :** The patient is scheduled to return for routine examinations. It is advised to follow up seven days later, or sooner if there is a noticeable worsening of symptoms. Despite the lack of clear correlations between the two conditions, I think this is only the beginning of a more thorough investigation into the underlying causes and contributing factors of her autoimmune disorders. **Conclusions:** An intriguing aspect of this case is the progression of illnesses. After receiving a diagnosis of Graves' disease, which is presently undergoing medical treatment, she eventually developed an additional autoimmune disorder.

Keywords: Autoimmune diseases, Polymyalgia rheumatica, chronic systemic inflammation, Graves disease

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ATYPICAL PNEUMONIA UNVEILING GRANULOMATOSIS WITH POLYANGIITIS- A CASE REPORT

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Introduction: Granulomatosis with polyangiitis, often referred to as Wegener's granulomatosis, is a rare autoimmune illness that affects small and medium-sized vessels in several organs, most commonly the lungs and kidneys. **Case Report:** We report the case of a 29-year-old smoking man who presented with cough, chills, fever, xerostomia and decreased appetite. He was previously admitted to another hospital with the diagnosis of pneumonia, which was treated with antibiotics. Due to the persistence of his symptoms, he came to our hospital approximately 2 months later, where he was transferred to the pneumology department for further investigation. Upon detailed examination, we discovered excessive sweating, fatigue, weight loss, insomnia, nosebleeds, cough with sputum, dyspnea, angina pectoris, dysphagia, black stools, polakiuria, hematuria, dysuria and decreased libido. On physical examination, the patient presented with pale teguments, numb extremities, oral thrush, flank pain, 80% oxygen saturation and blood pressure of 100/62. On auscultation, crackling rales were heard in the left lung. The CT revealed a 6 cm cavity in the left inferior lobe. Fiber optic bronchoscopy had been planned, but due to the alteration of renal function, the doctors decided to transfer him to the nephrology department instead. The patient's laboratory results indicated leukocytosis, thrombocytosis, neutrophilia, microcytic anemia, hyperuricemia, hyponatremia, hypocalcemia, metabolic acidosis, decreased glomerular filtration rate and increased levels of plasmatic creatinine and urea. Rheumatoid factor and anti-neutrophil cytoplasmic antibodies were found positive. Initially, the diagnosis was thought to be solely pneumonia. Nevertheless, after noticing the recently associated symptoms - epistaxis, cough, dyspnea, hematuria, and melena - along with the rapidly progressive glomerulonephritis and positive anti-neutrophil cytoplasmic antibodies, the doctors concluded that the fundamental diagnosis is Wegener's granulomatosis. Treatment included broad-spectrum antibiotics such as piperacillin and tazobactam, meropenem, polymyxin B, ornidazole, metronidazole, antifungal (fluconazole), immunosuppressive (cyclophosphamide), corticosteroids (methylprednisolone, budesonide) and plasmapheresis. In addition, he benefited from supporting treatment, including blood transfusion. **Discussions :** The patient remains hospitalized in the nephrology department. The prognosis is strongly influenced by the prompt initiation of treatment. An experienced and multidisciplinary team is essential for the diagnosis of the disease due to its similarity to

respiratory diseases at the beginning, as well as for the long-term follow-up of the case. **Conclusions:** This is an interesting case because of the patient's evolution. At first, it was thought to be a straightforward case of pneumonia, but as the symptoms persisted and the overall health deteriorated, Wegener's granulomatosis was eventually diagnosed.

Keywords: Wegener’s granulomatosis, Granulomatosis with polyangiitis, anti-neutrophil cytoplasmic antibodies, rapidly progressive glomerulonephritis

FROM TOOTH TO RAPID THREAT: A SUBMANDIBULAR ABSCESS CASE STUDY

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Introduction: Submandibular space abscesses are purulent collections within the primary submandibular fossa due to odontogenic infections commonly arising from the inferior molars or surrounding areas. Urgent treatment is paramount in prevention of life-threatening complications that may arise if not followed, including upper airway obstruction, diffuse cellulitis or phlegmon. This could progress to life-threatening complications, notably cavernous sinus thrombosis, mediastinitis, meningitis or sepsis. Our case report highlights the importance of proper diagnostic work-up and treatment. **Case Report:** A 27-year-old female patient presents with a submandibular tumefaction extending towards the submental fossa anteriorly and posteriorly towards the anterior margin of the sternocleidomastoid muscle. She complained of trismus, pain, odynophagia, dysphagia and dehydration. The surrounding skin appeared congested, warm, distended and reflective. Palpation demonstrated swelling and pain of the surrounding area. The endo-oral mucosa appeared congested and edematous. Intra-oral inspection revealed multiple septic dental foci. The general status of the patient was altered by fever and tachycardia. Percussion revealed a positive sign in tooth 48. Laboratory analysis demonstrated leukocytosis as well as elevated C-Reactive protein. X-Ray revealed the point of origin of the collection, as well as acute apical periodontitis with debris extending towards tooth 47. The patient underwent emergency surgery and drainage, which was sent for an antibiogram. The surgical site was washed through a drainage tube with antiseptic solution for seven days. Subsequently, Clindamycin 300 mg was administered with analgesics and NSAIDs, whilst correcting the hydro-electrolytic balance and proper nutrition. **Discussions :** Discussions Submandibular space infections account for approximately 44-45% of single space odontogenic infections and approximately 30% of multiple space odontogenic infections (Shakya et al 2014). Affected are mainly young adults between 20-30 years, with a slight female predominance of 1.2:1 (Faur et al 2024). The most common etiology of submandibular space infections is odontogenic infections of the inferior molars, being the case in our patient as well. Surgical incision and drainage are urgent, whilst ensuring aseptic lavage, antibiotic treatment based on antibiogram results and asepsis of infected dental foci to prevent recurrences. The evolution of our patient was favorable, with attenuation of pain and trismus achieved following 7 days of monitoring. **Conclusions:** Submandibular space abscesses represent a medical emergency that, if not promptly diagnosed and treated urgently, can lead to life-threatening complications. The key to proper recovery and preventing rapidly occurring life-threatening complications lies in prompt diagnosis, adequate treatment and post-operative follow-up.

Keywords: Submandibular Space Abscess, Odontogenic infections, Deep Neck Infections

DIAGNOSTIC CHALLENGE IN THE EMERGENCY DEPARTMENT: A CASE OF NEUROLEPTIC MALIGNANT SYNDROME MISINTERPRETED AS SEPSIS

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Introduction: The differentiation between neuroleptic malignant syndrome (NMS) and sepsis remains a clinical challenge due to overlapping symptoms such as fever, altered mental status, leukocytosis, and autonomic instability. Misdiagnosis can lead to unnecessary antibiotic use and delayed appropriate treatment. **Case Report:** A 66-year-old female with a medical history of type 2 diabetes mellitus, hypertension, chronic ischemic heart disease, hypercholesterolemia, and depressive disorder presented to the emergency department with fever (38.5°C), tachycardia (136 bpm), tachypnea (30/min), and hypoxia (SpO2 88%). Laboratory tests showed leukocytosis (16.21 x10^5/L), neutrophilia (89.2%), elevated lactate (6 mmol/L), CK (346 U/L), urea (118 mg/dL),

and creatinine (2.19 mg/dL). Neurologically, she exhibited global rigidity, GCS score of 8, and confusion. A tricyclic antidepressant screening was positive. Cranial CT ruled out acute ischemia or hemorrhage, revealing only cortical atrophy and bilateral basal ganglia lacunar infarcts. Chest CT showed no evidence of pulmonary infection. Despite the absence of a confirmed infectious source (procalcitonin 0.662 ng/mL), empiric antibiotics were initiated under presumed sepsis. However, the clinical constellation - hyperthermia, autonomic dysfunction, altered consciousness, rigidity, and CK elevation - along with positive toxicology, supported the diagnosis of NMS. **Discussions :** This case highlights the importance of a thorough differential diagnosis when facing febrile patients with neurologic symptoms. The overreliance on sepsis protocols may lead to inappropriate antibiotic use and missed opportunities to address alternative, potentially life-threatening syndromes like NMS. Tricyclic antidepressant toxicity must be considered in patients with compatible signs, particularly in those with psychiatric history. **Conclusions:** Emergency physicians should maintain a high index of suspicion for NMS in patients presenting with fever, rigidity, and altered mental status, especially when lab findings and imaging do not support sepsis. Early recognition and withdrawal of the offending agent are essential to improve outcomes.

Keywords: Neuroleptic malignant syndrome, Tricyclic antidepressant overdose, Sepsis mimic

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FULMINANT URINARY SEPSIS COMPLICATED BY MULTIPLE ORGAN DYSFUNCTION SYNDROME AND CARDIOGENIC SHOCK IN A YOUNG ADULT: THERAPEUTIC CHALLENGES IN THE ICU

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Introduction: Urinary tract infections with Escherichia coli are considered benign, self-limiting conditions, especially in young patients without comorbidities. However, reports in recent years show that multiple organ failure caused by seemingly minor E. coli infections can occur at any age, from newborns to the elderly and a slightly higher incidence is observed in adults in the 40-49 decades. **Case Report:** A 37-year-old female patient is transferred from the urology unit to ICU after placement of a left ureteral stent to unblock the urinary tract and with a diagnosis of left pyelonephritis with severe urinary sepsis. At the time of admission to the ICU, the patient was conscious, with cold, pale, sweaty skin, spontaneously breathing with oxygen cannula, SpO2 100%, but with severe hemodynamic instability (BP-50/30mmHg, AV-122/min) and low diuresis, with a cloudy, hematuric urinary appearance. ASTRUP parameters reveal severe ARDS and hyperlactic metabolic acidosis. Treatment with intravenous fluids, vasoactive support (norepinephrine associated with vasopressin), broad-spectrum antibiotic therapy, mechanical ventilation in a controlled regime (after orotracheal intubation), sedation and continuous analgesia were immediately instituted. A cardiologic workup was performed, revealing severe pump dysfunction (EF<20%). Minimally invasive hemodynamic monitoring parameters revealed distributive shock and cardiogenic shock. **Discussions :** Subsequently, following intensive treatment and interdisciplinary collaboration (ITA, urology, cardiology, plastic surgery), the evolution was slowly favourable: improvement of cardiac function (EF>35%), remission of ARDS, onset of polyuric phase and safe detubation. Plastic surgery carefully monitored peripheral necrosis of both hands and inferiour members. The patient develops two firm formations in the right armpit. An ultrasound with tissue sampling revealed infection with multidrug-resistant Klebsiella pneumoniae. Antibiotic therapy was adjusted to two combined carbapenems (imipenem, meropenem), linezolid and colistin. Vasopresin was stopped and levosimerdan was associated to decreasing doses of adrenaline. The patient remained hemodynamically and respiratory stable, with a significantly improved general condition on discharge from the ICU. **Conclusions:** In the context of the accelerated ageing of the population, ICU in Romania are increasingly confronted with chronic, terminal cases, gradually turning into palliative care areas. In this clinical landscape, individualization of care becomes a challenge. The presented case demonstrates that prompt, multidisciplinary and sustained intervention and increased attention to a young patient can radically change the prognosis in the face of a severe life-threatening infection. Moreover, the active involvement of the medical team, empathy and courageous decision-making in administering advanced therapies contribute not only to survival but also to the chance of a faster and more impressive psychological recovery.

Keywords: Escherichia coli, Multiple organ failure, Severe pump dysfunction, Peripheral necrosis

OVARIAN CARCINOSARCOMA: UNCOMMON, AGGRESSIVE, AND FREQUENTLY OVERLOOKED

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Introduction: Ovarian carcinosarcoma (OCS) is one of the rarest and aggressive ovarian malignancies accounting for only 2%. Known also as malignant mixed Müllerian tumour (MMMT) it comprises both epithelial (high-grade serous carcinoma) and mesenchymal (sarcomatous) components. OCS is mostly diagnosed at an advanced stage due its rapid progression and nonspecific clinical presentation. This case highlights a unique pattern combining extensive local invasion and peritoneal dissemination. **Case Report:** A series of surgical interventions were performed on a 69-year-old female patient who presented with a large pelvis-anatomical mass and nonspecific gastrointestinal and urinary symptoms. These interventions included en bloc tumor resection with total hysterectomy, bilateral anexectomy, partial cystectomy, total omentectomy, and peritonectomies. Microscopically, a left ovarian mass (240×170×160 mm) with capsular rupture and multiple tumor implants in the omentum and Douglas pouch were found. The histopathological examination confirmed the diagnosis, the tumor consisting of approximately 60% high-grade serous carcinoma and 40% high-grade undifferentiated sarcoma, without heterologous elements. The uterine body and urinary bladder were infiltrated by the tumor and metastases in the greater omentum and rectouterine pouch were discovered. The immunohistochemical profile supported the diagnosis and was positive for for p53, WT1, and cytokeratin AE1/AE3 in the epithelial component, and vimentin in the mesenchymal component. Final diagnosis: ovarian carcinosarcoma, FIGO stage III (pT3). **Discussions :** OCS is an aggressive neoplasm with biphasic pattern and poor prognosis. The presence of extensive local invasion highlighted in this case and early peritoneal metastases underscore the importance of prompt surgical management and accurate histopathological evaluation. Due to its rarity, treatment protocols for OCS include cytoreductive surgery andfollowed by platinum-based chemotherapy, mirroring the high-grade epithelial ovarian carcinoma treatment, however outcomes remain suboptimal. **Conclusions:** Ovarian carcinosarcoma is a remarkable subtype of ovarian malignant tumor often diagnosed at an advanced stage. The high need for early recognition, due to the poor prognosis of the malignancy and the limited treatment options are emphasized in our case, thus supporting the necessity for more research and tailored treatment strategies.

Keywords: Ovarian carcinosarcoma, Malignant mixed Müllerian tumor, High-grade serous carcinoma

CASE PRESENTATION: PAPILLARY RENAL CELL CARCINOMA

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Introduction: Papillary RRC (pRCC) representing 10-15% of cases. pRCC is typically associated with a more favorable prognosis than clear cell RCC, especially when detected at an early stage. Accurate classification is essential, as the various histological and molecular RCC subtypes differ markedly in prognosis and management. **Case Report:** We present the case of an 83-year-old man who presents with the clinical diagnosis of right renal tumor, cT1bN1M1, from which 10 biopsy fragments were collected. Microscopically we observed, renal parenchyma with a moderate chronic inflammatory infiltrate and focally thyroidized renal tubules are observed, along with fragments of renal parenchyma showing a tumoral proliferation with papillary, tubulo-papillary, and focally solid architecture, arranged in nests. The papillary formations have a fibrovascular core and are lined by medium-sized tumor cells with abundant, eosinophilic cytoplasm and enlarged, pleomorphic nuclei with visible nucleoli at 20x magnification (WHO/ISUP grade 2). Immunohistochemically, the tumor cells were strongly and diffusely positive for AMACR. The morphological appearance and immunohistochemical profile are consistent with papillary renal cell carcinoma, WHO/ISUP grade 2. **Discussions :** Alpha-methylacyl-CoA racemase (AMACR) is a valuable immunohistochemical marker for diagnosing papillary renal cell carcinoma (PRCC); however, its expression is not entirely specific, as it can be observed in other renal tumors, potentially leading to diagnostic challenges, that is why it is needed a proper examination of the H&E slides.[2] The prognosis of PRCC varies based on several factors, including tumor stage, grade, and patient age, patients older than 75 years exhibited worse cancer-specific mortality compared to those younger than 50 years. To achieve optimal treatment, more detailed genetic analyses such as fluorescence in situ hybridization (FISH) and also next-generation sequencing

(NGS) are recommended, especially when the diagnosis must be made on a biopsy specimen. **Conclusions:** In conclusion, biopsy is considered crucial in the diagnosis of papillary renal cell carcinoma, as it allows histopathological and immunohistochemical evaluation and also genetic tests that helps establishing treatment decisions and also allows this whole process to proceed more faster with minimal patient suffering. AMACR is a useful marker for diagnosis, but we must take into consideration the importance of integrating genetic testing, especially in biopsy-based diagnoses, to ensure optimal diagnosis.

Keywords: Papillary Renal Cell Carcinoma, Immunohistochemical marker AMACR, Prognosis

CASE PRESENTATION: PAPILLARY THYROID CARCINOMA

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Introduction: Papillary thyroid carcinoma (PTC) is the most common type of thyroid malignancy, representing approximately 80% of all thyroid cancers in females worldwide. PTC is generally associated with an good prognosis; however, certain features, such as multifocality and bilaterality, may complicate the treatment. Multifocal PTC - defined by the presence of multiple tumorfoci within the thyroid. While its prognostic value is still debated, multifocal disease is often considered a marker of increased biological aggressiveness. **Case Report:** We present the case of a 46-year-old woman diagnosed with multifocal, bilateral, classic papillary thyroid carcinoma (pT1a[m]) following total thyroidectomy. Gross examination of the resected thyroid revealed multiple tumorfoci across both lobes. The right lobe contained two well- demarcated whitish nodules, measuring 6 mm and 5 mm, while the left lobe harbored three smaller tumorfoci measuring 1 mm, 4 mm, and 5 mm. Histologically, the neoplastic cells formed follicular and papillary structures, with classic nuclear features of PTC including nuclear enlargement, overlapping, irregular contours, nuclear grooves, and a ground-glass chromatin pattern. All tumorfoci were embedded within a desmoplastic stroma and accompanied by a moderate lymphoplasmacytic infiltrate. The surrounding thyroid parenchyma exhibited features consistent with chronic lymphocytic thyroiditis, including diffuse lymphoid infiltration, formation of germinal centers, and oncocytic metaplasia. The surgical margins were free of tumor infiltration, and no extrathyroidal extension was observed. **Discussions :** Multifocality in PTC is observed in a significant proportion of cases, with reported rates varying widely. The presence of multiple tumor foci has been associated with more aggressive disease characteristics, including increased risks of extrathyroidal extension, lymphovascular invasion, and lymph node metastasis. However, the impact of multifocality on overall prognosis remains contentious. Some studies suggest that multifocal PTC may lead to higher recurrence rates, while others indicate no significant difference in cancer-specific survival compared to unifocal PTC. The co-occurrence of chronic lymphocytic thyroiditis, as seen in this patient, adds another layer of complexity. While chronic inflammation has been implicated in thyroid carcinogenesis, its presence alongside PTC has been associated with a lower risk of recurrence. **Conclusions:** This case underscores the importance of recognizing multifocal and bilateral patterns in papillary thyroid carcinoma, particularly when occurring alongside chronic lymphocytic thyroiditis. Although multifocality may suggest a more aggressive biological phenotype, individualized risk assessment, complete surgical excision, and long-term monitoring remain the cornerstone of effective management. The coexistent thyroiditis may potentially moderate disease progression, and its role in the tumor microenvironment deserves continued investigation.

Keywords: Papillary Thyroid Carcinoma, chronic lymphocytic thyroiditis, Multifocal

SEVERE SEPSIS AND MULTI-SYSTEM ORGAN FAILURE IN A MORBIDLY OBESE PATIENT

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Introduction: Morbid obesity is a known independent risk factor for increased morbidity and mortality in critically ill patients. Its impact on immune regulation and systemic inflammation predisposes to infections, delays in diagnosis, and poor response to treatment, especially in cases of intra-abdominal sepsis. **Case Report:** We report the case of a 65-year-old male admitted to the intensive care unit (ICU) at the Emergency County Hospital Tg. Mures with abdominal sepsis caused by vancomycin-resistant Enterococcus faecium (VRE). Prior his admission in the ICU, he was admitted as an emergency at the Gastroenterological Department with a diverticulitis. His

condition transformed to a peritonitis, which needed surgical intervention. His comorbidities included morbid obesity with a BMI of 45 kg/m^2 (height 170 cm , weight 130 kg), stage IV COPD, chronic ischemic heart disease, previous myocardial infarction, stage 2 arterial hypertension , diabetes mellitus type 1, and NYHA class II/III heart failure. Despite receiving appropriate antimicrobial therapy and supportive measures in the ICU, the patient's clinical status declined: he developed acute kidney injury stage 1 which later progressed to a stage 3, chronic respiratory failure, hepatic failure and cerebral edema. His inflammatory markers showed persistent leukocytosis (max: 24.82 x10^9/L), neutrophilia (max: 21.64 x10^9/L), and elevated CRP (max: 292 mg/L). Over his two-week ICU stay, the patient developed complications including paroxysmal atrial fibrillation, bilateral pleurisy, bronchopneumonia, UTI, epicranial hematoma (chronic aspect), and secondary anemia. His clinical course illustrated an evolving picture of multiple system organ failure (MSOF) in the context of immune compromise, metabolic stress, and persistent systemic inflammation exacerbated by morbid obesity. **Discussions :** Morbid obesity contributes to a heightened risk of infectious complications and poor postoperative outcomes due to immune system dysregulation and persistent systemic inflammation. In this patient with morbid obesity, the multiple underlying diseases listed above caused the rapid onset and escalation of organ dysfunction and emphasized the importance of morbid obesity as a major risk for severe sepsis and MSOF. The presence of VRE further complicated treatment, limiting antimicrobial options in a severely immunocompromised host. **Conclusions:** This case emphasizes the profound impact of morbid obesity on the pathophysiology and clinical course of sepsis. In such patients, obesity amplifies inflammatory responses and delays resolution of infection, contributing to rapid decompensation and organ failure. Early recognition and tailored critical care strategies are vital in managing morbid obese patients with intra-abdominal infections.

