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17th-21th of May 2023
Targu Mures, Romania

BOOK OF ABSTRACTS

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BASIC MEDICAL SCIENCES

PREVALENCE TREND AND HISTOPATHOLOGICAL CHARACTERISTICS OF CERVICAL CANCER IN MUREȘ COUNTY HOSPITAL: A RETROSPECTIVE STUDY (2014-2022)

Cristian Tătar[1], Georgian-Nicolae Radu[1], Adela Nechifor-Boilă[1], Carmen Carașca[2]

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Background: According to World Health Organization (WHO) statistics, in 2020, in Romania, cervical cancer (CC) was the second most diagnosed malignancy among women under 60 years-old and the first cause of death due to a malignancy for women under 40 years-old. Cervical cancer is associated with Human Papillomavirus (HPV) infection in most cases, being preceded by pre-malignant lesions. **Objective:** In this study, we aimed to assess the prevalence trend and various histopathological characteristics of CC over the last 9 years in Mureș Clinical County Hospital. **Material and methods:** We performed a retrospective study and evaluated all cases of CC registered in the Pathology Department, Mures Clinical County Hospital between 2014-2022. Cervical biopsies, cone excision and hysterectomy specimens were included in the study. Demographic (age at diagnosis, year of diagnosis) and histopathological data (including TNM and FIGO stage) were collected from the pathological reports. **Results :** A total of 622 histopathological reports, from January 2014 to December 2022, were analysed; 39% of the studied specimens were cervical biopsies, 37% cone excisions and 24% hysterectomies. Out of all analysed reports, 153 (25%) identified an invasive, malignant lesion. Among these cases, squamous cell carcinoma (SCC) was the most prevalent (86% of cases), followed by adenocarcinoma (ADK) (10% of cases); other tumour types, including adenosquamous carcinoma or secondary tumours were rare. Based on age categories, the highest incidence of CC was found among patients aged between 60 and 70 years-old (35%), while ADK had a prevalence peak in the sixth decade (31%). During our study period no woman under 25 years old has been diagnosed with CC. More than half (57%) of the malignant lesions were FIGO stage IB1 at the time of diagnosis, almost 30% were FIGO stage II or higher. Looking at the prevalence trend of CC, the number of new diagnosed cases each year varied throughout the study period, with peak prevenances observed in 2016 and 2019. **Conclusions:** : As expected, in our study the majority CC cases were SCCs, while ADK cases were found in much smaller percentages. Approximately half of the cases were FIGO stage IB1. Most of SCC cases occurred in post-menopausal women. The prevalence trend of CC varied considerably throughout the study period, COVID19 pandemic year (2020) being characterized by a sudden decrease in the number of new cases compared to 2019.

Keywords: cervical cancer, squamous cell carcinoma, adenocarcinoma, Human Papillomavirus

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UROTHELIAL BLADDER CANCER IN YOUNG PATIENTS

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Background: Urothelial bladder carcinoma (UBC) is one of the most frequent urological tumors, with most of the cases occuring in patients over 65 years old. It is a rare entity in children and young adults, and for this reason, in these patients its clinical behaviour and prognosis are not well defined. **Objective:** Our objective was to study the incidence of these tumors in patients under 40 years old, as well as the histological type and the tumor stage, and to compare them with the older age categories. **Material and methods:** Our retrospective study included 940 patients who underwent a transurethral resection for bladder cancer from January 2018 to November 2022 and is focused on patients under 40 years old. For each patient we assesed the age, gender, histological type, tumor stage and tumoral reccurence. **Results :** Our study included 940 patients, with only 7 patients under 40 years old (0.7%), 5 men and 2 women, with a male:female ratio of 2.5:1. We could notice that this ratio was much lower in young patients, compared to patients older than 40 years old (3.9:1) (p=0.032). Regarding the histological type, within the young age group, 71.4% had low grade papillary urothelial carcinoma (LGPUC), 14.3% had papillary urothelial neoplasm of low malignant potential (PUNLMP), and 14.3% had high grade papillary urothelial carcinoma (HGPUC). No young patients were diagnosed with invasive UBC (p=0.000). As for the pathological stage, 85.7% of young patients were pTa and 14.3% pT2, revealing that UBC in young patients tends to be non invasive (p=0.027). Only 14.3% of the patients had carcinoma in situ associated and 14.3% had tumor reccurence. **Conclusions:** UBC in young patients is a rare entity, representing only a small percentage of all UBC. We noticed that UBC in young patients is prone to be low grade and stage, suggesting a more favorable prognosis. On the

other hand, some of them tend to reccur, so their follow-up should be as strict as for the rest of the patients.

Keywords: urothelial bladder carcinoma, young patients, transurethral resection, low grade and stage

MIND OVER (THE) MICROBES: THE INTRICATE RELATIONSHIP BETWEEN NEUROTRANSMITTERS AND BACTERIAL GROWTH

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Background: The interaction between the brain and the human gastrointestinal commensal microbiota, also known as the gut-brain axis, can modify the levels of circulating neurotransmitters. Studies have also shown that the relation between the neurotransmitters and the commensal intestinal flora is a reversible one, suggesting that bacterial growth might be influenced by neurotransmitters. **Objective:** This study aims to identify the in vitro effect exerted by the neurotransmitters adrenaline, noradrenaline, and dopamine on the virulence of methicillin-resistant S. aureus (MRSA), a bacterium commonly involved in central nervous system (CNS) infections and proven to be part of the gut microbiota. **Material and methods:** Adrenaline (1mg/ml), norepinephrine tartrate (2mg/ml), and dopamine hydrochloride (5mg.ml), were successively diluted in Muller-Hinton (MH) solution to reach successive concentrations of 10-3 mg/ml, 10-5 mg/ml and 10-7 mg/ml. These concentrations were chosen to reflect the average physiological levels of neurotransmitters. Inocula of 0.5 McFarland units were prepared by combining MRSA (ATCC 43300) with saline suspensions. MRSA was previously stored at -80˚C and subsequently cultured on a Blood Agar, for 24 hours at 37˚C. A quantity of 3 µl was taken from these inocula and combined with 2 ml of MH medium enriched with neurotransmitter at different concentrations. The control samples were obtained by combining a quantity of 5ml pure MH solution with 7.5 µl of the same bacterial inoculum. The samples were measured spectrophotometrically at 4 different time points (at 0h, 24h, 48h and 72h), at 600nm, using the Eppendorf BioPhotometer® D30 (Eppendorf, Austria GmbH). Each experiment was performed in triplicate. **Results :** There was no significant statistical difference between the control sample and the neurotransmitter samples at 0h and 24h (ANOVA $p<0.05$, Tukey post-hoc $p<0.05$ across all comparison groups), but there was a statistically significant increase in bacterial growth at 48h and 72h in all samples that were supplemented with neurotransmitters compared to control sample (ANOVA $p>0.05$, Tukey post-hoc $p>0.05$ across all comparison groups). **Conclusions:** This study proves that the three catecholamines, adrenaline, dopamine, and noradrenaline promote the growth of MRSA supporting the hypothesis of a bidirectional gut-brain relationship. These findings could have clinical implications portraying a potential side effect of inotrope administration when confronted with MRSA infections and further studies are needed to prove this hypothesis in vivo. Although these results are similar with previous reports, the particularity of this study, compared to the existing literature is that physiologically relevant levels of clinically available drug variants of neurotransmitters were used.

Keywords: Bacteria, Neurotransmitters, Gut-Brain Axis, MRSA

AUTOMATIC ASSESSMENT OF BONE AGE USING ARTIFICIAL INTELLIGENCE

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Background: Bone age assessment is a diagnostic process, that is currently performed manually by radiologists, which is tedious, time-consuming and prone to subjectivity. Thereby, it is important to develop an alternative. A possibility for this would be the use of Artificial Intelligence to automatize the diagnosis of bone age. **Objective:** The aim of this paper was to develop an automatic diagnosis tool that utilizes machine learning to predict bone age on paediatric hand radiographs. Moreover, we pursue a model that offers an under +/- 6 months average error, a value with clinical relevance. **Material and methods:** To achieve this goal, we utilized the RSNA Paediatric Bone Age Challenge dataset, which consisted of 14.036 radiographs with the annotation of the bone age, determined by a team of four radiologists, and the sex of the patients. The images were pre-processed using machine learning to eliminate the background, reorientate and rescale the images and for the extraction of four arias of interest, namely the carpal region, the metacarpal region, the region of fingers 1,3,5 and the region of all five fingers. In this way, we obtained five datasets, each focusing on different parts of the radiographs. Finally, the data was split into 90% training data and 10% validation data. **Results :** The preliminary results showed an average error of +/- 7.25

months for all ten models, with the best prediction being +/- 6.88 months for the classification of the region of fingers 1,3,5. Subsequently, we applied ensemble learning, and tested the real-world applicability of the program on a test dataset. In this way, we simulated a clinical context in which we introduce to the model cases that were not interpreted before. This resulted in an average error of +/- 5.41 months, demonstrating generalization capabilities. **Conclusions:** Obtaining the average error of +/- 5.41 months, we reach the goal of having a model that predicts the bone age with an average error of under 6 months. Moreover, this shows the possibility of building complex models for diagnostics with satisfactory result, disposing only of the personal computer with limited computation power.

Keywords: Artificial Intelligence, Deep Learning, Radiology, Bone Age Assessment

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EPIDEMIOLOGY OF FAKE NEWS

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Background: The rise of the internet and social media has provided a platform for the rapid spread of false information, which has led to the erosion of trust in traditional news sources and institutions. This phenomenon has resulted in a "post-truth" era, where the value of objective truth has declined in favor of subjective beliefs and opinions. **Objective:** This study presents an epidemiological investigation of the complex phenomenon of fake news, seeking to identify factors that contribute to its spread and potential solutions to minimize its impact. **Material and methods:** Using online surveys and statistical analysis, we collected data from a sample of 442 participants of varying ages, genders, levels of education and native environments. The questionnaire consisted of 30 questions with simple or multiple-choice answers. The Chi-Square Test was used for statistics and p-value <0.05 was considered for statistical significance. **Results :** The study found that out of 442 participants, most participants have low (72.4%) or no trust in the media (15.4%), despite regular news consumption and social media usage. Over 85% were deceived by fake news on platforms like Facebook, which is the primary source of misinformation (95%). Healthcare (69%) and politics (85%) were identified as the least reliable domains, while sports (8.8%), entertainment (18.8%), and science (30.1%) were deemed the most trustworthy. 45% of participants spend less than 1 hour daily on media, 38.9% between 1-3 hours. Of the 442 participants, 89.4% of the female participants use their phone as they primary gadget compared to man (79.5%). Following the application of the square CHI test to determine the correlation between the gender and most used gadgets, we obtained a p-value = 0.012, representing a statistically significant association between these parameters with women using mobile phones more frequently. Participants' rural or urban background is significantly associated with the importance of fake news (p=0.001), with rural participants being less concerned and less likely to verify information (p=0.0001), making them more susceptible to deception. **Conclusions:** People from rural backgrounds are more susceptible to believing fake news due to their lack of interest in the topic and their tendency not to verify information. Furthermore, the study finds that women spend more time on their phones than men, potentially increasing their exposure to fake news. Lastly, Facebook is identified as the primary source of fake news, highlighting the need for social media platforms to take steps to combat the spread of false information.

Keywords: fake news, social media, post-truth

DISTRIBUTION OF THE GEOMETRIC PARAMETERS OF HUMAN AORTIC-COMMON ILIAC BIFURCATIONS IN ATHEROSCLEROSIS RISK

Denisa-Maria Borla[1], Alexandra-Elena Borla, Alexandru Muresan[1], Razvan-Andrei Gligor[1], Eliza Russu[1]

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Background: The aortic bifurcation, which gives rise to the two common iliac arteries, is situated at the fourth lumbar vertebra, and has an angle of approximately 60° to 70°. Each common iliac artery further branches into an internal iliac artery and an external iliac artery, which continues as the femoral artery. Recent studies have revealed that the left common iliac artery is smaller in diameter than the right and has a narrower angle of bifurcation. This is due to the asymmetrical left lateral orientation of the abdominal aorta. Consequently, the left common iliac artery is more prone to developing atherosclerosis than the right counterpart. **Objective:** The objective of our study is to determine the precise location of the aortic bifurcation, the angle of the aortic-common

iliac bifurcation relative to the lumbar vertebra, the length of the common iliac artery, and their potential influence on atherosclerosis. **Material and methods:** In this study, we analyzed a total of 79 computed tomography scans obtained between 2020 and 2022 from the Clinic of Vascular Surgery at the Emergency Clinical County Hospital in Targu Mures. All patients were diagnosed with peripheral arterial disease with infrainguinal severe stenosis or occlusion. **Results :** As for the results, the mean value of the common iliac bifurcation angle was 51.73 degrees, the length of the left common iliac artery was 6.49 cm, the length of the right common iliac artery was 7.44 cm, and the mean degree of stenosis was 24.91 on the left common iliac artery, and 17.82 on the right common iliac artery. A strong correlation was observed between the angle of the common iliac artery bifurcation and the degree of stenosis of the left common iliac artery ($R=0.849$; $p<0.01$), as well as the degree of stenosis of the right common iliac artery ($R=0.616$; $p=0.008$). No correlation was observed between the length of iliac artery and the stenosis. **Conclusions:** The impact of haemodynamic forces on the formation and localization of atherosclerotic plaques remains a topic of debate. Despite this, it is recognized that local variations in haemodynamic forces between the two iliac arteries may play a significant role, provided that biochemical and genetic factors have a uniform influence on the arterial system. At the bifurcation point, anatomical differences between the iliac arteries are infrequent. However, due to the aorta's bifurcation being situated to the left of the midline of the sagittal plane, the right iliac artery must adopt a greater take-off angle.

Keywords: angle, atherosclerosis, bifurcation, plaques

DIETARY RISK FACTORS AND THEIR IMPACT ON GASTROINTESTINAL DISEASES

Oana Rusu[1], Ana-Maria Sandu[1], Tania Negovan[1], Camelia Sandu[1], Cristina Golea[1]

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Background: Nutrition and dietary habits influence humans' health, as food is the main source of nutrients that are necessary to live and function. Eating unhealthy food, having disorganized dietary habits and the absence of hygiene can lead to developing different diseases, including a variety of gastrointestinal pathologies. The most common digestive diseases that are affected by dietary patterns are gastro-esophageal reflux disease (GERD), gastritis, functional dyspepsia, ulcerative colitis, chronic constipation and diarrheal disease. **Objective:** It is known that the relationship we have with food can determine how healthy we are and how prone we are to develop diseases. The aim of this study is to evaluate the dietary risk factors which include food, eating habits and hygiene and their impact on the gastrointestinal tract's heath. **Material and methods:** This research is a case-control study which was performed between November 2022 and January 2023, using an online survey to evaluate different dietary risk factors. The questionnaire was shared on social media platforms and using the informed consent and under the protection of anonymity, 275 respondents filled in. **Results :** Out of the 275 respondents, 85 have been diagnosed with a gastrointestinal disease, most of them suffering from gastritis (16,73%) and GERD (11,64%). The categories with less respondents consist of subjects suffering from functional dyspepsia, chronic constipation and diarrheal disease. No subject was diagnosed with ulcerative colitis. There is a statistically significant association between the subjects who ate spicy foods (OR=0.405, CI=0.18-0.86, p=0.025) and sweets (OR=0.402, CI=0.25-1.12, p=0.001) and GERD, but the probability of developing this disease is lower compared to the control group. Respondents who eat sweets (OR=1.51, CI=1.13-3.13, p=0.025) and especially chocolate (OR=3.22, CI=1.38-7.53, p=0.0068) were more likely to develop gastritis. This study found a statistically significant association between ingesting a large amount of food and gastritis (p=0.049). Another statistically significant association was found between coffee consumption ($p<0.00001$) and eating dairy ($p<0.00001$) and the subjects diagnosed with chronic constipation. There is a statistically significant association between the subjects that don't usually wash their hands before eating a meal or after using the toilet and developing diarrheal disease (p=0.0043). **Conclusions:** This study showed the associations between dietary risk factors and gastrointestinal pathologies and a higher probability of developing a digestive disease by maintaining a certain lifestyle. Although a couple of risk factors are related to these diseases, further studies should be conducted to confirm the correlations.

Keywords: gastritis, eating habits, diet, hygiene

MENTAL STRESS AND OXIDATIVE STRESS - WHICH IS THE CAUSE AND WHICH IS THE EFFECT

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Background: The topic of oxidative stress is highly debated, with literature reviewing its detrimental effects on various pathologies such as cancer, chronic obstructive pulmonary disease, and type 2 diabetes mellitus. However, recent studies have also explored the potential benefits of oxidative stress as well as the harmful effects of reductive stress. Growing evidence shows a correlation between mental stress and unbalanced antioxidative homeostasis. Especially during mental stress periods more reactive oxygen species (ROS) are produced. **Objective:** The aim of this paper is to evaluate the existing literature regarding the oxidative status, specifically oxidative stress, induced in young individuals as a result of mental stress. **Material and methods:** A comprehensive review of existing literature was conducted using the key words "oxidative stress" and "mental stress". **Results :** There can be several mechanisms identified through which mental stress induces oxidative stress. Following neuronal stimulation such as in periods of mental stress, specific regions of the brain display increased activity, resulting in heightened cerebral blood flow, blood volume, glucose consumption and oxygen metabolism. The main sources of reactive oxygen species (ROS) are the mitochondrial oxidative processes, as the electron transfer chain takes place in the inner mitochondrial membrane. **Conclusions:** Mental stress-induced oxidative stress is a complex phenomenon with significant health implications among young individuals. Despite the numerous studies conducted, a debate persists regarding the cause and effect between the identified factors. This work was supported by the George Emil Palade University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș, Research Grant number 165/7/10.01.2023

Keywords: Oxidative stress, Mental stress, Young individuals, Reactive oxygen species

STXBP-1 (SYNTAXIN-BINDING PROTEIN-1) IS A POTENTIAL BIOMARKER FOR IDENTIFYING SEPSIS PATIENTS

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Background: Sepsis is a potentially fatal condition caused by an abnormal and exaggerated immune and coagulation response to infection, which results in multiple organ failure. Given the syndrome's high mortality and morbidity rates, as well as its complexity, reliable biomarkers are required for early detection and treatment. STXBP-1, also known as MUNC-18, is a protein found in the plasma membrane of monocytes that regulates Soluble N-ethylmaleimide-sensitive factor activating protein receptor (SNARE) assembly and, as a result, cell-cell or cell-particle communication. This is especially important during infection to ensure an adequate immune response to bacterial-driven inflammation. **Objective:** The purpose of this study was to compare the levels of STXBP-1 expression in human-derived monocytes under infectious and sterile inflammatory conditions. **Material and methods:** THP1-XBlue human monocytic cells were stimulated with 100 ng/ml E. coli lipopolysaccharides (LPS), and samples were collected at various time points (0-control, 2, 4, 6, and 24 hours). STXBP-1 expression was examined using Western blot with antibodies against STXBP-1 and GAPDH as a housekeeping stable expression control. The same procedure was followed with tumour necrosis factor-alpha (TNF-alpha) and interleukin-1 beta (IL-1b) as stimulants, each at a concentration of 20 ng/ml. Consequently, NF-kB pathway activation was measured in each sample by a spectrophotometer using QUANTI-Blue solution. **Results :** STXBP-1 was clearly down-regulated in cells stimulated with LPS over time, whereas protein levels remained constant in cells stimulated with TNF-alpha and IL-1b. In all three cases, NF-kB activation was present. **Conclusions:** Reduced STXBP-1 expression in LPS-stimulated monocytes may indicate that microorganisms control cell-cell and cell-particle communication during bacterial infections, resulting in an ineffective host immune response. During sterile inflammation (as represented by TNF-alpha and IL-1b stimulation), the STXBP-1 protein levels remain stable, indicating an adequate signalling pathway and normal host responsiveness. In each of the three experiments, activation of the NF-kB pathway confirms the presence of inflammation. Furthermore, the reduced STXBP-1 levels in monocytes in infectious conditions suggest that this protein could be used as a biomarker in the

early detection of sepsis.

Keywords: inflammation, sepsis, STXBP-1, biomarker

EVALUATION OF RISK FACTORS ASSOCIATED WITH HEMORRHOIDAL DISEASE

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Background: Hemorrhoids are affecting around 10% of the world population, almost half of the adults aged over 50 are found with this disease on colonoscopy. Hemorrhoidal disease can be asymptomatic, however patients experiencing symptoms have a decrease in quality of life. **Objective:** Although this disease is quite common, the factors that contribute to this pathology are still unclear. The aim of this study is to evaluate possible risk factors that were previously associated with hemorrhoidal disease. **Material and methods:** To perform this study, an online survey was created and shared through social media platforms between September and December 2022. The questionnaire gathered information about different risk factors present in the studied group. Statistical analysis was performed using Statistical Package for Social Sciences (SPSS) and Fisher's Exact Test. **Results :** We collected data from 370 respondents, out of which 30 were previously diagnosed with hemorrhoids by a medical specialist (8.1%). Most of the respondents were female (72%), aged between 20 and 39 years old (57%) and lived in urban area (71%). A positive diagnosis was more common in respondents who were aged over 40 (OR=2.26, CI=1.06-4.8, p=0.03), completed higher education (OR=3.37, CI=1.5-7.5, p=0.003) and in those with monthly income above average (OR=2.25, CI=1.05-4.82, p=0.03). A statistically significant association was found between family history of this pathology and hemorrhoids (p=0.01). Women who had at least one full term pregnancy were more likely to be diagnosed with hemorrhoidal disease compared to nulliparous women (OR=2.77, CI=1.05-7.3, p=0.03). Respondents who reported frequent stools (at least 3 per day) were more prone to develop hemorrhoids compared to those who have a slower bowel transit (OR=3.61, CI=1.33-9.75, p=0.01). This study found no statistically significant association between hemorrhoidal disease and obesity, constipation, smoking, alcohol intake, physical activity or eating habits. Regarding the symptoms of the disease, only 22.65% of those without a diagnosis were completely asymptomatic and 20% of this group admitted that they used self-medication to improve their symptoms. **Conclusions:** Hemorrhoidal disease is more prevalent among those over 40 years of age, with higher education and better socio-economic status. Family history, pregnancy and frequent stools were associated with this pathology, yet the other risk factors need further research.