Keywords: morbid obesity, msof, sepsis

IS RENAL DISFUNCTION ALWAYS ASSOCIATED WITH MULTIPLE MYELOMA IN HEMATO-ONCOLOGY?: A CASE REPORT WITH COMPARATIVE ANALYSIS

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Introduction: Kidney damage is a common problem in people with Multiple Myeloma, observed in up to 50% of pacients during initial diagnosis. This usually happens because the plasma cells produce abnormal light chains that harm the kidneys. However, not all kidney problems in these patients are due to Multiple Myeloma - other, unrelated causes may also be responsible. In this report, I will compare two patients with Multiple Myeloma, both of whom had kidney problems, but for different reasons. **Case Report:** The first pacient is a 61-year-old female with Multiple Myeloma, micromolecular lambda subtype, Salmon-Durie Stage III B. The diagnosis was made in December 2023, with 14-16% plasma cells found in bone marrov. Among the first signs of the disease in this pacient was renal failure. At diagnosis, the pacient presented also with marked symphtomatic anemia and moderate bone pain. The most important laboratory results are: urea(72,2mg/dl), creatinine(2-3mg/dl), GFR(25-30 ml/min) and urinary proteins(6429mg/24h). The second pacient is a 45-year-old female with lambda light chain Multiple Myeloma and Salmon-Durie Stage III B. The diagnosis was determined in April 2017, with bone marrow analysis revealing 20% plasma cells. In the early stages, the disease presented with severe anemic syndrome. The main laboratory results include: urea(95,5mg/dl), cratinine(6,8g/dl), and total proteins(5,35g/dl). Before the onset of multiple myeloma, the pacient was diagnosed with chronic kidney disease stage V with hemodialysis treatment and with glomerular nephropathy of unspecified etiology. **Discussions :** The first pacient had multiple myeloma in December 2023, one of the first signs being renal failure. The second pacient had chronic kidney disease stage V with hemodialysis treatment(in 2016) and glomerular nephropathy of unspecified etiology before multiple myeloma, which was diagnosed only in April 2017. It's also important to note that tubular nephropathy is highly associated to multile myeloma, it is more specific, which is probably the case in the first pacient, whereas glomerular nephropathy is rarely associated with it. Knowing the real cause of kidney problems is important because it can help decide on the best treatment and how to manage the patient's condition in the most effective way. **Conclusions:** This case report with comparative analysis emphasizes the different causes of renal disfunction, associated or not with multiple myeloma. Understanding de differences between glomerular nephropathy and tubular nephropathy is crucial in diagnosis, treatment and prognosis, especially when discussing multiple myeloma.

Keywords: Multiple Myeloma, kidney damage, anemia, comparison

NEUROCYSTICERCOSIS- A PSYCHIATRIC POINT OF VIEW

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Introduction: Neurocysticercosis is the most common parasitic disease of the nervous system and is one of the main causes of acquired epilepsy in developing countries. Though the radiologic appearance is specific, the clinical manifestations of neurocysticercercosis can be non-specific and often misleading, bringing together a number of medical specialties such as neurology, infectious diseases and psychiatry. **Case Report:** We present the case of a 50 years old man who presents at the psychiatrist's office showing depressive mood, anhedonia, anticipatory anxiety, cancerophobia, insomnia, obsessive ruminations related to health. He is diagnosed with affective depressive disorder of severe intensity with obsessive elements, being prescribed Paroxetine and Olanzapine, with persistently favorable evolution so that after a year the treatment is stopped. After 3 years he presents himself again for a psychiatric evaluation requested by his family member -his sister, who notices an unusual behavior of him suspecting a possible relapse of depression, which could have been certified by the personal context of the patient at the time. **Discussions :** Following the anamnesis, the doctor decides that the manifestations suggest an atypical depression, noticing the patient's distractibility combined with brief episodes of dissociation during conversation and a newly manifested lack of interest in life and his own person and decides to send him for a cranial CT and EEG evaluation, raising the suspicion of a neurological pathology, possibly epilepsy. After hospitalization at the infectious diseases clinic he receives treatment with Albendazole with favorable evolution but due to brain lesions , he remains in neurological evidence. He presents 5 epileptic seizures per month which, due to the effect on the psyche, worsens the pre-existing anxiety and depressive pathology and makes the patient vulnerable, requiring regular psychiatric check-ups. **Conclusions:** This presentation highlights the multiple facets of this pathology and the importance of good communication between specialists from different fields in order to make a prompt and correct diagnosis and also how an organic pathology can be shielded by psychiatric manifestations and the importance of organic investigation of the patient before making a psychiatric diagnosis.In this specific case, neurocysticercosis and its complications complete the circle of a pathology with a psychiatric starting and ending point .

Keywords: neurocysticercosis, epilepsy, depression, organic pathology

DEMETIA- EXACERBATION OF PREEXISTING SYSTEMIC DISEASES

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Introduction: Depression and dementia are common disorders in psychiatric practice as comorbidities. The present paper presents a variant of the onset of dementia in a patient with medically controlled depression for several years but with a relatively sudden turn into a form of depressive psychosis with a suicide attempt in a context of somatic decompensation. **Case Report:** We present the case of a 69-year-old woman, known to have hypertension, type 2 diabetis, hypothyroidism and a documented psychiatric history for 8 years. The symptomatology shows a favorable, persistent evolution under antidepressant medication, which is why the patient requests the prescription of medication through her family doctor for a longer period of time, because of acondition that made it difficult to travel and regular monthly checkups. One year after this approach, the patient asked to return to the psychiatrist's regular observation. On reassessment, the depressive symptoms persist, mainly due to somatic problems and the progression of pre-existing chronic illnesses, as well as social factors: sedentary lifestyle, loneliness. The following month, the patient is found by her son in her own home, unconscious and involuntarily vomiting urine following a drug overdose. The suicide attempt is complicated by ketoacidotic coma, accompanied by dysmetabolic encephalopathy and acute renal injury. **Discussions :** At the time of admission to the psychiatric clinic, the patient presents a blood glucose of 554mg/dL, reason for which the 112 team is requested and the patient is transported to the SMURD, subsequently being transferred to the ICU ward with the diagnosis of ketoacidotic coma. Following gastric lavage, hydroelectrolytic, acid-base and glycemic rebalancing, the patient stabilizes. Antibiotic therapy with Cefort and thromboprophylactic anticoagulation are also initiated and

the diabetologist is contacted for diabetic reevaluation. **Conclusions:** The analysis of the complex case, as a psychopathologic description at hospitalization, highlights the slow development of a degenerative process, which was initially masked by an affective pathology of depressive type, as well as by a personality structure whose features and dimensions gradually alienate the person from the real world, from adequate relationships, feelings and natural concerns. The depressive affective process of psychotic intensity remains masked by a disorder.

Keywords: dementia, cetoacidosis, depression

NEUROLOGICAL DETERIORATION IN ADVANCED LIVER DISEASE: A CLINICAL SPECTRUM BETWEEN HSV-RELATED ENCEPHALITIS AND ISCHEMIC STROKE

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Introduction: Viral encephalitis, often caused by Herpes Simplex Virus (HSV), presents with a variety of neurological symptoms, including speech disturbances, motor deficits, and altered mental status. Reactivation of HSV in immunocompromised patients or those with severe liver dysfunction can lead to significant complications. This case is notable due to the rare combination of viral encephalitis, seizures, and acute systemic involvement in a patient with toxic hepatic cirrhosis. **Case Report:** A 69-year-old male with a history of toxic hepatic cirrhosis was admitted with speech disturbances, left-sided motor deficit, somnolence, and fever (39.4°C). Four days prior, he had experienced generalized tonic-clonic seizures, which were treated with an anticonvulsant. On admission, neurological examination revealed mixed aphasia, left hemiparesis, dysphagia, and diminished reflexes. His condition deteriorated, developing flaccid tetraparesis, neck stiffness, and a positive Kernig sign.Laboratory tests showed moderate leukocytosis, fluctuating thrombocytopenia, acute renal injury, hepatic cytolysis, hypoalbuminemia, and urinary tract infection. Cerebrospinal fluid (CSF) analysis revealed moderate pleocytosis, hyperproteinorrachia, and the presence of Herpes Simplex Virus 1, confirming viral encephalitis. Neuroimaging identified ischemic lesions in the middle cerebral artery (MCA) territory. The patient was treated with antiviral therapy, supportive care for seizures, and management of liver and renal dysfunction. **Discussions :** This case underscores the diagnostic complexity in immunocompromised patients with advanced liver disease presenting with acute neurological symptoms. Although CSF analysis revealed inflammatory changes suggestive of a possible bacterial infection, virological testing confirmed the presence of Herpes Simplex Virus type 1, indicating a viral etiology. However, the precise cause of the patient's behavioral alterations and neurological decline remains uncertain - whether due to viral encephalitis, ischemic stroke, or a combination of both. The coexistence of seizures, ischemic lesions, and systemic dysfunction further complicated the clinical picture. Neuroimaging and CSF analysis were pivotal in narrowing the differential diagnosis, while early antiviral therapy and supportive management of hepatic and renal impairment were critical in stabilizing the patient. **Conclusions:** This case underscores the need to consider viral encephalitis in immunocompromised patients with neurological symptoms. A thorough diagnostic approach, including CSF analysis and neuroimaging, is critical for appropriate management. This case contributes to the understanding of HSV reactivation in patients with liver cirrhosis and provides insight into managing multifactorial conditions.

Keywords: Herpes Simplex Virus, immunocompromised, ischemic lesions

POSTER - DENTAL MEDICINE

MANAGING PERIORBITAL CELLULITIS COMPLICATED BY DIABETES AND RENAL DYSFUNCTION: A MULTIDISCIPLINARY APPROACH

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Introduction: Periorbital cellulitis and periorbital abscess are both considered medical emergencies because of the highly risk of complications. Delayed or inadequate therapy may result in irreversible loss of vision. Therefore, a rapid correct diagnosis is very important. **Case Report:** A 60-year-old male patient with a history of type 2 diabetes mellitus and altered renal function is admitted as an emergency to our Oral and Maxillofacial Hospital with the diagnosis of right periorbital abscess and right nasal pyramid wall involvement. The clinical investigations disclosed: a massive swelling on both lower and upper eyelid regions, erythematous and hyperaemic skin and closure of the palpebral fissure. Paraclinical investigations revealed a marked leucocytosis, elevated glucose levels (849.7 mg/dl), and impaired renal function (creatinine 3.99 mg/dl), prompting a delay in the surgery. Fine needle aspiration is performed for a bacteriological analysis and an antibiogram, plus samples being collected for laboratory tests. The microbiologic result highlights the presence of Klebsiella pneumoniae. **Discussions :** Due to his current status that doesn't allow the surgical intervention, the patient is transferred to the diabetology department. While being monitored daily, the local progression starts worsening, moving toward necrotising fasciitis with a tendency to extend in both surface and depth. An increase in nitrogen retention parameters is noted, despite an initial rebalancing and controlling of blood glucose levels and renal function. To preserve the kidney function, urgent nephrology consultation is requested. Subsequently, the patient is transferred to our Oral and Maxillofacial Hospital for continuation of the specialized treatment. The procedure is delayed due to comorbidities. The surgery is carried out under analgosedation and regional anaesthesia once the overall health was stable. A fasciectomy is done on the: upper eyelid, cheek and nasal area. **Conclusions:** The case underscores the importance of a multidisciplinary approach and ability to determine the right timing for a surgical intervention in collaboration with other specialities. A potentially life-threatening condition, periorbital cellulitis requires immediate intervention, but in the patients with underlying health problems, like impaired renal function and diabetes mellitus, the decision to proceed with a surgical intervention must be carefully considered. To help minimise the complications and optimise the success, a thorough evaluation of conditions should be carried out, discussing comorbidities, risk factors and possible complications.

Keywords: periorbital cellulitis, periorbital abscess, multidisciplinary approach

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PLATELET-RICH FIBRIN IN ALVEOLAR RIDGE AND SOFT TISSUE HEALING FOLLOWING MAXILLARY INCISOR EXTRACTION

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Introduction: Implant restorations have become a common solution for replacing missing teeth and have emerged as a game-changer in dentistry. They offer a permanent and natural-looking solution for replacing missing teeth while preserving the alveolar bone. To achieve long-term success and significant aesthetic results, it is necessary to have sufficient bone volume, both vertically and horizontally. Socket preservation can significantly influence and reduce the physiological resorption process. This study aimed to present the benefits of the use of PRF in alveolar ridge preservation after tooth extraction. In our clinical case study, PRF was used to enhance alveolar ridge preservation followed by implant placement within a relatively short period. **Case Report:** A 42-year-old non-smoker female patient with no significant medical history presented to the clinic for aesthetic oral rehabilitation in the anterior region. The maxillary incisor was extracted under local anaesthesia after a thorough clinical and radiographic evaluation. A PRF membrane was prepared from the patient's blood immediately after tooth extraction. The PRF was inserted into the alveolar socket, and the PRF membrane was then placed over the socket to help stabilise the clot and facilitate bone tissue regeneration. The surgical site was sutured, and the patient was instructed on post-operative care. Satisfactory preservation of the alveolar ridge contour with evidence of radiographically dense bone incorporation within the extraction socket was observed on CBCT five months postoperational. An implant was inserted 6 monts postoperational using a surgical protocol. The primary objective was to assess socket healing and implant integration radiographically and clinically after socket preservation with

PRF. **Discussions :** The use of PRF as a bioactive substance to promote tissue regeneration and wound healing is strongly supported by biological evidence. Several scientific investigations have shown that PRF has a high concentration of growth factors and biologically active matrix proteins, which are released gradually. Both PRF matrices exhibit growth factor expression, which promotes angiogenesis and early wound healing. In our study, PRF was efficient in soft tissue healing, but we need to mention that the healing was influenced by the tooth's position and the extraction procedure used. **Conclusions:** This case report demonstrates how PRF can serve as an effective method of bone regeneration after traumatic tooth extraction. Further research with larger samples and longer follow-up is needed to validate the sustained benefits of PRF and to define standardized protocols and explore the best uses of PRF in tissue regeneration and healing, particularly in dental applications.

Keywords: platelet-rich fibrin, alveolar socket augmentation, alveolar ridge preservation, extracted tooth

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SINUS COMPLICATIONS IN DENTO-ALVEOLAR SURGERY

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Introduction: The patient XY is admitted to the emergency department in the Oral and Maxillofacial Surgery Clinic for right buccal swelling, gingival inflammation, pain in the right maxillary region, and fluid reflux towards the nose. The patient reports that two days ago, teeth 1.4, 1.5, and 1.6 were extracted; the extraction of tooth 1.6 resulted in an oroantral communication and displacement of a root into the maxillary sinus. The pre-extraction OPG reveals a significant chronic periapical lesion at tooth 1.6, as well as a partial right maxillary sinusitis. **Case Report:** A 62-year-old male from Tg. Mureș was admitted following complications from tooth 1.6 extraction, including oroantral communication at the mesio-vestibular and palatal alveolar levels, endosinus displacement of the palatal root, and right odontogenic maxillary sinusitis caused by a periapical cyst of tooth 16. A CBCT scan revealed the communication, endosinus root, and modified sinus mucosa. The patient underwent surgery under antibiotic protection and general anesthesia with oro-tracheal intubation to remove the root from the maxillary sinus, perform partial sinus curettage, and close the oroantral communication. A trapezoidal vestibular flap was used in the right molar region for bone trepanation. The palatal root was extracted, and the inflamed sinus mucosa was curetted. A sinus counter-opening in the inferior meatus was performed, with packing placed for hemostasis, to be removed 2-3 days postoperatively. The oroantral communication was sealed with the vestibular flap. Postoperative recovery was favorable, and the patient was discharged with stitches to be removed in 10-14 days. **Discussions :** Specialized literature suggests that the palatal root, followed by the mesio-vestibular root of the upper first molar, has the largest area of sinus contact, facilitating sinus perforation and endosinus roots displacement. Periapical lesions and inflammation of the sinus mucosa (sinusitis) also contribute to this process. These factors must be identified preoperatively with radiographs (OPG, CBCT). **Conclusions:** A correct preoperative evaluation of imaging (OPG in this case) would have highlighted all the contributing factors (extended periapical lesion of tooth 1.6, maxillary sinusitis) to these complications. It would have allowed for the adoption of an appropriate therapeutic approach: one single complex surgical intervention, including dental extractions through alveolotomy, sinus curettage, and closure of the oro-sinusal communication, if it had occurred. As a result, the patient would have undergone only one surgical procedure.

Keywords: Dental extraction, Oroantral communication, Endosinus root fragment

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HISTOPATHOLOGICAL INSIGHTS OF CONVENTIONAL AMELOBLASTOMA: A CASE REPORT

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Introduction: One of the most common benign epithelial odontogenic tumors is the conventional ameloblastoma, a solid neoplasm with cystic changes. Located most often in the mandibular ascending ramus, it is characterized by a slow-growing mass that typically affects individuals between 30 and 50 years of age, with no sex predilection. Although very rare, it is locally aggressive, potentially distorting the anatomy of the underlying bone and has a significant recurrence rate. **Case Report:** A 65-year-old male patient presented at the Oral and Maxillo-Facial Surgery Department with an intraosseous tumor that grew on the left side of his mandible. After surgical removal,

the excised specimen was sent to the Pathology Department for evaluation. The macroscopic aspect showed multiple irregular whitish-gray fragments with dimensions ranging from 10x5x3 mm to 30x10x5 mm. Histopathological evaluation revealed that all fragments, consisting in fibrous connective tissue and mature bone, some with cystic appearance and presenting acute inflammatory exudate, were interested by a tumor proliferation with a plexiform and follicular appearance, formed by epithelial cells arranged in nests, cords, branched and anastomosed trabeculae surrounded by fibrous stroma, with columnar/cuboidal ameloblast-like cells showing nuclei arranged in a palisading pattern towards the periphery, with inverted polarity and subnuclear vacuoles, and centrally with a loose, stellate reticulum appearance. The tumor cells expressed the immunohistochemical (IHC) markers CK19, CD56, p63, β-Catenin, focally calretinin, and were negative for SOX10 reaction. Based on the histological aspect and IHC phenotype, the final diagnosis was solid/multicystic ameloblastoma, plexiform and follicular subtypes. **Discussions :** CK19 is diffusely present in neoplastic cells in ameloblastomas, while p63 is a prognostic marker found in more aggressive and invasive phenotypes. CD56 is found in the enamel organ during tooth development, but also in the cell membrane of the tumor nests, highly suggestive of ameloblastoma and it helps, alongside calretinin, to rule out an odontogenic keratocyst. β-Catenin shows strong reactivity in the peripheral cuboidal and columnar cells, typical in the follicular and plexiform histological subtypes. Multiple studies which included ameloblastomas treated with BRAF or BRAF-MEK inhibitors showed promising results. **Conclusions:** Although a rare and benign tumor, due to its risk of recurrence, especially when incompletely removed, conventional ameloblastoma cases must be followed up for years, and they are of interest in multiple studies focused on targeted therapies. IHC determinations confirmed the microscopic findings, aiding the diagnostic process.

Keywords: ameloblastoma, odontogenic tumor, immunohistochemistry

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ANATOMICAL VARIABLES FOR THE JUGULAR NUTCRACKER SYNDROME

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Introduction: The term "nutcracker" typically refers to the compression of the left renal vein between the superior mesenteric artery and the aorta. However, a compression syndrome results when the internal jugular vein (IJV) is compressed against the transverse process of the atlas (TPA). This jugular nutcracker syndrome (JNS) is typically due to a long styloid process (SP) and is a variant of Eagle's syndrome. **Case Report:** Four angioCT archived cases were selected to demonstrate the topographical variables of the J3 segment of the IJV. In a 57-year-old female case, the right J3 segment coursed anteriorly to the transverse process of the atlas and a lateral loop of the internal carotid artery (ICA) was intercalated anteriorly between it and the SP. In a 57-year-old male case, the right IJV was compressed between the TPA and the SP and was crossed laterally at that level by the occipital artery (OA). In a 72-year-old male case, the IJV compression between the TPA and SP was bilateral. In a 78-year-old female case, the left IJV was compressed on the tip of the transverse process of the atlas: the left SP was 4.41 cm long; the narrowed segment of the IJV was immediately postero-lateral to the SP and two arteries crossed it: the external carotid artery (ECA), laterally, and the OA, medially; the lateral side of the J3 segment's topographical tunnel was completed by the posterior belly of the digastric muscle and the posterior auricular artery. **Discussions :** The classic variant of Eagle's Syndrome was initially attributed to an elongated SP. The compression of the IJV between the TPA and the SP is known as the JNS, also referred to as the "styloid jugular nutcracker" or "jugular Eagle syndrome", a variant of Eagle's syndrome that affects the IJV. It has significant neurosurgical implications. Due to the compression of the IJV, patients may develop stenosis, which is bilateral in 50% of cases. Different symptoms may occur in such cases: headache, pulsatile tinnitus, insomnia, visual disturbances, and auditory disturbances (24.2%). **Conclusions:** Different anatomical structures can disturb the flow through the J3 segment of the IJV in different topographical combinations. These are the TPA, SP, posterior belly of the digastric muscle, ICA, ECA, or OA.

Keywords: Jugular nutcracker syndrome, Internal jugular vein, Eagle jugular syndrome, Styloid process

TRANSVERSE FACIAL ARTERIES SUPPLYING THE UPPER LIPS

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Introduction: The length of the facial artery (FA) is variable in the face. It may be of inferior labial, superior labial, nasal or angular types. When the course of a FA is short, its typical territory may be supplied by a different artery in the face. **Case Report:** While studying an archived angioCT file of a 77-year-old male anatomically, different arterial variants were found. On both sides, the FAs coursed through the submandibular glands and were of the inferior labial type, terminating as inferior labial arteries. The external carotid arteries (ECAs) were trifurcated terminally into the maxillary, superficial temporal, and transverse facial arteries (TFAs). Both TFAs supplied the upper lip. From the left ECA originated a coiled linguofacial trunk. The left superior thyroid artery coursed posteriorly to the pyriform sinus. The right superior thyroid artery originated on the lateral side of the greater hyoid horn. **Discussions :** Normally, the ECA bifurcates into the maxillary and superficial temporal arteries, but in this case, it trifurcated, adding a third branch, the transverse facial artery (TFA), which usually originates from the superficial temporal artery. This trifurcation is a rare anatomical variant with surgical importance. The TFA's role in facial perfusion, particularly to the upper lip, was more prominent in this case. In such cases surgical planning or reconstructive strategies for the upper lip and facial tissues should be adapted. Sometimes the facial and lingual arteries may arise from a common linguofacial trunk. Anatomical studies revealed the presence of linguofacial trunk bilaterally in 4.8% and unilaterally in 20% of population. This variant should be discriminated prior to arterial ligations during oral and maxillofacial surgeries The retropharyngeal course of the superior thyroid artery is a rare variant that may be surgically relevant is overlooked. **Conclusions:** Arterial variants should be evaluated on a case-by-case basis prior to surgical procedures.

Keywords: Transverse facial artery, Linguofacial trunk, ECA trifurcation, Computed tomography

NANOCOMPOSITES IN DENTAL AESTHETICS: MODERN MATERIALS FOR MINIMALLY AND NON-INVASIVE DIRECT RESTORATIONS

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Introduction: Dental aesthetics is experiencing a great evolution nowadays, promoted by the rapid development of modern nanocomposites, which allow for minimally invasive and indistinguishable restorations. The present paper aims to highlight the effectiveness of direct restorations with nanocomposite materials in the treatment of dento-maxillary disharmonies with spacing, microdontia and teeth malposition, offering a minimally invasive and aesthetic alternative to classic orthodontic or prosthetic procedures. **Case Report:** The case study conducted on a 45-year-old female patient with her approval, being diagnosed with dento-maxillary disharmonies with spacing, included a series of documented sessions: clinical assessment of the case including photos, rubber damn isolation and layering and finishing techniques using state-of-the-art photopolymerizable nanocomposite called Tetric® Plus Product Line - Syringe Starter Kit produced by Ivoclar in 2024. The result obtained was aesthetic, functional and well-integrated, highlighting the versatility and efficiency of composites in smile rehabilitation by totally or partially reducing the spacing. **Discussions :** The paper emphasizes the importance of the correct selection of the material and adhesive technique, as well as the need to comply with clinical protocols to obtain a durable and satisfactory result for the patient. Materials vary in composition and physical properties, with the main chemical variations being in the concentration and dimension of filler particles. Modern nanocomposites offer excellent aesthetics and are a modern non-invasive option of treatment for various aesthetic disharmonies. They can be shaped and polished to perfectly match the rest of the teeth, providing a satisfying final result. All patients appreciate the immediate results of direct non-invasive composite restorations, including their natural appearance, comfort, and durability. Nanocomposites with ultra-fine consistency are high-performance materials that accurately mimic the tooth's natural shade and translucency after polymerization, while also replicating the enamel's shine. **Conclusions:** The properties of nanocomposites allow dentists to shape and adjust restorations during the procedure, providing flexibility in achieving the desired shape and colour for closing diastemas or dental spaces. If necessary, composite restorations can be easily repaired or modified in the dental office without significantly affecting the existing tooth substance.

Keywords: nanocomposite, dental aesthetics, direct restoration, direct restoration

AESTHETIC MANAGEMENT OF DENTAL FLUOROSIS

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Introduction: Currently there is a scientific debate regarding dental fluorosis which some dentists consider that it is not an actual dental disease, but rather a type of condition characterized by fluoride intoxication during tooth development and growth that induces a disruption of the mineralization process of the enamel. The clinical picture in dental fluorosis is centred around the appearance of the teeth, with no pain or other symptoms that create a high degree of discomfort. For this reason, fluorosis is not considered to be a pathology in itself, but rather an aesthetic defect. **Case Report:** The present study was based on a questionnaire for 120 dentists which was opened for completion between November 2022 - April 2023. In order to maintain confidentiality, personal data and potential information that may lead to the identification of participants have not been collected. This questionnaire was developed using the Google Forms platform, containing 25 questions, comprising both single-answer and multiple-answer questions. Results were collected and processed using Microsoft Excel and Microsoft Word 2011 platforms. **Discussions :** Through the questionnaire, we aimed to evaluate knowledge, attitudes and therapeutic choices related to dental fluorosis. The results and answers given of the study, by 60 dentists from Romania, show that most dentists believe that fluorosis is an important aesthetic problem, which has an influence on the social life of patients. The most preferred treatments by dentists are non-invasive or minimally invasive ones, presumably microabrasion, professional whitening and in the most serious cases, dental veneers, depending on the severity of the lesions. For serious cases, prosthetic treatments, such as dental crowns, were chosen. A significant percentage of 66% of respondents expressed the need to develop new protocols or therapeutic options, more efficient and more conservative. We also noted the lack of consensus regarding the optimal time to start an aesthetic treatment in the case of affected children or adolescents. The study also highlights the need for a personalized approach and multidisciplinary collaborations that combine dental aesthetics, functionality and preservation of healthy dental tissues. **Conclusions:** The primary objective of fluorosis treatment is to improve the aesthetic appearance of affected teeth. Depending on the severity and specific characteristics of the condition, dentists employ a range of treatment modalities to achieve optimal cosmetic outcomes. The decision is typically left to the clinical judgment of the dentist, who must assess whether immediate aesthetic intervention is appropriate or if postponing treatment would be more beneficial.

Keywords: fluorosis, white spot lesions, dental aesthetics

LONG INFERIOR PETROSAL SINUS

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Introduction: The inferior petrosal sinus (IPS) is a dural venous structure draining the ipsilateral cavernous sinus into the internal jugular vein (IJV). In clinical practice, the IPS is used for endovenous catheter navigation in the diagnosis and treatment of skull base and cerebrospinal fluid lesions. Understanding the important anatomical variations of the IPS, such as the long IPS and confluence patterns of the IPS with other veins, is crucial for establishing treatment strategies that involve endovascular manipulation via the IPS. **Case Report:** During an anatomical study of the archived angioCT file of a 63-year-old male case, bilateral IPSs were found. The right one was 1.25 cm long, and the left one was 5.15 cm long. The right one had a diameter of 0.2 cm. The opposite one had a diameter of 0.32 cm. The right IPS was joined beneath the jugular foramen by the lateral condylar vein. The left IPS coursed antero-medially to the left IJV. Both veins were applied and compressed on the anterior side of the transverse process of the atlas. The two veins continued anterolaterally to the transverse process of the axis, and at 0.41 cm below that process, the IPS ended into the IJV. On both sides, the internal carotid arteries crossed anteriorly to the IPSs to enter the carotid canals. **Discussions :** The anatomic route of the IPS, the long IPS-IJV confluence site, and the diameter of the IPS are relevant in clinical procedures such as cavernous sinus sampling, which requires catheterization of both IPS. **Conclusions:** Knowledge of the venous anatomy, including variants of the IPS and its branches, is crucial for the diagnosis and treatment of parasellar lesions.

Keywords: long inferior petrosal sinus, variations, endovascular manipulation

SURPRISING TWIST IN ROUTINE EXTRACTION

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Introduction: Tooth extractions are a widespread surgical procedure performed for a variety of reasons, among them being severe trauma and infection, when all other therapeutic methods have failed. During the procedure a great number of accidents can occur such as radicular fractures, which can change the course of action: from a simple forceps procedure to alveolectomy. The particularity of this case was however discovered by accident during the alveolectomy, more precisely after the mucoperiosteum was mobilized and retracted revealing a drainage tube. **Case Report:** The pacient, a 20-year-old female, suffered a fracture along the occlusal surface of her upper right molar 1.6, the anamnestic data revealed that ten years ago she had a periapical abscess that was cleared out via a drainage tube and a year ago an endodontic treatment was performed on the same tooth, due to these extensive treatments, the patient decided that she wanted to extract the tooth. We began the surgical procedure with the conventional technique: syndesmotomy, applying the forceps and dislocating the tooth with slow movements; even so the density of the surrounding bone caused a fracture along one of the roots which became apparent upon closer examination of the extracted tooth. On account of the proximity to the maxillary sinus and the high risk of pushing the remaining root further, we decided alveolectomy should be performed; during the first step which is mobilizing the mucoperiosteum the drainage tube was uncovered and removed. The remaining fragment of the root was removed successfully, but a small opening was created in the sinus wall, without any mucosal lesions, thus a simple suture was performed. Seven days post operation the suture thread was removed, a small superficial infection was observed and treated. **Discussions :** Literature analysis shows that there is a divide between practitioners on whether retained roots should be extracted or maintained, but in the case of patients with infections of the tooth in their history , removal reduces the risk of post operative complications. **Conclusions:** Unforeseen circumstances occur daily in the medical practice and some are unavoidable, that is precisely why paying close attention to anamnestic data and being adaptable in any clinical setting is crucial.

Keywords: Extraction, Root fracture, Alveolectomy, Drainage tube

POSTER - PHARMACY

PHYTOTHERAPY FOR RESPIRATORY DISEASES: EVALUATING THE ROLE OF ONION SYRUP AND WILD ROSE SYRUP IN TRADITIONAL AND MODERN MEDICINE

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Background: Phytotherapy has played a crucial role in respiratory disease management, particularly in regions with a strong tradition of folk medicine. Upper Silesia, historically affected by industrial pollution, has relied on natural remedies such as onion syrup (Allium cepa) and Wild rose syrup (Rosa canina) for respiratory ailments. These treatments have been valued for their antimicrobial, anti-inflammatory, and immunomodulatory properties. Despite their historical usage, their efficacy has gained increasing attention in modern scientific research, highlighting their potential integration into contemporary medicine as accessible, cost-effective treatments for respiratory health. **Objective:** This study aims to evaluate the efficacy of Onion syrup and Wild rose syrup, as phytotherapeutic treatments for respiratory conditions. It analyzes their traditional preparation methods, active compounds, and their scientifically validated effects on respiratory health. By comparing folk practices with modern pharmacological findings, this study seeks to bridge the gap between traditional knowledge and evidence-based medicine, encouraging further integration of plant-based therapies into clinical practice. **Material and methods:** A literature review was conducted to analyze the biochemical properties and pharmacological effects of Onion syrup and Wild rose syrup. Scientific studies investigating the antimicrobial, anti-inflammatory, and immunomodulatory effects of their active compounds were reviewed. Historical ethnobotanical data were examined to assess their traditional use in Upper Silesia. A comparative analysis was performed to evaluate the effectiveness of these natural remedies against pharmaceutical treatments for respiratory infections, bronchitis, and immune function support. **Results :** Onion syrup, prepared by extracting juice from sliced onions with sugar or honey, acts as a natural decongestant and cough suppressant. Its sulfur compounds exhibit antimicrobial and anti-inflammatory effects, reducing mucus buildup and alleviating bronchial symptoms. Scientific studies confirm increased antibacterial activity in vivo, by 30% compared to control samples. Wild rose syrup, rich in vitamin C and antioxidants, supports the immune system and reduces respiratory symptoms. Research indicates a 60% reduction in cold symptoms in patients consuming Wild rose syrup extract. These findings support the scientific validity of these traditional remedies, emphasizing their role as complementary treatments for respiratory health. **Conclusions:** The pharmacological properties of Onion syrup and Wild rose syrup align with their traditional practices as effective treatments for respiratory conditions. Scientific studies validate their antimicrobial, anti-inflammatory, and immune supporting effects, reinforcing their relevance in modern healthcare. The findings support their potential integration into evidence-based medicine, particularly in regions with limited access to pharmaceutical treatments. Further research is warranted to optimize dosage, formulations, and clinical applications for enhanced therapeutic benefits.

Keywords: Phytotherapy, Onion Syrup, Respiratory Diseases, Wild Rose Syrup

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DEVELOPMENT AND EVALUATION OF BILAYERED EFFERVESCENT TABLETS FOR SYNERGISTIC PAIN MANAGEMENT

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Background: Ibuprofen is a nonsteroidal anti-inflammatory drug used for its anti-inflammatory, analgesic, and antipyretic effects, while paracetamol acts as an analgesic and antipyretic drug. Effervescent tablets contain a precise single dose of active ingredients dispersed in water, ensuring rapid absorption and faster therapeutic effects compared to uncoated tablets. **Objective:** This study aimed to develop bilayered effervescent tablets containing 200 mg of ibuprofen and 330 mg of paracetamol for rapid absorption and effective management of pain and fever. **Material and methods:** The tablets were manufactured using an eccentric tableting machine with 19 mm diameter punches. Several formulations (C1-C6) were tested, differing in their composition and preparation methods. The active ingredients were incorporated in separate layers: layer 1 - ibuprofen, citric acid, NaHCO3, polyvinylpyrrolidone, and croscarmellose sodium; layer 2 - paracetamol, citric acid, NaHCO3, and hydroxypropyl cellulose. Both layers included sucralose, sodium stearyl fumarate, and lemon flavor. C1-C5 were developed using various mixing and compression methods, including intermediate steps such as wet granulation. The final formulation (C6) was prepared by the separate compression of each layer followed by the adhesion of the two

parts using a bioadhesive glue. Granules were evaluated for particle size distribution (G1 with paracetamol and G2 with ibuprofen), and the tablets were tested for crushing strength, average mass, and disintegration time (DT). UV-VIS spectrophotometry was used to assay active substance concentrations in both the granules and tablets. **Results :** Granulometric analysis underscored an average particle size of 1770 µm (G1) and 1890 µm (G2); the tablets obtained from the granules (C1) failed to meet FRX requirements due to poor appearance. The content of the active ingredient was >85% in both formulations. C2-C4 showed good mechanical properties and an increased DT (>5 min). C5 performed better in terms of DT due to $NaHCO_3$ excess and separate compression; however, the DT>5 min, corroborated with a crushing strength of 33 N. Only C6 showed a disintegration time under 5 minutes, with individual crushing strength of 19 N (ibuprofen) and 20 N (paracetamol). Assay results indicated 95.73% ibuprofen and 92.34% paracetamol content. **Conclusions:** Granulation was unsuitable due to poor appearance and uneven distribution. The most effective method was powder homogenization with excess $NaHCO_3$ and separate compression of each layer followed by the bioadhesion of the two tablets, which ensured better disintegration and compliance with the pharmacopeial stipulations.

Keywords: effervescent bilayered tablets, ibuprofen, paracetamol, rapid disintegration

POSTER - MILITARY MEDICINE

MANAGING MAXILLARY SINUSITIS IN COMPLEX CASES: THE IMPACT OF COMORBIDITIES

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Introduction: Sinusitis is a common health issue, with 1 in 8 people in the US affected at least once in their lifetime. Odontogenic maxillary sinusitis is increasingly seen in Otorhinolaryngology (ENT) practice and is often misdiagnosed as chronic sinusitis. Only 70% of patients are evaluated by both dental and ENT specialists. Treating sinusitis can be challenging when other conditions are present and may require special attention. **Case Report:** A 55-year-old male presented with left maxillary sinusitis at the ENT department of the Emergency Military Hospital of Cluj-Napoca. The patient also has hemorrhagic ulcerative rectocolitis (HURC), a chronic inflammatory condition that can complicate infection management by altering the immune response. He had previously received two antibiotic courses (Augmentin and levofloxacin) for periapical abscesses prescribed by a dentist, along with mucolytics and a nasal decongestant. Systemic non-steroidal anti-inflammatory drug (NSAID) treatment was avoided due to HURC, as it could exacerbate intestinal inflammation and increase the risk of complications such as bleeding or kidney failure. A CT scan confirmed the diagnosis. Surgery was required as symptoms persisted despite the antibiotics. **Discussions :** The surgical procedure included left middle antrostomy after infundibulotomy, resection of the uncinate process, sinus drainage, and saline lavage. Postoperatively, the patient received a nasal decongestant, corticosteroid anti-inflammatory spray, and topical antibiotics (Tobramycin). Both antibiotics and anti-inflammatory medications were used topically to avoid systemic effects due to the patient's condition. Recovery was favorable, with symptom resolution, and a follow-up confirmed successful management of the periapical abscesses. **Conclusions:** HURC affects the intestinal microbiome, requiring topical antibiotherapy. NSAID use was avoided due to risks such as increased bleeding, kidney failure, and reduced intestinal mucosal protection. The size of the maxillary sinuses and their proximity to the upper molars changes with age, which is closely linked to the development of odontogenic unilateral maxillary sinusitis.

Keywords: Sinusitis, Odontogenic maxillary sinusitis, Hemorrhagic ulcerative rectocolitis (HURC)

DIAGNOSIS AND MANAGEMENT OF FIRST BRANCHIAL CLEFT FISTULA

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Introduction: Branchial cleft anomalies represent congenital lesions due to incomplete involution of branchial cleft structures from the branchial apparatus during embryonic development. The most common classification is that by Olsen, who divides defects into cysts, sinuses or fistulas. **Case Report:** A 4 years old patient presented in the Ear Nose and Throat clinic with a mass in the upper region of the neck. The history showed that during the recurrent infectious episodes of rhinopharyngitis the mass got swollen,presenting a whitish secretion from the left laterocervical region and the left external auditory canal (EAC). The clinical examinations showed an ovoid, inconsistent mass of 2.5/1cm, relative mobile on the deep anatomical cervical structures and a small cutaneous opening in submandibular left region. Paraclinical evaluations revealed an intact tympane membrane and a small opening in the left EAC, while the CT showed a fistulous tract connecting the cartilaginous portion of the left EAC to the upper laterocervical region that crossed the deep parotid lobe which confirms the first branchial cleft diagnosis. The patient underwent a superficial parotidectomy, during which the fistulous tract was discovered beneath the facial nerve branches. The fistulous tract was excised along with its inferior opening, preserving the facial nerve branches, and also its superior opening along with a small portion of the carilaginous floor of the left EAC. The surgery and the histopathological exams confirmed the diagnostic of type II first branchial cleft fistula. **Discussions :** Despite the fact that the clinical manifestations and paraclinical investigations were definitive features of the diagnosis, the location of the fistulous tract being under the facial nerve proved to be a challenge while preserving the nerve branches. Also, the mastoid tip being underdeveloped at this young age, placed the facial nerve more superficial when exiting the stylomastoidian foramen. Taking in account the recurrent episodes of infectios, the excision of a small cartilaginous floor of EAC was essential to prevent a recurrence. **Conclusions:** First branchial cleft fistula can be a challenge due to the variable anatomical location of the defect, and early

diagnosis and precise surgery of it is essential in order to prevent long term complications, such as facial palsy.

Keywords: Branchial cleft anomalies, Congenital fistula, First branchial cleft fistula

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LIMB-GIRDLE MUSCULAR DYSTROPHY TYPE 1B / LAMINOPATHY – DIAGNOSIS AND MANAGEMENT IN A PEDIATRIC PATIENT

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Introduction: Limb-girdle muscular dystrophy type 1B (laminopathy) is a rare myopathy caused by mutations in the LMNA gene, encoding lamin A/C. The disease presents with a variable clinical spectrum, including progressive muscle weakness, early contractures, and severe cardiomyopathy. Early diagnosis is crucial for optimal patient management due to the high risk of heart failure and malignant arrhythmias. **Case Report:** We present the case of an 8.6-year-old girl, born at term with an initially normal development. At two months, a neurological evaluation revealed generalized muscle hypotonia and head tilt to the left, initially interpreted as postural torticollis. Reevaluation at three months confirmed congenital left torticollis and persistent hypotonia. Despite physiotherapy improving head posture, neuromotor deficits became evident after 1.5 years. At two years, she exhibited proximal muscle weakness, abolished deep tendon reflexes in the lower limbs, and mildly elevated muscle enzymes (CPK, GOT, GPT). Genetic testing ruled out spinal muscular atrophy, while electromyography suggested a possible inflammatory myopathy. Cardiac evaluation revealed left ventricular hypertrophy, and genetic testing for cardiomyopathy-associated genes confirmed the LMNA 1B mutation (LMNA c.1072G>A, p.Glu358Lys). **Discussions :** The case emphasizes the importance of early diagnosis in laminopathies to prevent severe complications. Management requires close cardiac surveillance, neurological monitoring, and adapted physiotherapy. The initial neurological picture at 2.8 years suggested a spinal motor neuron disorder, but left ventricular hypertrophy prompted genetic testing for cardiomyopathies, leading to the correct diagnosis. **Conclusions:** This case highlights the complex, multifaceted nature of diagnosing Limb-girdle muscular dystrophy 1B (laminopathy), emphasizing the importance of a multidisciplinary approach in early diagnosis. Early identification allowed for better management and surveillance, particularly in preventing severe complications like heart failure and arrhythmias. This case contributes to the understanding of laminopathies, demonstrating the clinical variability and the crucial role of genetic testing in diagnosis, ultimately improving patient care and management strategies.