Keywords: hemorrhoidal disease, risk factors, pregnancy, obesity

PERSONALIZED MEDICINE IN CYSTIC FIBROSIS USING PATIENT-DERIVED RECTAL ORGANOIDS HARBORING R347P/R1158X MUTATIONS

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Background: Cystic Fibrosis (CF) is the most common monogenic life-shortening disease affecting almost 50,000 people in Europe and an estimate of 254 patients in Romania. It is caused by mutations in the CF transmembrane conductance regulator (CFTR), a chloride (Cl^-)/bicarbonate ($HCO3^-$) channel expressed at the plasma membrane of epithelial cells. CF is a multi-organ disorder affecting exocrine epithelia and characterized by a diversity of symptoms, as all epithelial tissues are affected by loss of CFTR function. Up to now, 2000 different mutations were identified at CFTR gene and they have been grouped according to their respective cellular defect to facilitate patient-treatment decision making. Treatment of CF improved substantially in the last years with the advent of new therapies (CFTR modulators) that target the molecular defect of CFTR channel, replacing the traditional medicines that used to act on the alleviation of the symptoms. However, patients that carry rare or uncharacterized CFTR mutations cannot benefit from these new therapies. **Objective:** We aim at assessing the effects of CFTR-modulators in recovering mutant CFTR channel activity using intestinal organoids derived from CFTR compound heterozygous (R347P/R1158X) CF patient. **Material and methods:** Intestinal organoids were obtained from rectal biopsy, collected from the Verona CF center, after crypts isolation. Epithelial monolayers were generated from rectal organoids of CF patient carrying R347P/R1158X mutations. R347P/R1158X organoid-derived monolayers were cultured in a 5% CO_2 atmosphere at 37 °C until reaching transepithelial electrical resistance (TEER) values

around 400 Ω.cm^2. For transepithelial short circuit current (Isc) measurement, the monolayers were mounted in the Ussing chamber/voltage-current clamp apparatus using chloride-rich solution to determine the magnitude of FSK-induced short-circuit current (Isc) and response to VX-770 (Ivacaftor) change in absence and in the presence of VX-661 (Tezacaftor) and VX-661/VX-445 (Tezacaftor/Elexacaftor) treatments. **Results :** Isc measurements indicate that the response of R347P/R1158X monolayers to forskolin was 4-fold higher following treatment with VX-661/VX-445 combination (ΔIsc 20 ± 11 μA/cm^2) in comparison with the control (ΔIsc-DMSO 5 ± 2 μA/cm^2). Moreover, the VX-661 treatment increased the currents recorded to ΔIsc 17 ± 8 μA/cm^2 similar to VX-661/VX-445, presenting statistical significance over control. Of relevance is the observation that VX-770 monotherapy does not significantly improve CFTR anion secretion (ΔIsc 6 ± 2 μA/cm^2). **Conclusions:** We provided in vitro evidence that R347P/R1158X-CFTR organoids respond positively to Trikafta (VX-661/VX-445/VX-770) suggesting a potential clinical benefit for patients with this CFTR genotype.

Keywords: cystic fibrosis, organoids, personalized medicine

ACUTE HUMORAL REJECTION IN CARDIAC ALLOGRAFT

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Background: After transplantation, a biopsy is taken to assess transplant rejection and adjust immunosuppressive therapy based on the degree of rejection. The degree of rejection is currently defined by the International Society for Heart and Lung Transplant (ISHLT) 2004 grading system. **Objective:** To study the number of patients with heart transplant and assess the grade of rejection. **Material and methods:** Data was collected from 61 heart transplant patients operated at "Institutul de Boli Cardiovasculare si Transplant Tg Mures, Romania", including histopathologic data from heart biopsies between the years 2018 and 2022. The data was statistically analyzed. **Results :** For all transplant patients, the male to female ratio was 70.5% versus 29.5% (2.38:1). In the rejection group the ratio was 57.1% males/42.9% females (1.33:1), and in the non-rejection group were 76.1% males/23.9% females (3.18:1), p=0.16. The average age for all transplant patients was 36.08+/-16.28 (age+/-SD). While the average age for no rejection group was 38.78+/-16.35, and for the rejection group 25.29+/-9.56, with a significant statistical difference, p=0.005. The prevalence of heart transplant rejection among the heart transplant patients analyzed was 23%. Further details are included in the main paper. **Conclusions:** Age and gender could represent risk factors for acute humoral heart transplant rejection. The prevalence of heart transplant rejection among the heart transplant patients operated at "Institutul de Boli Cardiovasculare si Transplant Tg Mures, Romania" between the years 2018 and 2022 was 23%.

Keywords: acute humoral rejection, heart transplant, biopsy

ASSOCIATION OF MOOD DISORDERS AND SEROTONIN LEVELS WITH ADDICTIVE BEHAVIOUR IN YOUNG PEOPLE

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Background: Mood disorders are a group of mental disorders characterized by both positive and negative affective changes such as depression, anxiety, dysphoria or mania. From the neuropathologic point of view, the altered monoaminergic neurotransmission in some areas of the Central Nervous System, particularly the serotonergic (5-HT) system, can determine mood changes and behaviors that can lead to decreased quality of life. **Objective:** The study aims to assess the presence of mood disorders in young people with age between 18-35 who are dependent of social media. **Material and methods:** In order to assess the use of social media platforms and the presence of clinical characteristics of mood disorders, a cross-sectional study was conducted using an online questionnaire that included 295 participants. The questionnaire consisted in simple and multiple-choice answers regarding gender, daily social media usage and mood disturbances. **Results :** From all the included people, 69.8% were women. 98.3% reported the usage of at least one social media platform, from which 45.4% spend a lot of their day on social media. The average use of <4 hours/day is reported in 36.6% of the cases, 4-6 hours/day in 28.5% and >6 hours/day in 34.9% of the cases. Fatigue, tiredness and daytime sleepiness were reported by 116 (39.32%) subjects, out of which 51 (43.96%) use more than 6 hours social media and 32 (27.58%)

less than 4 hours. Depressive moods were reported by 70 (23.73%) subjects, of which 22 (31.42%) use social media for more than 6 hours/day. **Conclusions:** The presence of symptoms characteristic of mood disorders and small levels of serotonin seems to be a negative consequence of prolonged social media use and other addictive behaviours such as compulsive eating, substance abuse with their medical consequences.

Keywords: mood disorders, serotonin, social media addiction, addictive behaviour

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COMPARISON BETWEEN THE SEMESTER AND MODULAR SYSTEM

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Background: At UMFST in Targu Mures a change was made in 2020. Instead of having two semesters, the academical year was split into four modules. This came with other changes, such as the exams being performed at the end of each module and all theoretical exams being written on the same day, making the exam session shorter. **Objective:** The aim of this study was to gain a better understanding of the students' view of the changes in the teaching system. **Material and methods:** A questionnaire was sent out in February 2023 to the general and dental medical students at UMFST from the clinical years in all three sections. It consisted of 16 questions and participation was anonymous. There was a total of 70 participants. The questions of main concern were regarding whether students felt a change in perceived learning, which system resulted in most stress for the student and which system they in the end considered best. **Results :** 87.1% said they felt a change in perceived learning. 70% answered they felt they learned more with the semester system, 21.4% answered the modular system and the remaining 8.6% did not feel any difference between the systems. The participants were asked in which system they felt more stressed about exams, and during the module/semester. 71.4% and 82.9% answered modular system, respectively. Lastly, 58.6% of the participants answered they prefer the semester system, 34.3% answered modular system and the remaining 7.1% did not prefer one system over the other. **Conclusions:** According to the participants there is a difference in how much the students learn and remember depending on the teaching system. The students are more stressed with the modular system and although some appreciate having modules, the majority preferred the semester system.

Keywords: Stress, Semester, Module

COMPUTED TOMOGRAPHY ANGIOGRAPHY'S ROLE IN DESCRIBING THE POPLITEAL ARTERY

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Background: The popliteal artery is the continuation of the femoral artery from the level of the tendinous hiatus, being located deep in the popliteal fossa. The anatomical variations of the popliteal artery are structured into 3 large categories and 10 subcategories. The first category includes all the branches of the popliteal artery below the knee joint. The second category includes the variations in which all the branches of the popliteal artery detach above the knee joint, and the last category includes cases of hypoplasia of the terminal branches. **Objective:** The purpose of this study is to describe the anatomy of the popliteal artery and the importance of anatomical variations in the evolution of patients diagnosed with peripheral arterial disease. **Material and methods:** This study is a descriptive one, in which we included angio-CT type examinations carried out in the Vascular Surgery Clinic of the Emergency Clinical County Hospital in Targu Mures during 2020-2022. Moreover, we recorded the sex and age of the patients, as well as the anatomy of the popliteal artery and its bifurcation. **Results :** Of the 78 examined patients, 8 had suffered major amputation prior this study. The most frequent popliteal artery branching pattern was the Type I-A, found in 97 limbs (69.28%), followed by I-B with 25 (17,85%) and II-A1 with 13 (9,28%). Third category branching occurred in 5 limbs (3.57%). **Conclusions:** Being aware of the variations of popliteal artery branches is crucial when it comes to surgical or interventional approach. Furthermore, it could foreshadow the outcome of these patients.

Keywords: amputation, disease, anatomy, variaton

AN ASSESSMENT OF ONLINE INFORMATION QUALITY ABOUT OVARIAN CANCER ON ROMANIAN- AND ENGLISH-LANGUAGE WEBSITES - A CROSS-SECTIONAL STUDY

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Background: Ovarian cancer causes more deaths than any other cancer of the female reproductive system. While instant access to data from the internet about ovarian cancer may facilitate medical communication and knowledge sharing, it can also make it possible for misleading and false medical information on the topic to spread online. **Objective:** To evaluate the credibility and quality, namely completeness and accuracy, of the information about ovarian cancer found on Romanian and English language websites addressed to the general population. **Material and methods:** An observational, cross-sectional study was conducted on a sample of 25 Romanian- and 25 English-language websites that were selected based on specific inclusion and exclusion criteria. The Google ranks of all included websites were noted. Website credibility was evaluated based on pre-established quality criteria. Information completeness and accuracy were assessed by two independent evaluators using a quality benchmark. Mean credibility, completeness, and accuracy scores were calculated for each language subsample and reported on a scale from 0 to 10. The comparisons between the Romanian- and English-language websites were performed using the Student's t-test or the Mann-Whitney test. Correlations were studied between credibility and Google ranking, on the one hand, and completeness and accuracy, on the other hand, using the Pearson or Spearman test. **Results :** The Romanian websites' mean credibility, completeness, and accuracy scores were 4.2±1.3, 4.6±1.7, and 9.7±0.4, respectively, whereas the English websites' scores were 6.7±1.9, 7.3±1.9, and 9.9±0.3. The comparisons between the language subsamples indicated highly statistically significant differences ($p<0.0001$) for credibility and completeness and a statistically significant difference ($p=0.0278$) for accuracy. Significant correlations were observed between Google ranking and completeness ($p=0.0101$, $r=-0.5044$) regarding Romanian-language websites and also between credibility and accuracy ($p=0.0158$, $r=-0.4773$) and Google ranking and accuracy ($p=0.0344$, $r=0.4245$) concerning English-language websites. **Conclusions:** English-language websites scored notably better on credibility and all quality indicators in comparison to Romanian websites. Google ranking and the websites' compliance with the selected credibility criteria were not consistent indicators of information quality.

Keywords: ovarian cancer, quality of online information, consumer health informatics, Internet

COMORBIDITIES, CLINICAL, ANHTROPOMERTIC AND FUNCTIONAL FEATURES IN OBSTRUCTIVE SLEEP APNEA SYNDROME

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Background: Obstructive sleep apnea syndrome (OSAS) is one of the most common breathing disorders during sleep with an increased prevalence worldwide. The pathophysiological mechanisms of OSAS are multidimensional and sophisticated and include sleep fragmentation, increased activity of sympathetic nervous system, intermittent hypoxia with oxidative stress installation and systemic inflammation, all these factors contribute to development and progression of different comorbidities, such as cardio and neurovascular and endocrino-metabolic disorders. **Objective:** The study aim is to detect the most common comorbidities, which was associated in OSAS patients as well as to evaluate clinical, anthropometric and functional features associated with these medical conditions. **Material and methods:** This is an observational, cross-sectional, retrospective study included 49 patients, all these patients were detailed investigated (anamnestic data collect, physical examination and Epworth sleepiness scale, cardiorespiratory polygraphy). Comorbidities evaluations were performed using the Charlson comorbidity index. **Results :** In this study were included 49 OSAS patients (35 males and 14 females), mean age = 53,8 □ 10,27 years (range from 25 to 70 years). The comorbidities prevalence were: hypertension (88%), obesity (88%), congestive heart failure (70%), diabetes mellitus (31%), ischemic heart disease (23%), etc. According to OSAS severity classification, based solely on cardiorespiratory polygraphy data, the studied group was divided into three groups: Mild OSAS □□□14%, moderate OSAS - 23% and severe OSAS □□□63%. In OSAS group patients was identified the following anthropometric (neck circumference (45,4 ± 5,31 cm), abdominal circumference (119,7 ± 19,13 cm), BMI (37,4 ± 8,19 kg/m2) and clinical (excessive daytime sleepiness (11,22 ± 4,32 points), AHI 42,46 ±

26,37 events/hour. Analysis of correlational relationships between number of comorbidities, Charlson's weighted index of comorbidities and Charlson's combined condition and age-related score was detected the presence of positive correlation with the following variables: number of comorbidities, Charlson's weighted index of comorbidities have linked moderate positive and statistically significant with the Epworth score (r = 0,41, p < 0,01, r = 0,39, p < 0,01), BMI correlated moderate positive and statistically significant with the number of comorbidities ((r = 0,56, p < 0,01) and Charlson's combined condition and age-related score(r = 0,4, p < 0,01). **Conclusions:** The results of these study offer the data about higher prevalence of OSAS in males (ratio obtained 3:1), OSAS was associated with increased clinical and anthropometric parameters. The most common comorbidities associated with OSAS were hypertension, obesity, congestive heart failure, diabetes mellitus and ischemic heart disease.

Keywords: Obstructive sleep apnea syndrome (OSAS),, comorbidity,, prevalence,, Charlson comorbidity index

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ORAL CONTRACEPTIVE METHODS: DISCOURSE ON SIDE EFFECTS OF ORAL CONTRACEPTIVES AND THEIR IMPACT ON CONTRACEPTIVE CHOICE COMPARED TO CURRENT DATA ON SIDE EFFECTS

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Background: There are about 1.9 billion women of childbearing age (15-49 years), of whom 1.1 billion desire contraception. The introduction of the contraceptive pill (CP) in 1960 caused a "sexual revolution" that made women independent and sexually free. With the end of the 20th/ beginning of the 21st century, the CP was one of the most sought-after contraceptive methods (CM) worldwide. **Objective:** However, in recent years, the number of women taking the CP has steadily declined, especially in the Western world. With this work, we wanted to identify the reasons for the decrease in CP usage. **Material and methods:** Using a survey, we asked 600 women from 46 different countries, aged 15-49, about their sexual education, the CM they use/desire to date, and their opinions about the CP. The women were divided into age groups of 15-20, 21-30, 31-40, and 40-49 years. They could achieve/give 1(very bad)- 5(very well) points for ordinal questions. We transferred the data to Excel and performed the statistical analysis (Fisher, Chi2, univariate ANOVA analysis, Sign test, Mann-Whitney-U test) using SPSS. **Results :** Older women were significantly more likely to have ever taken CP overall (35%; 56%; 77%; 74%; P=<0.001). On average, women were sexually educated between 10-13 years. The most popular CM were the condom (30%), CP (19%), and the intrauterine device (IUD) (17%). Older women tried significantly more CM on average (1.4CM; 2.8CM; 3.7CM; 3.3CM; P=<0.001) than younger women. Women rated sterilization (72%), condoms (51%), and IUD (48%) as the safest CM, with younger women significantly more likely (P=0.037) to cite condoms and older women (P=0.006) to cite sterilization. Subjectively, women rated their knowledge about the CP significantly (P=<0.001) higher than it was (3.8/5 points vs. 3.5/5 points). The effectiveness of CP was rated with 4.4/5 points. 85% of women felt that the CP has many side effects, and 90% of women said that hormone-free preparations have fewer side effects than hormonal CM. The most feared side effects of CP were depression (71%), mood swings (66%), weight gain (65%), and thrombosis (56%). 63% of women would not recommend CP. Younger women were significantly less likely (P=0.017) to recommend CP (39%; 33%; 47%; 52%). **Conclusions:** Although women rated the effectiveness of the CP very high, especially young women would less frequently use/recommend the CP. One reason seems to be the dreaded side-effect profile of the CP. The side-effect profile of hormone-free CM is considered to be significantly less harmful.

Keywords: contraceptive methods, contraceptive pill, hormone-free contraception, hormonal contraception

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MUCOID EXTRACELLULAR MATRIX ACCUMULATION, INSIGHTS INTO MEDIAL AORTIC DEGENERATION

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Background: Aortic aneurysms are among the most prevalent aortic diseases and the ninth-leading cause of death worldwide; the weakness in the vessel wall is caused by the degeneration of the aortic media. **Objective:** The objective of this paper is to describe the putative role of mucoid matrix accumulation as a surrogate for the overall medial degeneration. **Material and methods:** We have analyzed aortic tissue samples from 100

consecutively admitted patients aged 20 and over that presented with aortic aneurysms at the Emergency Institute for Cardiovascular Diseases and Transplant Center, Târgu Mureș, between January 2021 and September 2022. Subsequently, the pathology reports were organised according to the classification established through a consensus by the Society for Cardiovascular Pathology and the Association For European Cardiovascular Pathology, published in 2016. Mucoid extracellular matrix accumulation, with either intralamellar (MEMA-i) or translamellar (MEMA-t) extension, was assessed for each case, and correlated with the overall degree of aortic medial degeneration. **Results :** Every surgical specimen examined showed medial degeneration, with variable degrees of translamellar or intralamellar mucoid extracellular matrix accumulation (MEMA-t/MEMA-i). MEMA-t was absent in 12% of cases, all MEMA-t-free cases having only mild overall medial degeneration. In moderate overall medial degeneration, MEMA-t was mild in 16.3% of cases, moderate in 83.6% of cases and no severe subtypes have been observed. In severe overall medial degeneration, the best represented MEMA-t subtype was severe MEMA-t(64.3%), while moderate MEMA-t was observed in only 35.7% of cases. On the other hand, MEMA-i was ubiquitous, almost all cases showing either moderate MEMA-I (38%), or severe MEMA-I (51%). From all cases, only 11% exhibited only mild MEMA-i. **Conclusions:** Even though MEMA-t is not always present, it is more consistent with the according subset of overall medial degeneration, whereas MEMA-i has a higher distribution, making it harder to correlate it with only one degree of overall degeneration. In conclusion, MEMA-t could wield a higher significance than MEMA-i, regarding the contributions brought to the overall degeneration of the aortic media.

Keywords: medial degeneration, aortic aneurysm, mucoid matrix accumulation, MEMA

HPV VACCINE- AN OVERVIEW OF NATIONAL IMMUNIZATION PROGRAM

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Background: Human Papilloma Virus (HPV) is a double-stranded DNA virus responsible for the most of sexually transmissible infections (STI). There are two types of HPV: low-risk, causing cutaneous warts and high-risk, causing oropharyngeal and anogenital cancers. Around 80% of sexually active people are infected at least once in their lifetime and nearly half of these infections are with a high-risk HPV. Even with a visible high incidence, most cases heal spontaneously in 1-2 years resulting a post-infectious immunity with low antibody titer that do not necessarily protect against subsequent infection. **Objective:** The aim of the study is to figure out what is the perception of primary healthcare workers over the national immunization program against HPV infection and how this vaccination program will be perceived by the population. **Material and methods:** To find about the medical specialists opinion on the studied matter, we delivered them a questionnaire related to the level of mass-information about the HPV-infection factors and the importance of vaccination. The goal of the campaign is to lower the infection rate within citizens, having in mind the fact that Romania is holding the title for the most cases, fact sustained by clinical studies. **Results :** Out of a total of 110 general practitioners, 72% consider that population level of information regarding the risks of HPV infection is low. The most effective way of informing the population was voted to be through the doctor by 42%. 62% of them believe that secondary prevention (Babes-Papanicolau test) is not respected by most of the female patients. Regarding national immunization program, 67% consider that anti-HPV vaccine will be viewed more seriously than the one against SARS-CoV-2, 99% recommend vaccination to their patients, 94% say that the national program is useful and 55% believe that Romania could reach a significant immunization rate. **Conclusions:** By improving the population level of information, we could increase the vaccination rate. The most effective method of education, according to this study, is through medical specialists. According to study participants, the national immunization program for SARS-CoV-2 infection did not increase the population's sensivity to primary prophylaxis.

Keywords: Human Papilloma Virus, vaccine, immunization

DIETARY HABITS AS A RISK FACTOR IN THE DEVELOPMENT OF TYPE 2 DIABETES MELLITUS. STUDY CONDUCTED ON ROMANIAN AND ITALIAN PEOPLE.

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Background: Diabetes mellitus is a chronic and metabolic disease resulting from increased levels of glucose in

the blood. Currently, it is considered one of the most frequent non-transmissible diseases. Type 2 diabetes mellitus is the most common form, responsible for about 90% of all cases. The etiology is complex; genetic predisposition, aging, obesity, diet and sedentary lifestyle are the most incriminating causes for diabetes mellitus type 2. In last decades, there were raised concerns that dietary habits could become the most important modifiable risk factor in the development and evolution of diabetes mellitus. **Objective:** The aim of the study was to find a correlation between nutritional factors and the risk of developing diabetes mellitus type 2 and also to see the difference in eating behavior between the people from Romania and people from Italy which could lead to diabetes. **Material and methods:** We conduct a cross-sectional study based on a sample of 376 volunteers, divided into two groups: 223 people from Romania and 153 people from Italy. Subjects completed a digital questionnaire on a voluntary basis, consisting of 31 questions. Data processing was performed using SPSS (Statistical Package for the Social Sciences) and the Chi-Square Test was used for statistic with $p<0,05$ considered significant. **Results :** The application of the square CHI test resulted in a $p=0,04$, so there is a statistically significant correlation between fast-food consumption and high blood glucose of the participants. Of the 376 volunteers, most Italians consume fast-food once a month, 38,6% or few times per year, 27,9% compared to Romanians where once a week consumption is most frequent, 38,1%. The correlation between countries and fast food consumption represents a statistically significant association by obtaining a $p=0.001$. The consumption of Mediterranean diet is significantly higher in Italian population than in Romanian people, we obtained a $p=0.001$. Also, 25.9% of Romanians do not consume at all this type of food, compared to Italy, 7.2%. **Conclusions:** The blood glucose level is negatively influenced by the fast-food consumption pattern in both groups of participants. In contrast, the Mediterranean protective diet is more used in Italy. Finally, a nutritional prevention program should be implemented to reduce the risk of diabetes, obesity and other chronic disease.

Keywords: type 2 diabetes, nutrition, questionnaire

MEDICAL MANAGEMENT IN ROMANIA

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Background: Medical management is the central element that coordinates the legislative and economic aspects of hospital units and leads the medical staff towards a united way of working, in a team that leads to the increase of the quality of the medical act. **Objective:** The purpose of the paper is to see the deficiencies of the Romanian medical system and what would be the areas where we could improve various aspects in order to increase the efficiency of hospitals and to shorten the waiting time of patients. **Material and methods:** In order to try to obtain some real and efficient methods of improving the Romanian medical system, we tried to confront the problems of hospitals in Romania with the qualities of hospitals that have 2 qualities, namely, they have the highest patient satisfaction rates and have implemented an integrated and efficient management system. **Results :** Innovations in international medical management show that saving money comes as an indirect result, after the application of labels such as "Lean", "Six Sigma", which increase the quality of medical services, and do not make costs the central element, putting in the first place, the medical team, and prioritizing aspects related to quality, satisfaction and morale, because a team that believes in these values will make every effort to inoculate them to the patients it cares about. **Conclusions:** Hospitals from all over the world that have innovated medical management through methods such as "Lean Management" or that have borrowed innovations from the "Toyota Management" trend, adapted to healthcare projects, enjoy the highest rates of patient satisfaction as well as medical staff.

Keywords: Medical Management, Innovations, quality, hospitals

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THE IMPACT OF HYPOLIPIDEMIC TREATMENT ON OSTEOPOROTIC AND OSTEOPENIC BONE TISSUE FROM ALBINOS WISTAR RATS USING DIFFUSION NUCLEAR MAGNETIC RESONANCE

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Background: Osteoporosis is one of the most common diseases that occurs after the onset of menopause. The physiological hormonal imbalance determines excessive bone tissue resorption that overpowers osteosynthesis, leading to lowered bone mineral density. Since cardiovascular diseases are the main cause of death globally and

the incidence of cardiovascular risk factors is on the rise, there is a high probability for a woman suffering from postmenopausal osteoporosis to be affected by a form of dyslipidemia and to require treatment for her metabolic disorder. **Objective:** The purpose of this paper is to highlight the correlation between the potential effects of hypolipidemic agents on the bone tissue turnover and the stage of osteoporosis. **Material and methods:** The study was conducted on 48 female Alibinos Wistar rats, with half of them undergoing ovarectomy in order for the iatrogenic menopause to be induced. The menopausal lot was divided into three groups based on the hypolipidemic agent that was administered: statins, fibrates and control group. 12 weeks after the ovarectomy, the hypolipidemic treatment started to be administered. The evaluation of its effect was made at 2, 4, 6 and 8 weeks afterwards by extracting and observing the proximal part of the femur through the perspective of the water molecules autodiffusion within the pores of the bone tissue using the NMR Bruker minispec spectrometer. **Results :** The effects of hypolipidemic treatment on the porosity of the proximal part of the femur are dependent upon the administering period. Fibrates increase the bone mineral density after 2 weeks of administration, whereas statins decrease it. On the 4th and 8th weeks of administration, both hypolipidemic agents showed a higher negative influence on bone tissue resorption compared to the one induced solely by ovarectomy. In the case of ovarectomized rats, the administration of a 6 week hypolipidemic treatment, especially regarding fenofibrate, led to a beneficial outcome. **Conclusions:** To sum up, osteolysis and osteogenesis are two separate entities that do not occur simultaneously, because increased osteoblastic activity may trigger osteolysis, whereas exacerbated lytic activity may induce new osteosynthetic processes in order to restore the balance. The former may be observed in the absence of installed osteoporosis, on an estrogenic background. The effects of simvastatine and fenofibrate are highly correlated with the particularities of this process.

Keywords: Albinos Wistar rats, osteoporosis, dyslipidemia, Diffusion NMR

OPTIMAL CHARACTERISTICS IN THE ANALYSIS OF BIAXIAL BIOMECHANICAL PROPERTIES OF PORCINE VENA CAVA

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Background: It is known that venous grafts are the first choice when it comes to aorto-coronary arterial bypasses or those used for reperfusion of ischemic lower limbs. The two most important elements in the extracellular matrix of a vascular wall are elastin and collagen. Compared to that of the arteries, the venous vascular wall has significantly more collagen fibers than elastin, most of them being arranged circularly to provide a high resistance to it, and different biomechanical properties. **Objective:** The objective of this study is to establish and present the optimal parameters for biaxial biomechanical analysis of the porcine inferior vena cava. **Material and methods:** A total number of 11 samples of 14 mm2 from the level of the porcine inferior vena cava, taken fresh from a local slaughterhouse, from a common breed pig aged 12 months were analyzed in this study. With the help of a surgical marker, the longitudinal side of each sample was marked at the level of the adventitia. In turn, each sample was biomechanically analyzed biaxially on the CellScale biotester (Waterloo, ON, Canada) from CCAMF. We used four 8.5 mm rakes, and each sample was analyzed progressive at different strain: 20% (20 seconds on stretch and recover), 30% (20 seconds on stretch and recover), 40% (20 seconds on stretch and recover), 50% (20 seconds on stretch and recover) for 5 cycles, and the values recorded in the last cycle were quantified. Based on the recorded forces (mN) and displacements (um) Young's moduli were calculated. To quantify the thickness of the samples we used a Digital Calliper (Burg Watcher, Germany). **Results :** Based on Young's method, comparing the 4 groups, we observed a statistically significant increase (0.17 MPa vs 0.49 MPa vs 0.85 MPa vs 0.93 MPa, $p<0.001$) for the longitudinal axis of samples, respectively (0.08 MPa vs 0.28 MPa vs 0.61 MPa vs 0.57 MPa, $p<0.001$) for the transverse axis, with the mention that a decrease in the value is observed for 50% strain. Based on fact that all the samples were extracted from the same inferior vena cava, there was no significant difference in terms of the thickness of each sample, respectively in the case of the histological structure. **Conclusions:** According to the results of this study, we recommend choosing a strain between 30-40% in the case of analyzing the biomechanical properties of the porcine inferior vena cava for optimal results .

Keywords: Biotester, inferior vena cava, biomechanical properties, Young's method

CAN MASS-MEDIA HELP WITH CERVICAL CANCER SCREENING?

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Background: In most cases, cervical cancer can be cured if it is discovered at an early stage. HPV (human papillomavirus) infection is the most frequent sexually transmitted infection. In Romania, cervical cancer is the third most common type of cancer in women, after breast and colorectal cancer, but in the European Union, Romania ranks first in terms of mortality rate. **Objective:** The aim of this study is to determinate if mass-media has an impact on cervical cancer screening and the opinion about mass-media information. **Material and methods:** We performed a cross-sectional study using an anonymous online questionnaire which included 26 multiple-answer questions. Statistical analysis was performed using Statistical Package for Social Sciences (SPSS) and the Chi square Test. **Results :** The study included 430 participants, all of them were females of different ages and different levels of education. Almost all the women know the screening methods and 64,9% know about the national screening program. From the total of 430 participants, 293 of them are between 16 and 30 years old. For 50,5% of them mass-media has a big impact, because they found out about the national screening program from social media and only 9,9% from their family doctor. 30 participants that have an age between 41 and 50 years old, 46,7% of them know about the program from their family doctor and only 23,3% from social media. For 79,1% of them the internet is the most important mass-media. Regarding the opinion about the information through media, 66,0% of them believe that media can help to futher educate yourself if you have knowledge about that subject, 17,9% have no opinion and 16,0% of them said that media has a bad influence. **Conclusions:** Almost all women know the screening methods. Impact of mass-media in cervical cancer screening depends on age, women between 16 and 30 years old use mass-media for information and the participants over 41 trust their family doctor. Mass-media is the most important source of information for almost all participants. "This work was supported by the University of Medicine, Pharmacy, Science and Technology of Târgu Mureș Research Grant number 615/14/17.01.2019."

Keywords: cervical cancer, screening, mass-media, women

LIFESTYLE AND ITS IMPACT ON EMOTIONAL BALANCE. A QUESTIONNAIRE BASES STUDY

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Background: Emotional health is essential for both general well-being and good performance in any field of activity. There are many factors that can influence the emotional balance during studenthood. In our study we focused on eating habits, physical activities, rest quality and comunication skills. **Objective:** The aim of this study was to identify the connections between lifestyle and emotional balance with predilection among students from the "George Emil Palade" University of Medicine and Pharmacy in Târgu Mureș. In this sense, the papers analyzed the importance of lifestyle from the perspective of the five determining factors (diet, addictions, activity, rest and communication) in a group of 132 students who participated in our study. **Material and methods:** We have done an anonymous survey using a questionnaire that included 52 questions. All the 132 participants from all medicine specialties studying at Faculty of General Medicine from Targu-Mures completed the online questionnaire on social platforms. We collected the completed questionnaires and then we evaluated and statistically analyzed them using chi-square test. **Results :** Most students have a chaotic lifestyle during their university years. Only 71 (54%) of the students say they have a healthy diet, 46% (61) use to eat fast food once a week, 66.7% (88) of the respondents practice less than 5 hours of sports per week, 64% (85) claim to sleep less than 8 hours a day, 30% are smokers and 62% have tried smoking marijuana. On the other side, based on the questions that concerned the emotional balance, most students, 65% consider to be stressed during the university period and only 14% are waiting for Monday to come in order to start doing their usual activities. **Conclusions:** Emotional balance is influenced by lifestyle behaviours such as: alimentation, addictions, rest, sport and comunication. Therefore, I believe that it is necessary to continue the development and implementation of preventive strategies, to counteract the possible vulnerabilities generated by any emotional imbalance, by pursuing an increase of emotional intelligence.

Keywords: lifestyle, diet, emotional health, student

MEDICINE: BETWEEN FOLK REMEDIES AND SCIENCE

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Background: Medicine is considered an exact science by most medical students. However, in the Romanian society, there are theories according to which the magic and the supernatural would have a significant influence in the process of illness and healing. This is how the folk remedies appeared, methods that at their origin had no scientific basis, but were proved to be effective against the pathologies that the members of the community encountered on a daily basis. Even today, when the evolution of science has led to the development of modern drugs and treatments, many of these folk remedies are still used successfully, some of them being studied and explained by the researchers. **Objective:** The present paper "Medicine: between folk remedies and science" analyzes the opinion of students from UMFST Târgu Mureș regarding the knowledge, spread and usefulness of folk remedies in current practice. **Material and methods:** As a method of psychological investigation, the survey form addressed to the students of UMFST, Faculty of Medicine, Dental Medicine and Pharmacy (with all related disciplines) was used and applied in the period February - March 2023, comprising in the study sample a number of 119 respondents. **Results :** The study demonstrated that 78.2% (93 respondents) are female, which means that this particular subject is more attractive to them because it involves the magic and the supernatural. In the Romanian archaic society, women are known to use folk remedies to cure those in need. 92.4% (110 respondents) have heard of folk remedies and 65.5% (78 respondents) have used these treatment methods, such as chicken soups against cold, lighted cigarettes against earache, chelidonium majus against palmar warts, cabbage leaves against rheumatic pain and vinegar socks against fever. The respondents even described how to prepare and use folk remedies. This is because this kind of medicine has been practiced in the Romanian society for hundreds of years, being well known. However, 47.9% (57 respondents) believe that doctors should not use folk remedies in the treatment of patients, compared to 22.7% (27 respondents) believing that this kind of therapy should be used. It means that students consider modern medicine safer to use and more effective. **Conclusions:** The research undertaken demonstrated the fact that the students from UMFST Târgu Mureș are familiar with folk remedies and have used them as a treatment against their own medical conditions, but they do not believe that doctors today should rely only on such therapy methods.

Keywords: ethnomedicine, folk remedies, science, student

PREVALENCE TREND AND DEMOGRAPHIC CHARACTERISTICS OF LUNG ADENOCARCINOMA DIAGNOSED ON ENDOBRONCHIAL BIOPSIES IN MUREȘ COUNTY HOSPITAL OVER THE LAST 5 YEARS (2018-2022)

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Background: Lung cancer represents the leading cause of cancer-related death in both men and women worldwide. Almost all lung cancers are carcinomas. The predominant histological types are adenocarcinoma (ADK), squamous cell carcinoma, small cell lung carcinoma and large cell carcinoma. ADK is a non-small cell lung carcinoma, with morphological and immunohistochemical evidence of glandular differentiation. Lung ADK arises from the glandular structures of the respiratory epithelium and represents about 40% of all lung cancers. It is mostly associated with female gender and non-smoking status. **Objective:** The aim of our study was to assess the prevalence trend and demographic characteristics of lung ADK diagnosed on small biopsy specimens (endobronchial biopsies) over the last 5 years in Mureș Clinical County Hospital. **Material and methods:** A retrospective observational study was performed. All pathological reports regarding endobronchial biopsies registered in the Department of Pathology, Mures Clinical County Hospital between 2018-2022 were evaluated. We assessed the frequency of ADK diagnosis throughout the study period, the demographic characteristics of the cases (gender; age) and the immunohistochemical (IHC) profile of the cases. **Results :** A total of 1155 endobronchial biopsies were registered in the Department of Pathology over the study period. Out of these, 219 were positive for a diagnosis of ADK. Based on age grouping, most ADKs occurred in patients over 60 years old (n=170) with the mean age of diagnosis being 66 years old. Gender distribution was as follows: 156 males versus

63 females. We observed a 79% drop in ADK cases number in 2020 due to Covid-19 pandemic (compared to 2019) which was followed by a 61% increase in 2022. Regarding the IHC profile of the tumors, IHC was performed in 210 cases; at least one marker of the following markers TTF-1, CK7, p40, p63 was performed. TTF-1 was the main marker used to clarify diagnosis of ADK (83% positivity), followed by CK7 which was generally used to complement a positive diagnosis of ADK whenever TTF-1 staining was negative. **Conclusions:** In our study, most ADK cases occurred in men aged over 60 years old. For most of the cases, IHC was performed to clarify and support the morphological diagnosis of ADK, TTF-1 revealing a characteristic positive staining in most cases. Covid-19 pandemic period had influenced the prevalence of this tumor type in our data, with a peak drop in the number of ADKs being observed in 2020.

Keywords: adenocarcinoma, Covid-19 pandemic, small biopsy, lung cancer

LONG-TERM METFORMIN THERAPY AND VITAMIN B12 IMPAIRMENT: PREVENTION VS TREATMENT OF MANIFESTATIONS

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Background: Metformin represents the first-line therapy for patients diagnosed with type 2 diabetes, having a real success thanks to its high efficacy profile. **Objective:** The aim of this paper is to highlight the side effect of long-term Metformin therapy on vitamin B12 absorption and metabolism, as well as the likely contribution of the vitamin deficiency to neuropsychiatric malfunction. **Material and methods:** This systematic review of literature is based on recent studies, mainly from the electronic databases: PubMed, The Journal of Neuropsychiatry, regarding articles about the current knowledge of the association between vitamin B12 deficiency and Metformin therapy. All the literature included in the study was published in English. **Results :** Long-term Metformin therapy leads to vitamin B12 impairment through mechanisms, which alter the intestinal absorption and metabolism of the vitamin; the main one is thought to be the interference of the drug with Cubilin, the Intrinsic Factor- vitamin B12 receptor. Vitamin B12 plays many keen roles in the human body and one of them is being the coenzyme in methylation processes; a deficiency of the vitamin, as well as consecutive hyperhomocysteinemia is believed to represent the biochemical dysfunctions, which lead to neuropsychiatric conditions such as dementia and Alzheimer disease. **Conclusions:** Taking into consideration that Metformin is the first-line oral glucose-lowering drug, but also the fact that it can possibly induce vitamin B12 impairment, there could be benefits of introducing screening recommendations for vitamin B12 deficiency at patients on long-term therapy, in order to prevent the development of severe clinical manifestations.

Keywords: Metformin, Type 2 diabetes, Vitamin B12, Dementia

AFTERMATH OF COVID-19 OVER THE RESISTANCE PROFILE OF PSEUDOMONAS AERUGINOSA

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Background: During the COVID-19 pandemic, secondary bacterial infections with opportunistic pathogens such as *Pseudomonas aeruginosa* have become a concern in patients with severe COVID-19, leading to an increase in injudicious use of antibiotics, which could prove to create dangerous resistant phenotypes. **Objective:** The purpose of this study is to dynamically evaluate the antibiotic resistances of *Pseudomonas aeruginosa* during this period. **Material and methods:** We retrospectively collected data regarding the resistance profiles of *Pseudomonas aeruginosa* strains isolated from various samples such as blood, sputum, tracheal aspirates, wounds, catheter tips and urine from patients admitted to the Cluj-Napoca Emergency County Hospital from November 2020 to April 2022. The frequency of resistant isolates to each antibiotic was analyzed against sex, discharge status, length of stay and COVID-19 status. The total time frame was also divided into three six months periods (A, B and C) for additional statistical analysis. Furthermore, we were able to isolate 22 strains of *Pseudomonas aeruginosa* to perform in house PCR for the *OXA-50* gene. **Results :** We included 72 *Pseudomonas aeruginosa* isolates from the hospital database. Resistance to ticarcillin and ticarcillin/clavulanate

was significantly influenced by period, the greatest proportion being found in period B, with 100% of the isolates marked as resistant to ticarcillin (p<0.01) and 86.8% as resistant to ticarcillin/clavulanate (p=0.04). The length of stay was influenced by resistance to every antibiotic other than ticarcillin and ticarcillin/clavulanate (p<0.01 with median difference (MD) = 14 days for piperacillin, p<0.01 with MD=9 days for piperacillin/tazobactam, p<0.01 with MD=14 days for ceftazidime, p<0.01 with MD=16 days for cefepime and ciprofloxacin, p<0.01 with MD=18 days for amikacin and tobramycin, p=0.02 with MD=23 days for colistin). A proportion of 59.1% of tested strains were positive for the *OXA-50* gene. **Conclusions:** It seems that *Pseudomonas aeruginosa* strains that were resistant to ticarcillin and ticarcillin/clavulanate were found in a greater proportion in period B, which could be due to prior injudicious use of antibiotics during the previous wave of COVID-19. Later development of the *OXA-50* gene also supports this hypothesis. Patients who were infected with strains that were resistant to the rest of the antibiotics appeared to have a prolonged stay in the hospital, thus increasing the pressure on the healthcare system. Injudicious use of antibiotics must be carefully monitored to prevent further spread of new resistance genes as seen with the *OXA-50*, and to reduce additional strain inflicted upon hospitals by such resistant pathogens.

Keywords: Antimicrobial resistance, COVID-19, Pseudomonas aeruginosa, OXA-50 gene

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INCIDENCE OF PROSTATE CANCER AMONG YOUNG MEN

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Background: In Romania, prostate cancer is the second most common malignancy among men with an incidence rate of 41.5 cases per 100,000 males. Screening for prostate cancer with PSA and digital rectal examination (DRE) is recommended for men from 50 years of age. Patients with any clinical or biochemical suspicion of prostate cancer have to undergo transrectal ultrasound guided prostate biopsy. **Objective:** The aim of this study is to investigate the incidence of prostate cancer in case of patients under the age of 55 **Material and methods:** A retrospective, descriptive study was conducted on a sample of 233 patients from the Târgu Mureș Clinic of Urology who underwent TRUS (transrectal ultrasound) guided prostate biopsy between January-December 2022. **Results :** During 2022, 10 (4.29%) patients were younger than 55 years, while the remaining 223(95.7%) were older. Our results show that 8 (80%) out of 10 patients aged <55 years were diagnosed with prostate adenocarcinoma with a mean PSA of 27.78 ng/mL and a mean age of 52.7 years, whereas the other 2 (20%) patients from this category, with a normal prostate tissue, had a mean PSA of 15.18 ng/mL and a mean age of 51 years. From the 223 (95.7%) patients aged >55 years, 147(65.9%) had histological features specific for a prostate cancer and a mean PSA of 64.27 ng/mL and a mean age of 70.57 years (between 55 and 88 years). On the other hand, 67(34.08%) patients had a histologically normal prostate with a mean PSA of 8.95 ng/mL and a mean age of 70.31 years (between 60 and 87 years). **Conclusions:** Although prostate cancer is considered a disease of older men (aged >65years), 80% of the patients (8 out of 10) aged <55years with elevated PSA level who underwent TRUS guided prostate biopsy, were diagnosed with prostate cancer. By performing PSA and DRE screening and as well as raising awareness towards this disease among young men, a larger number of young patients with prostate adenocarcinoma are being identified.

Keywords: prostate cancer, PSA screening, transrectal ultrasound guided prostate biopsy, young men

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STUDY OF THE INCIDENCE OF VERTEBRAL FRACTURE IN RELATION TO OSTEODENSITOMETRY VALUES IN WOMEN OVER 50 YEARS OF AGE

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Background: Osteoporosis is a systemic skeletal disorder characterized by a decrease in bone mineral density. This condition predisposes the skeleton to numerous fractures that may occur de novo or secondary to trauma. **Objective:** The aim of this study is to correlate the degree of bone mineral density loss with the presence the number and location of vertebral fractures in women aged 50 years and older. **Material and methods:** We studied 186 dorsolumbar spine radiography of women over 50 years of age, mean age being 67.9 ± 7.74 years. For 102 patients we also performed osteodensitometry. We determined the incidence and degree of vertebral body fracture according to the Genant semi-quantitative classification. **Results :** Vertebral body fracture was present in 28% of cases, the degree and number of vertebrae affected correlate with the age of the patients (p=0.004 resp p=0.01).

The most frequently affected segment was the dorso-lumbar junction (D11-L2). In 32.3% of cases we observed DXA values characteristic for the osteoporotic range. The incidence of cases with DXA values of osteoporosis increases with age (p=0.05). DXA values do not correlate statistically significant with the presence, degree, number and location of vertebral fractures (p>0.05). **Conclusions:** These results correlate with data shown in literature.

Keywords: Osteoporosis, Osteodensitometry, Dorsolumbar spine

WHAT DO YOUNG WOMEN KNOW ABOUT BREAST SCREENING?

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Background: For young women, breast diseases represent one of the reasons they visit a doctor. However, in many cases, this happens only when they experience symptoms and not for a periodic preventive check-up. While breast cancer is more commonly diagnosed in older women, over 50 years old, it can also occur in younger females. Other conditions that can affect the mammary gland include fibrocystic mastopathy, infections and benign tumors. To detect any of them in their early stages, screening methods should be used. **Objective:** The aim of this study was to determine if young women are informed about the screening methods for breast diseases, such as breast self-examination, clinical examination, breast ultrasound and mammography. **Material and methods:** We conducted a cross-sectional study using an online questionnaire consisting of 21 questions. There were 302 participants, only women between 18 and 30 years old. For the statistical analysis, we used the Statistical Package for the Social Sciences and the Chi square test. The value of p≤0.05 was considered statistically significant. **Results :** Out of 302 participants, 84% were unmarried and 16% were married. 88.4% knew about the screening and the most acquainted method was the breast ultrasound, 88.1%. The main source of information was healthcare professionals, consisting of 69.5%, followed by social media with 40.1% and school obtained 0%. Excluding breast cancer, 48.3% of the participants didn't know any other illness of the breast. 236 persons (78.1%) were using the breast self-examination and 60.6% of them every month. A link between marital status and the performing of clinical examination of the breasts in the past was identified, p=0.0001. **Conclusions:** Many young women are informed about the breast screening methods, but their knowledge about breast diseases is poor. The school could be more involved in informing the girls, so they will know what to do when they are older.

Keywords: screening, breast self-examination, breast diseases

AMNIOCENTESIS: BENEFITS AND RISKS IN STUDENTS' PERCEPTION

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Background: Amniocentesis is an invasive procedure used as a prenatal screening method. It consists of amniotic fluid sampling using a syringe under ultrasound guidance, which generally takes place between weeks 14 and 20 of gestation. One of the aims of this procedure is genetic testing, for instance being widely used to diagnose Down Syndrome. Although being reported as low-risk, amniocentesis still involves risks, among which we mention miscarriage, needle injury or mother to infant viral transmission such as hepatitis C virus or HIV. **Objective:** The aim of this study is to assess the level of awareness of the risks posed by amniocentesis among student population. It was also sought to understand in which proportion the respondents would agree to the procedure and what is the main influencing factor in their decision. **Material and methods:** The data was collected through a questionnaire which was completed voluntarily and anonymously by students enrolled in Romanian higher education institutions. The information for creating the questionnaire was collected from articles available in the PubMed database. **Results :** A total of 103 responses were collected between March and April 2023. The group consisted of 68% female and 32% male respondents, with an age range between 18- and 49-years. The best represented were the 20- and 21-years subdivisions. 76.7% knew genetic testing to be an aim of amniocentesis, while the least known benefit was fetal pulmonary function assessment with only 10.7%. As far as risks are concerned, miscarriage was the best recognized with 55.3%, followed by needle injury-33%. 82.5% of the respondents stated that they would agree to the procedure, mainly influenced by their desire to know the possibility of their child having a genetic disease. Opposed to this, 17.5% considered it too much of a risk, with 55.5% stating miscarriage as the main decisional factor. The percentage of respondents who were not aware of any of the

indications, benefits or risks involved in amniocentesis was 14.6% and 33.9% stated that were unaware of at least one of the categories investigated. **Conclusions:** The analysis revealed that although amniocentesis is recognized for its use in prenatal screening, more resources should be used to spread the knowledge of other benefits and risks involved, even among the younger generation.