Keywords: Laminopathy, pediatric neuromuscular disorder, cardiomyopathy, LMNA mutation

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DRUG-INDUCED ILEUS IN AN ELDERLY PATIENT: THE HIDDEN RISK OF ANTIPERISTALTIC MEDICATIONS

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Introduction: Ileus is a serious medical condition that can have potentially life-threatening consequences if not promptly recognized and addressed. Its main causes are post-operative, after certain medications, metabolic imbalances and inflammation. In addition, drug-induced ileus can be correlated with the use of opioids, anticholinergics, antipsychotics or calcium-channel blockers. **Case Report:** We present the case of a 90-year-old man who presented in the emergency room accusing intense abdominal pain and constipation. Two days before, he referred to the general practitioner accusing multiple watery stools, who prescribed him drotaverine for his abdominal pain and loperamide for his diarrheic syndrome. CT scan showed multiple air-fluid levels, whitout any organic obstruction. Surgical team excluded intervention necessity, patient did not present signs of peritonitis. The patient was discharged with recommendations: avoidance of antiperistalsis drugs, treatment with trimebutine (for regulation of bowel movement), rifaximin (for treating the cause of diarrhoea) and in perspective performing a total colonoscopy. Patient returned one week later in outpatient clinic with favourable evolution. **Discussions :** Treating bowel disorders in elderly patients might be a challenge, due to the fragile balance between movement regulation factors such as the microbiota, the enteric nervous system and the slower metabolization of drugs.. The ileus was likely caused by the combination of loperamide and drotaverine in an elderly patient that was already weakened by an episode of enterocolitis. **Conclusions:** This case report proves challenges of diagnosing and treating ileus in

elderly patients. Drotaverine and loperamide can precipitate drug-induced ileus, particularly in individuals with pre-existing vulnerabilities, such as metabolic imbalances and gastrointestinal conditions. The patient's outcome shows the importance of a careful approach to management, avoiding drugs that affect gastrointestinal motility. Furthermore, ongoing follow-up and investigations, such as in this case colonoscopy, are necessary for offering a better recovery chance and also for addressing other potential unidentified causes. We aimed to illustrate the need for higher awareness of drug interactions and their impacts on gastrointestinal function in the geriatric population.

Keywords: Drug-induced ileus, Elderly patients, Gastrointestinal motility, Loperamide toxicity

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DUCHENNE MUSCULAR DYSTROPHY – DIAGNOSIS AND MANAGEMENT IN THE CASE OF A PEDIATRIC PATIENT

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Introduction: Duchenne Muscular Dystrophy (DMD) is a progressive disease affecting the muscles, leading to weakness and progressive atrophy of the skeletal muscles and myocardium. It's caused by the mutation of a gene responsible for controlling a protein called "dystrophin", and it is the most common form of muscle dystrophy in boys, affecting 1 in every 3500. The symptoms begin in the early childhood with troubles walking, running, getting up or climbing stairs - rapidly progressing until the patients lose locomotion around 12 years old. **Case Report:** This is the case of a 3,7 years old boy, born to term, physiological pregnancy, from a cesarian, with general development issues: starts walking by himself at 1,5 years old, can speak coherently at 1,6 years old then loses function, starting to develop autistic spectrum disorder (ASD). The pacient's history indicates a case of hepatitis at the age of 1, and a family history of DMD, with multiple members diagnosed. After a febrile episode, he's brought to the Pediatrics Department and after multiple blood works, his liver enzymes are highlighted as being elevated, by the hundreds, raising the suspicion of a hepatocytolysis (the mother leaving out the details from the medical history). After excluding viral hepatitis and an elevation by the thousands of the creatine kinase, the concern of a muscular dystrophy was raised, multiple genetic tests confirming the mutation of the "dystrophin" gene. As of this day, the patient presents with a low-grade motor deficit associated with ASD behavior. **Discussions :** The certainty of the diagnosis comes from genetic testing. DMD being an uncurable and progressive disease, the treatment consists of corticosteroids, neurotrophics and kinesiotherapy. This case underlines the importance of pre-natal genetic testing, taking into account the family's history of DMD. **Conclusions:** Considering the severity and the progressive aspect of the disease, it is of great importance to have a multidisciplinary approach and thorough planning, in order to increase the patient's quality of life, all the more being such a delicate case in association with ASD. Despite their knowledge of the positive cases in their family, it is important to acknowledge the parents did not ask for genetic guidance , making it harder for a premature diagnosis. The diagnosis of both ASD and DMD make the management difficult, respecting the treatment really hard and kinetic therapy challenging.

Keywords: Duchenne Muscular Dystrophy, autistic spectrum disorder, genetic testing

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FROM STENOSIS TO HEMORRHAGE: UNDERSTANDING CEREBRAL HYPERPERFUSION SYNDROME

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Introduction: Cerebral hyperperfusion syndrome (CHS) is a rare complication following carotid artery stenting (CAS), with intracerebral hemorrhage (ICH) occurring in 0.67% of cases. Patients with severe bilateral carotid stenosis, particularly those with concomitant arterial hypertension, are at increased risk. These high-risk patients may require intensive hemodynamic monitoring and, in some cases, prolonged hospitalization. We present a case of a patient with multiple comorbidities who developed CHS after the procedure. **Case Report:** A 62-years-old male known with chronic ischemic heart disease, hypertension, radiochemotherapy-treated laryngeal cancer, right internal carotid artery (ICA) severe stenosis, subocclusive stenosis of the left ICA, and cerebral microvascular disease presented to the emergency department with recurrent syncopal episodes. Catheter angiography confirmed severe right and left ICA stenosis; additionaly, stenoses of both common carotid arteries, changes that suggested fibrosis after radiotherapy. A left carotid artery stenting was performed under local anesthesia,

successfully dilating the stenotic lesion without intraoperative complications. However, 10 minutes postoperatively, the patient developed global aphasia and right-sided hemiplegia. Emergency angiography revealed acute contrast extravasation from a perforating branch of the MCA and multiple millimetric hemorrhagic foci originating from the lateral and medial lenticulostriate arteries. Orotracheal intubation was performed, systolic blood pressure was lowered to below 90 mmHg, and 150 mg of platelet concentrate was administered. Upon ICU admission, the patient was in critical condition, with anisocoric pupils. Despite intensive treatment, one hour later, the patient developed fixed, midriatic, non-reactive pupils, and sadly two days after passed away. **Discussions :** The exact mechanism of CHS is not fully understood but appears to be multifactorial. Microangiopathy, through endothelial dysfunction of small vessels, has been associated with an increased risk of cerebral hyperperfusion. Some studies suggest that uncontrolled preoperative hypertension contributes to CHS development, though this association has not been universally confirmed in patients undergoing carotid artery stenting. **Conclusions:** Careful screening to identify high-risk patients, vigilant postoperative monitoring for signs of cerebral hyperperfusion syndrome, and aggressive management of postoperative blood pressure are crucial steps in both preventing and mitigating the impact of this potentially devastating complication.

Keywords: Grade II arterial hypertension, Carotid artery stenting, Intracerebral hemorrhage, Cerebral microvascular disease

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RESISTANCE TO THYROID HORMONES B IN ASSOCIATION WITH OTHER AUTOIMMUNE DISEASES – A CASE REPORT

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Introduction: Resistance to thyroid hormones **β** is defined by a reduced sensitivity to these hormones, most frequently caused by a mutation in a gene encoding the **β** receptors of thyroid hormones(THR **β**). The **β** fragment regulates TSH , so a mutation at this level prevents the ability to bind to triiodothyronine, reducing its affinity. It is a rare condition in which the body does not respond to the thyroid hormones(T3 and T4), even though their respective blood levels can either be normal or elevated. **Case Report:** This is the case of a 35 year old female, known with a mild form of ankylosing spondylitis since 2008- being treated with anti-inflammatory drugs, presents to the Endocrinology department at Bacau County Emergency Hospital in 2016 with moderate pain in the anterior cervical region, dysphagia and palpitations, clinical signs of hypothyroidism, triggered by an emotional shock. The blood work and imaging showed elevated levels of TSH188.1 µUI/mL (0.27-4.2 µUI/mL), lower levels of FT45.91 pmol/L (12-22 pmol/L) and ATPO>1000 UI/mL(0-34UI/mL), inflammatory syndrome, diagnosing her with subacute thyroiditis associated with autoimmune thyroiditis. She was prescribed Euthyrox 100µg/24h, the condition steadily improving. The patient returns for a consult in december 2020, during this period being diagnosed with immune thrombocytopenic purpura, 4 weeks pregnant, the blood analysis showing TSH 32.5µUI/mL(0.4-4 µUI/mL) and FT4 77.2 (12-22 pmol/L), treated with corticosteroid pre-pregnancy and without having done any thyroid function tests. The Euthyrox dose is adjusted, the pregnancy and fetus' status becomes favorable. In march 2022, she abandons the treatment for personal reasons, the following blood tests revealing: TSH 246 µUI/mL(0.4-4 µUI/mL) and FT4>77.2 pmol/L(12-22 pmol/L),paired with pericarditis, severe myxedema, depression and hypoanabolic syndrome. **Discussions :** The dissimilarity between TSH and FT4 points to a resistance to thyroid hormones syndrome. Concerning the treatment, Euthyrox 100µg/24h adjusting doses as necessary so complications such as myxedema do not occur. **Conclusions:** The unusual aspect of this case is the association of of three rare autoimmune diseases: ankylosing spondylitis, immune thrombocytopenic purpura and autoimmune thyroiditis paired with a resistance to thyroid hormones syndrome.

Keywords: resistance to thyroid hormones syndrome, thyroid, hypothyroidism

WHEN MULTIPLE DISEASES COLLIDE: A COMPLEX CASE OF PERIPROSTHETIC HIP FRACTURE

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Introduction: Periprosthetic hip fracture occurs in patients with hip prostheses and is the result of trauma associated with pathologic bone conditions. The therapeutic approach may include: reduction of the fracture and osteosynthesis with the need for reimplantation of the prosthesis if a dislocation of the prosthesis is associated. The postoperative outcome depends on the patient's general condition, associated comorbidities and compliance with the treatment. **Case Report:** In February 2025, a 73-year-old patient presents to the emergency department complaining of pain and functional impotence of the right lower limb due to a traumatic fall from another level. Multiple abrasions to the face and right frontal hematoma were found, and a cranio-cerebral and cervical CT scan was performed, which showed no acute life-threatening injuries. The patient is known to have a malignant tumor of the pancreatic head, hypertension, hypothyroidism, hiatal hernia, gastroesophageal reflux disease, and arthroprotitis in both hip joints. Radiography revealed a right periprosthetic fracture Vancouver type B1 and multiple areas of cytolysis. The patient was hospitalized for surgery which consisted in the reduction of the fracture on open focus, through a lateral approach, making an incision of about 20 cm and internal fixation with femoral plate and screws, over-stabilized with 2 multifilament cerclage wires, finding the need to add another proximal cerclage wire after plain radiographs in anteroposterior and lateral projections. The intra-operative challenge was the anatomic alignment at the fracture site due to the poor strength of the bone tissue, for which bone tissue samples were taken for histopathologic examination. The evolution is slowly favorable due to the associated comorbidities, necessitating an integrated care team for good management of the case. **Discussions :** In the present case, a patient with a periprosthetic fracture Vancouver type B1, likely on pathologic bone, occurred after a fall trauma from another level, with multiple comorbidities and a reduced life expectancy. Surgery was opted at the request of the patient, who expressed a desire to avoid bed immobilization in the last months of life. **Conclusions:** The choice of treatment should be tailored to the patient's needs and wishes, aiming to maintain quality of life. The management of these cases requires the involvement of a multidisciplinary team, an individualized approach, carefully balancing the risks and benefits.

Keywords: periprosthetic fracture, pathologic bone, comorbidities, internal fixation

WHEN STABILITY FAILS: A CASE OF COMPLEX ANKLE TRAUMA

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Introduction: Complex ankle injuries are characterized by concomitant damage to several anatomical components of the ankle joint, such as bones, ligaments, joint capsule and soft tissues. This combination leads to severe mechanical instability and significantly increases the risk of functional complications. Such injuries represent a major challenge in orthopedics, both in establishing an accurate diagnosis and choosing the most appropriate therapeutic approach. **Case Report:** We present the case of a 56-year-old patient, presenting in the emergency department with pain in the right ankle, occurring after falling from the same level, accompanied by edema and functional impotence. Radiography shows an epimetaphyseal fracture of the distal extremity of the right tibia with associated tibial-astragral dislocation and fracture of the external malleolus. According to Ruedi and Allgower's classification, which follows the degree of displacement and comminution, the fracture is classified as type 2. In the emergency department, immobilization was performed using a femur-podal cast splint after the dislocation was reduced and the fracture was realigned through orthopedic maneuvers. Together with the patient it was decided to admit the patient to the orthopedic ward for specialized therapeutic management. After preoperative preparation, surgery was performed through a lateral approach following the reduction of the fracture of the external malleolus on open focus and osteosynthesis with an anatomic titanium plate and screws. For better fixation, 2 tycron were added to the fracture site. Fracture reduction of the tibia was achieved by anterior open approach and osteosynthesis with L-plate and screws. With the help of Roentgen TV, the anatomic alignment and the correct

positioning of the osteosynthesis materials were verified. The evolution is favorable, the patient was discharged with specialized recommendations a few days after surgery. **Discussions :** This case highlights the surgical approach of a combined ankle injury, consisting of fractures and dislocations, being considered a particularly severe case, with impact on joint stability and long-term functional prognosis. The challenge was to restore proper alignment and stabilize the fractured and dislocated components. **Conclusions:** Complex ankle fractures such as in the present case must be treated accordingly, conservative treatment fails to provide proper anatomical alignment of the joint, resulting in vicious healing with callus formation, chronic pain and over time post-traumatic arthrosis, which is why surgical treatment is the treatment of choice.

Keywords: ankle injuries, osteosynthesis, fracture, Ruedi and Allgower

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RAPID PROGRESSION FROM VULVAR PHLEGMON TO NECROTIZING FASCIITIS: A CRITICAL CASE REPORT

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Introduction: Phlegmon is an acute, diffuse infection without extensive necrosis that responds well to antibiotics. Necrotizing fasciitis is a rapidly severe infection with extensive tissue destruction that requires emergency surgical intervention. Necrotizing fasciitis can be polymicrobial (caused by both aerobic and anaerobic bacteria) or monomicrobial (caused by Streptococcus pyogenes, also known as the "flesh-eating bacteria"). **Case Report:** We report a case of a 57-year-old female who presented to the Emergency Department of the Emergency Clinical County Hospital of Targu Mures. She presented with a deteriorated general condition, febrile, complaining of pain in the genital area. Following anamnesis, physical examination, and laboratory tests, which revealed massive leukocytosis, she was admitted to the gynecology department for a phlegmon of the right vulva. After three days of treatment with broad-spectrum antibiotics (cefuroxime and metronidazole), the treatment proved ineffective, and the patient's general condition worsened, with the infection spreading suprapubically and to the right upper-lower limb. A surgical consultation was requested and after a soft tissue ultrasound, an emergency surgical intervention was required, during which incisions were made at the level of the right vulva, suprapubic area, and right thigh, draining 400 ml of necrotic secretions. The infection was much deeper, reaching the muscle fascia, leading to the diagnosis of necrotizing fasciitis caused by Streptococcus pyogenes and Staphylococcus aureus (MRSA). Following debridement and antibiotic treatment, the patient's condition improved, showing a favorable progression. Multiple local wound revisions were required but there were no more complications during the treatment with discharge after seven days. **Discussions :** Initially diagnosed as a phlegmon, the condition rapidly progressed to multiple abscesses with necrotizing fasciitis. Rapid surgical intervention was crucial in controlling the infection and preventing further complications. The fulminant progressions of such deseases require prompt attention and meticulous surgical management due to the polymicrobial and multidrug-resistant spectrum present in this case. **Conclusions:** Regarding the treatment of necrotizing fasciitis, it is always surgical and must be performed as quickly as possible, with extensive debridement. Delay or misdiagnosis can lead to multiple organ failure and septic shock.

Keywords: Necrotizing fasciitis, Vulvar infections, Surgical debridement, Multidrug resistance

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FROM NASAL POLYPS TO A RARE TUMOR: THE MYSTERY OF MYOSPHERULOSIS

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Introduction: Considered a rare iatrogenic benign tumour, myospherulosis is known to affect the skeletal muscle and subcutaneous tissues, exhibiting forebody reaction-like symptoms. The spherules are caused by the interaction of exogenous or endogenous lipids with extravasated erythrocytes. Past surgeries, steroid ointments, trauma or parasite infections are well-known risk factors. **Case Report:** We report the case of a 70-year-old hypertensive male patient who presented to the Otorhinolaryngology (ENT) Department of the Emergency Clinical County Hospital of Targu Mures. He accused hyponasality, progressive chronic nasal obstruction, purulent rhinorrhea, mouth breathing, anosmia, and long-standing hypoacusis. His medical record revealed a past surgical

intervention for polypous rhinosinusitis and right sinusitis. The ENT clinical examination revealed multiple polypoid formations at the level of nasal cavities. Bilateral nasal polypectomy was performed and the excised specimens sent to the Pathology Department. The postoperative evolution was favourable. The patient is discharged in good condition, haemodynamically, and respiratory stable, with no signs of bleeding **Discussions :** Histopathological examination revealed multiple mucosal fragments of polypoid appearance lined by respiratory-type epithelium. At the level of the underlying edematous stroma, there were numerous several cyst-like structures containing spherical structures represented by degenerated red blood cells. Vascular congestion with chronic inflammatory infiltrate were observed. The diagnosis of myospherulosis and chronic polypoid rhinitis with inflammatory polyps was then formulated. **Conclusions:** Myospherulosis is still considered a rare benign tumour with only several cases reported in the literature at the present moment. Differential diagnosis includes carcinomas, metastases, osteofibrosis or echinococcosis. The correlation of clinical, anamnestic data and histopathological result is important for establishing the final diagnosis and subsequent therapy.

Keywords: Myospherulosis, Rhinosinusitis, Inflammatory polyps

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ENDOCARDITIS AND POLYMYALGIA RHEUMATICA: A DIAGNOSTIC AND THERAPEUTIC CHALLENGE

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Introduction: Infective endocarditis, a serious condition, can mimic systemic inflammatory diseases, obscuring other pathologies and complicating accurate diagnosis and treatment. **Case Report:** A 70-year-old patient presented with a two-week history of high-grade fever, asthenia, unintentional weight loss, intense inflammatory arthralgia affecting the scapulohumeral girdles, and persistent myalgias of the lower extremities. Echocardiography revealed a mobile hypoechoic formation in the aortic valve, consistent with vegetation. Laboratory investigations illustrated leukocytosis and a marked inflammatory syndrome, requiring empirical antibiotic therapy with ceftriaxone and vancomycin. Due to a reported rabbit bite, doxycycline was added to the treatment scheme, with a suspicion of Coxiella burnetii. Blood cultures subsequently revealed doxycycline-sensitive methicillin-resistant Staphylococcus aureus (MRSA). Serological testing for Coxiella burnetii was negative. The persistence of inflammatory manifestations, coupled with the lack of response to analgesics and the observed reduction in vegetation size, raised suspicion of polymyalgia rheumatica. Following confirmation of infectious control, corticosteroid therapy with prednisone (50mg daily) was initiated. The patient exhibited favorable clinical evolution and was discharged with a planned six-week course of antibiotic therapy. **Discussions :** The clinical difficulty of this case rested in the need to differentiate and treat coexisting endocarditis and polymyalgia rheumatica, both marked by systemic inflammation. A multidisciplinary team was vital for diagnosis and treatment. Crucially, the decision to initiate corticosteroid therapy in a patient with an ongoing infection was a calculated risk that was necessary to achieve a successful result. **Conclusions:** This case accentuates the critical role of interdisciplinary collaboration and meticulous patient assessment in the identification and management of overlapping pathologies. It further emphasizes the necessity of carefully evaluating the risks and benefits of corticosteroid therapy in infectious settings.

Keywords: infective endocarditis, polymyalgia rheumatica, diagnosis

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NEO-FEMORAL ARTERY RECONSTRUCTION WITH AUTOLOGOUS GREAT SAPHENOUS VEIN GRAFT IN A 88 YEARS PATIENT WITH A LARGE INFECTED PSEUDOANEURYSM

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Introduction: The femoral prosthetic patch is a surgical procedure that is commonly employed to address atherosclerotic lesions associated with the bifurcation of the femoral artery. Although this procedure is relatively straightforward to perform, the surgical management of complications, primarily graft infections, can present considerable challenges, resulting in a heightened risk of morbidity and mortality for patients. **Case Report:** We report an 88-year-old patient with diagnoses of peripheral arterial disease, hypertension, ischemic heart disease, obesity, and dyslipidemia. The patient was admitted to the Vascular Surgery Clinic with a diagnosis of complete

occlusion of the common femoral artery and occlusion at the origins of both the superficial and deep femoral arteries. Surgical intervention was successfully performed, involving femoral artery endarterectomy and the placement of a prosthetic patch. The patient's postoperative progress was favorable during the first 48 hours. However, a large hematoma developed at the surgical site, necessitating another surgery for hematoma evacuation and hemostasis using sutures on the synthetic patch. Following this second procedure, the patient's condition improved, and the patient was discharged on the fifth postoperative day without issues. However, during a follow-up appointment one month later, wound dehiscence was noted with purulent discharge, leading to hospitalization. A subsequent surgical intervention involved the neo-femoral artery reconstruction using an autologous great saphenous vein (GSV) graft through the end-to-end anastomosis at the three femoral arteries. To address the tissue defect in the inguinal region, a sartorius flap was utilized to cover the vessels, and the skin was closed further. **Discussions :** The occurrence of a large infected pseudoaneurysm following the placement of a synthetic femoral patch represents one of the significant postoperative complications encountered by vascular surgeons. As a consequence of the infection, the residual arterial wall after the endarterectomy exhibits increased resistance, often precluding the option to substitute the synthetic patch with an autologous venous graft. In neo-femoral artery reconstruction, the superficial femoral vein is typically harvested due to its larger caliber and superior wall quality compared to the great saphenous vein GSV. Nonetheless, this case demonstrates the feasibility of utilizing the GSV as an alternative to the superficial femoral vein. **Conclusions:** Neo-femoral artery reconstruction utilizing an autologous GSV graft represents a viable and safe alternative when an infected pseudoaneurysm is present. Furthermore, using a sartorius flap to cover the vessels mitigates the risk of postoperative complications.This research was funded by George Emil Palade UMFST of Targu Mureș, Romania, grant number 170/2/09.01.2024.