Keywords: Amniocentesis, Risks, Awareness, Students

PRENATAL EXPOSURE TO TERATOGENIC MEDICATION: EFFECTS ASSOCIATED WITH ANTICONVULSANT MEDICATION

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Background: The teratogenic effects of antiepileptic medication currently used in clinical practise, are a real concern among women who want to minimise the risk of malformations. Valproic acid (VPA), carbamazepine and phenytoin are anticonvulsants prescribed in neurological disorders such as epilepsy, bipolar disorder and migraines. **Objective:** The purpose of this study is to familiarise the population with the dangers posed by pharmaceutical active substances to their unborn babies. The focus of this analysis was on the abnormalities that occurred after antiepileptic drugs administration. **Material and methods:** All information used for the analysis was collected from the PubMed database, representing a systematic review of articles published between 2009 to 2022. **Results :** During the selected period, a number of 8 studies were carried out investigating the teratogenic effects on laboratory mice and macroscopic deformities were observed after administration on the 7th and 10th day of pregnancy. Studied immunohistochemically, an increase in brain apoptotic activity was evident. Phenotypic abnormalities were also noted at the level of the eyeballs, vertebrae and neurocranium. As a parallel, in 5 studies analysed on pregnant women who had been administered VPA for convulsive seizures, multiple haematological abnormalities were reported, such as coagulopathy and thrombocytopenia. A few studies show that exposure to valproic acid in the first trimester of pregnancy has a significantly higher risk of congenital malformations compared to carbamazepine. **Conclusions:** The treatment with anticonvulsants in pregnancy, especially with valproic acid, has been closely linked to a higher risk of abnormalities, which denotes the importance of knowing its effects, before administration. Also, the present analysis highlights the contribution of animal studies to a better understanding of the possible side effects of medication.

Keywords: Teratogenic effects, Valproic acid, Abnormalities, Anticonvulsant treatment

IS MENSTRUAL BLOOD A POSSIBLE SUSTAINABLE SOURCE OF STEM CELLS FOR REGENERATIVE MEDICINE?

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Background: The discoveries of the late 20th century in molecular, cellular and biotechnological biology have made it possible to separate and cultivate cells from various tissues and organs. One of the readily available sources of mesenchymal stem cells (MSCs) is menstrual blood-derived stem cells (Men-SCs), which exhibit characteristics similar to other types of MSCs. In 2007, Meng with colleagues isolated a MSC population from menstrual blood (MenSC). Stem cells attract the attention of medical practitioners due to the possibility of treating a series of pathologies, currently difficult to cure. **Objective:** Evaluation of the latest research progresses in menstrual blood-derived stem cells (MenSC) and their application potential. **Material and methods:** This study is a review of the literature, based on the synthesis of clinical studies published in the period 2007-2022, 21 scientific sources were researched. This article includes publications identified through Google Search Engines, PubMed Databases. **Results :** Human endometrium is a dynamic remodeling tissue,undergoing cycles of growth, differentiation and shedding on a monthly basis as part of the menstrual cycle . These dynamic processes occur about 400 times in women until menopause. Menstrual blood is a readily accessible, non-invasive source of large numbers of endometrial stem/stromal cells (MenSC)easily collected using a menstrual cup . There is therefore a growing interest in the functions of MenSCs and their potential applications in regenerative medicine. **Conclusions:** In the past 12 years, researchers have gained more interest in MenSCs due to their advantages of being an abundant and continuous source, collection by non-invasive procedure, high proliferation rate, low

immunogenicity and lack of ethical issues compared to other sources of MSCs .Based on these advantages, several researchers are focusing on the therapeutic potentials and underlying mechanisms of MenSCs in treating a number of diseases both in vivo and in vitro.Menstrual blood collecting and processing protocols need to be evaluated and refined and adapted to the conditions of the Tissue Engineering and Cell Culture laboratory.

Keywords: Menstrual blood, Regenerative medicine, Stem cells, Stem cell therapy

GASTROINTESTINAL PROBLEMS RELATED TO THE STRESS LEVEL OF UNIVERSITY STUDENTS

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Background: The modern university experience can be a stressful and demanding time for students. The pressures of academic performance, social life, and personal responsibilities can take a toll on physical and mental health. One area where this is particularly evident is in the gastrointestinal tract. **Objective:** Our study aims to investigate the relationship between stress level and gastrointestinal problems and the variety of symptoms, among university students in different fields of study. **Material and methods:** We utilized an online questionnaire to conduct a survey of 351 university students (225 female, 126 male) from diverse faculties and 38 different nationalities. The survey included questions regarding the participants' stress levels over the past six months, gastrointestinal symptoms, lifestyle habits, and knowledge about gastrointestinal diseases. The data collected were analyzed using SPSS for statistical analysis (Mann-Whitney-U, Chi-Square). **Results :** More female students (98%) experienced university-related stress in the last 6 months than male students (87%). There was a significant ($P<0.001$) difference in the average stress levels of female and male students. While female students reported their average stress level from the last six months as 7, male students reported their stress level as 6. Both female (49%) and male (34%) students reported diarrhea as the most common stress-related symptom. While students in the fields of Applied (52%) and Social (59%) science, Education (56%), and Law (34%) complained about diarrhea, students in the fields of Engineering (50%), Natural science (43%), Humanities (47%) and Business and Management (41%) stated that the feeling of fullness is the most common stress-related symptom. 72% of female students stated that their gastrointestinal problems get worse in stressful periods, and only 55% of the male students experienced a worsening, which shows a significant ($P=0.039$) difference between these two genders. **Conclusions:** There are gender differences and variations among different fields of study regarding the experience of university-related stress and the worsening of gastrointestinal problems. The most common symptoms, both in terms of comparison between the genders and the different study programs, were Diarrhea and the feeling of fullness.

Keywords: gastrointestinal problems, stress levels, university students

RUTIN IMPROVES ARTERIOLAR DIAMETER IN RETINA AND DECREASES LENS OPACITY AS WELL AS OXIDATIVE STRESS IN A RAT MODEL OF EARLY DIABETES MELLITUS

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Background: Diabetic retinopathy and cataracts are of main concern for diabetics. Hyperglycemia deteriorates the eye lens through the polyol pathway and favors retinal ischemia by enhancing response to endogenous vasoconstrictors. Because there is no curative treatment, advancements in screening have focused on early diagnosis, prior to vision loss. Additionally, post-screening therapeutic strategies would benefit management of asymptomatic patients. **Objective:** The study aimed to investigate the *in vivo* ocular effects of rutin, a natural antioxidant, on an early model of diabetes mellitus (DM) by using funduscopy, transmission electron microscopy (TEM) and oxidative stress (OS) parameters. **Material and methods:** Fifteen female Wistar albino rats, weighing 250±20 g, aged three months, were used. The 30 harvested eyeballs were equally allocated to the following groups: healthy control animals, DM animals treated with vehicle, DM animals treated with rutin. DM was induced by intraperitoneal administration of 40 mg/kg streptozotocin and was considered positive for blood glucose levels over 250 mg/dL. Retinopathy and cataracts were assessed by ophthalmoscopy for the following four weeks. After

four weeks, the rats from DM groups received orally vehicle and 10 mg/kg rutin respectively, for seven days. On day eight, the cohort was examined by funduscopy and images were recorded. Then, samples were collected: lenses for TEM and blood for OS analysis. For each funduscopy image the diameter of three arterioles was measured, the election site being within a 180µm radius of emergence. Twenty regions of interest, selected for each TEM photo, were corrected for pixel density distribution (PDD) and used to assess opacity. Images were examined using ImageJ by two blinded researchers. Data was analyzed using RStudio, alpha = 0.05. **Results :** Diameters of arterioles decreased in DM (60.8 ± 6.3 µm) compared to controls (62.4 ± 7.1 µm). Rutin increased the diameter (62.4 ± 6 µm) compared to DM treated with vehicle and maintained it close to controls ($p>0.05$). Opacity of lenses increased in DM (143.6 ± 6.1) compared to controls (132 ± 8.5; $p<0.001$), while rutin (137.2 ± 5.6) reduced the opacity compared to DM ($p<0.001$). OS analysis revealed increased MDA in DM treated with vehicle when compared to controls ($p<0.05$). In the rutin treatment group, MDA decreased compared to DM treated with vehicle ($p<0.05$). **Conclusions:** In conclusion, rutin had positive effects on the redox imbalance in a rat model of early diabetic ocular complications and exerted favorable outcomes on retinal arteriolar diameter and lens transparency.

Keywords: Diabetic retinopathy, Diabetic cataracts, Rutin, Antioxidant

CLINICAL - MEDICAL

BACTERIOLOGICAL AND FUNGAL INVESTIGATION IN PNEUMOLOGICAL PRACTICE: A USEFUL MANEUVER FOR AN ACCURATE DIAGNOSIS

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Background: Healthy lung hosts a diverse microbiota, even in acute infections and chronic suppurative diseases. Bacteriological investigation should be mandatory in hospitalized patients with symptoms of an infectious disease. An initial sputum Gram stain and culture (or an invasive respiratory sample as appropriate) should be obtained in all hospitalized patients. Sputum quality should be ensured for interpreting Gram stain results. Bacteriological confirmation by sputum examination or bronchial aspirate of cases with suspicion of pulmonary tuberculosis is necessary for a certain diagnosis. Identification of microorganisms in the lower respiratory tract is conditioned by the adequacy of the lower respiratory tract specimen, by the avoidance of contamination by upper respiratory tract flora, the use of microscopic techniques and culture methods and by the current and recent antimicrobial treatment. **Objective:** The objective of this study was to determinate how many bacteriological and fungal investigations (including the identification of M. Tuberculosis) were performed in patients hospitalized in the Pulmonology Department, in order to assess the percentage of bacteriological confirmation and its distribution according to the diagnosis of admission. **Material and methods:** : We conducted a retrospective study for the period 01.01.2021-31.01. 2022. The data from the informatic system used in the Mures County Clinical Hospital were 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 patients who requested bacteriological or fungal investigation from sputum, bronchial aspirated or pleural fluid on the procedure code 92204-00. Patients with negative results were excluded (without bacteriological or fungal identification). **Results :** We included 535 patients in the study who requested bacteriological or fungal investigation from spontaneous sputum, pleural fluid or bronchial aspirate. After the selection of patients and the application of the exclusion criteria, the study group comprised 132 patients with bacteriological or fungal confirmation. Of these, 53 samples were positive for M. Tuberculosis, 55 samples for bacteriological and 24 samples for fungal examination. **Conclusions:** The low percentage of bacteriological confirmation is due to the fact that in patients with clear symptomatology and diagnostic concordance this investigation was not requested. According to the European Guidelines for the diagnosis and monitoring of pneumonias, for microorganisms other than M. Tuberculosis, bacteriological confirmation should be obtained whenever possible. The use of bronchoscopy as a maneuver for bacteriological or fungal diagnosis is useful and reserved for cases in which the result could not be obtained from spontaneous sputum.

Keywords: bacteriological investigation, fungal, sputum, bronchial aspirate

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UPPER ENDOSCOPIC FINDINGS IN PATIENTS TREATED WITH NOACS

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Background: New oral anticoagulants (NOACs) are a class of drugs that target either thrombin or factor Xa to achieve the desired effect: protection against thromboembolic events. However, there is a concern regarding the clinically relevant bleeding that can occur in the gastrointestinal tract due to their use. Studies have shown that NOACs could cause bleeding and inflammation in the GI tract, with no significant data in populations with a high prevalence of H. pylori infection. **Objective:** The aim is to observe the correlation between clinical aspects and upper endoscopic findings in patients with chronic NOAC treatment compared to patients without any gastrotoxic medication. **Material and methods:** In our retrospective study, we have included a total of 134 patients who have undergone endoscopic investigations for either gastrointestinal symptoms, anaemia, or screening for bleeding risk. The study group (n=52) were patients on NOACs and the control group (n=82) were patients that had no chronic drug prescription for anticoagulants or antiplatelet therapy. **Results :** Of the 134 patients, 52,24% were men, and 47,76% were women. The mean age was 59,02 years, but, as expected, there was a significant difference between the mean ages of the study group (69,48 years) and the control group (52,39 years) ($p<0,0001$). In terms of endoscopic findings, patients with chronic NOAC treatment are significantly more likely to present submucosal haemorrhages of the gastric body ($p=0,025$), but not antral submucosal haemorrhages ($p=0,3366$). There was a

negative correlation between heartburn and NOAC consumption (p=0,0008, OR=0,148, 95% CI=0,042 to 0,5213), but no correlation with dyspeptic symptoms such as abdominal pain, nausea, or early satiety. Patients that regularly take NOACs are more likely to present with anaemia (p=0,0096). There were no significant correlations between the chronic intake of NOACs and gastric antral or corpus erosions and ulcers. **Conclusions:** In our endoscopic population anaemia was the main indication for endoscopy in NOAC consumers, while petechiae of gastric corpus were the single findings correlated with their administration. There are no correlations between NOACs and symptoms of dyspeptic syndrome.

Keywords: NOACs, endoscopic, submucosal haemorrhage, anaemia

TYPE 2 DIABETES MELLITUS, THE MASTER OF CAMOUFLAGE

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Background: Type 2 diabetes mellitus (T2DM) is a worldwide spread disease, accounting for a prevalence of approximately 11.6% in the population of Romania. The gastrointestinal implications of the disease are scarcely investigated as a routine, so they are not given as much attention as they should normally receive. **Objective:** The aim of our study was to evaluate demographical, clinical, endoscopic and pathological aspect of gastric mucosa in consecutive patients with T2DM in comparison with patients without T2DM evaluated on upper digestive endoscopy (UDE). **Material and methods:** We realised a retrospective case-control study on patients investigated on UDE in the 2nd Medical Clinic of the Clinical County Emergency Hospital Targu Mures, Romania, including 633 patients, successively divided in 2 groups, considering their T2DM status: 119 patients in the study group (T2DM+) and 514 patients in the control group (T2DM-). We have gathered demographic and clinical data, such as previous or concomitant diseases, routine medication, social habits, as well as the laboratory results for all patients, that included the routine blood cell count and biochemical parameters. The results from UDE reports, together with the histopathological analysis of the biopsied fragments were collected and analysed. **Results :** Regarding the endoscopic findings, antral or corporeal erythema, erosions, haemorrhages or ulcerations, we have determined no significant difference between the two groups. However, when investigating the digestive symptoms of the studied patients, there was a significantly lower incidence of gastric pain/discomfort and pyrosis in the T2DM positive group, with an odds ratio estimated at 0.637 and 0.346 respectively, proving its presence as being a "protective factor" against these manifestations, probably due to the development of autonomic diabetic neuropathy. Analysing the histological findings, we have established that the diabetic disease tends to have a slight association with Helicobacter pylori infection (OR=1.426) in both antrum limited and corporeal extension (OR=1.451 and OR=1.501 respectively). Furthermore, the association between smoking and the H. Pylori infection in T2DM patients proved to significantly increase its risk of appearance, with an OR valued at 3.3793. **Conclusions:** The presence of T2DM, can lead to the misinterpretation of a clinical examination/interview, due to the neuropathy that can camouflage the gastric symptoms, but the examination flow must be completed with H. Pylori test, endoscopy and biopsies due to the high potential risk of gastritis and further cancer development.

Keywords: type 2 diabetes mellitus, gastrointestinal implications, camouflage, neuropathy

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THE EFFECTS OF COVID-19 PANDEMIC ON CHILDREN`S MENTAL HEALTH

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Background: The World Health Organisation declared the COVID-19 pandemic on 11th of march 2020 with a considerable influence on the global population, including the pediatric category. It is well known that the rapid spread of the SARS-CoV2 virus determined the authorities to initiate different restrictions, such as the quarantine imposed which made the children and teenagers unable to continue their education onsite for at least two months in Romania(march-april 2020). This led to social isolation and disruption of their daily life, with a great impact for both physical and mental health. **Objective:** The aim of this study is to the present the effects of the COVID-19 pandemic on the children and teenagers` mental health, considering the influence of the following factors: level of physical activity, screen time and quality of sleep. **Material and methods:** A prospective study was conducted, between February and April 2023, based on a questionnaire applied online to be answered by the parents from the geographic territory of Romania. **Results :** The study is based on 304 completed questionnaires with the average

age of the children between 10-14 years old(54,9%), followed by 5-9 years old (27,3%) and 15-19 years old(17,8%). A significant correlation was made between the effects of the pandemic on the mental and physical health of children(p=0,0001). 88,2% of the parents considered the pandemic as not having a beneficial effect for their children`s mental health. Regarding the level of physical activity, 35,9% of the children spent less than 30 minutes per day performing a sport. Extended screen time, with more than 3 hours per day was registered for 79,3% of the children. Furthermore, 44,1% parents confirmed that their children had an unbalanced sleep pattern, sometimes falling asleep at late hours and other times at appropriate hours. It was found that 25% of the children become more introverted, 32,2% of them started having symptoms of depression and anxiety and 28,6% developed negative habits for their health. **Conclusions:** In light of all these, it is important to highlight the impact of the COVID-19 pandemic on children`s mental health and to deal with it in an appropriate way as it can have long term consequences for their life.

Keywords: COVID-19 pandemic, children, mental health

THE IMPACT OF THE COVID-19 PANDEMIC ON TEENAGE PREGNANCIES

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Background: Romania ranks second in Europe in the birth rate among teenage girls and the highest rate is seen in the Mureș County. The high rates of teenage pregnancies in Romania are widely linked to factors such as poverty, lack of access to family planning and sex education and conventional cultural views. **Objective:** assessing if the Covid-19 pandemic had an impact on the number of births from teenage mothers (in this study the maximum age is set at 16 years old), potentially with an increase or a decrease in their number. **Material and methods:** the study is based on a data collection from the clinic of Obstetrics and Gynecology 1 of Târgu Mureș from January 2018 until October 2022. We assessed the number of births, cesarian section, premature births and complications and risk factors related to the births in girls <=16 years old. **Results :** total number of births in girls <=16 years old (n=297) out of a total number of births in general (n=8321), representing the 3.6%. Out of 297 births in girls <=16 years old, 40 had a C-section (13.5%) and 44 had a premature birth (14.8%). The most common birth-related complications were unspecified labor dystocia (n=61), perineal lacerations (n=27) and post-partum anemia (n=8). Out of the 8022 births in women > 16 years old, 2466 had a C-section (30.7%) and 920 had a premature birth (11.5%). **Conclusions:** in the year of onset of the COVID-19 pandemic the births in girls <=16 years old were diminished (n=44), confirming the hypothesis that the pandemic would have an impact on adolescent pregnancies. Furthermore, it was observed that the percentage of prematurity was higher in the births from girls <=16 years old compared to the births in > 16 years old: the former had a percentage of premature births of 14.8% (44 out of 297) and the latter had a percentage of 11.5% (920 out of 8022).

Keywords: teenage pregnancy, cesarian section, premature birth

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EVALUATION OF THE COMMON RISK FACTORS RELATED TO CHILD POISONINGS

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Background: Any substance can have a toxic effect on the body if administered in a dose higher than recommended, and in children the consequences are often severe as the toxic dose can be reached very quickly. Storing medicines and household products in accessible places for children, combined with parental neglect, represents the main causes of intoxications. The environment in which they grow up, as well as childhood traumas, lead adolescents to purposefully ingest substances for suicidal reasons. **Objective:** Highlighting the risk factors involved in both medication and non-medication-related ingestions among minors, as well as monitoring certain aspects of the topic (gender, distribution by age group, type of poisoning). **Material and methods:** We conducted an observational study through retrospective analysis of observation records of pediatric patients (aged 1-18 years) diagnosed with substance ingestion poisoning at the Pediatrics I Clinic of the Emergency County Clinical Hospital in Târgu Mureș, during the period 2019-2022. **Results :** During the aforementioned period, 204 cases were registered with the diagnosis of acute poisoning by ingestion of various substances at admission. Of the total number of children, 54,41% (111 cases) were female, and medication-related poisoning had a dominant share of

53.92% (110 cases). In terms of the type of poisoning, the majority of ingestions were accidental (66,67%). The most affected age group was 1-4 years old (47,55%), where only accidental poisoning occurred, while the lowest frequency was recorded in the 5-9 age group (10,29%). Regarding the place of origin, the urban area (50,98%) predominates with a subtle difference from the rural area (49,02%). The most frequent drugs involved were psychotropic drugs (24,51%), while for non-medication substances, household corrosive substances predominated (18,62%). The main cause of poisoning in young children is the negligence of caregivers, while family conflicts most often lead adolescents to suicidal attempts. **Conclusions:** Accidental intoxications from ingestion of non-medication substances occur more frequently in young children (1-4 years old), while voluntary poisoning for suicidal purposes are the domain of adolescents who have experienced various psychological traumas in childhood.

Keywords: intoxications, children, suicidal

LARGE VESSEL OCCLUSION IN ACUTE ISCHEMIC STROKE - RADIOMIC FEATURES IN DIAGNOSIS

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Background: Often called "cerebrovascular accident", stroke is a global leading cause of death and long-term disability. It reached the proportions of an epidemic, with 1 in 4 adults suffering a stroke in their lifetime. This number doubled in the past 17 years. The backbone of stroke management is neuroimaging. As there is a continuous progress in computational technology, digital image information can be now converted into comprehensive quantitative data. The field that manages this conversion is known as radiomics. A valuable advantage of radiomics is the ability to identify microstructural changes, otherwise undetectable by human eye alone. **Objective:** The objective of this paper is to find and highlight the associations between the radiomical features of the thrombus, and the outcome of the endovascular procedure in stroke patients. **Material and methods:** We selected 20 patients suffering from stroke due to large vessel occlusion, who received endovascular treatment. We assessed the textural features of the thrombi, on non-enhanced cranial CT scans using 3D Slicer™ analysis software, and compared the results with the outcome of the endovascular procedure, quantified using the eTICI score. **Results :** We found a positive linear association between the radiomical features of the thrombi and the outcome of the procedure in all admitted cases. We furthermore will proceed with the graphical representation of the segmentations. **Conclusions:** Graphical textural analysis of spontaneous hyperdense thrombi on native head CT scans are proven, on a small scale, to be relevant in estimating the outcome of endovascular treatment in acute ischemic stroke caused by large vessel occlusion.

Keywords: Stroke, Endovascular, LVO, Radiomic

AST TO ALT RATIO – A NEW PREDICTIVE FACTOR FOR DEVELOPING HEART FAILURE AFTER AN ACUTE CORONARY SYNDROME

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Background: Heart Failure (HF) affects more than 64 million people worldwide, and current studies show that HF is responsible for 8,5% of all heart disease deaths. Many cardiovascular diseases, especially ischemic heart disease, can lead to HF, and monitoring of biomarkers can be used for the initial diagnosis, as well as to identify the patient's response to therapeutic intervention. **Objective:** The study aims to investigate if AST to ALT ratio may be used as a predictive factor for developing HF in patients following an acute coronary syndrome. **Material and methods:** Our study included 134 consecutive patients admitted into the Cardiology Clinic of Emergency Clinical County Hospital Târgu Mureș with acute coronary syndrome and treated by percutaneous angioplasty with stenting. Based on the AST/ALT ratio, a week after the acute event, the study population was divided as follows - Group 1 with AST/ALT <1 (n = 39) and Group 2 with AST/ALT ≥ 1 (n = 95). Paraclinical markers of HF, such as left ventricular ejection fraction (LVEF) and N-terminal pro-B-type natriuretic peptide (NT-proBNP) values, were determined for both groups to highlight the differences in cardiac function between the two groups. **Results :** In our study, the mean age was 61.50 ± 11.49 years. Patients in group 2 presented significantly higher values of NT-proBNP (1810 ng/L ± 724 ng/L vs. 306 ng/L ± 177 ng/L; p < 0.0001) and significantly lower LVEF (40.00 % ± 0.76

% vs. 46.50 % ±1.10 %; p = 0.0003) compared to those in group 1. Correlation analysis revealed a positive association between the AST to ALT ratio and NT-proBNP levels (r = 0.4; p < 0.0001) and a negative association with LVEF (r = -0.3; p = 0.0002). **Conclusions:** We observed a strong association between AST/ALT ratio and paraclinical markers of left ventricular dysfunction, suggesting that AST/ALT ratio might be used as a predictor of HF development after an acute coronary syndrome.