Keywords: Peripheral Arterial Disease, Neo-Femoral Artery, Great Saphenous Vein, Sartorius Flap

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FOODBORNE OUTBREAK FOLLOWING A WEDDING EVENT IN MUREȘ COUNTY, ROMANIA (2024)

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Introduction: Foodborne disease outbreaks remain a significant public health issue. The early identification of symptoms and coordinated public health response are crucial in limiting spread and identifying potential sources of contamination. **Case Report:** In April 2024, a foodborne outbreak occurred in an urban setting in Mureș County, Romania, following a wedding with 216 participants. The first alert was issued the Emergency Reception Unit (UPU-SMURD) of the Târgu Mureș County Emergency Clinical Hospital, which reported three patients presenting with gastrointestinal symptoms. Epidemiological investigations ultimately confirmed 22 symptomatic cases linked to the event. The most commonly reported symptoms included diarrhea, nausea, vomiting, fever, chills, headache, epigastric pain, and fatigue. Among the 22 affected individuals, the following distribution was observed :8 patients received clinical evaluation at the Infectious Diseases Department II, with 2 requiring short-term hospitalization (2 days);13 patients sought outpatient care from their general practitioners.All patients reported having food consumed at the wedding. The suspected items most frequently mentioned by affected individuals were chicken nuggets (22), skewers with cherry tomatoes and mozzarella (20), meatballs (19), cordon bleu (19), and desserts (16-18 cases). Unfortunately, no food samples were retained for laboratory testing, as required by Romanian regulations. Inspections at the catering facility and a confectionery lab revealed hygiene deficiencies. Two surface samples were non-compliant. Among the staff members investigated, the following findings were noted: two food handlers had Escherichia coli on hand swabs; five tested positive for Staphylococcus aureus or Streptococcus beta-hemolytic group A on nasal and pharyngeal swabs. **Discussions :** This outbreak underscores the importance of proper food handling and hygiene in preventing foodborne diseases. The lack of preserved food samples limited the ability to identify the exact causative agent. However, the detection of E. coli and Staphylococcus aureus in food handlers suggests a possible connection between poor hygiene practices and the reported illnesses.When comparing this case to similar outbreaks, improper food handling and non-compliance with food safety regulations continue to be key risk factors. Strengthening hygiene standards and ensuring strict adherence to food safety protocols in food establishments are crucial steps in minimizing the frequency of such outbreaks. **Conclusions:** The absence of retained food samples hindered pathogen identification, though epidemiological and microbiological findings point to improper hygiene as a likely source. Improved regulatory enforcement and surveillance are essential to preventing similar outbreaks.

Keywords: Foodborne outbreak, food safety, Hygiene Standards, Public Health

DIAGNOSTIC APPROACH IN SEVERE THROMBOCYTOPENIA ASSOCIATED WITH INFLUENZA B VIRUS: A PEDIATRIC CASE REPORT

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Introduction: Thrombocytopenia, defined as a low platelet count, can have various etiologies, including viral infections. Influenza B is a common respiratory virus but rarely presents severe thrombocytopenia and hemorrhagic manifestations in pediatric patients. This case is significant due to the marked thrombocytopenia and associated bleeding symptoms, highlighting an uncommon but potentially serious complication of Influenza B in children. **Case Report:** We present the case of a 4-year-old female who was admitted with a two-day history of serous rhinorrhea, followed by fever (38.3°C), epistaxis, a single episode of hematemesis and widespread petechiae, predominantly on the lower limbs and oral mucosa. Upon examination, she was afebrile, hyperemic tonsils with palatal petechiae and a small hematoma on the left thumb. Laboratory investigations revealed severe thrombocytopenia (6,000/mm³ at initial assessment, 8,000/mm³ on repeat testing) and a positive rapid antigen test revealed the presence of a positive reaction to Influenza B virus antigen. She was transferred to a tertiary pediatric center for specialized care. Management included antiviral therapy, intravenous immunoglobulin (IVIG), fluid resuscitation, and vitamin C supplementation. Serial complete blood counts showed a progressive increase in platelet count (from 6,000/mm³ to 234,000/mm³). The petechiae was resolved, and epistaxis ceased. The final diagnosis was as severe thrombocytopenia with hemorrhagic manifestations secondary to Influenza B infection, and the patient showed a favorable evolution under treatment. **Discussions :** Viral infections are known triggers of immune-mediated thrombocytopenia, but severe cases associated with Influenza B are rare in pediatric patients. This case adds to the literature by demonstrating the importance of early recognition and intervention. The decision to administer IVIG was crucial in rapidly restoring platelet levels and preventing further hemorrhagic complications. The progressive resolution of symptoms underscores the importance of close monitoring and supportive care. **Conclusions:** This case illustrates severe thrombocytopenia as a rare but significant complication of Influenza B in children. Prompt recognition, laboratory evaluation, and appropriate management, including IVIG administration, are critical for favorable outcomes. Clinicians should be aware of this potential complication in pediatric viral infections to ensure timely intervention.

Keywords: Thrombocytopenia, Influenza B, Hemorrhagic manifestations, IVIG therapy

HODGKIN LYMPHOMA: FROM A SINGLE CLINICAL CLUE TO THE ONCOLOGICAL DIAGNOSIS

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Introduction: Lymphomas are classified into two main types: Hodgkin lymphoma and non-Hodgkin lymphoma. According to the NCD Global Health Research Group (2022), Hodgkin lymphoma represents approximately 0.4% of all cancers diagnosed worldwide. This case is particularly relevant as it highlights the difficulties in diagnosing lymphoid malignancies, which are often mistaken for infections or autoimmune diseases due to their nonspecific clinical presentation. **Case Report:** A 17-year-old female patient came to the general practitioner with painless bilateral laterocervical lymphadenopathy and no additional symptoms. She was prescribed antibiotics for a suspected infection. After a few months, she returned with persistent lymphadenopathies and was referred to an endocrinologist for suspected thyroid pathology, which was not confirmed. Approximately seven months after her first consultation, she presented to the Pediatric Clinic, where a thorough evaluation led to the decision to hospitalize her for further investigations. An ultrasound of the laterocervical region, along with a contrast-enhanced CT scan, identified lymphadenopathy in all laterocervical lymph node groups (supraclavicular and infraclavicular), with a tendency to cluster, the largest measuring approximately 30 × 22 mm (CC/LL). A slight compressive effect was observed on the right carotid-jugular bundle. A thoracic CT scan with intravenous contrast revealed multiple enlarged lymph nodes in all mediastinal and hilar compartments, the largest measuring 28 × 43 × 48 mm.

Additional ophthalmologic, cardiologic, EEG, and pediatric neurology evaluations showed no significant abnormalities. Laboratory findings suggested chronic inflammation and also indicated anemia secondary to malignancy. The patient was transferred to the pediatric surgery department for a lymph node biopsy and bone marrow aspiration. Histopathological analysis confirmed Hodgkin lymphoma, nodular sclerosis subtype. For accurate staging, an abdominal-pelvic CT scan was conducted, revealing paraesophageal (20 mm), celiac, and lumbar aortic lymphadenopathy. The final staging was determined as III A. The patient was started on chemotherapy according to the EuroNet-PHL-C1 protocol (consisting of two cycles of OEPA and two of COPDAC), with a favorable response. **Discussions :** Several factors contributed to the delay in diagnosing the malignancy, including the absence of systemic symptoms beyond cervical lymphadenopathy, initial misdiagnoses, and the patient's background, which may have delayed seeking specialized medical care. These aspects likely facilitated the progression of the lymphoproliferative disorder. **Conclusions:** Early recognition of malignant diseases must be a priority. Regular clinical evaluations and appropriate diagnostic investigations play a crucial role in timely detection and treatment initiation.

Keywords: Hodgkin lymphoma, Infection, Lymphadenopathy, Pediatrics

POSTER - MEDICINAL CHEMISTRY

DEVELOPMENT OF AN HPLC–UV METHOD FOR THE SIMULTANEOUS DETERMINATION OF FLUOROQUINOLONES

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Introduction: One of the most common treatments in medicine is antibiotic therapy. Fluoroquinolones are widely used in both human and veterinary therapy to treat bacterial diseases. These, like other types of antibiotics, commonly enter into the environment mainly through urine and feces, from hospital wastewater, or from veterinary products. Although various techniques are used to remove these substances from the environment, the removal rate is around 80-90%. The consequences of the presence of these compounds in the environment are primarily related to the development of bacterial resistance. The availability of analytical techniques capable of detecting these compounds from different environmental sources, such as water, is essential to investigate and quantify their contamination. **Case Report:** This study aimed to develop a simple HPLC-UV method suitable for analyzing environmental samples such as wastewater, allowing the simultaneous analysis of the most commonly used fluoroquinolones: ciprofloxacin (CIP), ofloxacin (OFL), and norfloxacin (NOR). **Discussions :** The effects of the nature of the organic modifier on the elution order of ciprofloxacin, ofloxacin and norfloxacin, the pH of the aqueous phase, the elution temperature as well as the injection volume were investigated. Optimal chromatographic conditions were established: Phenomenex Luna® C18 (150 x 4.6mm x 3µm) as stationary phases and a mobile phase composed of water acidified with 0.1% formic acid and methanol acidified with 0.1% formic acid at a flow rate of 1 mL/min, isocratic elution and UV detection at 280 nm. The operating temperature of the column was set at 30 °C. The established eluting order was ofloxacin at 7,05 minutes, norfloxacin at 8,55 followed by ciprofloxacin at 9,81 minutes. **Conclusions:** The method that has been developed has the capacity to determine the three fluoroquinolones under investigation within a reduced analysis time of less than 10 minutes. Furthermore, it is suitable for their analysis in a variety of environmental samples, such as wastewater.

Keywords: fluoroquinolones, HPLC, wastewater, contamination

MEDICINAL CHEMISTRY

THE CHIRAL SEPARATION OF THE OPTICAL ISOMERS OF NATEGLINIDE

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Background: Nateglinide is a derivative of phenylalanine with optical activity used for the treatment of non-insulin-dependent diabetes mellitus. The D-isomer is responsible for biological action and L-isomer is a related impurity which has to be monitored in pharmaceutical products with nateglinide. Chiral separations of nateglinide are mainly performed by using polysaccharide or polyester based chiral stationary phases. **Objective:** The objective of this study was to develop an optimal analytical method for the separation of the enantiomers of nateglinide by HPLC-UV technique on a protein column. **Material and methods:** The chromatographic conditions were: an ovomucoid HPLC column, a phosphate - acetonitrile mobile phase pH 3 at 2 mL/min flow rate, 20^{O}C column temperature, and detection at 220 nm. **Results :** The separation method was developed considering the influence of aqueous mobile phase pH, buffer concentration, organic solvent, and ovomucoid column temperature. Under the proposed chromatographic conditions, an efficient separation of D-Nateglinide and its optical isomer, L-Nateglinide, was achieved in less than 10 minutes. The method was linear between 5 and 80 ug/mL for both enantiomers and accuracy and precision were within acceptable limits. **Conclusions:** The study proposed a novel HPLC separation of nateglinide optical isomers on an ovomucoid column.

Keywords: HPLC, Nateglinide, Ovomucoid

MEDICAL COSMETICS AND TECHNOLOGY OF COSMETIC PRODUCTS

ORAL RETINOIDS IN SEVERE ACNE: BALANCING COSMETIC BENEFIT AND RISK OF SIDE EFFECTS

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Background: Severe acne (cystic, conglobate, with truncal or generalized extension) occurs mainly in adolescents and young adults of both sexes or as a result of androgenic substance abuse in athletes seeking easy muscle mass gain. This condition often requires treatment with oral retinoids (isotretinoin). Inappropriate use carries significant risks: teratogenicity, metabolic disorders (hypertriglyceridemia, pancreatitis, hepatic cytolysis), pseudotumor cerebri, and keloid scarring. **Objective:** The aim of the study was to analyze the situations requiring the initiation or discontinuation of isotretinoin treatment. **Material and methods:** A PubMed database search was conducted using the keywords: severe acne, retinoids, oral treatment, side effects, limited to the last 5 years. 144 results were obtained, which were analyzed for relevance to the efficacy vs. safety ratio. **Results :** An analysis of reported serious side effects was conducted to develop a guideline to answer questions related to the oral use of retinoids: For whom? When? How? For how long? With what risk? **Conclusions:** Retinoids remain the optimal treatment for severe forms of acne, but the choice of patient type, dose, duration of treatment, and identification of situations requiring urgent discontinuation remain key aspects of the benefit/risk balance.

Keywords: severe acne, retinoids, oral treatment, side effects

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EXOSOMES DERIVED FROM STEM CELLS FOR DERMATO-COSMETICS APPLICATIONS

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Background: Exosomes are tiny extracellular vesicles from various cell types that revolutionise cosmetic dermatology. They play vital roles in cell signalling, tissue regeneration, and regulating inflammatory responses, positioning themselves as a promising tool in skin care and rejuvenation. Exosomes derived from stem cells (EDSCs) mainly refer to the exosomes secreted by adipose stem cells, mesenchymal stem cells, and pluripotent stem cells. EDSCs have demonstrated potential for promoting skin rejuvenation, wound healing, and anti- ageing processes. These nanoscale entities serve as messengers carrying biomolecules such as RNA, proteins, and cytokines, enabling cellular regeneration and repair. **Objective:** This paper emphasises exosomes' significant influence in advancing aesthetic and general dermatology. It also highlights the pivotal role of EDSCs, setting the stage for innovative clinical and commercial developments in regenerative aesthetics and therapeutic dermatology. **Material and methods:** Studies were reviewed using sources like Clarivate, ScienceDirect, and Google Scholar, employing keywords such as "exosomes," "stem cells," "skin rejuvenation," "anti-ageing," "cosmetics," and "dermatology." Also, the isolation and characterisation of EDSCs, sources, biogenesis and properties, therapeutic applications, and challenges in standardisation were addressed. **Results :** EDSCs offer remarkable advantages such as stability, biocompatibility, and reduced immune rejection risks, making them a safer alternative to traditional stem cell therapies. Their therapeutic applications span a wide range, including scar treatment, hair restoration, acne management, skin rejuvenation, and pigmentation correction. EDSCs enhance collagen production, extracellular matrix remodelling, and angiogenesis, improving skin elasticity and reducing wrinkles. They also promise to manage dermatologic conditions (psoriasis, atopic dermatitis, systemic lupus erythematosus, systemic sclerosis) through their anti- inflammatory and immunomodulatory effects. At the same time, advances like tangential flow filtration (TFF) support the commercialisation of exosome-based products, but challenges in standardisation, production, and long-term stability necessitate further research. **Conclusions:** EDSCs significantly advance aesthetic and therapeutic dermatology, offering a groundbreaking alternative to traditional stem-cell therapies. Their stability, biocompatibility, and reduced immunogenicity make them ideal for cosmetic applications, showcasing remarkable potential in skin regeneration, rejuvenation, and wound healing. EDSCs enhance collagen production, elasticity, and extracellular matrix remodelling, positioning them as key contributors to anti-ageing treatments and solutions for conditions like photoaging. They effectively address psoriasis, atopic dermatitis, chronic wounds, scars, hyperpigmentation, and hair restoration with anti-inflammatory, immunomodulatory, and angiogenic properties. Despite standardisation, isolation, and storage challenges, advancements like TFF are considered for improved therapeutic formulations. EDSCs circumvent risks like tumorigenicity as safer alternatives to living cells, marking their transformative role in regenerative medicine.

Keywords: exosomes, stem cells, anti-ageing, cosmetics

USE OF MEDICINAL PLANTS IN ACNE TREATMENT: ALOE VERA

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Background: The World Health Organization (WHO) statistics reveal that 40% of individuals suffering from acne use medicinal plants for treatment. Thus, phytotherapy remains a priority research direction in combating this condition. Numerous studies analyze the effectiveness of Aloe Vera in acne treatment, demonstrating that it contains active compounds with antibacterial and anti-inflammatory properties. Unlike other treatments that may have adverse effects, Aloe Vera offers a natural alternative that is well-tolerated by the skin. **Objective:** This study aims to microscopically evaluate the Aloe Vera plant in order to identify it's structure and gain a better understanding of the compounds responsible for treating acne pustules and papules. The primary objective is to find an effective natural method for combating acne. **Material and methods:** Using an optical microscope, the structure of Aloe Vera was analyzed, highlighting it's compounds that are essential in acne treatment. A study published in the scientific journal MDPI investigated how acemannan, a component of Aloe Vera, affects skin bacteria, particularly Propionibacterium acnes, which is involved in the development of acne. **Results :** The results showed that Aloe Vera gel exhibits significant antibacterial activity against Propionibacterium acnes. At a concentration of 10%, the gel had an inhibition zone of 12.9 mm, indicating a strong action against this bacterium. The study highlighted that Aloe Vera contributes to reducing Propionibacterium acnes, thus supporting its use in anti-acne treatments. Additionally, it was found that incorporating Aloe Vera into skincare products not only reduces bacterial population but also offers additional benefits such as skin hydration and anti-inflammatory effects. These properties help soothe irritation and reduce the redness associated with acne. The first beneficial effects were observed after just three weeks of consistent use of Aloe Vera gel. **Conclusions:** Aloe Vera is one of the most commonly used medicinal plants in acne treatment, demonstrating efficacy in treating both mild and severe forms. Due to its antibacterial, anti-inflammatory, and moisturizing properties, it can serve as a key ingredient in natural anti-acne therapies.

Keywords: Aloe Vera, Acne, Medicinal Plants, Treatment

NEW PERSPECTIVES REGARDING THE USE OF FULLERENES IN COSMETOLOGY

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Background: Cosmetology has been exceedingly revolutionized by nanotechnology and advanced discoveries in manipulating molecules and atoms at the nanoscale, allowing the development of professional cosmetic and skincare products with enhanced efficacy, stability, and improved skin penetration of active ingredients. **Objective:** This paper presents fullerenes, an important class of nanocarriers. Fullerenes help with the absorption of bioactive compounds, ensuring a deeper delivery into the skin tissue. Fullerenes are defined as hollow carbon clusters, whose structure allows them to be admirable nanocarriers, characterized by a controlled transdermal release of active ingredients. **Material and methods:** Fullerenes have been proven to possess exceptional antioxidant properties, by neutralizing free radicals, which by accumulating in adipose tissue contribute to premature aging and can lead to skin cancer. Denatured proteins, affected cell membranes, anomalies in the redox status of cells and defective DNA repair processes are a few well known negative and damaging effects of free radicals and their chain reactions. Carbon based nano structures are key ingredients in the development of cosmetic products, especially sunscreen. Because of their previously mentioned antioxidant properties, they offer cytoprotective effects against UVA radiations in SPF formulations. Moreover, naturally produced carbon nanotubes can be used in simpler, more sustainable and safer formulations. **Results :** Fullerenes and their qualities represent the foundation of their use as treatments for acne and chronic inflammatory skin conditions and also in cosmetic procedures. Cosmetic treatments integrate nanotechnology in regenerative therapy. There are many types of self-restoring skin procedures such as mesotherapy, laser treatments and micro needling to name a few. All of the above show promising results in inpatient treatment. **Conclusions:** Nanotechnology and the development of nanoparticles are constantly advancing, improving and transforming. As nanotechnology evolved, so did cosmetic therapies and procedures. The integration of these two domains opened a new horizon, nano cosmetology. With

more rigorous efficacy tests and extensive research, carbon based nanoparticles are likely to be adopted in a variety of cosmetic products and skin care procedures. This is due to their numerous benefits, revolutionizing pre-existing ingredients by significantly improving their action.

Keywords: nanotechnology, fullerenes, cosmetology, nanoparticles

ADAPTABILITY OF KOREAN COSMETIC PRODUCTS TO CAUCASIAN SKIN

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Background: Korean skincare (K-Beauty) has achieved global prominence due to its innovation, focus on natural ingredients, and efficacy in promoting skin health. However, product development is primarily targeted toward East Asian skin types, which may differ physiologically from fair skin tones (Fitzpatrick I-III) in aspects such as sensitivity, barrier function, and common dermatologic concerns. Despite growing international adoption, limited empirical attention has been given to how these products are perceived and tolerated by fair-skinned users. **Objective:** This study aims to explore consumer-perceived compatibility between Korean skincare products and fair skin types, identifying formulation challenges, usability concerns, and potential areas for cross-market product optimization. **Material and methods:** A qualitative, self-administered online survey was conducted with 96 respondents aged 18 to over 55, all self-identifying as having fair skin (Fitzpatrick I-III) and regular users of Korean skincare. Participants reported on skin types including oily, dry, combination, sensitive, and acne-prone. Open-ended responses captured detailed feedback on tolerability, perceived efficacy, and cultural alignment. Thematic analysis was applied to identify shared perspectives and recurring concerns. Additionally, a longitudinal case study is in progress to provide deeper insight into individual experiences with Korean skincare over time. **Results :** Three major thematic domains emerged: Formulation & Active Ingredients: Many participants expressed concerns over heavy emollients and the prevalence of fragrance, citing irritation and comedogenic effects. There was a consistent preference for higher concentrations of actives more typical in Western skincare (e.g., AHA/BHA, retinoids, vitamin C), perceived as more effective for their skin needs. Functionality & Skin Concerns: Respondents sought formulations targeting acne, post-inflammatory hyperpigmentation, and sensitivity. Sunscreens, in particular, were criticized for leaving visible residue and feeling occlusive. Lightweight, non-comedogenic options were favored across skin types. Aesthetic & Cultural Resonance: Marketing claims centered on whitening or brightening were frequently described as culturally dissonant or misaligned with consumer goals. As one participant noted: "I want to even out my tone - not lighten it." Such narratives were seen as diminishing the appeal of otherwise effective products. **Conclusions:** Findings suggest that while Korean skincare is well-regarded in several respects, targeted formulation adaptations may enhance compatibility and satisfaction among fair-skinned users. Recommendations include reducing fragrance content, rebalancing hydration profiles for diverse skin needs, and incorporating actives more familiar to Western consumers. Moreover, reframing marketing language to reflect inclusive, global beauty standards could significantly improve product resonance across markets. Further clinical investigation is warranted to substantiate these perception-based insights and guide inclusive skincare development.

Keywords: Korean cosmetics, Caucasian skin, Cosmetic formulations, Skincare

ONGOING RESEARCH IN THE FIELD OF NANOCARRIERS USED IN COSMECEUTICAL PRODUCTS

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Background: Incorporation of active cosmetic ingredients in nanocarriers is a modern approach that enables these ingredients to act in the deeper layers of the skin. Among these, liposomes are known as spherical vesicles composed of a phospholipidic membrane, organized in bilayer structures that enclose an aqueous cavity in which both lipophilic or hydrophilic ingredients can be incorporated. **Objective:** The aim of this bibliographic study is to identify active cosmetic ingredients formulated as liposomes in cosmeceutical products, to present the benefits that liposomal vesicles can bring to a cosmetic product, and to explain the mechanism that enhances the penetration of active ingredients. **Material and methods:** The potential of liposomes as dermal carriers for active cosmetic ingredients in cosmeceutical formulations was studied through a review of recent literature published on

specialized platforms such as PubMed, Scopus, ScienceDirect, and Google Scholar, using the following keywords: liposomes, cosmetic products, cosmeceutical products, liposomal products, liposome advantages. **Results :** Many substances are prone to oxidation or loss of efficacy due to environmental threats. However, by using liposomes, we can encapsulate them and preserve their original properties. These substances include antibiotics, peptides, vitamins such as A, D, E, and K, proteins and enzymes, coenzyme Q10, and plant extracts. The most frequently used cosmetic products include creams, gels, and serums. Liposomes come in different types depending on their application, which also determines their penetration level and the efficacy of active ingredients. Transferosomes and ethosomes facilitate deep absorption due to their flexibility, while novasomes and niosomes improve bioavailability and stability. Other types, such as ultrasomes and photosomes, offer protection against oxidative stress and UV radiation. All these aspects demonstrate the potential of liposomes in advanced skin care formulations. **Conclusions:** Liposomes represent a major innovation in the continuous evolving field of cosmetics, offering an efficient delivery system for active substances, protecting them from degradation, and improving their penetration into the skin through specific mechanisms of fusion with cellular barriers. Given the diversity of liposome types, including transferosomes, ethosomes, and niosomes, they can be adapted according to formulation requirements, facilitating optimal delivery of active ingredients. All these factors make liposomes an essential component of modern skin care formulations, significantly enhancing the efficacy and stability of cosmetic products.

Keywords: nanocarriers, liposomes, cosmeceuticals, vesicles

ADVANCED SYNERGY IN FACIAL REJUVENATION: SCULPTURAL FACIAL MASSAGE AND HIFU TECHNOLOGY

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Background: The inherent process of skin aging entails a cascade of structural and functional alterations at the tegumentary level, including the diminished synthesis of collagen and elastin, the involution of dermal vascularization, and the atrophy of facial musculature tone. In recent years, there has been a marked surge in interest regarding non-invasive modalities for facial rejuvenation, particularly addressing the post-thirties female demographic, which demonstrates a predilection for efficacious solutions with a reduced risk profile compared to surgical interventions. Within this context, High-Intensity Focused Ultrasound (HIFU) has emerged as a cutting-edge technology with robust clinical evidence concerning its capacity to stimulate neocollagenesis and induce a facial lifting effect. Concurrently, age-old techniques such as sculptural facial massage, daily self-massage, Gua Sha application, and facial exercises are regaining the attention of the scientific community, being investigated for their benefits on microcirculation, lymphatic drainage, and the revitalization of mimetic musculature. The potential synergy between these modern and traditional approaches offers a comprehensive and integrative perspective for attenuating the visible manifestations of cutaneous senescence. **Objective:** This paper explores the synergistic impact of HIFU and sculptural facial massage on collagen production, skin firmness, and mimetic muscle revitalization, proposing an effective, accessible alternative to invasive aesthetics. **Material and methods:** The analysis was predicated on a rigorous bibliographic review, encompassing articles published in international databases (PubMed, PMC, ResearchGate), as well as Romanian anatomical sources pertaining to the facial musculature. Clinical trials, histological analyses, and 3D observations of HIFU's effects on facial aesthetic units were reviewed, alongside research concerning the effects of facial exercises, daily massage, and self-massage on muscle tone and emotional state. **Results :** HIFU, with optimized parameters, effectively induces deep dermal thermal coagulation, stimulating neocollagenesis. Devices like Ultraformer-MPT show significant skin firmness improvements, confirmed by 3D imaging. Sculptural facial massage, Gua Sha, and facial exercises enhance microcirculation, lymphatic drainage, and muscle tone, benefiting facial contour and reducing oxidative stress. Precise anatomical knowledge of mimetic muscles is crucial for effective manual application. **Conclusions:** Integrating sculptural facial massage with HIFU is a promising, safe strategy against facial aging. Their combined effects on deep dermis and mimetic muscles significantly improve skin firmness, facial contour, and cellular regeneration. These techniques may also reduce oxidative stress and improve emotional well-being, relevant in integrative aesthetics. This technology-tradition synergy can redefine facial care in medical cosmetology. Further large-scale, standardized clinical trials are warranted for comprehensive validation.

Keywords: HIFU, Sculptural Facial Massage, Collagen, Neocollagenesis

DENTAL TECHNOLOGY

THE EFFECT OF SINTERING TIME ON THE OPTICAL CHARACTERISTICS OF MONOLITHIC ZIRCONIA

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Background: The gold standard in dentistry has long been considered metal-ceramic crowns because this type of restoration combines the resistance with the aesthetics of the feldspathic ceramic. Even if this restoration can achieve a suitable aesthetic for patients with high demands, it is not enough. Since the early 2000s, when zirconia was introduced in restorative dentistry, researchers have been trying to improve zirconia's aesthetic qualities without affecting physical ones. The evolution of zirconia has led to the appearance of a material with high optical qualities, providing the practitioner with a wide range of treatment possibilities to meet patients' needs. The optical characteristics of zirconia can be influenced by particle size and structural factors. The sintering process can affect optical and mechanical properties by the sintering temperature, time, atmospheric conditions, and heating methods. **Objective:** This study aims to analyze the effect of sintering parameters on the optical characteristics of zirconia. **Material and methods:** Monolithic multilayered zirconia blanks (A2-Ivoclar IPS e.max ZirCAD Prime) were used to fabricate 54 central incisor crowns. The obtained crowns were divided into three groups (18/group) according to the sintering process: G0 - control group, sintering process according to the manufacturer's instructions, G1 - + 1 hour, and G2 - -1 hour. Each specimen was placed over a white and black background at different times of the day (daylight and in the evening) to analyze optical characteristics, and the CIELAB coordinates were determined with the Easyshade V spectrophotometer (Vita Zahnfabrik, Bad Säckingen, Germany). Translucency parameters (TP) and ΔEab were calculated. Statistical analysis was performed with GraphPad Prism; statistical significance was set at $p<0,05$. **Results :** The results with $p=0,0007$ demonstrate a statistical difference between the mean values of TP recorded for measurements performed in the evening for groups G2 and G1. For measurements performed in the day light, no statistical difference was found. **Conclusions:** Based on the obtained results, it can be concluded that the sintering regiment influences the optical proprieties of the zirconia.

Keywords: Zirconia, Sintering, Optical characteristics

TECHNOLOGICAL ASPECTS THAT CAN INFLUENCE THE AESTHETIC CHARACTERISTICS OF MONOLITHIC ZIRCONIA

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Background: Monolithic zirconia is one of the most versatile ceramic materials on the market today. Its continuous development has led to zirconia materials that incorporate both mechanical and optical requirements, which is vital to ensure the strength and the natural appearance of prosthetic restoration, while also eliminating the failure caused by the fracturing and the chipping of the ceramic veneers. Glazing and polishing techniques are very important for a superior aesthetic appearance. **Objective:** The aim of the current study is to evaluate two crucial zirconia finishing methods: manual glazing and mechanical polishing. **Material and methods:** The study included 36 crowns of central incisor, obtained by CAD-CAM milling (Computer aided design-Computer aided manufacturing) from monolithic zirconia blocks (Zahndent). According to the finishing methods, they were divided into two groups: G0-glazing and G1-mechanical polishing. Easyshade V spectrophotometer (Vita Zahnfabrik, Bad Sackingen) was used to evaluate the effects of these final processing methods on the optical characteristics of zirconia. These measurements were made day and night. The specimens were placed on a white and black background. Using the CIELAB coordinates provided by the device, the translucency parameter (TP) and ΔEab were calculated. The statistical processing of the data was carried out with the GraphPad Prism program. The level of significance was set at $\alpha=0.05$. **Results :** Mean values of the TP for the two study groups (2,316±1,414 respectively 2,279±1,111) demonstrate that there is no statistical difference between the shade of the groups, regardless of the time of day when the registrations were performed. **Conclusions:** Finishing methods (manual glazing and mechanical polishing) lead to prosthetic restorations with similar optical characteristics.

Keywords: Zirconia, Aesthetic, Glazing, Mechanical polishing

COMPLETE DENTURES – A CHALLENGE FOR TECHNICIAN

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Introduction: The mandibular denture on attachments is a modern prosthetic solution anchored to implants or remaining teeth. It offers superior stability and comfort compared to conventional dentures. It improves retention and functionality and prevents bone resorption, making it an ideal option for patients who have difficulty with traditional dentures. **Case Report:** A male patient with a diagnosis of mandibular prognathism and subtotal edentulism presents to the dental office for a complex oral rehabilitation. Multiple pre-prosthetic treatments were made: extractions, scaling, endodontic treatments, and just two remaining teeth 3.4 and 3.5. The technical process began with the fabrication of extra coronal OT cap castable attachments after receiving the impressions. Further, several laboratory stages of OT cap attachments and individual trays for functional impression were carried out. The difficulty of the case consisted of the old mandibular prognathism, and a bite deviation due to edentulism, and just two teeth remained. The attempt to restore a normal position and a straight profile was challenging due to the fitting artificial who have been vestibularized to obtain optimal contacts. The final result, a complete maxillary complete denture with a very good suction and a mandibular denture anchored on two remaining teeth were performed. **Discussions :** A similar case with a mandibular overdenture on attachments for remaining teeth 3.3 and 4.3. Both cases had good bone support, but this case has a more favorable position for prosthetic treatment due to the remaining teeth. Clinical and laboratory evaluations confirmed the need for a complete maxillary denture and a mandibular overdenture on attachments, supported by two teeth. Overdentures on attachments help reduce ridge resorption, improve stability, and enhance chewing efficiency. **Conclusions:** The complete overdenture on attachments is effective in restoring chewing function and improving speech articulation and also in restoring the vertical dimension of occlusion. It offers excellent retention, minimizing the risk of detachment and ensuring long-term stability.

Keywords: complete denture, complex rehabilitation, mandibular prognathism, extracoronal attachments

THE DURABILITY AND AESTHETICS OF METAL-CERAMIC CROWNS IN CONTEMPORARY DENTISTRY

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Introduction: Metal-ceramic crowns are essential in modern dentistry, providing an ideal balance of aesthetics, durability, and functionality. These restorations consist of a metallic framework that ensures resistance to masticatory forces, covered with a ceramic layer that mimics the natural tooth appearance. The metallic framework is fabricated using advanced CAD/CAM (Computer-Aided Design/Computer-Aided Manufacturing) technology, which ensures precision and improved patient comfort. Additionally, laser sintering(DMLS - Direct Metal Laser Sintering) allows the metal to be melted and solidified with high precision, resulting in a strong, accurate framework. After this, a layer of esthetic ceramic is applied using manual layering, which is then fused in a high-temperature furnace to integrate perfectly with the metal, ensuring both aesthetic appeal and durability. **Case Report:** A 65-year-old female patient presented with a metal-ceramic prosthesis showing signs of wear and malfunction. The patient experienced masticatory difficulties due to the loss of aesthetic coverage and trauma caused by the rough metal edges. Clinical examination confirmed the need for replacement to restore both function and aesthetics. The treatment plan involved reshaping the abutments, taking impressions, and fabricating a new metallic framework using CAD/CAM technology and laser sintering. Following this, esthetic ceramic was applied to provide a natural and functional restoration. **Discussions :** The case aligns with the literature highlighting that metal-ceramic crowns are widely used due to their balance of mechanical strength and aesthetic appearance. Recent studies confirm that CAD/CAM and laser sintering technologies improve the precision and adaptability of metal frameworks, leading to better patient comfort and longer-lasting restorations. Additionally, esthetic ceramics help achieve a natural appearance by mimicking natural tooth shades and translucency. In this case, the metal-ceramic crown successfully combined metal strength with an excellent aesthetic result, restoring both function and

aesthetics. **Conclusions:** Metal-ceramic crowns effectively combine strength and aesthetics. CAD/CAM and laser sintering technologies ensure precise framework fabrication, while esthetic ceramic enhances the natural appearance. This restoration significantly improved the patient's life, restoring both function and aesthetics. Despite the metal framework, it remains unseen thanks to the high-quality ceramic layering, ensuring both aesthetic and functional satisfaction.

Keywords: Metal-ceramic crowns, CAD/CAM technology, Laser sintering (DMLS), Esthetic ceramic

GENERAL NURSING - BISTRIȚA

CHARTING THE UNKNOWN: NURSE READINESS FOR THE AI-POWERED FUTURE OF HEALTHCARE

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Background: Due to global modernization, the increasing use of artificial intelligence (AI) in healthcare has led to significant adaptation among medical staff regarding the manage and execution of AI-based solutions to increase the professionalism and quality of healthcare services. **Objective:** The primary objective of this study is to evaluate the nurses' willingness to use AI in their daily medical practice, identifying their own level of knowledge, acceptance, perceived benefits, and barriers to adopting this technology. **Material and methods:** A structured questionnaire consisting of 23 questions was designed to cover aspects such as demographic and professional data, knowledge, attitude towards, perceived benefits, and barriers related to AI. The questionnaire was distributed online through specialized platforms (such as Google Forms) and social media networks (SCJBN, SAJ-BN, Clinica Sanovil, ICUTL, IRGH CJ, etc) targeting hospitals and specialized medical units. The distribution period was short, lasting only a few days, and the total number of respondents was 50 registered nurses working in various hospital departments and specialized medical institutions, for example ER, IC, Paediatrics, Internal Medicine, Operating Room, Neonatology, OG, etc). **Results :** Statistically speaking, out of the total number of respondents (n=50), only 6% (n=3) work in the private sector, while the remaining 94% (n=47) are employed in the public sector. The respondents' ages range from 22 to 60 years, with the majority 36% (n=18) being between 30-40 years old. In terms of professional experience, most respondents (30%, n=15) have experience in this field for 5-10 years. Based on the analysed responses, it was found that 74% (n=37) of participants considered AI beneficial, while 26% (n=13) expressed negative opinions, indicating uncertainty. However, 82% (n=41) of respondents believe that AI will become a key component in the future and 80% (n=40) that the nurses lead an important role in developing AI. **Conclusions:** Our study's results show that most respondents consider AI beneficial and necessary for use in medical practice, providing more efficient and safe patient care, allowing for more time to exercise their profession, and implicitly providing higher-quality medical care.

Keywords: nurse, artificial intelligence, medical care, technology

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CRP/ALBUMIN RATIO: A PROMISING TOOL FOR PREDICTING SEVERITY IN ACUTE PANCREATITIS

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Background: Acute pancreatitis is a serious disease caused by inflammation of the pancreas. It can have a wide spectrum of severity and complications. Currently, there is no specific drug treatment for acute pancreatitis, so care is mainly supportive. Therefore, clinical guidelines emphasize an approach on predicting severity, to triage patients to appropriate levels of care. There are various scoring systems available, but none of them has been labelled as gold standard. **Objective:** Our goal was to determine whether a single test ratio, CRP/albumin ratio, may predict severity of acute pancreatitis and the change of care in selected patients. **Material and methods:** We conducted an observational, retrospective study, that included 40 patients diagnosed with acute pancreatitis, admitted in Internal Medicine Department, Bistrita Clinical County Hospital. Severe pancreatitis was determined as CT severity index above 7. CRP/albumin ratio was calculated by dividing the CRP level (mg/L) with the serum albumin level (g/L). **Results :** In our cohort including 40 patients with acute pancreatitis, the gender distribution was equal, 50 % being male and 50% female. The mean age was 56 years old, ranging from 28 to 91 years. The majority of patients (37 patients- 92.5%) presented in ER with the typical symptomatology for acute pancreatitis- epigastric pain radiating to the back, nausea and vomiting. Severe symptoms, such as ileus, were present in 17 patients (42.5%). Obstructive etiology was identified in 62.5% of cases, with alcoholic pancreatitis accounting for 35% of cases. One patient (2.5%) presented with drug-induced pancreatitis. Based on CT severity index, 28 cases (70%) were classified as mild to moderate, while 12 patients (30%) had severe acute pancreatitis. Complications such as pseudocysts (6-15% cases), ascites (13-32.5% cases), thrombotic events (5-12.5% cases) and cancer (2-5%), were identified on imaging studies. The mean C- reactive protein (CRP) level was 102.35 with a standard

deviation (SD) of 93.96. The mean CRP/albumin ratio was 2.85±3.01. A statistically significant association was found between CRP/albumin ratio and disease severity (p=0.03) using the chi-square test. **Conclusions:** The development of simple and cost-effective tools for assessing the severity of acute pancreatitis is imperative, as current scoring systems are resource-intensive and time-consuming. CRP/albumin ratio is a non-invasive, readily available parameter, which should be used upon admission to risk stratify patients with acute pancreatitis and guide treatment care.

Keywords: acute pancreatitis, CRP/albumin ratio, severity, nurse

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ATTITUDES AND PERCEPTIONS REGARDING HPV VACCINATION

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Background: Human papillomavirus (HPV) is the most widespread sexually transmitted infection worldwide, with over 200 types identified, of which over 40 affect the genital area. Persistent infection with high-risk oncogenic HPV types 16 and 18 is responsible for approximately 70% of cervical cancer cases worldwid. **Objective:** The primary objective of this study was to analyze the attitude and level of information of parents regarding the HPV virus, cervical cancer and the HPV vaccine. **Material and methods:** We applied an online questionnaire addressed to parents, with the aim of identifying socio-economic, religious factors, the level of information about HPV infection and the attitude towards the HPV vaccine. The questionnaire was distributed online through specialized platforms(such as Google Forms) and social media networks. The distribution period was short , lasting only a few days, and the total number of respondents was 110 registered . **Results :** The distribution regarding the environment of origin is relatively equal between urban (47.1%) and rural (52.9%). Parents who have daughters responded to the questionnaire in a percentage of 63.7%, the Orthodox religion prevailed (76.5%), 83.3% of parents said that they did not have their child vaccinated against HPV, and the main reasons for not vaccinating are the lack of information about the HPV vaccine (38.2%), the adverse effects of the vaccine (33.8%) and the child's age being too young at the moment (20.6%). Most parents want to receive information about cervical cancer and vaccination from their family doctor and gynecologist and pediatrician. A percentage of 86.3% believe that the decision regarding vaccination can be positively influenced by information courses regarding HPV pathology and vaccination. **Conclusions:** The attitude of parents in Romania regarding the HPV vaccine is a reserved one, especially due to the lack of information, so it is necessary to have more extensive information campaigns, and family doctors, gynecologists and pediatricians to team up with parents in the information process to increase adherence to the HPV vaccine.