Keywords: AST/ALT ratio, Heart Failure, LVEF, NT-proBNP

THE ALBI SCORE IN LIVER CIRRHOSIS

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Background: Cirrhosis is a complex pathology resulting in scarring or fibrosis of the liver caused by long term damage. Research has established that liver fibrosis is a progressive process which, in early stages, can be reversible, when the causing factor is eliminated. Most patients do not show signs of liver disfunction until the onset of decompensation. Since most patients are not diagnosed in the early stages, treatment focuses on preventing cirrhosis, decompensation and death. Currently, the only curative treatment for liver cirrhosis is liver transplant. The ALBI score was developed to assess prognosis in patients with liver fibrosis. **Objective:** This study aims to assess the efficacy of the ALBI score in grading patients with cirrhosis and to compare it to other clinical tools, such as the Child-Pugh score. **Material and methods:** The study currently involves 539 patients, aged 21 to 80, diagnosed with cirrhosis, which were admitted to our clinic (Gastroenterologie) in Targu Mures. By using the serum albumin and the total bilirubin levels, we divided the patients based on the ALBI scoring system into 3 grades. We quantified the correlation between the ALBI score and other factors we included in the study and compared its findings to those of the Child-Pugh score. **Results :** The most common cause of cirrhosis amongst the patients included in this study, was alcoholic liver disease (177/539). A significant number of those that participated in the study were males (413/539). The most common complications found were: encephalopathy, ascites, upper gastro-intestinal bleeding and varices. We observed a strong correlation between albumin levels and the ALBI score grade (p<0,0001). Our findings suggest that the ALBI score is, perhaps, a better way of assessing the severity of the disease compared to its counterparts (p<0,0001). **Conclusions:** Despite its relative novelty, the ALBI score has proven to be an important tool in the assessment of prognosis in liver pathology because of the fact that it does not require clinical experience and it limits the subjectiveness of prognostic tools, such as the Child-Pugh score, which requires the subjective grading of ascites and encephalopathy. The ALBI score can be calculated using the serum albumin levels and the total bilirubin levels.

Keywords: ALBI score, Cirrhosis, Prognosis, Child-Pugh score

THE ROLE OF IMMUNOSENESCENCE IN INTERFERON-B-TREATED MULTIPLE SCLEROSIS

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Background: Multiple Sclerosis (MS) is a neurological autoimmune disorder where the immune system attacks the myelin sheath of neurons leading to neurodegeneration and demyelinating lesions. Immunosenescence is the age-related decline of immune system function has been found to begin prematurely in MS patients. It has an essential role in the course of the disease and the efficacy of immunotherapies. **Objective:** This study aims to establish a relationship between increased levels of inflammatory cytokines and age in MS patients treated with interferon-β. **Material and methods:** This retrospective study examined the data of 70 patients treated with interferon-β for MS at the Neurology I ward of the Emergency County Hospital of Tirgu Mures in Romania. Cytokines levels as well as other demographical and clinical data were analyzed. The patients were divided into 2 groups according to age, with the first cohort being 49 years and under and the second cohort being 50 years and older. All statistical analyses were conducted using the software Graphpad Prism 9.5.1. P values <0,05 were considered statistically significant. For comparative analysis of continuous variables, the Mann-Whitney U test was used. The Fisher exact test was used to test categorical variables. Multivariable linear regression models were used to explore the relationship between age and cytokine levels. **Results :** There was a statistically significant association between TNF-α and age (p=0,007) but no such significance could be established for the other

cytokines: IL-1 (p=0,84, IL-6 (p=0,24), IL-10 (p=0,82), IL-17 (p=0,95). Multiple linear regression for age and TNF-α adjusting for disease duration found a statistical significance (Multiple R= 0,35, R2=0,1242 p=0,008). However, no noteworthy relationship could be seen in the other cytokine models. Between the two cohorts, EDSS and disease duration had consequential p values (p=0,0073, p=0,0024). **Conclusions:** Since Interferon-β has been proven in previous studies to reduce TNF-α, its increased levels in the older cohort might be explained by immunosenescence. However, further research should be conducted on treatment-experienced MS patients to demonstrate a link between immunosenescence and inflammatory cytokine levels.

Keywords: Immunosenescence, Multiple Sclerosis, Cytokines, Interferon-β

ASSOCIATION OF CORONARY ARTERY CALCIFICATION (CAC) SCORES WITH PERICARDIAL FAT ATTENUATION IN CARDIAC CTS

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Background: Recent research has shown a correlation between vascular inflammation and calcification. Both inflammatory cytokines and proinflammatory fatty acids have been implicated in the development of osteoblastic differentiation in local cells and vascular smooth muscle cells. Epicardial fat has been shown to be involved in releasing free fatty acids, is known to modulate the formation and progression of atheroma and is thought to release proinflammatory factors that lead to coronary artery calcification (CAC) formation. Considered an independent risk factor of coronary artery disease progression, epicardial fat may provide a pathway to diagnose and manage CAC. **Objective:** The aim is to establish whether a correlation exists between patients with various CAC scores or with stents, and their epicardial fat attenuation when scaled relative to their subcutaneous fat attenuation. **Material and methods:** 250 patients were selected: Fifty of each of these groups; CAC 0, CAC 1-99, CAC 100-299, CAC >=300 and CAC of patients with stents. Smart Score acquisitions (120 kv, 250mA, 25 cm diameter FOV, 25 mm spacing) were used, with RadiAnt, ellipse tool and viewed using the default window (WL40, WW 400). Subcutaneous fat area of >1 cm2 (3 samples each); coronary fat area >0.1 cm2 (2 samples each, near the right coronary (RCA), and the left main (LM), from the aortic root, and near the RCA, the left anterior descending and the left circumflex artery at the 4-chamber view). ANOVA and Tukey Post Hoc (if ANOVA p-value <0.05) were used. **Results :** Significant associations ($p<0.05$) were noted in the attenuation of the fat surrounding the RCA (between those with zero calcification and those with CAC >100) and the LM (between those with zero calcification and those with CAC 100-299) at the aortic root. A strong link ($p<0.01$) is seen in the attenuation around the RCA at the aortic root between those with 0 CAC and those with >=300. In all these significant groups, higher CAC classifications present with lower means of attenuation. The rest present no significant associations. **Conclusions:** This study shows there is a link between lower fat attenuation values at some regions of the epicardial fat around coronary arteries and higher CAC scores. Considering there is evidence that lower fat attenuation values are associated with lower-quality fat, this signifies that atherosclerosis and inflammation affect the adipose tissue around it. However, there is also research showing paradoxical or insignificant associations. It is necessary to research further in order to understand CAC pathophysiology better.

Keywords: Coronary Artery Calcification, Epicardial Fat, Cardiac CTs, CT attenuation

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THE QUALITY OF INFORMATION ON FRENCH WEBSITES CONCERNING ALZHEIMER'S DISEASE – A CROSS-SECTIONAL STUDY ON THEIR CREDIBILITY, COMPLETENESS AND ACCURACY

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Background: The high prevalence of Alzheimer's Disease (AD) worldwide has led the affected and their caretakers to seek the Internet for information. Therefore, there is an exigency for the Internet to contain accurate clinical sources of information, as it plays an important role in early detection and treatment. **Objective:** The study's primary aim was to assess the compliance with credibility criteria, completeness, and accuracy of online information about AD in the French language. Secondarily, the study investigated the correlations between credibility scores and Google ranking on the one hand and content completeness and accuracy on the other. **Material and methods:**

This cross-sectional, observational study included the first 25 websites listed on the Google results page in French relevant to the topic of AD. They were selected using a set of inclusion and exclusion criteria. Two co-evaluators reviewed each website separately to assess the completeness and accuracy of the information against a structured quality benchmark based on DSM5 and critically revised by two psychiatrists. The Spearman correlation test was used to test correlations between scores. The statistical significance threshold was set at 0.05. **Results :** The relative credibility score was 5.2 (SD=1.0). The relative completeness score was 5.5 (SD=1.9). The relative accuracy score was 6.5 (SD=0.8). The relative credibility score was not correlated either with the relative completeness score (p=0.2298; rho=0.2491) or the relative accuracy score (p=0.6988; rho=-0.0814). The Google rank of the websites was significantly correlated with the relative completeness score (p=0.0406; rho=-0.4123) but not with the relative accuracy score (p=0.0544; rho=-0.3894). **Conclusions:** Regarding the primary objective, the quality (credibility, completeness, and accuracy) of online information about AD in French was mediocre. The only statistically significant correlation was between Google ranks and the relative completeness score. The strength of the correlation was moderate.

Keywords: Alzheimer's disease, patient educational resources, consumer health information, Internet

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CLADRIBINE TREATMENT IN PATIENT WITH HIGLY ACTIVE RELAPSING REMITTING MULTIPLE SCLEROSIS FORM

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Background: Cladribine decreases 90% of major B lymphocytes and 40% of T-helper lymphocytes which are known to have a major role in pathophysiology of MS. It is recommended as a treatment for highly active relapsing-remitting MS. **Objective:** The aim of the study was to correlate the clinical evolution before and after treatment, the Extended Disability Status Scale (EDSS), number of relapses and the lymphocytes number within the 2 years of treatment. **Material and methods:** A case-control, clinical, observational prospective non-interventional study in which data were collected from patients in the neurology department, over a period of 3 years, between 2021 and 2023. We evaluate the outcome of patients during the treatment with cladribine (3.5 mg/kg cumulative dose over 2 years). Inclusion criteria: Patients (15) diagnosed with RRMS with high activity. We evaluated patients at 1 and 2 years. All received an MRI, a clinical assessment of their neurological status, an EDSS, and a relapse count. Microsoft Excel was used for statistical analysis. **Results :** 15 RRMS patients (5 male and 10 female), 4 on their fourth cycle, 7 on their third, 14 on their second, and 15 on their first. Six patients (40%) were treated naïve while nine patients (60%) had at least one DMT. For 10 patients, the EDSS mean initially was 1.4 and ranged between 0 and 6, while the EDSS mean after 1 year was 0.9 with a range between 0 and 7.5. The EDSS remained stable in 50% of the patients, improved in 30%, and worsened in 20%. Compared with an annualized relapse rate (ARR) of 1.5 in the year prior to the start of cladribine, the ARR was reduced to 0.5 in year 1 after cladribine treatment (67% reduction). The 4 patients who finished the 4th cycle had a 0 ARR after 2 years of treatment. Analyzing the lymphocytic numbers of 10 patients at baseline, 6 months, and 12 months we observed a reduction of 34% in month 6, followed by a 29% reduction in month 12. **Conclusions:** Cladribine is effective in decreasing the EDSS in 30% of cases while stabilizing it in 50%. Severe reduction in the number relapses (67% reduction). The main mechanism of action is lymphocyte reduction. Cladribine is an efficient therapy for RRMS patients. No side effect were encountered.

Keywords: Multiple Sclerosis, Cladribine, EDSS

HYPOTRICHOSIS WITH JUVENILE MACULAR DYSTROPHY (HJMD) - A RARE CASE WITH AN EVEN RARER PHENOTYPE

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Background: HJMD is a rare autosomal recessive (AR) disease that leads to progressive vision loss with subsequent blindness in the 2-3rd decade of life. It is caused by the mutation of the CDH3 gene responsible for coding the P-cadherin protein. P-cadherin is strongly expressed in the development of the hair follicle matrix, but also at the level of the retinal pigment epithelium (RPE). Its damage will end with RPE atrophy and progressive damage to the outer retina. **Objective:** The objective of this study is to highlight the rare fundus imagine retina

changes of a patient with HJMD. This is particularity very important, because the total number of cases reported in scientific journals until 2022 were 116 .The different phenotype will make the diagnosis of this condition even more difficult. **Material and methods:** A 20-year-old female presented with complaints regarding visual loss in December 2020. Due to the association of hypotrichosis and macular degeneration, the diagnosis of HJMD was suspected, which was later confirmed by the genetic test. A literature search was conducted to collect relevant published research using PubMed, Web of Science and Science Direct databases, and then we compared the retinal lesions of our patient with those found in clinical studies. The Optical Coherence Tomography (OCT) was done using Zeiss Stratus OCT. Taking into account the AR transmission, the investigations were also done for the patient's sister. **Results :** In addition to the classic findings such as: outer retinal tubulation, retinal thickness, loss of outer nuclear layer (ONL), of the subfoveal interdigitation zone (IZ) and inner segment/outer segment (IS/OS) junction IS/OS lines, RPE irregularities, macular hole and pigment clump in the subretinal space, we also found atypical features such as: small excavation of the papilla, damage to the peripheral retina with preservation of the macula and epiretinal membrane after 3 years from the first visit. The patient's sister presented at the ophthalmological examination degenerative lesions of the retina since the age of 3, when the minimum age at which the lesion was described in the current clinical studies was 5 years. **Conclusions:** The incidence of HJMD could also be low due to its non-diagnosis as a result of clinical variability. The association of hypotrichosis with degenerative retinal lesions should lead us to confirm/deny this diagnosis.

Keywords: retina, macular hole, retinal pigment epithelium, vision loss

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DRUG-DRUG INTERACTIONS AMONG HYPERTENSIVE PATIENTS.

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Background: Hypertension has increase prevalence and concurrent comorbidities, because these patients are treated with a complex therapeutic regimen comprising multiple different drugs. A drug interaction is a reaction between two (or more) drugs or between a drug and a portion of food, beverage, or supplement and can cause an unwanted reaction. **Objective:** Is to assess the utilization pattern of antihypertensive drugs and drug-drug interaction (DDI) in hypertensive patients. **Material and methods:** These was an analytical literature review from the scientific articles related to the keywords, selected 40 scientific articles out of which only 34 met the inclusion criteria in the research topic. **Results :** Scientific evidence has shown that 71.5% prescriptions were identified having at least one drug-drug interaction. Of these, 55.2% DDIs were pharmacodynamics, 4.7% pharmacokinetic type of DDIs. Also, 32.2% were found affecting serum potassium level. The percentage of DDIs was higher in males compared to females. DDIs are increasing with the number of drugs that patients are administering and at their age. Sources warn of the serious consequences of using non-steroidal anti-inflammatory drugs with antihypertensive drugs and recommend the use of low and short-term doses of treatment. Nonsteroidal anti-inflammatory drugs (NSAID's) may interact the antihypertensive effects of thiazide diuretics, ß-blockers, ACE-inhibitors and AT1-receptor antagonists, as a result of sodium and fluid retention as well as decreased formation of vasodilatory prostaglandins . It has been clearly demonstrated, however, that low-dose of acetylsalicylic acid (75 mg daily) does not interfere with the antihypertensive activity of ACE-inhibitors and other types of antihypertensive drugs. **Conclusions:** The present review identified the potential drug-drug interaction and documented interactions in hypertensive patients. Although, potential drug-drug interactions, though common in this study comprised mainly of minor and moderate types. Notwithstanding, physicians need to be reminded of the potential interactions.

Keywords: drug-drug interactions, hypertension, antihypertensive drugs

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SYSTEMIC INFLAMMATORY BIOMARKERS AS PREDICTORS OF VENOUS THROMBOEMBOLISM IN COVID-19 PATIENTS

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Background: COVID-19 is a viral infection caused by SARS-CoV-2 that has become a global health emergency. Biomarkers play a significant role in predicting the disease's severity and clinical outcomes. Venous

thromboembolism (VTE), pulmonary embolism (PE), and deep vein thrombosis (DVT) are common in COVID-19 patients and can cause morbidity and mortality. Thus, investigating the impact of biomarkers on VTE, PE, and DVT in COVID-19 patients is crucial. **Objective:** The objective of this systematic review was to assess the impact of biomarkers on COVID-19 patients with VTE, PE, and DVT. **Material and methods:** A systematic review was conducted using Google Scholar, PubMed, and Cochrane databases, with the words "COVID-19", "biomarkers" (including D-dimer, fibrinogen, C-reactive protein (CRP), lymphocyte count, neutrophil count, platelet count, and prothrombin time (PT)), "venous thromboembolism", "pulmonary embolism", and "deep vein thrombosis", and involved screening studies by title and abstract, followed by a full-text review. We excluded studies with incomplete data. A total of 16 studies met the inclusion and exclusion criteria and were included in the final analysis. **Results :** The study included data from 16 studies and the mean age of COVID-19 patients was found to be 64.93 years, with a male predominance. The average length of stay was 18.5 days. Hypertension was seen in 45.6% of patients, while dyslipidemia was reported in a range of 1-38%. The incidence of malignancy was low, with few studies reporting values above 10%. The mean platelet count across all studies was within the normal range. However, the mean value for fibrinogen was elevated, suggesting the presence of hypercoagulability. The mean value for D-dimer was found to be significantly elevated, indicating the presence of thrombosis. CRP levels, which indicate inflammation, were found to be increased based on the available data. The lymphocyte count and the neutrophil count were high, suggesting an activated immune system, but he mean hemoglobin level was within the normal range for both men and women. **Conclusions:** Elevated D-dimer, fibrinogen, and CRP levels are associated with an increased risk of thrombosis and inflammation in COVID-19 patients with VTE, PE, and DVT. Lymphopenia and neutrophilia indicates an activated immune system, with hypertension being present in approximately half of the patients. Understanding the role of biomarkers in COVID-19 patients with VTE, PE, and DVT could help in early detection, risk stratification, and optimal management.

Keywords: systemic inflammatory biomarkers, COVID-19, venous thromboembolism, deep vein thrombosis

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THE CREDIBILITY, COMPLETENESS AND ACCURACY OF WEB CONTENT INFORMING ABOUT ALZHEIMER'S DISEASE IN THE GERMAN AND ROMANIAN LANGUAGES

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Background: The recent period of the COVID-19 pandemic has shown us how readily accessible misleading health information can be and that it is much more difficult to recognize misinformation and distinguish it from correct sources. Alzheimer's disease (AD) is just one of the thousands of diseases that people need to be educated about, in order for them to differentiate scientifically correct sources from deceptive ones. **Objective:** The study measured the reliability, completeness, and scientific fidelity of information about AD geared towards the German and Romanian internet users. **Material and methods:** The study is part of a larger investigation into the quality of health-related online information accessed by the general population and included a relevant number of websites in German and Romanian language. The methodology applied in the study is described in detail in previously published papers. **Results :** The German websites averaged 5.9 grades while the Romanian websites 4.4 grades on the credibility scale (p=0.0082). As far as the completeness of the information is concerned, both language subsamples contained only half of the items included in the quality benchmark (p=0.9381). The German websites averaged 5.7 grades while the Romanian websites averaged 5.1 grades on the correctness scale (p=0.0436). In both German and Romanian subsamples, the information about AD symptoms graded significantly higher on the completeness as well as on the correctness scale (p-values **Conclusions:** The overall quality of online information about AD was mediocre. The scores for completeness and accuracy were marginally higher for the German websites, but the difference only reached statistical significance for the credibility and accuracy scores. For both subsamples the treatment scores were significantly lower than the symptom scores.

Keywords: Alzheimer's disease, health information, education, neurodegeneration

HEMADSORPTION IN CARDIAC SURGERY

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Background: Cardiopulmonary bypass (CPB) used during open-heart surgery induces a systemic inflammatory response that leads to multiorgan failure and thus affects the prognosis. In the last years, different blood purification strategies have been performed during surgery to reduce the intensity of this inflammation. **Objective:** We studied the effectiveness and possible side effects of the Jafron HA330 hemoperfusion cartridges used during cardiopulmonary bypass in cardiac surgery. **Material and methods:** We conducted our retrospective case-control study at the Intensive Care Department of the Emergency Institute of Cardiovascular Diseases and Transplantation of Târgu-Mureș, including 102 adult patients who underwent open-heart surgery. In some of the patients (test group) hemoperfusion cartridge was used during cardiopulmonary bypass, in the control group this procedure was not performed. During the operation and in the postoperative period we followed the vital signs of the patients, the need for circulatory support, the laboratory parameters, the complications and mortality. **Results :** We included 58 patients (22 female, 36 males, mean age 63.5 years) in the test group and 44 patients (16 female, 28 males, mean age 66 years) in the control group. There were no significant differences between the two groups regarding the length of myocardial ischemia and cardiopulmonary bypass. Valvular diseases were more common in the control group (p=0.0246), while in the test group the aortic dissection was the predominant pathology (p=0.0067). In the test group, the partial pressure of oxygen was significantly higher during surgery (p= 0.0361) and on the first postoperative day (p=0.0335). The C reactive protein (CRP) (p=0.0291) and the leukocyte count (p=0.0425) showed significantly lower values in patients who underwent hemoadsorption. Regarding the length of stay in the intensive care unit, we found no significant differences between the groups. We did not observe side effects related to hemoperfusion during the treatment or during the follow-up. The difference between the two groups were also significant regarding the mortality (3.44% in the test group, 6.81% in the control group) (p=0.0495). **Conclusions:** Our research raised the possibility that cytokine adsorption could serve as an additional therapy in the treatment of the systemic inflammatory reaction occurring after open-heart surgery.

Keywords: hemoadsorption, Jafron HA330, cardiac surgery, systemic inflammatory response

STUDY OF THROMBOTIC COMPLICATIONS IN COVID-19 PATIENTS: PROPHYLAXIS, DIAGNOSIS, TREATMENT

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Background: On January 30, 2020, the World Health Organization (WHO) declared COVID-19 a Public Health Emergency of International Concern. As more data were available about the pathophysiology of COVID-19 infection, it was found that the occurrence of thrombotic complications has a significant impact, especially in severe forms of the disease. **Objective:** The main objective of the study is to determine the presence or absence of significant statistical correlations between COVID-19 infection, risk factors for developing thrombotic complications, and their occurrence. Furthermore, another objective of this study was to analyze pathological changes in paraclinical parameters and evaluate the positive impact of treatment and prophylaxis measures on thrombotic complications in patients with SARS-CoV-2 infection. **Material and methods:** This paper is based on a descriptive, retrospective case-control study including 300 patients diagnosed with SARS-CoV-2 infection and treated in the Anesthesia and Intensive Care Unit of SCJM between March 1, 2020 and October 3, 2022. The following data was studied and analyzed: demographic information (age, gender, place of origin), body mass index, comorbidities, length of hospital stay, smoking history, SOFA score, vital status, and hematological parameters (D-dimers, prothrombin time, fibrinogen, platelet count, lactate dehydrogenase, C-reactive protein, and ferritin). Both the antiviral, antiplatelet, and anticoagulant treatment administered to the patient during hospitalization, as well as the type of thrombotic complication that occurred during this time, were included in this study. **Results :** Obese patients had a higher risk of thrombotic complications (22.73%) than normal weight (72.73%) or underweight (4.55%) patients (p=0.047). The proportion of smokers was higher in the group of patients who had thrombotic complications associated with SARS-CoV-2 infection (p=0.042). A significant correlation was also identified between an increase in D-dimer levels above normal and the occurrence of

thrombotic complications (p<0.0001). Antiplatelet therapy is a predictive factor for the absence of thrombotic complications among patients with SARS-CoV-2 infection (AUC=0.597) (p=0.023). 86.4% of patients who had thrombotic complications died, a significantly higher percentage than the control group with 38.1% of cases (p<0.001). **Conclusions:** Obese and smoking patients have an increased risk of developing thrombotic complications in the case of SARS-CoV-2 infection, and increased levels of D-dimers are strongly correlated with these complications. Antiplatelet therapy can reduce the risk of thrombotic complications. Additionally, patients with thrombotic events have a higher risk of mortality. These results emphasize the importance of targeted interventions to prevent thrombotic complications in high-risk patients and to reduce the mortality associated with SARS-CoV-2 infection.