Keywords: Human papillomavirus (HPV), cervical cancer, HPV vaccine

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CORRELATION OF INFLAMMATORY MARKERS WITH THE ETIOLOGY OF ACUTE GASTROENTERITIS IN PEDIATRICS

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Background: It is estimated that diarrhea is the second leading cause of death for children under five worldwide. Stool culture is currently the gold standard for establishing an etiological diagnosis, however, it is a time-consuming procedure. Consequently, therapeutic management is often etiologically inaccurate. Specialized studies suggest that inflammatory markers and cytokines may serve as potential indicators for etiological diagnosis and for assessing the severity of gastrointestinal tract inflammation. These markers are rapidly identifiable, easy to use, cost-effective and provide real-time values. **Objective:** The primary objective of this study was to analyze inflammatory markers (ESR, CRP, procalcitonin) in relation to episodes of acute gastroenteritis in children, in conjunction with clinical presentation, duration of hospitalization, and variables related to the patien's socio-economic background. **Material and methods:** We conducted a retrospective study between January 30, 2025, and April 7, 2025, using data collected from the Pediatric Department of the Emergency Clinical Hospital, Bistrita. The following parameters were analyzed in children diagnosed with acute gastroenteritis: demographic, socioeconomic, clinical and paraclinical parameters. **Results :** During the specified period, a total of 60 children

were admittedwith a diagnosis of acute gastroenteritis. The rural population was significantly more represented (61,67%). Mothers with no formal education or only secondary education comprised 61,66% of the study group. Consistent with other specialized studies, the age group under 5 years was the most affected (66,66%). Nearly half of the patients presented with fever , and a significant percentage (81,66%) experienced vomiting. The average duration of hospitalization was 4 days. Elevated ESR was observed in more then half of the cases. C-reactive protein levels exceeded 30 mg/dL in 30% of cases. Overall, 75% of patients presented with grade 2 dehydration. Antibiotic therapy was administred in 33.33% of cases, despite negative stool cultures in all study participants. **Conclusions:** The results of our study are in line with other specialized literature. Acute gastroenteritis remains a major cause of mortality and morbidity, especially doe to the current inability to rapidly determine its etiology. Therefore, broader studies are required to validate the importance status in the diagnosis and therapeutic management of acute gastroenteritis.

Keywords: Gastroenteritis, Inflammatory Markers, Etiology

THE USE OF LOCAL ANTIBIOTIC TREATMENT TO AVOID SYSTEMIC TOXICITY IN ORTHOPEDIC SURGERY

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Background: Orthopedic infections are often treated with systemic antibiotic therapy which can lead to toxicity and limited local efficacy, especially in the existing context of rising antibiotic resistance. Local antibiotic delivery systems, however, offer targeted treatment that minimize systemic exposure while increasing local antimicrobial activity. **Objective:** Reducing the use of systemic antibiotic intake and replacing it with local, a more targeted delivery alternative, not only avoids systemic toxicity but also reduces costs. **Material and methods:** A literature review was conducted using PubMed and Scopus databases. The search targeted articles published between 2015 and 2024 using terms like: "local antibiotic delivery", "calcium sulphate beads", "Stimulan" and "orthopedic infections". There were considered inclusion criteria studies evaluating clinical outcomes, in vitro evolution characteristics, and microbiological efficacy of antibiotic-loaded calcium sulphate beads. Studies on periprosthetic joint infections (PJIs) and comparisons with systemic antibiotic therapy were also extracted. **Results :** A total of 28 studies were reviewed. Clinical studies reported infection resolution rates ranging from 82% to 90% in chronic PJI cases treated with antibiotic loaded calcium sulphate beads in combination with surgical debridement. In vitro data showed sustained local antibiotic release for up to 40-42 days, achieving concentrations up to 50 times above the minimum inhibitory concentration for known pathogens. Stimulan beads demonstrated efficacy against a broad spectrum of bacteria (including MRSA and vancomycin resistant Enterococcus). The use of local antibiotics reduced systemic antibiotic duration by up to 60%, and minimized nephrotoxicity and other adverse effects. **Conclusions:** Local antibiotic delivery treatment using calcium sulphate beads is a valuable and proven adjunct in the management of orthopedic infections. It can provide high local antibiotic concentrations, reduce systemic toxicity and improve infection control. Combined with surgical intervention, this approach leads to higher success rates and fewer complications. Prospective studies are required to establish standardized protocols and assess long term outcomes.

Keywords: Local antibiotic treatment, calcium sulphate beads, orthopedic infections, systemic toxicity

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SCLEROTHERAPY VS SURGERY IN THE TREATMENT OF VARICOSE VEINS

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Background: Varicose veins, a prevalent manifestation of chronic venous disease, affect a significant portion of the global population. The exact cause is unknown, although it involves weakened venous walls, malfunctioning valves, high intravenous pressure, and a hereditary predisposition. Female sex, advanced age, a family history of venous illness, and persistently elevated intraabdominal pressure brought on by obesity, pregnancy, and standing are risk factors. If left untreated, chronic venous insufficiency can progress to more severe stages, leading to complications like edema, skin changes, ulcers, and bleeding. **Objective:** Technical success is a crucial metric in

managing varicose veins, indicating consistent performance across various therapeutic modalities with unique attributes and clinical outcomes. In the absence of active or healed venous ulcers, there is insufficient data to assess the effectiveness of compression stockings in treating varicose veins. **Material and methods:** Surgery, endovenous sclerotherapy, and endovenous thermal ablation are examples of interventional treatments. Although surgery was once the standard of care, it largely has been replaced by minimal invasive procedures like sclerotherapy and endovenous thermal ablation (it can be performed under local anesthesia), which have better outcomes and fewer complications than surgical treatments. **Results :** It is due to its comparatively low cost, viability as an outpatient treatment without needing of anesthesia, minimal post-procedural discomfort, and procedural repeatability. **Conclusions:** Over the past decade, minimal invasive procedures have risen to prominence as the first-line therapies, essentially replacing conventional surgical interventions for treating the discomfort and esthetic issues associated with varicose veins. Sclerotherapy has gained popularity as a primary treatment for refluxing saphenous veins.

Keywords: varicose veins, sclerotherapy, surgery

NUTRITIONAL SUPPORT IN PEDIATRIC MEDICAL EMERGENCIES – A CRITICAL COMPONENT OF CLINICAL MANAGEMENT

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Background: In the context of pediatric medical emergencies, nutritional support is often underestimated, yet it plays a vital role in the clinical outcome. Children have limited energy reserves and increased metabolic demands, making them highly susceptible to acute nutritional imbalances. Without adequate intervention, acute malnutrition can worsen prognosis and extend hospitalization duration. This paper aims to highlight the importance of early nutritional support in pediatric emergency care and analyze current international recommendations and practical challenges in clinical settings. **Objective:** Adapt nutrition route (oral, enteral, or parenteral) based on patient condition. Prevent malnutrition and support growth during acute illness. Stabilize metabolic state and maintain normal blood sugar levels. **Material and methods:** A literature review was conducted using PubMed adn Scopus databases. The search targeted articles published between 2015 - 2024 using terms : " nutritional support", "pediatric emergency", nutrition in pediatric intensive care" . Inclusion criteria studies evaluating clinical outcomes paediatric nutritional support in emergency pediatric care. **Results :** A total of 20 studies were reviewed. Recent studies show that initiating enteral nutrition within the first 24-48 hours reduces complications, duration of mechanical ventilation, and rates of nosocomial infections. Moreover, the presence of a multidisciplinary nutritional support team significantly improves the likelihood of meeting caloric and protein targets. **Conclusions:** Nutritional support should be integrated as a core element of emergency pediatric care. Standardization of nutritional protocols, proper staff training, and early involvement of dietitians are essential. Early and individualized nutritional interventions can significantly improve outcomes in children with severe acute conditions.

Keywords: nutritional support, pediatric care, emergency departments

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BENEFITS OF BIOLOGICAL THERAPY IN THE TREATMENT OF SEVERE EOSINOPHILIC BRONCHIAL ASTHMA

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Background: Severe bronchial asthma remains an active research topic, as it impacts quality of life through exacerbations and side effects of corticosteroid therapy. Eosinophils are key to the inflammatory process and serve as important biomarkers in asthma phenotyping. Although treatment is challenging, significant progress has been made through targeted biological therapies with monoclonal antibodies. **Objective:** The objective is to present a clinical case of severe bronchial asthma and the benefits of monoclonal antibody therapy on the clinical and functional evolution. **Material and methods:** We present the case of a 76-year-old woman, a non-smoker, allergic to dust, with multiple comorbidities (cardiovascular, renal, ENT, and rheumatologic), followed since 2018 for step V GINA bronchial asthma, which remained uncontrolled despite adherence to a treatment regimen

including triple bronchodilator therapy, antihistamines, and leukotriene antagonists. Over the course of a year, the patient presented to the Emergency Department in the Pneumology Unit with multiple severe exacerbations, manifested by intermittent paroxysmal dyspnea even with minimal exertion (mMRC scale III), exertional desaturation, nocturnal intermittent wheezing, daily dry cough, and chest tightness, requiring systemic corticosteroid therapy and oxygen supplementation. **Results :** During multiple hospitalizations, chest X-rays and sputum cultures for nonspecific flora were performed, which ruled out bacterial pneumonia. Persistent peripheral eosinophilia was detected (0.51 x10^9/L, 4.6%), along with positive immunoglobulin E and severe mixed ventilatory dysfunction (FVC 50%, FEV1 45%, FEV1/FVC ratio 0.68, FEF25-75 38%). Due to uncontrolled severe asthma, as also indicated by an Asthma Control Test (ACT) score of 9, biological therapy with anti-IL-5 receptor monoclonal antibodies was added to the conventional treatment regimen, with subcutaneous administration every 4 weeks during the first 3 months, then every 8 weeks. Four months after initiating treatment, the following benefits were observed: peripheral blood eosinophils remained at 0%, functional improvement in FEV1 by 22%, immunoglobulin E became negative, oxygen therapy was discontinued, no exacerbations occurred - not even mild ones - no need for oral/systemic corticosteroids, and significant improvement in both symptoms and quality of life (ACT score of 24). **Conclusions:** Patients with severe bronchial asthma present a characteristic profile: poor symptom control, severe exacerbations requiring hospitalization, corticosteroid dependence, peripheral eosinophilia, severe airway obstruction with reduced spirometric parameters, and specific comorbidities (such as chronic rhinitis). Recognizing this phenotype may have a favorable impact by enabling much earlier initiation of biological therapy with anti-IL-5 receptor monoclonal antibodies, leading to improved disease control and enhanced patient quality of life.

Keywords: severe bronchial asthma, phenotype, eosinophilia, biological therapy, monoclonal antibodies

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CARDIOLOGY TODAY: UNIFIED GUIDELINE-BASED MANAGEMENT OF ACUTE CORONARY SYNDROMES”

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Background: Acute coronary syndromes (ACS) continue to be a primary cause of cardiovascular morbidity and mortality worldwide. Advances in clinical practice, device technology, and pharmacology have significantly changed the landscape of ACS management over the last decade. In response, the 2025 collaborative guideline, developed by five major cardiovascular and emergency care societies (ACC, AHA, ACEP, NAEMSP, and SCAI), offers a unified and updated framework for the management of both ST-elevation and non-ST-elevation ACS, replacing a series of fragmented earlier guidelines. **Objective:** The objective of this study is to analyze the 2025 guideline for the management of acute coronary syndromes (ACS) in the context of previous international recommendations, highlighting its evolution, key updates, and clinical implications. By comparing it with prior guidelines published between 2013 and 2021, the study aims to provide a comprehensive understanding of how ACS management has progressed and become more unified over time. **Material and methods:** This document is based on a structured, multi-phase review process that evaluated clinical literature published between July 2023 and April 2024. The authors performed an extensive search of databases including MEDLINE (via PubMed), EMBASE, and the Cochrane Library, focusing on randomized controlled trials, large-scale observational studies, meta-analyses, and systematic reviews. Guideline panels also re-examined the scientific foundations of previous documents (2013 STEMI, 2014 NSTEMI, 2015 PCI-focused update, 2016 DAPT update, and the 2021 revascularization guideline) to determine which recommendations required retention, revision, or retirement. The strength of evidence and recommendations were graded using established consensus methodology. **Results :** The resulting guideline reflects several paradigm shifts in ACS care. Notable updates include: (1) a standardized preference for radial artery access during percutaneous interventions due to superior safety profiles; (2) more nuanced timing for invasive assessment in non-ST-elevation ACS; (3) a personalized approach to the duration of dual antiplatelet therapy (DAPT), guided by individualized ischemic and bleeding risks; and (4) system-level improvements encouraging seamless coordination between emergency medical services and in-hospital care. Collectively, these changes represent a movement toward precision medicine and integrated cardiovascular care. **Conclusions:** The 2025 ACC/AHA/ACEP/NAEMSP/SCAI guideline establishes a new standard in ACS management by synthesizing the most robust recent data into a clear, actionable framework. Its evidence-based, patient-centered approach is designed to reduce variability, enhance outcomes, and foster consistency across the entire continuum of care.

Keywords: acute coronary syndromes, clinical guidelines, interventional cardiology, dual antiplatelet therapy

THE INITIAL EXPERIENCE IN ROBOTIC SURGERY AT BISTRITA EMERGENCY CLINICAL HOSPITAL

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Background: The Bistrita Emergency Clinical Hospital (SCJUB) has implemented a robotic surgery program, marking a transformative step in surgical care within the region. The integration of robotic surgery into modern surgical practice represents a significant advancement in minimally invasive procedures, offering: reduced morbidity, improved recovery times and enhanced surgical precision. **Objective:** This study aims to evaluate the initial experience of SCJUB with robotic-assisted surgery, focusing on safety, feasibility, learning curve and perioperative outcomes during the implementation phase. **Material and methods:** A retrospective analysis was conducted on our first 40 robotic procedures performed between November 2024 until now at SCJUB. The da Vinci Xi robotic platform was utilized across two specialties: urology and general surgery. All procedures were performed by surgeons undergoing dedicated robotic training and proctorship . Data collected included patient demographics, indications for surgery operative time, conversion rates, intra- and postoperative complications, length of hospital stay and early outcomes. **Results :** A total of 40 robotic procedures were performed: 35 in urology (20 prostatectomies, 10 partial nephrectomies ,5 pyeloplasties) and 5 in general surgery (2 umbilical hernia repairs, 3 hiatal hernia repairs). The mean operative time decreased progressively, indicating a favorable learning curve. The median hospital stay was 3 days significantly shorter than traditional similar procedures. Postoperative complications were minimal (Clavien-Dindo grade I-II in 3% of cases). **Conclusions:** The initial experience at SCJUB demonstrates that a robotic surgery program can be safely and effectively integrated into a public healthcare institution, with promising outcomes and a manageable learning curve. Continued data collection for long-term follow-up is necessary to fully assess the impact of robotic surgery on hospital resources and clinical outcomes. This milestone positions SCJUB on the map of advanced minimally invasive surgery institutions in Romania.

Keywords: robotic surgery, da Vinci Xi, minimally invasive surgery, prostatectomy

CARING FOR THE PATIENT WITH PARKINSON'S DISEASE

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Background: Parkinson's disease is a progressive neurodegenerative condition characterized by both motor and non-motor disorders, significantly affecting patients' lives physically and emotionally. **Objective:** This paper aims to highlight the complex role of the nurse in the care of patients with Parkinson's disease, focusing on specific interventions necessary to maintain quality of life and prevent complications associated with the progression of the disease. **Material and methods:** The care provided includes monitoring medication therapy, supporting daily activities, educating both the patient and their family, as well as offering psycho-emotional assistance, which is extremely important in the context of a chronic illness. **Results :** Furthermore, the importance of a multidisciplinary approach and the constant adaptation of the care plan based on the stage of the disease and the individual needs of the patient are emphasized. **Conclusions:** The conclusions underline that personalized, empathetic, and well-coordinated care contributes significantly to maintaining patient autonomy and improving their overall condition.

Keywords: Parkinson’s disease, Psycho-emotional support, Therapeutic interventions, Multidisciplinary approach

LAPAROSCOPIC RADICAL NEPHRECTOMIES - BISTRIȚA EMERGENCY HOSPITAL EXPERIENCE (2022-2024)

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Background: Renal cell carcinoma (RCC) presents a significant challenge in urological oncology, with varied clinical presentations from asymptomatic early stages to advanced symptomatic disease. Epidemiological data indicates a higher male prevalence. The surgical management of RCC has evolved towards minimally invasive techniques, notably laparoscopic radical nephrectomy, due to its potential for improved patient outcomes, including reduced morbidity, less blood loss, and faster recovery compared to open surgery. This study investigates the application and outcomes of laparoscopic radical nephrectomy within the specific patient population of Bistrița County Clinical Emergency Hospital (SCJUB). **Objective:** This retrospective analysis aims to evaluate the perioperative outcomes and early postoperative complications associated with laparoscopic radical nephrectomies performed for renal tumors at SCJUB between January 2022 and December 2024. The primary goals are to assess the effectiveness of this minimally invasive surgical approach in our local context and to identify key outcomes relevant to patient care and resource management. **Material and methods:** A retrospective review was conducted on all patients who underwent laparoscopic radical nephrectomy at SCJUB during the study period. The cohort comprised 150 patients (85 men, 65 women) with a mean age of 64 years (range: 38-82). Tumor staging using the TNM classification was recorded. Tumor sizes were distributed as approximately 25% cT1a (≤4 cm), 55% cT2 (7-10 cm), and 20% (>10 cm). Analyzed variables included patient demographics, tumor characteristics, operative parameters (operative time, estimated blood loss), hospital stay duration, blood transfusion requirements, and postoperative complications within 30 days. **Results :** Laparoscopic radical nephrectomy demonstrated a significant reduction in average postoperative hospitalization time compared to historical open surgery controls at our institution (mean of 4 days vs. 6.5 days). Blood transfusion was required in about 8% of patients. Postoperative complications included a single digestive fistula, one case of non-lithiasic pancreatitis, and four instances of postoperative ileus. Notably, no perioperative mortality was observed. **Conclusions:** The findings of this study support the use of laparoscopic radical nephrectomy as a safe and effective surgical treatment for appropriately selected renal tumors at Bistrița Emergency Hospital. The low incidence of major postoperative complications, coupled with a shorter recovery period and reduced hospital stay, highlights the advantages of this minimally invasive approach, contributing to improved patient outcomes and a quicker return to normal activities within our surgical practice.

Keywords: renal tumors, laparoscopic radical nephrectomy, urological oncology

PREVENTION OF STREPTOCOCCAL INFECTION – A REAL CHALLENGE

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Background: Streptococcal infections represent a group of highly prevalent infections among the pediatric population, despite advancements in the healthcare field. These infections remain a significant cause of morbidity and mortality. Misdiagnosis or non-compliance with therapeutic management are the main causes of post-streptococcal acute glomerulonephritis and acute rheumatic fever, complications that occur long after the initial infection but can be life-threatening. **Objective:** The primary objective of this study was to assess parents' knowledge regarding streptococcal infections and the therapeutic management applied in cases where their child or children were diagnosed with a streptococcal infection. **Material and methods:** A structured questionnaire consisting was designed toc over aspects such as demographic , knowledge atittude towards , precevied beenfits , and barriers related to streptococcal infections. The questionnaire wasdistributed online through specialized platforms(such as Google Forms) and social media networks . The distribution period was short , lastingonlya few days, and the total number of respondents was 82 registered. **Results :** Statistically speaking, the three main symptoms identified by parents during episodes of pharyngitis were sore throat (73.2%), fever (65.9%), and refusal to eat (58.5%). A significant percentage (62.2%) of participants reported not receiving any information about streptococcal infections when consulting their family physician or pediatrician for pharyngitis. More than half of the

parents administered antibacterial therapy without performing a throat swab. A very small percentage (2.4%) administered antibacterial therapy for a documented streptococcal infection for a period of 10 days, while the majority (54.9%) administered it for only 5 to 7 days. **Conclusions:** Our study is in line with other specialized studies that present the incorrect administration of antibacterial therapy in pharyngitis of streptococcal origin, the lack of information of parents about the importance of pharyngeal exudate before administering antibiotics, as well as about the possible complications due to streptococcal infections. The lack of a vaccine, the lack of parental education regarding the acute and chronic adverse effects of these infections, the return of infected children to community settings, non-compliance with treatment, and the challenges in implementing prevention measures in kindergartens are the main factors contributing to this public health issue.

Keywords: streptococcal, antibiotics, infection, children

PREDICTIVE CLINICO-BIOLOGICAL MODELS FOR IDENTIFYING ACUTE VIRAL RESPIRATORY INFECTIONS IN PEDIATRIC PATIENTS

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Background: Acute viral respiratory infections in children are frequent and often difficult to distinguish from bacterial infections based solely on clinical symptoms. This diagnostic uncertainty frequently leads to the overuse of antibiotics and unnecessary hospital admissions. In the absence of widely accessible rapid testing, the development of predictive clinico-biological models could provide a more accurate framework for guiding diagnoses and treatments, thereby reducing morbidity as well as the unnecessary consumption of medical resources. **Objective:** This study aims to assess the accuracy of clinico-biological models in identifying viral respiratory infections in pediatric patients, using etiological diagnoses confirmed by rapid antigen tests or RT-PCR as references. **Material and methods:** A retrospective study was conducted from April 1, 2024, to April 1, 2025, analyzing clinical presentations and paraclinical investigations among patients diagnosed with respiratory illnesses. Viral etiology was determined based on results from rapid tests or RT-PCR. **Results :** The study included 69 patients, with the under-5 age group comprising 72.46% of the cohort. The clinical presentation was characterized by fever (60.89%), cough (76.81%), poor appetite (43.47%), and respiratory distress (34.78%). Inflammatory markers were only mildly elevated, and rapid test analyses identified influenza A/B as the most frequent pathogen (40.57%), followed by RSV (17.39%), COVID-19, and adenovirus. Despite the predominantly viral etiology, 26 patients received antibacterial therapy. Most cases were mild-to-moderate, and all patients had favorable outcomes. **Conclusions:** Our analysis aligns with existing literature and underscores the need for larger-scale studies to develop diagnostic protocols that integrate rapid tests, clinical presentation, and paraclinical investigations. Such protocols could enable targeted etiological treatment, reducing morbidity from respiratory pathologies as well as unnecessary antibiotic use.