Keywords: COVID-19, Thrombotic complications, D-dimers

THE PREVALENCE OF BINGE EATING DISORDER AMONG UMFST STUDENTS OVER A PERIOD OF 2 MONTHS

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Background: Binge eating disorder (BED) is the most common eating disorder, characterized by the ingestion of large amounts of food than most people, generally affecting females more (4.9% of the female population at risk) and having a prevalence of 1.8% in the general population. BED is associated with depression, obesity and other psychiatric disorders. **Objective:** This study aimed to determine the prevalence of BED among students from George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures in a specific time gap. **Material and methods:** We applied a questionnaire including 48 items according to American Psychiatric Association criteria. Among these, five questions assessed eating faster, even if not hungry, alone, feeling guilty for eating more than usual, and ingesting even if being imbued. Suspicion of BED was considered if subjects met a minimum of 4 out of 5 criteria. The initial cohort consisted of 421 students (IQR:18-39 years old), on a period of 2 months (February-April 2023), from which 68 (16.15%) students were identified with suspicion of BED. Among these, 25 (36.76%) answered positively on all five items. **Results :** Among the entire cohort, 45 (66.17%) were females, and 60 (86.7%) were found to be Romanian students. The mean body mass index for the entire sample was 23.92+/-4.38 kg/m2, while comparing men to females was considered very close to being statistically significant (p=0.052). Twenty-two individuals were determined with a BMI greater than 24.99 kg/m2. The most frequent BED item answered was eating despite being saturated. **Conclusions:** This study found a greater prevalence of BED disorder than specialty literature while raising the question of whether the study was biased by participants when answering the questions or really an actual increase in prevalence in young students. A greater sample needs to be performed to ascertain better data.

Keywords: binge eating disorder, prevalence, eating disorders, obesity

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H. PYLORI INFECTION AND CARDIOVASCULAR DISEASES - A CLINICOPATHOLOGICAL STUDY ON PATIENTS INVESTIGATED BY UPPER DIGESTIVE ENDOSCOPY

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Background: Gastritis is defined as the inflammation and injury of the stomach, whose most frequent etiology is the H. pylori infection. Helicobacter pylori is the pathogen responsible for the most common infection in the world and is one of the major risk factors in the development of gastric ulcer and gastric carcinoma. Recently the pathogen has been linked to the presence of cardiovascular complications on top of the digestive lesions. **Objective:** The aim of this study is to describe the potential correlation between the presence of the endoscopically confirmed H. pylori infection and the associated cardiovascular condition, namelyischemic coronary disease. **Material and methods:** This research includes 208 patients with antral or corporeal gastritis caused by H. pylori infection, divided into two study groups: 80 patients with confirmed coronary heart disease (CHD) and 128 patients without cardiac diseases (control group). We excluded the patients with gastritis of any other etiology. **Results :** The patients in the control group had a mean age of 58,85 years compared to the mean age of 67,48 years in the group with CHD, therefore advanced age is significantly correlated with the coronary artery disease

(p<0.0001). Laboratory findings showed that patients with CHD had significantly higher levels of glucose (p=0,041) and fibrinogen (p=0,10), markers of inflammatory status, but contrary to expectations had lower levels of cholesterol than the patients in the control group (p=0,022) probably due to therapy intervention. The association of cardiovascular risk factors such as hypertension (p<0.0001) and anemia (p<0.003) was significantly higher in patients who present with coronary heart disease. The consumption of proton pump inhibitors was higher in the control group, but of no significance as a potential risk factor for CHD. Smoking was also found to be more frequent in the control group, thus not a contributing factor for coronary disease. There were no significant correlations between the dyspeptic symptoms in the context of H. pylori infection and cardiovascular abnormalities. No endoscopic findings where proven to be of significant importance in association with CHD. **Conclusions:** The results provided by this study support the hypothesis that inflammatory status due to chronic infection with H. pylori alongside metabolic alterations may have an impact on the risk of developing coronary heart disease. Patients with CHD investigated by endoscopy tend to have similar symptoms and gastroduodenal endoscopic lesions as the patients without it and a better control of cardiovascular risk factors.

Keywords: Helicobacter pylori, active gastritis, upper digestive endoscopy, coronary artery disease

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ASSESSING THE SEVERITY OF CONGENITAL HEART DEFECTS USING THE SNAPPE-II SCORE

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Background: Congenital heart defects (CHDs) are one of the most common birth defects, affecting around 1% of live births. The CHDs vary from mild to severe and affect blood flow through the heart and into the arteries. The Score for Neonatal Acute Physiology (SNAP)-Perinatal Extension-II (SNAPPE-II) is a very important score developed to assess illness severity and predict mortality in neonatal intensive care units. **Objective:** This study aims to show the importance of assessing the severity of a patients condition through the SNAPPE-II score and the correlations between a higher score and more severe cases in newborns with CHD. **Material and methods:** We conducted a retrospective, observational study on a group of 42 patients with CHD, hospitalized during the year 2022 in the Neonatal Intensive Care Unit (NICU) of the Emergency Clinical Hospital Targu Mures, a tertiary care hospital. The statistical analysis was conducted using Microsoft Excel and GraphPad 9.5.1, by applying the exact Fishers test. **Results :** This study showed that from 42 live births presenting CHD, 16% (7) of them were born premature, the average gestational age being 39 weeks. Out of all the CHDs, 54.7% (23) of them presented cyanogenic CHDs with an average SNAPPE-II score of 19.5. We report that we found no statistically significant association when comparing the score among neonates who required surgery versus those with non-emergent surgical procedures who were discharged earlier [median 19.5 (17□□□□□vs. 8.6 (5□□□□□□p>0.05]. Moreover, the SNAPPE-II score cannot predict the duration of hospitalization of patients in NICU, but when calculated in the first 24 hours after admission, the score was higher in patients who required prolonged hospitalization. The score of patients with more than 7 days of hospitalization correlates to an expected death rate of approximately 3.6%. **Conclusions:** Although the SNAPPE-II score showed some correlations between a higher score and the more severe CHD forms, we observed that for a study to show the importance and applicability of the SNAPPE-II score needs a larger number of cases selected for it.

Keywords: SNAPPE-II, CHD, NICU, Cyanogenic

THE IMPACT OF SOCIAL BEHAVIORS ON CLINICAL AND ENDOSCOPIC GASTRIC ASPECTS

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Background: People who regularly consume alcohol or smoke cigarettes are more prone to experience gastrointestinal diseases, among them gastritis or gastropathies are frequent detect on endoscopic evaluation, usualy for symptoms like epigastric pain, nausea, vomiting and early satiety may be associated with gas . **Objective:** The aim of this study is to correlate smoking and alcohol drinking with gastrointestinal symptoms and gastric lesions/findings in consecutive patients undergoing upper digestive endoscopy (UDE). **Material and methods:**

241 patients performing an upper digestive endoscopy between 2017-2022, were included in the study. We excluded patients with incomplete data. We collected data from medical records and endoscopic reports. **Results :** 141 patients in the study are non-smokers (58.5%), while the group of smokers consisted of 100 patients (41.5%), male patients being more frequent (F:28:,M:72). 167 patients in the study group do not consume alcohol (69.3%) and only 74 patients (30.7% M:62 ,F:12) are alcohol consumers. In smoking patients, there was a statistically significant negative association with nausea/vomiting (p=0.007, OR:0.391, 95% CI:0.196-0.779:). There were no correlations (p>0.05) between smoking and epigastric pain, heartburn, early satiety or fullness feeling.In patients consuming alcohol,there was a statistically significant negative association with heartburn (p=0.003, OR:0.292,95%CI:0.125-0.684).Alcohol consumption was not associated (p>0.05) with epigastric pain,nausea/vomiting and early satiety.Fullness (p=0.033, OR:1.028, 95% CI:0.989- 1.069) was the single symptom positive correlated with alcohol consumption.Regarding endoscopy,in smoking patients, gastric corpus erythema (p=0.004, OR:2.390, 95% CI:1.314-4.348) and bulbar ulcer (p=0.014, OR:3.116, 95% CI:1.209-8.032) were more frequent than in non-smoking patients.There was a corellation (p=0.004, OR:0.225, 95% CI:0.075-0.676) between corporeal submucosal hemorrhages and smoking. In patients with alcohol consumption, antral submucosal hemorrhages evaluated by endoscopy (p=0.031, OR:2.743, 95% CI:1.065-7.066) and bulbar ulcer (p=0.024, OR:2.741, 95% CI:1.109-6.775) were significantly more frequent than in patients without alcohol consumption.A significant association trend is observed between gastric corpus erythema (p=0.056, OR:1.810, 95% CI:0.981-3.342) and alcohol. **Conclusions:** This study revealed that nausea and vomiting may be associated with smoking, while heartburn and fullness with alcohol consumption in patients investigated on endoscopy. Gastric corpus erythema and bulbar ulcer were both associated with smoking and alcohol drinking. Antral submucosal hemorrhages occur more frequent in patients who drink alcohol, while corpus submucosal hemorrhages in patients who smoke.

Keywords: smoking, drinking, gastritis

AN OVERVIEW ON HYPOCHROMIC MICROCYTIC ANEMIA INDUCED BY MENORRHAGIA IN ADOLESCENTS

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Background: Patients with heavy blood flow have a higher risk of iron deficiency and anemia. Hypochromic anemia is characterized by a decrease in hemoglobin production due to iron deficiency, chronic inflammation or genetic disorders. Menorrhagia is the amount of menstrual blood that exceeds 80 ml or lasting more than 7 days and it is estimated that 18-38% of women of fertile age suffer from this abnormality. **Objective:** This paper aims to examine the diagnosis and management of hypochromic microcytic anemia caused by menorrhagia in a literature review. **Material and methods:** The research was conducted across multiple databases, including PubMed, Medscape, Google scholar and UpToDate to identify randomized controlled trials and clinical guidelines that studied heavy blood flow in women under 18 years old. **Results :** For this paper three main trials and a guidelines overview were elected. Menorrhagia may vary depending on geographic area and race. African americans and hispanics appearing to be more susceptible, one in 20 requiring intensive care for anemia. The primary cause of menorrhagia is ovulatory dysfunction. A disorder that has a higher rate the further away the patients gets from their menarche, screening in older adolescents is recommended. Multiple ways of treatment are found in guidelines for anemia, fundamental ones being oral contraceptives and iron supplementations. In combination they may have been found to cause overlapping adverse effects. This is the reason why clinicians in two of the studies occasionally prescribe only one or another (37% had treatment without iron, respectively 10% without oral contraceptives). Following an hypothetical risk of premature maturation of the growth cartilages, progesterone based contraceptives are recommended for this age group. False reassurances from female family members may occur due to similar menstrual patterns. This is the reason why reproductive education in schools may minimize severe anemia in young women. Only one trial had gastrointestinal disorders as exclusion criteria, even though it might be another reason for hypochromic anemia. **Conclusions:** Underdiagnosed menorrhagia represents the main cause of anemia in young women, adequate treatment might increase considerably the quality of life. Furthermore, diagnosis and management in early stages of hypochromic anemia can significantly decrease risk of acute severe anemia in young women which results in hemorrhage or hemodynamic instability, both being indications for blood transfusions.

Keywords: hypochromic anemia, menorrhagia, young women

CLINICAL AND EVOLUTIVE ASPECTS OF INFLUENZA A TYPE INFECTION IN AN IMMUNOCOMPROMISED PATIENT WITH MEN2A SYNDROME - A CASE REPORT

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Background: Multiple Endocrine Neoplasia Type 2A (MEN2A) is a rare hereditary disorder characterized by the development of multiple tumors in endocrine glands, primarily the thyroid, parathyroid and adrenal glands. The respiratory infection with Influenza A virus is still a significant cause of morbidity and mortality worldwide. **Objective:** In this case study, we present the impact of an Influenza A virus infection in a patient known with MEN2A syndrome, highlighting the potential interactions between the viral infection and the genetic disorder. **Material and methods:** The present paper is a case report of a 37-years-old male patient, without Influenza virus prophylaxis, who was tested positive for Influenza A, in medical history with MEN2A syndrome, diabetes, thyroidectomy and adrenalectomy. He was admitted to the Infectious Diseases Clinic 1 in 2023. **Results :** The patient was admitted on the 3rd day of illness with fever, odynophagia, dysphagia, diarrhea, emesis and myalgia. Physical exam showed a patient with increased BMI: 27.13 kg/m2 with saburral tongue, hyperemic pharynx, dry mouth and skin, lichen amyloidosis - like tegument, diffuse bilateral rhonchi, with normal signs. Neurological examination assessment did not show nervous involvement. Laboratory tests showed increased inflammatory markers, hyperglycemia, a positive Influenza A test, thrombocytopenia and negative SARS-CoV-2 test. In addition, an abdominal ultrasound was performed revealing characteristic images for bilateral kidney cysts. He was treated with intravenous antibiotics, antiviral drugs, steroidal anti-inflammatory drugs, insulin therapy and rehydration infusions. During his hospital stay, the patient developed high blood glucose values between 407-593 mg/dl that were unresponsive to intravenous insulin therapy. Following metabolic imbalance with worsening of general condition, low blood pressure 80/50 mmHg, the patient was transferred to the intensive care unit (ICU). Succeeding the treatment, the patient showed clinical and biological improvement and was discharged after 5 days of hospitalization. **Conclusions:** This case highlights the potential impact of Influenza A virus infection in a patient with MEN2A syndrome, recalling once again the potentially devastating effects any infection could have on clinical and paraclinical parameters in an immunosuppressed patient. A multidisciplinary management of infections in this category of patients is mandatory. Always remember the potential complications of viral infections in patients with MEN2A syndrome and consider vaccination and antiviral prophylaxis as appropriate.

Keywords: Influenza A virus, MEN2A syndrome, Metabolic imbalance, Impact

THE ROLE OF EXOSOMES IN ACUTE ISCHEMIC STROKE

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Background: Exosomes represent a subdivision of extracellular vesicles. The function of these specialized vesicles is to provide intercellular communication in physiological and pathological situations. They function as messengers within a cell and coordinate information exchange by conveying molecules such as metabolites, lipids, proteins and microRNAs (miRNAs). In addition to their function in intercellular communication, exosomes contribute to anti-apoptotic processes including neurogenesis, brain repair, and synaptic transmission. These unique vesicles are of rising interest in recent research due to their highly specific properties, such as their ability to easily cross the blood brain barrier, stability in the circulation, low immunogenicity, and low toxicity. Therefore, exosomes being loaded with biomarkers, offer innovative functionality not only for diagnostic and prognostic purposes, but also for the treatment of ischemic stroke. **Objective:** The objective of this study is to isolate exosomes and the method used for this process, that can be put into relation with an acute ischemic stroke. **Material and methods:** The participating patients were admitted and treated in the Neurology 1 ward of the Emergency County Hospital of Targu Mures in Romania. To be allowed to take part of this study they had to fulfill certain criteria. These consist of 1) an ischemic stroke within the areas supplied by ACM or ACA, 2) symptoms onset within 24h, 3) NIHSS 6-12, 4) age below 80 years and 5) without associations of a medical condition or current infectious disease. Based on these criteria, the samples that were taken from these patients went through ExoQuick-TC process to isolate the exosomes from biofluids, in which small quantities are already enough to be able to isolate them. **Results :** The isolation of exosomes in the participating patients that presented all the criteria

mentioned previously to take part in this study was 100% successful with this method. **Conclusions:** Just the isolation of the exosomes themselves is a big accomplishment. Further steps, like identifying the content of exosomes, can contribute into the potential to use the isolated exosomes as biomarkers and improve on that way the diagnosis, treatment and prognosis of acute ischemic stroke.

Keywords: Exosomes isolation, Stroke, ExoQuick-TC

APOLIPOPROTEIN B AS A MARKER OF A WORSE LIPID PROFILE - ASSOCIATED WITH A HIGHER RISK OF DIABETES MELLITUS DEVELOPMENT

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Background: Apolipoprotein B (ApoB) is associated with an increased risk of atherosclerosis and it has been found to be more specific in predicting the cardiovascular risk than the classic lipid profile. The ApoB level may be associated also with diabetes mellitus, one of the classic cardiovascular risk factors, however, little is known whether or not serum ApoB levels are correlated with fasting blood glucose or glycosylated hemoglobin. **Objective:** The present study aims to investigate if ApoB is correlated with classic lipid profile, fasting blood glucose and glycosylated hemoglobin in the general population. **Material and methods:** The study included 923 adults aged between 18 and 80 y.o. from the general population of Romania. Patients with a mean age of 51.77 ± 16.45y.o. were divided into two groups based on ApoB values as follows: Group 1 - apoB < 130 mg/dL (n=820) and Group 2 - apoB ≥ 130 mg/dL (n=103). For all participants, glycosylated hemoglobin (HbA1c), fasting blood glucose level, and lipid profile were assessed. **Results :** Participants with apoB ≥130 mg/dL showed significantly higher values of total cholesterol (279.00 ± 4.75 mg/dL vs. 191.50 ± 1.26 mg/dL), LDL-cholesterol (203.00 ± 4.24 mg/dL vs. 124.00 ± 1.22 mg/dL) and triglycerides (173 ± 12.34 mg/dL vs. 95.00 ± 2.46 mg/dL) compared to those with apoB levels below 130 mg/dL (all $p < 0.0001$), while the HDL-cholesterol value was significantly lower (49.00 ± 1.23 mg/dL vs. 52.00 ± 0.48 mg/dL; $p = 0.007$). Also, patients in group 2 presented significantly higher values of fasting blood glucose (101.00 ± 3.76 mg/dL vs. 95.00 ± 0.76 mg/dL; $p < 0.0001$) and HbA1c (5.70 ± 0.10 % vs. 5.50 ± 0.02%; $p<0.0001$). **Conclusions:** In our study an association between ApoB levels and poorer lipid profile, fasting blood glucose values and glycosylated hemoglobin were found, suggesting that Apo B could be not just a marker of an increased cardiovascular risk, but also a marker of metabolic imbalance and diabetes mellitus development.

Keywords: Apolipoprotein B, diabetes mellitus, fasting blood glucose glycosylated hemoglobin, lipid profile

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GASTRIC ADENOCARCINOMA - INCIDENCE, RISK FACTORS, AND METHODS OF DIAGNOSIS - OUR CENTER EXPERIENCE

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Background: Gastric adenocarcinoma is the fifth most common cancer and the third leading cause of cancer-related death globally. While its incidence is decreasing in developed countries, it is still prevalent in developing countries. H. pylori is the main cause of gastric adenocarcinoma. Smoking is a well-known carcinogenic and a modifiable risk factor for gastric adenocarcinoma. The association between diet and stomach cancer is weak and not proven as a cause. Familial clustering is related to genetic factors that play a role in the host immune response to H. pylori infection. **Objective:** Assessing the role of various risk and protective factors for the development of gastric adenocarcinoma **Material and methods:** We analyzed recent studies from scientific platforms such as Google Scholar and Pubmed related to how different factors influence the development of gastric adenocarcinoma, assessing the risk they confer or the protection against its development. **Results :** H. pylori infection leads to chronic inflammation, which promotes tumorigenesis through the release of mutagenic substances and the creation of a sustainable environment of chronic inflammation. Recent meta-analyses have proven that gastric cancer can potentially be prevented by eradicating H. pylori, and its preventive effect is greater when preneoplastic conditions of the gastric mucosa are absent at the time of intervention. Smoking is an established risk factor for gastric cancer, with several large cohort studies reporting a significantly increased risk of gastric cancer among smokers in Europe and Asia. Familial clustering is related to genetic factors that play a role in the host immune response to H. pylori infection. COX-2 expression promotes tumor growth, and the potential benefits of using

NSAIDs, particularly aspirin, in preventing gastric cancer have been noted. Epidemiologic studies have consistently shown a reduced risk of gastric cancer with NSAID use, but further trials in high-risk patients are needed to determine their efficacy. Regular aspirin use is associated with a lower risk of gastric adenocarcinoma among women after at least 10 years of use, but not among men. **Conclusions:** H. pylori infection, smoking, and genetics are risk factors for gastric cancer, while a healthy diet may help reduce the risk. Eradication of H. Pylori, and NSAIDs, particularly aspirin, may have a role in preventing gastric cancer. Further research is needed to determine the efficacy of NSAIDs in high-risk patients.

Keywords: Gastric Adenocarcinoma, H. Pylori, Smoking, COX-2

THE RESISTANCE OF BACTERIA INVOLVED IN URINARY CATHETER-RELATED INFECTIONS

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Background: Urinary catheters are one of the most common medical devices involved in urosepsis due to physical obstructions within the catheter itself and bacterial biofilms developing on their surface. **Objective:** The aim of this study is to assess the resistance patterns of bacteria involved in catheter related infections. **Material and methods:** This is a retrospective observational study, conducted over two years, between 3.01.2021 □□ 15.10.2022, on a group of 101 admitted and diagnosed with urosepsis in the Urology Clinic, Mureș County Hospital. Patient demographics, associated diseases and resistance patterns of isolated bacteria from urine cultures, catheter cultures were analyzed. The diagnosis of urosepsis was confirmed by the presence of systemic inflammatory response syndrome (SIRS), positive procalcitonin levels, positive urinary cultures and hemocultures. The clinical resistance profile was evaluated by the help of diffusimetrical antibiograms. **Results :** The average age of patients was 68 years, of which 53% were men from urban areas. Positive blood cultures were present in 68% of cases. Most common microorganisms involved in urosepsis were: Escherichia coli (41,55%), Enterobacter speciae (18,18%), Pseudomonas aeruginosa (16,88%), Klebsiella pneumoniae (11,68%), Methicillin resistant Staphylococcus aureus (9,09%), Proteus mirabillis (2,59%). The resistance profile was analysed with the help of antibiograms which included 15 different types of antibiotics, with up to 20 different combinations.As observed, a resistance over 50% in Escherichia coli strains was present when tested to aminopenicillins in combination with betalactamase inhibitors as well as to second and third generations of cephalosporins and fluoroquinolones. Furthermore, the Enterobacteriaceae species had a resistance of 30% to 45% to fluoroquinolones, tetracyclines and aminoglycosides. Third and fourth generation cephalosporins, aminoglycosides, carbapenems had a concerning efficency (30%) on Pseudomonas aeruginosa. The specimens of Klebsiella pneumoniae, had a high resistance (65%) to amoxycilin/clavulanate, third generation cephalosporins and carbapenems. Methicillin-resistant Staphyloccocus aureus had a high resistance profile to commonly used antibiotics (100%). Proteus mirabillis had a resistance of 60% to the reffered antibiotics. **Conclusions:** This study underlines the fact that Gram-negative bacteria was the most common microorganism involved in urosepsis caused by urinary cathethers. A high level of resistance was identified in Gram-negative and Gram-positive bacteria to wide spectrum antibiotics.