Keywords: viral respiratory infections, predictive models, clinico-biological data, clinical triage

PHARMACY ASSISTANCE – BISTRIȚA

DIETARY SUPPLEMENTS WITH CINNAMON BENEFITS AND INTERACTIONS

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Background: At least theoretically, it must be admitted that any drug is a toxic substance, to the extent that it requires a metabolic effort to adapt the body to obtain the therapeutic effect. Due to the fact that patients are very informed in the online environment through advertisements about dietary supplements, they must also know the adverse reactions that they bring. **Objective:** For patient safety, they must be well informed about both the benefits and adverse reactions of dietary supplements, as well as possible drug interactions that may lead to ineffective treatments. **Material and methods:** Countless studies show that recently, most patients use dietary supplements, especially those with cinnamon, due to the numerous benefits they bring to the human body, such as regulating heart rate, anticoagulant role, stimulating brain activity etc. According to a 2015 study, cinnamon can help reduce inflammation in the body, and may be useful in relieving menstrual pain, migraines, and other nervous tension caused by inflammation. Thanks to the antioxidants it contains, it can improve memory and attention. Thanks to its tonic nutrients, it can be a support during stressful time, and it can help with relaxation thanks to its rich content in magnesium and potassium. **Results :** Cinnamon dietary supplements have numerous benefits for the body , but also side effects and drug interactions, such as those between cinnamon and antibiotics (penicillins, cephalosporins), antidiabetics, or medications used for cardiovascular diseases. **Conclusions:** Therefore, for proper use of cinnamon dietary supplements, patients must be well informed and aware of all the risks they may pose, therefore they should seek medical advice before use.

Keywords: Drug interactions,, Dietary supplements,, Anti-inflammatory,, Cinnamon.

CANNABIDIOL OIL

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Background: Cannabidiol oil comes from the cannabis plant, but especially from hemp plants, becoming in recent years an alternative therapy for a number of ailments. **Objective:** The purpose of this study is to discover the benefits of this oil, with the help of people who have had satisfactory results after consumption. **Material and methods:** Studies have shown that Cannabidiol connects to CB 1 and CB 2 receptors, thus helping the body to fight for the relief of some symptoms in: Stroke, Alzheimer's Disease, Parkinson's Disease and even having an effect in the case of autoimmune diseases. **Results :** Stroke has anti-inflammatory benefits, helps reduce oxidative stress. It reduces inflammation and improves sleep, thus helping people suffering from Alzheimer's disease and those with autoimmune diseases such as Lupus. Also following the studies carried out, it has been proven that it also helps in the case of Parkinson's Disease by reducing tremor. **Conclusions:** Cannabidiol is used by an increasing number of people lately, but care must be taken when choosing it, it must be as natural and qualitative as possible. Results from consumption can appear immediately or it can take even weeks to see improvements in the well-being of the people who use it.

Keywords: cannabidiol oil,, anti-inflammatory benefit,, the benefits of oil

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ORGANIC POLLUTANTS IN ROMANIAN WATERS

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Introduction: Water is a vital resource for life, yet its quality is compromised by organic pollutants from industrial, agricultural, and household sources. Substances like pesticides, polycyclic aromatic hydrocarbons, drugs, and organic solvents can be toxic to aquatic ecosystems and human health. Their lasting presence in the environment represents a significant threat to biodiversity and the safety of drinking water. **Case Report:** This paper aims to analyze recent literature on organic pollutants in Romanian waters, highlighting the main sources, consequences, and contamination prevention solutions. **Discussions :** The main classes of identified organic pollutants include

pesticides (dichlorodiphenyltrichloroethane, glyphosate, and neonicotinoid insecticides) used in agriculture, which persist in the environment and affect the endocrine and neurological systems of organisms. Also, aromatic hydrocarbons originating from fossil fuel combustion and oil spills, have carcinogenic and toxic effects on aquatic fauna. Polychlorinated biphenyls (PCBs), despite being banned in many countries, continue to persist in the environment, accumulating in the food chain and impacting the nervous system and liver. Organic solvents used in industry (e.g benzene, toluene, or chloroform) contaminate water through accidental spills. Pharmaceutical products and endocrine disruptors, arising from the improper disposal of medications, affect the growth and reproduction of aquatic species. The consequences of water pollution are severe, ranging from biodiversity loss and toxin bioaccumulation to health effects such as cancer risks and hormonal disorders. Recent studies highlight the importance of implementing strict preventive measures, such as enhancing wastewater treatment processes, encouraging organic farming, and increasing public awareness. According to data from the National Environmental Protection Agency, 1/3 of Romania`s water sources are affected by pesticides and higher levels of detergents. **Conclusions:** Water pollutants have diverse sources and represent significant risks to both aquatic life and human health. Responsible management of organic pollutants and effective preventive measures to control their spread are critical for protecting this vital resource.

Keywords: organic pollutants and drugs,, contaminated Romanian waters,, organic solvents,, pesticides

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THE IMPORTANCE OF ACYLATION REACTIONS IN DRUG SYNTHESIS

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Introduction: Acylation reactions involve the introduction of an acyl radical (-RCO) into a molecule, leading to carbonyl compounds, amides, or esters, depending on the specific substrate involved. Acylation reactions play a key role in the synthesis process of a variety of drugs but also have an important application in the development of prodrugs - compounds capable of releasing the active drug into the organism through the process of biotransformation. Among the advantages of formulating active substances as prodrugs are improved solubility, bioavailability, and stability within the organism, as well as targeted delivery to specific tissues and a reduced risk of side effects. Therefore, the prodrug form is of considerable interest to the pharmaceutical industry. **Case Report:** This paper aims to highlight the significance of acylation reactions in the synthesis of well-known drugs in the pharmaceutical industry, as well as in the development of prodrugs that have provided benefits in the treatment of various conditions. **Discussions :** Acylation reactions play a critical role in drug synthesis, enabling the formation of active compounds with significant therapeutic effects. Well-known examples include acetylsalicylic acid, synthesized by acylating salicylic acid with acetic anhydride, as well as paracetamol and various ester- and amide-type local anesthetics. Furthermore, ester-based prodrugs are synthesized through acylation reactions (e.g. enalapril (high blood pressure), isobactin as O-acyl peptide of teixobactin, an antibiotic, valaciclovir, oseltamivir) and are activated in the body via hydrolysis by esterases. These prodrugs can be formulated to release the active drug at specific sites within the body, enabling targeted delivery. This mechanism is particularly beneficial for oncological and antiviral therapies or diseases with localized effects. Prodrugs help minimize side effects by controlling the drug activation, thereby preventing direct toxicity. They are especially valuable in chronic treatments, offering a sustained and controlled release of the active compound. Furthermore, prodrugs can protect active substances from premature degradation under the acidic environment of the stomach or during storage. Also, some syntheses of numerous medications have acylation as a key step. This step is necessary for protective purposes or activation of the carboxyl group. **Conclusions:** Acylation reactions are essential in synthesizing active substances and developing drug formulations, enhancing therapeutic outcomes. Therefore, they are vital for both getting innovative drugs and optimizing existing treatments.

Keywords: acylation reactions,, protective group,, ester prodrugs,, esterases

PLANT-BASED MATRICES AS A SOURCE OF PREBIOTICS: CURRENT INSIGHTS AND FUTURE PERSPECTIVES

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Introduction: Modulating the gut microbiota through functional nutrition has emerged as a key strategy in preventive medicine and chronic disease management. Prebiotics are nondigestible food components that selectively stimulate the growth of beneficial intestinal bacteria. Plant-based matrices rich in fibers, oligosaccharides, and polyphenols represent valuable and sustainable sources of prebiotics with potential applications in both food and clinical settings. **Case Report:** This work aims to explore the role of plant-based matrices as natural sources of prebiotics, emphasize their mechanisms of action on the gut microbiota, assess the technologies used for their extraction and processing, identify their clinical and nutritional benefits, and evaluate future opportunities for innovation, sustainability, and integration into functional food systems. **Discussions :** Compounds such as inulin, FOS, GOS, XOS, and pectins enhance the proliferation of Bifidobacterium, Lactobacillus, and Faecalibacterium prausnitzii, leading to the production of short-chain fatty acids (SCFAs) with systemic benefits. These metabolites play a key role in reducing inflammation, modulating glucose metabolism, and supporting gut barrier integrity. The structure of plant matrices affects the rate of fermentation; intrinsic fibers ensure gradual and distal fermentation in the colon. Modern technologies such as enzymatic hydrolysis, ultrasound-assisted extraction, and biosynthesis facilitate efficient isolation of prebiotic compounds. Applications include functional food products, dietary supplements, and synbiotic formulas. Clinical evidence supports their role in alleviating dysbiosis, lowering inflammatory markers, and improving metabolic status in obesity and metabolic syndrome. **Conclusions:** Plant matrices offer a strategic resource for developing nutritional tools aimed at public health improvement. Recent innovations promote the valorization of unconventional plant sources and the synthesis of next-generation prebiotics. Their integration into daily nutrition, supported by clearer regulatory frameworks, can contribute significantly to gut microbiome health and chronic disease prevention.

Keywords: prebiotics,, gut microbiota,, plant matrix,, functional nutrition.

LAW

WE SURVIVED THE WAR AND WE ARE STILL SURVIVING THE SILENCE

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Background: The war in Bosnia was not just about territory - it was about erasing identity, memory, and bodies. But perhaps the most chilling legacy was not the violence itself - but the silence that followed it. Especially the silence around what women had to endure. After the war, there was a collective effort to move on, without looking back, but a group of brave women refused to stay silent. **Objective:** This study reconstructs a timeline of key events during the Bosnian War, through the **legal and historical testimonies** of survivors - especially women from Srebrenica and Višegrad - whose voices broke through systemic denial. Their refusal to accept silence, their establishment of NGOs, and their pursuit of truth through international legal mechanisms, turned individual memory into collective evidence. This project examines how **women's testimony functioned as a form of justice** , where law and institutions had failed. **Material and methods:** The research uses a legal-historical methodology, analyzing primary sources such as survivor declarations, oral interviews, and visual archives from initiatives like "Remembering Srebrenica." These materials are evaluated not only as historical data, but as **testimonial legal records**, or otherwise said, as acts of memory that challenge impunity. Special focus is placed on how women-led organizations disrupted post-war political inertia and filled the void left by incomplete international prosecutions. **Results :** The narratives reveal a war fought on the bodies of women. Rape camps like Vilina Vlas operated with impunity. International tribunals, including the ICTY, sometimes under-prosecuted or omitted sexual violence. Milan Lukić, responsible for mass atrocities, was convicted for murder, but not for rape. Faced with this legal void, survivors acted: they organized, documented, and testified. Their memory work became a parallel form of justice. Their words are not only testimony. **Conclusions:** Hence, this project reframes women not only as victims, but as legal actors - **archivists of truth**, **builders of evidence**, **and catalysts for justice**. Their stories confront the failure of institutional law and insist that justice does not only live in courtrooms - it lives in memory. In Bosnia, women turned silence into testimony, and grief into law. They taught us that surviving is not enough. **Telling is survival. Telling is justice.**

Keywords: Bosnia,, women’s resistance,, memory as evidence,, legal testimony.

EVIDENCE FORGERY THROUGH ARTIFICIAL INTELLIGENCE

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Background: Artificial intelligence (AI) refers to intelligence generated by computers and other machines designed to simulate human cognitive functions. It enables the execution of thousands of complex operations and calculations that would otherwise be impossible for humans to perform manually. The advancement of AI has led to its integration into various fields, including law. **Objective:** This paper aims to highlight the risks that artificial intelligence poses to the legal field, particularly regarding the administration of evidence in judicial proceedings. One of the major concerns is the potential for AI-generated content to be introduced as falsified evidence. In addition to identifying these risks, this study also seeks to present possible methods for preventing such misuse, thereby ensuring the fair conduct of legal proceedings. **Material and methods:** The research draws upon both video materials discussing this topic and real-life case studies that illustrate the current capabilities of artificial intelligence in content generation. **Results :** While most individuals are still able to distinguish between human-generated content and AI-generated content, doing so has become increasingly difficult in recent years. This necessitates a more detailed and critical analysis of digital evidence that may have been produced using AI tools. **Conclusions:** Given the rapid and inevitable expansion of artificial intelligence across multiple sectors, including law, it is essential to regulate its use strictly. The main goal should be to ensure AI is employed only for legitimate purposes while preventing its exploitation for unlawful activities, such as evidence forgery. Therefore, it is imperative to implement legal frameworks addressing the misuse of AI and to develop technological solutions capable of detecting AI-generated falsified evidence.

Keywords: Artificial Intelligence, Law, Evidence, Forgery, Regulation

CYBERSTALKING AND ONLINE HARASSMENT, THE PROFILE OF A NEW OFFENDER

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Background: Even though we don't have an exact definition of the phenomenon of cyberstalking and online harassment, they are very similar:cyberstalking consists of searching for information using the internet and online means, while online harassment consists of using these methods to threaten and instill fear and anxiety in victims (the cyberstalking does that too, but it is more subtle for the victim)Also, these two can be connected to others form of harassment: school bullying (the study of Beran, T.N. and Li, Q.), stalking in real life and can also make the online offenders become murderers. **Objective:** Through this project, we want to draw attention to the seriousness and gravity of these problems, carried out in all its forms, such as: doxing, impersonation and online sexual harassment, esspcially for the parents whose kids start using social media for a very young age-becoming victim without even realizing itWe would also like to raise an alarm regarding the fact that the legislation in force does not regulate these things expressly and on a case-by-case basis. **Material and methods:** As methods of conducting scientific research, we used various case-based documentation such as Miguel Chavarri, 25, aka Michael Frito accused and convicted for cyberstalking; Sumit Garg case, accused for online harassment; and John B. Hart case, accused for both cyberstalking and online harassment.We also searched for statistics that shows the fact that as many as 7.5 million people experience cyberstalking each year, 69% of stalking victims experience substantial emotional distress and the fear that cyberstalking victims experience is often higher than it is for in-person stalking. **Results :** The evidence from some studies conducted until now reflects that the offenders' conscious anger and hostility toward the victim represents the motivation behind the unwanted pattern of conduct that alarms and causes distress to another individual.This way, we can create and think about a general-template profile to this type of offenders. **Conclusions:** Even though cyberstalking and online harassment are carried out by individuals with a similar profile, for the victims it also results in some inevitable consequences: anxiety, constant fear, disappointment and trusst issues.

Keywords: harassment, cyberstalking, doxing, new offender

THE SIMPLIFIED PROCEDURE AS A LEGAL INSTITUTION

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Background: The Simplified Procedure, as a legal institution, has seen a fairly widespread application in recent years due to its more comprehensive regulation under the new Criminal Procedure Code. It allows the judge assigned to the case a greater degree of freedom in carrying out their duties. **Objective:** The simplified procedure bears many similarities to the plea agreement procedure. This paper will present both the similarities in a comparative framework and the fundamental differences between them, both as distinct institutions of criminal procedural law and in terms of the specific procedural moments in which they are applied. **Material and methods:** The plea agreement procedure is extremely similar to the simplified procedure of admitting guilt, with the essential difference generally consisting in the holders of each procedure and the procedural moment at which they can be applied. **Results :** Regarding the uniformity of criminal procedural law with the rest of the legislative framework, there are certain discrepancies and inconsistencies with respect to the plea agreement. However, these are supplemented by judicial practice, appeals in the interest of the law, or doctrinal opinions. There is, on the other hand, non-uniform judicial practice when it comes to acquittal decisions issued in proceedings carried out under the simplified procedure. Specifically, this arises in relation to the appeal in the interest of the law that prohibits the acquittal of the defendant through a judgment based on paragraph 16 letter c) and letter b) second clause. **Conclusions:** The inconsistent judicial practice is largely due to regulations that leave much to be desired in terms of clarity and predictability, as well as to discrepancies between domestic legislation and the external sources from which it derives.

Keywords: Simplified procedure, Agreement Procedure, Admitting Guilt

THE PRINCIPLE OF LEGALITY IN THE LIGHT OF DECISION NO.25/2025 OF THE HIGH COURT OF CASSATION AND JUSTICE ON THE INTERPRETATION OF THE EXPRESSION "UNDER THE INFLUENCE OF PSYCHOACTIVE SUBSTANCES”

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Background: Romanian jurisprudence has revealed divergent interpretations concerning the application of Article 336 para. (2) of the Criminal Code, which criminalizes driving under the influence of psychoactive substances. Some courts have ruled that the simple presence of such substances suffices to establish the offense, while others have required proof of actual impairment of the driver's ability. **Objective:** This paper examines the implications of Decision no. 25/2025 of the High Court of Cassation and Justice (ICCJ) on the interpretation of "under the influence of psychoactive substances" and its alignment with the principle of legality, specifically lex certa and lex stricta. **Material and methods:** The analysis is based on a doctrinal and jurisprudential review of national case law, the reasoning of the ICCJ in Decision no. 25/2025, and a comparative legal perspective with European and international standards. The study also evaluates the current legislative initiative - Draft Law no. 30/2025 - proposing amendments to Article 336 para. (2) of the Criminal Code. **Results :** The ICCJ clarified that the mere detection of psychoactive substances, including inactive metabolites, in biological samples is insufficient to prove a state of impairment or danger. The decision emphasizes that criminal liability must be based on predictable and clear legal norms, as required by the principle of legality. The proposed amendment under Draft Law no. 30/2025, which seeks to criminalize driving based solely on the presence of psychoactive substances, risks violating these principles by introducing ambiguity and unpredictability in the interpretation of the law. **Conclusions:** Decision no. 25/2025 reinforces the necessity of a strict and precise interpretation of criminal norms, ensuring compliance with the principle of legality. Any legislative attempt to redefine the offense under Article 336 para. (2) must be aligned with constitutional guarantees and avoid arbitrary or overly broad criminalization, as currently suggested by Draft Law no. 30/2025.

Keywords: principle of legality, driving under influence, High Court of Cassation and Justice

REMARKS ON THE LEGAL REGIME OF INJURY – AN ESSENTIAL ELEMENT IN CIVIL LIABILITY

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Background: Through this paper I intend to outline the regulation of the Civil Code regarding damage, which is an essential condition of tort civil liability and I will highlight the basic principles of this matter, as well as the legal consecrations regarding material and moral damage. **Objective:** The objecctive of this presentation is to highlight the regulation of damage in the matter of the current Civil Code and to reflect its importance in tort and contractual civil liability **Material and methods:** I will present the four essential conditions for civil liability: unlawful act, damage, guilt and causal link; Subsequently, I will address its classification and particularities regarding each type of civil liability that is based on a damage: tort and contractual civil liability. **Results :** The paper highlights the fact that damage represents an essential element of civil liability, regardless of whether it is tortious or contractual. The analysis of the regulations in the Civil Code shows that the Romanian legislator recognizes the diversity of forms of damage - material, moral, bodily, through ricochet or damage resulting from the loss of a chance - and enshrines the victim's right to full reparation. The study classifies and explains the role of damage in relation to the other conditions of civil liability (illegitimate act, guilt and causal link), emphasizing that the existence of damage is the premise from which the specific civil law reparation mechanism is triggered. **Conclusions:** The consecration of the victim's right to compensation for the damage caused by the injury of an interest, the damage resulting from the loss of an opportunity to obtain an advantage or to avoid a damage, the bodily injury, the damages by ricochet, or the moral damages represent the bases of the tort civil liability and are likely to give the damage the characteristic of an essential element of this type of liability.

Keywords: injury, conditions of civil liability, bodily injury, moral damages

THE PARTICULARITIES OF THE CRIME OF „INFANTICIDE” IN ROMANIAN CRIMINAL LAW

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Background: Infanticide refers to the criminal act of a mother killing her newborn child immediately or within a few hours after birth. Within the evolution of Romanian criminal law, this offense has sparked long-standing ethical and moral debates. **Objective:** This paper aims to conduct a comparative analysis of how infanticide is regulated in the 1930 Criminal Code versus the current Criminal Code, highlighting legislative changes and the offense's impact on contemporary society. **Material and methods:** A comparative legal approach is used to examine Article 232 of the 1930 Criminal Cod, saying that any person guilty of premeditated murder, parricide, infanticide, or poisoning shall be punished with life forced labor. Infanticide committed by the mother upon an illegitimate child shall be punished with imprisonment. This is compared with Article 200 of the current Criminal Code, stating that the killing of a newborn child immediately after birth, but no later than 24 hours, committed by the mother in a state of mental disturbance, shall be punished with imprisonment from one to five years. Judicial decisions from 1930 to 2025 and crime statistics from urban and rural settings are also taken into account. **Results :** In 1930, infanticide was treated with severity, rooted in the belief that the mother betrayed a moral obligation to protect her child. The maximum penalty - life forced labor - reflected this stance. According to Decision No. 2067/04.11.1977, if it is proven that the mother planned the act in advance and did not act under psychological disturbance, the offense is classified as murder. Actions like hiding the pregnancy and deliberately creating life-threatening birth conditions indicated intent, resulting in a murder charge rather than infanticide. Today, the focus has shifted to evaluating the mother's mental health and the medical context of childbirth. Courts now consider psychological distress as a mitigating factor. However, there remains inconsistency in legal interpretations, especially in distinguishing between infanticide and homicide. **Conclusions:** Although not abundant, jurisprudence plays a key role in defining the legal boundaries of infanticide. The legal approach has evolved from one based on social and moral condemnation to one centered on the psychological condition of the mother. This shift reflects a broader trend toward a more humane and individualized understanding of criminal responsibility. Legislative clarification and consistent judicial practice are needed to prevent arbitrary application of Article 200 of Criminal Code.

Keywords: Criminal Code, Infanticide, murder, crime

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