Keywords: Urosepsis, Urinary catheters, Resistance

FATTY LIVER DISEASES AND UPPER DIGESTIVE ENDOSCOPY – CLINICO-PATHOLOGICAL CORRELATIONS

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Background: Fatty liver disease (FLD) is an accumulation of fat in the hepatocytes. It can be divided into alcohol-related and non-alcohol-related causes (NAFLD). Once a rare condition, NAFLD is now the most widespread liver disease and a significant risk factor for cirrhosis and HCC, affecting over 25% of the global population. Many gastric disorders are caused by the bacterium Helicobacter pylori (H. pylori). More recently, H. pylori has been linked to metabolic diseases, particularly NAFLD, through several processes, including chronic inflammation, hormone imbalance and metabolic abnormalities, and may influence the development of NAFLD. **Objective:** The aim is to correlate clinical aspects, endoscopic findings, and histological aspects of the gastric and duodenal

mucosa in patients with chronic FLD compared to patients without liver disease. **Material and methods:** In our cross-sectional study, we included a total of 122 patients: the study group (n=61) patients with FLD and the control group (n=61) patients without liver disease. Both groups must have been investigated endoscopically due to gastrointestinal symptoms, anemia or screening for bleeding risk and must have a complete set of biopsies. **Results :** Of the 122 patients included, 52.5% were men and 47.5% were women. The mean age was 60.98 years. Patients with hepatic steatosis were significantly older than the patients without liver disease, with a mean age of 64.3 years compared to 57.7 years (p=0.029). In terms of laboratory analysis, patients with FLD tended to have significantly higher levels of hemoglobin (p=0.029), MCV (p=0.027), glucose (p=0.003), total cholesterol (p=0.03), triglycerides (p=0.012), ALT (p=0.01). Patients with FLD were significantly more likely to present corpus erythema (p=0.04) on EGD. Histologically, more patients with FLD had severe infiltrative antral inflammation compared to moderate infiltrative antral inflammation (p=0.022). 13% of patients without liver disease and 19% with FLD were H. pylori positive, so patients with FLD were more likely to be H. pylori positive, but this was not statistically significant (p=0.174). They had significantly more comorbidities including coronary artery disease (p=0.039), arterial hypertension (p=0.001) and osteoarticular disease (p=0.004) and received more aspirin, ACE-I, and beta-blockers, but the difference was not significant. **Conclusions:** In the population studied, there is a trend towards an association between H. pylori and FLD, but the results are not significant. Inflammation is more severe in the gastric mucosa of patients with FLD vs patients without liver condition; larger numbers of patients should be studied to make a reliable estimate.

Keywords: Fatty Liver Disease, Upper Digestive Endoscopy, Helicobacter Pylori

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CARDIOVASCULAR PATHOLOGY IN PREGNANCY

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Background: Cardiovascular pathology (CVP) during pregnancy has a major influence concerning maternal-fetal indices and the newborn's characteristics, ranking fourth regarding maternal mortality due to hemodynamic changes and complications predominantly seen in the second trimester, labor and early postpartum period. **Objective:** Assessing the evolution of pregnancy and birth in CVP patients. **Material and methods:** A retrospective study was conducted on 92 pregnant women diagnosed with CVP, hospitalized in a Tertiary Perinatal Center. The patient's history, clinical and paraclinical data (electrocardiography, echocardiography), the fetal wellbeing (US exam, Doppler velocimetry, cardiotocography) were evaluated. **Results :** Age of the patients □□□ between 17-42 years, mean age 29.5±2 years. Congenital heart diseases (CHD) were assessed in 55.4% cases and acquired heart diseases □□□in 44.6 % cases. Cardiac surgical interventions prior to pregnancy were performed in 46.7% cases, while 36,6% patients required valvuloplasty and one patient underwent surgery for electric stimulation replacement. Pregnancies associated with CVP evolved on the background of a high premature birth risk in 23.9% cases and the exacerbation of present illnesses. Cardiac function was decompensated in 16 (17.4%) pregnant women, 6 of them requiring premature labor. Pregnancy-induced hypertension was determined in 15 cases (16.3%), 5 of them developing preeclampsia as complication; 26.1% cases of pregnancies ended by C-section due to indications like decompensated cardiac function, acute fetal distress and labor dystocia. In 93.5% the births were at term, the newborns being assessed with ≥7 Apgar points. CHD were evaluated and confirmed in 5 cases in the neonatal period, being associated with other congenital defects (single kidney, cleft palate, achondrodisplasia). Fetal growth restriction was found in 9 cases. **Conclusions:** CVP associated with pregnancy is a significant problem that can complicate the evolution of the perinatal period, requiring appropriate management and urgent delivery, in order to prevent maternal and/or neonatal complications.

Keywords: Pregnancy, Heart disease, Cardiovascular pathology, Congenital heart disease

CORRELATIONS OF INFLAMMATORY BOWEL DISEASE TREATMENT WITH CALPROTECTIN EVOLUTION AND CYTOMEGALOVIRUS PRESENCE

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Background: The relationships between inflammatory bowel disease medication, calprotectin, and cytomegalovirus infection are described by complexity, interdependence, and individual specificity. The drug spectrum consisting of biologics and immunosuppressants can reduce inflammation and calprotectin levels in affected patients. In contrast, the administration of these therapies can weaken the immune system thereby increasing the risk of CMV infection. **Objective:** The main objective is to highlight the evolution of calprotectin before and after the initiation of biological therapy. The influence of CMV infection on the response to biological treatment was also analyzed. **Material and methods:** A retrospective study was performed in the Department of Gastroenterology of the Clinical County Emergency Hospital in Târgu-Mureș, Romania, in which 45 patients diagnosed with IBD, aged between 18-83 years (29 male; 16 female) were included over a four-year period (2019-2022). Based on the discriminating factor - the presence or absence of biological therapy - two subgroups were created. A small percentage presented clinical data on CMV serology. The spectrum of paraclinical data included: leukocyte, neutrophil, platelet count, hemoglobin concentration, ESR, C-reactive protein, and fecal calprotectin. **Results :** Depending on the IBD type diagnosis, 53.3% (n=24) presented Crohn's disease and 46.7% (n=21) ulcerative colitis with an increased incidence of the male sex for both types (p=0.36). The average age of the CD patients was slightly higher compared to UC (47.0833 vs 43.1429). 48.9% of the total number of patients didn't benefit from biological therapy; the remaining 51.1% of patients received treatment with TNF-α inhibitors. The latter were split according to the type of medication: Adalimumab (86.4%; n=19) and Infliximab (13.6%; n=3). The patients with CMV serology, representing 37.7% (n=17) of the total, showed that chronic CMV infection was more common in CD, with two cases of acute infection present. Following the statistical analysis was observed that the concentration of fecal calprotectin decreased significantly after the intake of biological therapy (p=0.0001); significant differences between the values of paraclinical parameters before and after the initiation of biological therapy were also noted (Le: p=0.046; N: p=0.005; Tr: p=0.018; Hb: p=0.0001; ESR: p=0.0001; PCR: p=0.0001). The subsequent running of the Mann-Whiteny non-parametric statistical test, resulted in a statistically insignificant outcome (p>0.05) that CMV serology and the presence or absence of biological treatment are correlated. **Conclusions:** The biological balance is improved following the administration of anti-TNF-α treatment thereby decreasing the inflammatory syndrome. The presence of CMV serology does not seem to affect the course of IBD.

Keywords: inflammatory bowel disease, biologic therapy, cytomegalovirus

QUALITY OF LIFE AND LEVEL OF INSIGHT IN SCHIZOPHRENIC PATIENTS

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Background: Schizophrenia is the term applied to a severe form of mental disorder that falls into the category of endogenous psychosis, whose etiology is still insufficiently clarified and which is more widespread than we might think. Several studies argue that lack of insight has been considered an important feature of psychosis and that low insight affects people with schizophrenia. The level of insight greatly influences patients' quality of life, both in terms of awareness of their condition and in terms of compliance with treatment. **Objective:** The main objective is to highlight associations between quality of life and insight level in patients diagnosed with schizophrenia. **Material and methods:** The present study is a cross-sectional observational study with patients diagnosed with schizophrenia according to the diagnostic criteria of the Diagnostic and Classification Manual of Mental Disorders (DSM 5) admitted in acute care in the Psychiatric Clinical Section II - Acute of the Mures County Clinical Hospital and patients admitted in chronic care in the Brâncovenești Neuropsychiatric Recovery and Rehabilitation Centre and in the Călugăreni Recovery and Rehabilitation Centre, Eremitu. The total number of subjects is 98, 28 acute and 61 chronic patients. Data were obtained by completing the following questionnaires: WHOQOL- BREF(The World Health Organization Quality of Life □□□□□□□□and Birchwood insight scale**Results :** The results obtained indicate that patients hospitalized in acute care have a higher level of quality of life regarding physical (A: M=66.71, SD=18, C: M=54.8, SD=15, p <0.0001) and mental health (A: M=67.71, SD=14, C: M=53.28, SD=17, p=0.004)

compared to patients hospitalized in chronic care. It is observed that patients hospitalized in an acute regime have a higher quality of life in terms of the environment in which they live in comparison with institutionalized patients (A: M=68.75, SD=15, C: M=61.27, SD=15, p=0.03). Regarding the level of insight, no statistically significant differences were observed between the two groups. It was also highlighted that there is a statistically significant differences positive association between the level of quality of life and patients' insight (OR=0.31, p=0.02). **Conclusions:** The study highlights that patients who benefit from primary support network through the family and friends as well as the secondary one provided by doctors, with an active life and involvement in various roles, have a higher level of quality of life. It is also observed that insight is associated with the level of quality of life.

Keywords: schizophrenia, insight, quality of life

CLINICAL FEATURES OF THE SARS-COV-2 INFECTION IN THE PEDIATRIC POPULATION

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Background: Over the course of the coronavirus disease 2019 (COVID-19) pandemic, the medical opinion on the clinical manifestation of the acute respiratory coronavirus 2 (SARS-CoV-2) in children has radically changed. At the very beginning, the pediatric population was thought to be immune from the disease. However, as time passed and more medical data became available, the consensus shifted, agreeing that children do get infected. In consequence of the infection, they are either asymptomatic or present in general much milder manifestations of the COVID-19 disease than the adults. Severe forms of the disease in children are quite rare. Furthermore, the clinical manifestation is unspecific, making the diagnosis of the SARS-CoV-2 infection in children more difficult. **Objective:** This study aims to observe the clinical manifestation of the SARS-CoV-2 infection in children admitted to the hospital while focusing on the prevalence of the most frequent symptoms and the occurrence of specific COVID-19 symptoms. **Material and methods:** This retrospective descriptive study analyzed the data of 140 patients admitted to the Pediatric Clinic 1 from the Emergency Clinical County Hospital of Târgu Mureș between 01/03/2020 and 31/08/2022. The patients included in the study are under 18 years old and tested positive for COVID-19 with RT-PCR. The exclusion criteria consisted of the presence of any other forms of infection. The signs and symptoms were collected from the medical files of the patients. **Results :** Among the studied group, the respiratory symptoms were the most prevalent, with 84 (60%) patients presenting fever and 63 (45%) cough. Subsequently, symptoms of the gastrointestinal tract, such as diarrhea, loss of appetite and vomiting were documented in 32 (22.85%), 31 (22.14%) and 29 (20.71%) patients. Neurological involvement in the form of seizures was present in 15 (10.71%) patients and cutaneous findings such as viral rashes affected 12 (8.57%) of the children. Specific COVID-19 symptoms like anosmia and ageusia were documented in only 1 (0.71%) patient. **Conclusions:** Although the majority of patients manifested mild respiratory and gastrointestinal presentations of COVID-19 disease, a significant number of seizures have been observed. The seizures appeared in the context of a fever or of specific neurological problems. Highly specific symptoms such as loss of smell and taste, which are the strongest predictors of the SARS-CoV-2 infection, were very rare among children. Thus, even if the majority of COVID-19 infections in children are mild and asymptomatic, the lack of specific presentation and the possible severe complications should be kept in mind.

Keywords: COVID-19, SARS-CoV-2, Pediatrics, Children

THE ETIOLOGY AND RESISTANCE OF GRAM NEGATIVE BACTERIA ASSOCIATED WITH SEPSIS

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Background: The resistant microorganisms are not unusual for medical practitioners. The current challenge emerges in systemic infections associated with high rates of multi-drug resistant pathogens that are hard to treat. **Objective:** The aim of this study was to identify the frequently involved Gram-negative bacteria in the etiology of sepsis and to update the resistance of the isolates among hospitalized patients. **Material and methods:** This is a retrospective cross-section study of 108 patients with sepsis admitted to the 2nd Infectious Disease Clinic, Mures County Hospital, from January 2019 to December 2021. Patients of all ages with their personal information such as gender, comorbidities and symptoms were included in the study. The diagnosis was confirmed by positive blood

cultures, used to understand the pathogenic spectrum of sepsis and the occurring resistance. The disk diffusion methods were used for antimicrobial susceptibility testing according to laboratory standards. **Results :** The median age of the group was 73 years, of whom 60,18% were male and the majority of patients had hypertension (62.96%). The most common causative pathogen was Escherichia coli, and 18,75% of pathogens were classified as producing Extended Spectrum Beta-Lactamase (ESBL). The detection rate for other etiological agents was: Klebsiella pneumoniae (18,96%), Acinetobacter baumannii (15,51%), Enterobacter cloacae (10,34%), Pseudomonas aeruginosa (8,62%), Serratia marcenscens (6,89%), Proteus mirabilis (8,62%), Stenotrophomonas maltophilia (3,44%). The resistance of Escherichia coli to the 2nd and the 3rd generation Cephalosphalosporins was up to 21%, Sulfamides- 28% and Ureidopenicillins- 17%. Klebsiella pneumoniae accounted increased resistance to the 2nd and the 3rd generation Cephalosporins (72%), Aminopenicillins (72%), Fluoroquinolones (60%), Aminoglycosides (49%), Ureidopenicillines (60%) and Carbapenems (34%). The highest resistance was registered in Pseudomonas aeruginosa and Acinetobacter baumanii to all tested antibiotics, except Colistin. The resistance for Proteus mirabilis and Enterobacter Cloacae varies between 30% - 60% for above mentioned antibiotics. **Conclusions:** This study shows a high rate of Gram negative bacteria resistance to broad spectrum antibiotic treatment in both community acquired and hospital acquired sepsis.

Keywords: Sepsis,, Gram negative bacteria,, Multi-drug resistant pathogens,, Antibiotic resistance.

TYPE 1 DIABETES MELLITUS AND MODERN TREATMENT MANAGEMENT

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Background: Type 1 diabetes mellitus is a chronic autoimmune disease characterized by an absolute insulin deficiency due to the progressive destruction of pancreatic beta cells. These patients require life-long insulin treatment (multiple daily insulin injections/continuous subcutaneous insulin infusion) and regular blood glucose monitoring (glucometer/continuous glucose monitoring) in order to prevent severe complications. **Objective:** The aim of this study is to evaluate the impact of modern technology, using insulin pump therapy and continuous glucose monitoring device by patients diagnosed with type 1 diabetes. **Material and methods:** A number of 52 patients with type 1 diabetes mellitus treated with continuous subcutaneous insulin infusion were selected from the Department of Diabetes, Nutrition, and Metabolic Diseases of the Clinical Hospital in Timisoara. Relevant data collected from patient medical records included: the year of diagnosis, date of initializing insulin pump therapy, type of blood glucose monitoring device, HbA1C values and daily insulin administration units before and after beginning with the treatment of an insulin pump. **Results :** The median time between the year of diagnosis and initiation of pump therapy is 13 years. Comparing available data from 35 patients, regarding insulin administration units before and after pump therapy, showed that 25 patients (71%) required less insulin units after the initialization of insulin pump therapy, while 10 patients (28%) needed a higher insulin dose. The other 17 patients had no recorded data regarding this topic. Furthermore, a correlation between lower insulin unit dose and HbA1C showed that 11 patients achieved the target HbA1C values (<7%) using less insulin after pump therapy while 10 patients had median HbA1c values of 7,45% (7,10%-8,70%). For glucose monitoring 21 patients (40,38%) used continuous glucose monitoring devices while 31 patients (59,61%) had a classic glucometer. **Conclusions:** Insulin pump therapy can provide better control of HbA1C in patients with type 1 diabetes mellitus, often using less insulin throughout the day.

Keywords: type 1 diabetes mellitus, continuous subcutaneous insulin infusion, continuous glucose monitoring, better HbA1C control

PREVALENCE OF SUICIDE IDEATION AND ATTITUDE TOWARDS SUICIDE PREVENTION AMONG MEDICAL STUDENTS

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Background: Suicide is a significant public health concern, and research suggests that medical students are at a higher risk of suicide compared to the general population. Multiple studies have found that medical students have higher rates of suicidal ideation, suicide attempts, and completed suicides compared to other college students or

young adults. Understanding the prevalence of suicide ideation and attitudes towards suicide prevention among medical students at the Medical University of Targu Mures is crucial in developing effective suicide prevention strategies for this population. Addressing the stigma and lack of education around suicide and suicide prevention is critical in promoting a culture of openness and awareness, and in ensuring that medical students have access to the resources they need to prioritize their mental health and well-being. **Objective:** This study aims to investigate the prevalence of suicide ideation and the attitudes towards suicide prevention among medical students at the Medical University of Targu Mures. **Material and methods:** The study included 151 participants of which all were medical students, aged 18 till 30, from different European countries. The data was gathered through a Google Forms online survey and analyzed using Microsoft Office Excel 2020. **Results :** The results showed that 37,7 % of the students reported experiencing suicide ideation at some point in their lives. 8,6% of respondents reported having planned at least once to end their lives and really wanting to die. Additionally, 96 % of the respondents expressed a positive attitude towards suicide prevention, believing that mental health and suicide prevention should be a priority in medical schools. However, only 20,5 % of the participants reported that they received suicide prevention training during their medical education and only 15,2 % think that there is enough awareness about suicide prevention and proper access to resources for those in need. 97,3 % think that their university does not provide proper mental health service for its students. Moreover, a significant majority of participants (90.7%) perceived a persistent stigma surrounding suicide and suicidal ideation. **Conclusions:** The study emphasizes the high prevalence of suicidal ideation among medical students and underscores the need for increased efforts to reduce stigma and improve suicide prevention resources and training in medical schools.

Keywords: suicide ideation, suicide prevention, medical students

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UTILITY OF THE EPWORTH SLEEPINESS AND STOP-BANG QUESTIONNAIRES IN THE DIAGNOSIS OF OBSTRUCTIVE SLEEP APNEA SYNDROME

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Background: Obstructive sleep apnea syndrome (OSA) is a rising modern day phenomenon that manifests itself through increased cardiovascular morbidity and excessive daytime somnolence. Despite its alarming impact on overall health, majority of patients remain undiagnosed. An efficient and widespread screening method in OSA diagnosis are the STOP-Bang questionnaire and the Epworth sleepiness scale (ESS). **Objective:** Evaluation of the utility of ESS and STOP-Bang questionnaire in OSA patients' diagnosis and prognosis. **Material and methods:** 60 patients were interviewed using the STOP-Bang questionnaire and the Epworth sleepiness scale, both containing 8 items. The patients had their anthropometric data examined and underwent cardiorespiratory polygraphy, taking their age and gender into consideration. **Results :** The study population was divided into 2 study groups, patients who fit the OSA criteria and those without OSA signs. The mean age of patients of the research groups were 49 ± 8.1 years and 38 ± 12.1 years, respectively. OSA patients were mostly males who exhibited higher Body Mass Index (BMI) 37 ± 4 kg/m2 and an increased neck circumference (NC) 45 ± 4 cm compared to the non-OSA group with BMI 30 ± 6.6 kg/m2, NC 38 ± 3.1 cm. The OSA group showcased a worsening of the cardiorespiratory function, with lower oxygen saturation (SpO2) 91.67 ± 5.64 % and severe Apnea Hypopnea Index (AHI) 37.7 ± 28.1/h (per hour) that correlated with a higher ESS 12 ± 5 points, while the non-OSA group presented SpO2 95.71 ± 1.09 %, minimal AHI1.4 ± 1.26/h and a lower ESS 5 ± 2.25 points. The analysis of the ROC curves for the STOP-Bang questionnaire and the ESS showed that the area under the curve (AUC) was 0.94 for the OSA patients and 0.91 for non-OSA group. **Conclusions:** STOP-Bang questionnaire and the Epworth sleepiness scale show a high performance in the diagnosis and prognosis of OSA patients, correlating to the aggravation of cardiorespiratory function.

Keywords: Obstructive Sleep Apnea Syndrome, Epworth sleepiness scale, STOP-Bang questionnaire

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THE INFLUENCE OF PARENTS ON TEENAGERS REGARDING HPV VACCINATION

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Background: Human Papilloma Virus (HPV) is a sexually transmitted pathogen that causes anogenital and

oropharyngeal diseases in women and men. Romania is the country in the European Union with the highest incidence and mortality from cervical cancer caused in 99% of the cases by HPV infection. In this context, 23% of the Romanian parents who were included in the study conducted by IPSOS said that they have already vaccinated their children against HPV infection, 32% are going to do so, and 91% of them say they are confident to protect their children against HPV on their own. **Objective:** The purpose of this paper is to determine if the romanian parents influence their children regarding HPV vaccination. **Material and methods:** As a method of psychological investigation, the anonymous questionnaire was made up of 14 questions that included both demographic questions (background, age, gender, class) and those that concerned the subject as such. The sample had as targeted group a number of 71 high school teenagers, of which 40.8% girls and 59.2% boys, and the period of data collection and development was between September 2022 and December 2022. **Results :** After analyzing the data, we noticed that most information about the HPV vaccine was collected from the internet (36.6%), then television (12.7%), school/teachers (9.9%) and only 5.6% of them learned from talking to their parents. The study shows that parents' decision to vaccinate against hpv affected only 4.2% of the teens in the study, while the vast majority (39.4%) said they did not know the reasons for refusing the vaccine. After analyzing the question, we noticed that only 29.6% of the study participants had discussions with their parents about HPV in terms of vaccination and/or protection, while 66.2% of them denied it. **Conclusions:** The undertaken study highlighted the importance of sexual education in schools taking into account the age particularities of the students and correct information of the family through authorized sources (national campaigns).

Keywords: HPV Vaccination, Parental Influence, Teenagers, Sexual Education

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THE CORRELATION BETWEEN THE LEVEL OF INFLAMMATION IN CORONARY ARTERIES AND THE CORONARY ARTERY CALCIUM SCORE IN THE EVALUATION OF CARDIOVASCULAR RISK

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Background: Pericoronary fat attenuation index is a novel computed tomography-derived marker used to quantify vascular inflammation at the level of coronary vessels. It has prognostic value for major adverse cardiovascular events and provides improvements in cardiac risk assessment beside classical risk factors and coronary artery calcium score. The presence of coronary calcium score is associated with plaque burden, but it is not a marker of plaque vulnerability. **Objective:** The aim of the study was to evaluate differences in the level of inflammation in coronary arteries and the amount of coronary artery calcium in patients who underwent coronary computed tomography angiography. **Material and methods:** In the study were included patients who underwent clinically indicated coronary computed tomography angiography (CCTA) and had high risk plaques. Fat attenuation index (with a greater value meaning a higher aqueous/lipid ratio in perivascular space), and the corresponding FAI score (which takes into consideration age, sex, technical scan parameters and is accompanied by vessel specific nomograms), and also coronary artery calcium (CAC) were evaluated in all patients at the level of left anterior descending artery (LAD), circumflex artery (LCX) and right coronary artery (RCA). The patients were divided in two groups based on CAC of 100 points. Group 1 consists of patients with a CAC lower or equal of 100 and Group 2 consists of patients with a CAC higher than 100. **Results :** In total, 78 patients were included in study. Mean age was 63 years old and 72% were males. Hypertension, hypercholesterolemia, diabetes mellitus and obesity were present in 69 (88%), 45 (58%), 25 (32%), and 15 (20%) respectively, of patients. In group 1, FAI was significantly higher compared to group 2 (-72.2±8.1 and -74.5±8, p=0.03). Also, in group 1, FAI at LAD level was higher compared to group 2 (-73.7±7.5 and -77.9±7.2, p=0.02). **Conclusions:** The combined approach to add FAI and FAI score to traditional coronary artery calcium assessment could improve identification of high-risk patients and implementation of early prevention measures.

Keywords: Fat attenuation index, Fat attenuation index score, Coronary computed tomography angiography, Coronary artery calcium

MEDICAL STUDENTS' PERCEPTION OF SKIN CANCERS: A CROSS-SECTIONAL SURVEY

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Background: Malignant tumors of the skin result from abnormal growth of cells. Squamous and basal cell carcinomas are the most common, while melanoma is less common but more aggressive. **Objective:** This paper aims to identify medical students' perceptions and knowledge levels regarding skin cancers. **Material and methods:** This cross-sectional study was addressed to first, fifth, and sixth-year General Medicine students from the University of Medicine, Pharmacy, Sciences, and Technology of Targu Mures. Participants were requested to anonymously complete a questionnaire consisting of 33 items, that assessed the demographic information of respondents and their knowledge regarding clinical, epidemiological, and therapeutical aspects of skin cancer. This paper presents partial data that was acquired until the 1st of March 2023. **Results :** 116 General Medicine students completed the questionnaire; 52 were from the sixth year, 42 from the fifth, and 22 were first-year students. 73.3% of the respondents were females. One student had a personal history of skin cancer (basal cell carcinoma). 31.9% of respondents consider that skin cancers are genetically transmitted. The majority consider that skin cancers arise only from pre-existing moles (88.8%). Regarding management, 90.5% of respondents consider that these tumors can be treated. 7.8% incorrectly consider that these cancers can spontaneously resolve, while, more concerning, 63.8% of respondents consider that, once diagnosed, a patient's skin cancer should only be monitored, and not removed. 68.1% of participants never went to a mole check-up, while 30.2% of them had never heard of the ABCDE rule. Nevertheless, significant discrepancies were noted between the three study subgroups and are to be addressed in more detail. **Conclusions:** The study findings suggest that there is a lack of awareness and knowledge among General Medicine students regarding skin cancer. Despite most respondents believing that skin cancers can be treated, a significant proportion has misconceptions about its management, indicating a need for further education and training. The lack of understanding of the importance of early detection and prevention, as shown by many participants not going for a mole check-up or being unaware of the ABCDE rule, suggests a need for targeted interventions. The study subgroups' varying levels of knowledge and awareness among students in different academic years also highlight the need for targeted interventions to address these disparities.

Keywords: students, skin cancers, knowledge, dermatology

METABOLIC SYNDROME AND THE RISK OF DEVELOPING ATHEROSCLEROTIC CARDIOVASCULAR DISEASES IN HYPERTENSIVE PATIENTS

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Background: A complex of metabolic disorders, metabolic syndrome, consists of at least three of the following five: abdominal obesity, insulin resistance, hypertriglyceridemia, low HDL-cholesterol, and high blood pressure. The association of these risk factors leads to the individual's decline in health state, with a higher rate of atherosclerotic cardiovascular events, diabetes, and both vascular and neurological problems. **Objective:** Knowing the impact as well as the increased incidence of cardiovascular diseases, the aim of this study is to evaluate the prevalence of the metabolic syndrome as well as the cardiovascular risk in a hypertensive population. **Material and methods:** Based on data taken from medical records the retrospective study was performed on a sample of 163 hypertensive patients without prior significant cardiovascular events admitted in Medical II Clinic of Targu-Mures between October 2021 and December 2022. The diagnosis of metabolic syndrome was made using an adapted form of the 2009 harmonized definition, and cardiovascular risk was assessed using the SCORE 2 risk estimation methods. **Results :** The study population had an average age of 70.71□11.02 years, and 52.14% were women. The prevalence of metabolic syndrome among hypertensive patients in the study group was 76.68%, with the highest prevalence being found in patients who fulfilled three of the diagnostic criteria (31.28%), followed by patients with four criteria (23.92%) and five criteria (21.47%). Out of all the changed criteria, the lipid profile was the most commonly altered, with 83.43% of patients showing alterations, and within this category, HDL-colesterol was altered in 78.52% of patients and the triglycerides in 68.09%. Glucose metabolism perturbations were present

in 46.62% of patients, while obesity was found in 40.49% of patients. Acording to the calculated values of SCORE2 96.93% of patients were placed in a verry high cardiovascular risk class, with an average score of 33.32%. However, there were no statistically significant differences between patients with metabolic syndrome and those without metabolic syndrome (p=0.13). Atherosclerotic changes were demonstrated in 84.66% of patients, and the presence of at least one location was significantly associated positively, 3.23 times more frequently in patients with metabolic syndrome (OR=3.23, 95% CI = 1.32-7.90, p=0.007). **Conclusions:** Metabolic syndrome is strongly associated with the presence of atherosclerotic changes, but intervention and adequate management of risk factors and components of the syndrome can significantly decrease the estimated risk of major cardiovascular events.

Keywords: Metabolic syndrome,, Hypertension,, Cardiovascular risk.

FUNGAL SUPERINFECTION: CLINICAL, PATHOPHYSIOLOGICAL AND THERAPEUTICAL IMPLICATIONS IN VENOUS LEG ULCERS

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Background: Venous insufficiency, defined by the retrograde flow of blood, is a chronic multistep disease encompassing many clinical manifestations. It is associated with an increased pro-inflammatory state, which serves as an additional underlying mechanism. Taking into account the etiologic, anatomic, and pathophysiologic criteria, this disease is defined as having 6 stages according to CEAP classification. Complications such as bacterial superinfection or ulcer bleeding are commonly associated with this disease. Nonetheless, fungal superinfection is not so often encountered in daily practice, and it can impose some difficulties in the management of such cases. **Objective:** This paper aims to bring focus to a not-so-commonly encountered superinfection in venous leg ulcers and to discuss its long and short-term impact on patients' management. **Material and methods:** We report the case of a 62 years-old female patient that was admitted to the Dermatology Clinic for the appearance of a lower leg ulcer five days prior to admission. Clinical examination revealed a 10x15 cm in size leg ulcer located on the posterior calf, covered by a thick, adherent, non-detachable white deposit, with a very shiny surface. Laboratory tests, focusing on inflammatory markers, bacterial and fungal swabs, Doppler examination, as well as a punch biopsy from the ulcer were performed. **Results :** The laboratory investigations revealed a high inflammatory state: ESR 48 mm/h, NLR 3,3 and NLP ratio 0,9. Doppler ultrasonography identified no underlying associated arterial insufficiency, while the histopathological diagnosis proved to be conclusive, describing hyphae and pseudohyphae on the hematoxylin-eosin stain. The patient was started on combined local and systemic treatment, including high-dose antimycotic agents; 3 months after diagnosis the patient developed mycotic sepsis originating from the leg ulcer and amputation was performed. **Conclusions:** Fungal superinfection in leg ulcers is an atypical complication. It represents a therapeutical challenge, as such cases often present with a rapid progression and resistance to treatment.

Keywords: venous insufficiency, fungal superinfection, inflammatory markers

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THE OCCURRENCE OF AUTOIMMUNE DISORDERS IN CHILDREN DIAGNOSED WITH PRIMARY IMMUNODEFICIENCIES

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Background: Primary immunodeficiency diseases (PIDs), now called inborn errors of immunity, are a heterogeneous group of inherited disorders characterized by defects in components of innate and/or adaptive immunity. Patients with PIDs have an increased susceptibility to infectious diseases and non-infectious complications, including allergies, malignancies, and autoimmune diseases (ADs), the latter being the first manifestation of PIDs in several cases. **Objective:** The present study aimed to evaluate demographic data, clinical manifestations, and immunological findings in primary immunodeficiency patients to have a clearer look on managing these diseases. **Material and methods:** Clinical features and immunological data were collected from medical records belonging to 51 patients with PIDs diagnosed between 2013-2023 in County Emergency Clinical Hospital of Targu Mures, Romania. To compare clinical records and laboratory data, all primary immunodeficiency

patients were classified into two different groups as follows: patients with autoimmune disease and patients without autoimmune diseases. **Results :** A total of 51 patients (33 males and 18 females) aged between 0-25, with the median (IQR) 12 years, at the time of diagnosis. Autoimmunity was seen in 6 patients (11.7%, 2 females and 4 males). Among the non-infectious manifestations, hepatomegaly and splenomegaly were significantly higher in patients with autoimmunity compared to patients without autoimmunity. The most common autoimmune presentations among immunodeficiency patients were systemic lupus erythematosus (3 patients), autoimmune hemolytic anemia (1 patient), Crohn's disease (1 patient), and juvenile rheumatoid arthritis (1 patient). **Conclusions:** Our results provide the basis for a detailed prospective evaluation of autoimmunity and inflammation the context of PIDs, with a view to accurately assessing these risks. Managing primary immunodeficiency patients with autoimmunity is more complex than managing patients without autoimmunity, and clinical symptoms may overlap with the underlying symptoms of immunodeficiency. The response to treatment in patients with autoimmune complications is often weaker compared to patients without autoimmunity. Therefore, evaluating the level of antibodies and performing immunological examinations should be considered for the diagnosis of autoimmune disease in PIDs and we suggest using special tests investigation for autoimmunity alongside immunological examinations.

Keywords: autoimmunity, immunodeficiency, pediatrics

REASONS FOR DISCONTINUATION OF BIOLOGIC THERAPY IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing spondylitis (AS) is a chronic systemic inflammatory disease that primarily affects the spine and sacroiliac joints, leading to back pain and limitation of spinal mobility. Biologic disease-modifying anti-rheumatic drugs (bDMARDs), including TNF-α inhibitors and IL-17 inhibitors, are very effective in relieving symptoms in more severe cases; however, a significant portion of patients discontinue treatment due to various reasons. **Objective:** To examine reasons for discontinuation of bDMARDs among patients with ankylosing spondylitis. **Material and methods:** We conducted a retrospective study including 54 patients who received at least one course of biologic therapy at the Rheumatology Department of the County Emergency Clinical Hospital of Târgu Mureș between 2008 and 2022. We recorded demographic and clinical characteristics of patients, as well as data regarding treatment and reasons for discontinuation of bDMARDs. Statistical analysis was performed using GraphPad Prism 9. **Results :** Of the 54 patients who received biologic therapy, 39 (72.2%) were male, average age at initiation was 44.64 ± 13.38 years, and mean disease duration was 12.88 ± 8.56 years. 33 (61.1%) patients discontinued the first-line therapy, 26 (48.1%) switched to a second drug, while 10 (18.5%) switched to a third bDMARD during the follow-up period. Etanercept was the most commonly used first-line treatment (31.5%), while adalimumab was the most frequently used overall (27.0%). Median persistence to first-line bDMARDs was 7.23 years (95% CI: 5.80□□□□□□□□compared to 4.26 years (95% CI: 1.06□□□□□□□□in second-line therapy (log-rank test, p = 0,22). The most frequent reason to discontinue the first-line bDMARD was inefficacy (48.5%), followed by adverse events (24.2%) and extra-articular manifestations (9.1%). In the second line, the two most common causes of treatment interruption were inefficacy (50.0%) and adverse events (25.0%). Malignancies, infusion- or injection-related reactions, infections, and elevated liver enzymes were among the adverse events that required discontinuation. The frequency of adverse events leading to discontinuation across all treatment lines was significantly higher in the infliximab group compared to patients treated with secukinumab (p = 0,012). **Conclusions:** Inefficacy was the most common reason for discontinuation of biologic therapy in both the first and second treatment lines. Infliximab treatment was associated with a higher frequency of adverse event-related discontinuation compared to secukinumab.

Keywords: ankylosing spondylitis, biologic therapy, discontinuation, switching

ASSOCIATION OF SLEEP DISTURBANCE AND ANXIETY AMONG STUDENTS

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Background: For university students, getting enough sleep is essential as it helps to consolidate memory, improve

cognitive function and academic performance. Lack of sleep can have a negative impact on physical and mental health by increasing stress, depression symptoms and lowering immunity. **Objective:** The study aims to investigate the prevalence of sleep disturbance symptoms and of determine the extent to which it can impact anxiety symptoms among students. **Material and methods:** A descriptive cross-sectional study was conducted using an anonymous online survey with 346 participants. Students from different disciplines and different nationalities participated and were asked to answer the questions having only last month in mind. **Results :** Out of 346 participants 32,1% are male, 67,1% female and 0,9% diverse. Regarding sleeping time 81,2% sleep 6-8 hours per night, and a lower percentage of 13,9% sleeping under 6 hours and 4,9% over 9 hours. Regarding sleep disturbance students reported severe or very severe difficulties falling asleep (15,32%), staying asleep (12,14%) and problems in waking up earlier (18,50%). For anxiety symptoms, more than two weeks out of a month to everyday symptoms of feeling nervous, anxious or on edge (28.32%) and not being able to stop or control worrying (29.48%) were reported. **Conclusions:** The problem for students with reduced sleep with anxiety symptoms is not based on the actual number of hours slept, but on factors such as falling asleep, staying asleep and waking up early.

Keywords: Anxiety, Sleep, Students

CONSUMPTION OF LEGAL AND ILLEGAL SUBSTANCES IN COMPARISON OF MEDICAL STUDENTS AND THE GENERAL POPULATION

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Background: Problematic alcohol consumption and binge drinking are great health issues in universities. Cannabis use is rising in the general population and has reached the highest level among students. Both can lead to poor academic performance, addiction, and cognitive impairment. **Objective:** We aim to distinguish the consumption of legal and illegal substances between medical students and other students in relation to the stress levels of their studies. **Material and methods:** We surveyed the substance abuse of students with 414 students (240 male, 157 female, and 17 other) of 40 different nationalities studying in 24 different countries. 112 medical students and 302 students of other subjects participated. Stress levels were assessed on a scale from 1 to 10. For the statistical analysis, we used Excel and SPSS with the Mann-Whitney-U, Spearman-Rho, and the Fisher exact test. **Results :** 85% of the students state that they experience stress related to their studies. Medical students experience significantly (p=0,006) more stress than other students (7,21 vs 6,71) and female students experience significantly (p=<0,001) more stress than male students (7,30 vs 6,56). Male students consume on a single occasion 6-7 drinks while female students consume 4-5 drinks (p=<0,001), male students tend to drink on average 3-4 drinks per week while female students drink 1-2 drinks per week (p=<0,001). Male students consume on average 1,65 times per week alcohol while female students consume 1,1 times alcohol per week (p=<0,001). We could not show a significant difference in alcohol consumption between medical and other students nor a significant correlation between stress levels and alcohol consumption. There is a significant (p=<0.001) difference in cannabis consumption between male and female students. While 50% of all male students have consumed cannabis in the last 6 months, only 31% of female students did so. The amount of cannabis consumption is significant (p=<0,001) increased in men compared to women. 31% of all medical students have consumed cannabis in the last 6 months while 69% of other students did so. A significant (p=0,004) correlation between cannabis consumption and the study subject exists. The amount of cannabis consumption is significant (p=0,014) increased in other students compared to medical students. We could not show a significant correlation between stress levels and cannabis consumption. **Conclusions:** While we can see significant differences between the consumption pattern of alcohol and cannabis of male and female students, medical students, and other students, we cannot see significant correlations between their consumption patterns and stress levels.

Keywords: Students, Stress, Alcohol-use, Cannabis-use

ATRIAL FIBRILLATION – WHERE DO WE STAND?

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Background: Being recognised as the most prevalent cardiac arrhythmia in the world, atrial fibrillation (AFib) has,

since the beginning, remained a well-debated topic in the medical world. Throughout the years, it has grown many concerns regarding the increase in incidence, as well as for the problem of the most optimised anticoagulation treatment. **Objective:** The aim of this study consisted in identifying the burden that atrial fibrillation carries in the present times, and also in which matter does it influence the presence of the three phenotypes of another popular medical condition - heart failure (HF). **Material and methods:** Our work consisted in a retrospective study that implied the participation of 171 patients (158 with atrial fibrillation and heart failure) admitted to the Internal Medicine II-Cardiology Clinic in the period of January 2019 □ □□December 2021 in Targu-Mures. The parameters assessed consisted in anthropometric parameters, AFib and HF phenotypes, different comorbidities, as well as anticoagulation and antiplatelet medication. **Results :** The mean age was 74 years (SD, 10.31), and 53.8% (n = 92) of the studied population were men. They predominantly came from the rural area (57.3%, n = 98) and were admitted to hospital for around 10 days (SD, 5.62). Regarding the atrial fibrillation types, we observed that most patients had permanent AFib (57%, n = 97, p = 0.046), followed by paroxysmal AFib (31%, n = 53, p = 0.016). Amongst the atrial fibrillation and heart failure population sample, we discovered that patients with permanent AFib had HF with reduced ejection fraction at a higher rate (46.6%, p > 0.05), while patients with paroxysmal AFib had a preserved ejection fraction (46.4%, p > 0.05) predominantly. About those with persistent AFib, we state that the majority had also HF with reduced ejection fraction. Regarding the comorbidities, hypertension (n = 141) was the most prevalent, followed closely by mitral valve disease (n = 135). The median CHA□□□□□□□□□score was 5 (SD, 1.65). **Conclusions:** Atrial fibrillation is a fascinating cardiac arrhythmia that occurs in many of the medical practitioners' work. It is still yet to discover how to influence its development by better management of related risk factors. Also, in the future, it is important to reveal if the maintenance of the sinus rhythm will provide or not the decrease in mortality due to AFib.

Keywords: atrial fibrillation, heart failure, ejection fraction, CHA□DS□-VASc score

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THE LINK BETWEEN ACUTE BRONCHIOLITIS IN CHILDREN AND MATERNAL SMOKING

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Background: Maternal smoking increases the risk of lower respiratory tract infections for the newborn and toddlers. Maternal Cigarette smoking is considered to be an ethiological and aggravating factor in the development of acute bronchiolitis among babies, but this theory is currently considered controversial **Objective:** The aim of this paper was to assess the impact of maternal smoking exposure on pediatric patients with acute bronchiolitis hospitalized in Târgu- Mureș by analyzing several clinical and paraclinical parameters. **Material and methods:** A retrospective, observational study was completed, the data being collected from the Pediatrics department of the Clinical County Emergency Hospital of Târgu Mureș, Romania, for a period of 7 years, between 2015 and 2021. All cases of acute bronchiolitis were included in the study. All children included in the study were divided into two groups according to the maternal smoking status. **Results :** We discovered a high incidence of acute bronchiolitis (287 cases) among pediatric patients. We identified 67% children born to non-smoking mothers, and 33% to smoking mothers. We noticed a male predominance in our entire sample (61%). Moreover, 63% of the patients had poor living conditions and 60% were living in rural area. The most common age group admitted with bronchiolitis was between 0-5 months (70%), while children above the age of 2 years were the least common age group (1%). Regarding the laboratory parameters, we noticed a decrease in mean corpuscular volume in patients with acute bronchiolitis. Nevertheless, we found no differences regarding complete blood cell count parameters at infants of non-smoking mothers and of smoking mothers. **Conclusions:** It is well documented that maternal smoking increases the risk of infants for developing lower respiratory tract infections, especially acute bronchiolitis in the first two years of life. Risk factors for acute bronchiolitis are poor life conditions and MCV from the blood tests.

Keywords: Maternal Smoking, Acute Bronchiolitis, Children, Risk factors

MECHANICAL ASPHYXIA - BETWEEN ACCIDENT AND SUICIDE

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Background: Mechanical asphyxia is a condition caused by the obstruction of the airways leading to the hindering of oxygen supply to the body. Sudden and brutal oxygen deprivation will cause anoxic syncope leading to death within minutes. This can be caused by a variety of factors, including compression of the neck, drowning or suffocation. **Objective:** This study aims to investigate the prevalence and peculiarities of suicides and accidents by mechanical asphyxia in Mures County in 2020 and it follows the dynamics and ways of causing deaths. **Material and methods:** The study includes the examination of 122 autopsy reports with mechanical asphyxia as the cause of death carried out at the Institute of Forensic Medicine in Targu Mures, selected from 758 autopsies performed. We investigated their dynamics based on various criteria, including sex, age, rural/urban background, nationality, type of asphyxia, BAC (blood alcohol concentration) values, survival period and time of year. **Results :** From a legal point of view, the majority of deaths by mechanical asphyxia were classified as suicides (85/122) applicable to both genders (74/107 males and 11/15 females), most of the autopsied bodies were from rural areas (75/122). The predominant causes of death by mechanical asphyxia differ by age group as follows most suicides have occurred in the 40-60 age range (37/85) and most accidents in people over 60 (16/37). Alcohol can directly influence a deliberate end-of-life decision or the occurrence of an accidental event, but our study reported that the blood alcohol level had a predominance of negative results (64/122) being statistically insignificant (p=0.71) and therefore not being a risk factor in the occurrence of both suicides and accidents. Some victims had a survival period from the appearance of the event to death, however, all cases ended with their decease. **Conclusions:** Determining the specific type of mechanical asphyxia, the cause of death, the changes and conditions that led to its occurrence depends on the information obtained during the forensic examination. The lack of survival period in the vast majority of cases reflects the rapid tanatogenic nature of mechanical asphyxia. Thus violent asphyxia remains a frequent cause of death in forensic practice - of all autopsies performed in 2020 at the Târgu Mureș Forensic Medicine Institute, every 6th case was a victim of asphyxia.

Keywords: Forensic Medicine, Mechanical Asphyxiation, Suicides, Accidents

IS LIFE QUALITY DEPENDANT ON PATIENTS' KNOWLEDGE LEVELS IN SKIN DISEASES?

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Background: The skin is a multilayered organ, which shields multiple functions, from protection to thermoregulation. A proper patients' management should take into account apart from lesions localisation and clinical picture the fact that varied skin diseases often impact patients' daily activities, leading to social isolation. **Objective:** This paper aims to analyze how patients' quality-of-life is affected in various skin diseases and to determine whether disease knowledge is related to quality-of-life impairment. **Material and methods:** An observational cross-sectional study was carried out between December 2022 and March 2023 in the Dermatology Clinic of Mures Clinical County Hospital. Patients were asked to complete a 21-items questionnaire aiming to gain information on lesions' evolution and patients' knowledge level about their skin disease. Knowledge level was assessed using a visual analogue scale (VAS, a maximum of 5 points).The quality-of-life was calculated using an internationally validated free of copyright score, the Dermatological Life Quality Index (DLQI). Pearson correlation was used to assess the relationship between knowledge level and quality-of-life. This paper presents data referring to patients diagnosed with two frequent chronic diseases: stage VI chronic venous insufficiency and psoriasis. **Results :** 54 patients were enrolled in this analysis, 26 diagnosed with venous leg ulcer, and 28 diagnosed with psoriasis. The majority were females and came from urban area. Most of them (n=39) received their diagnosis in the last six months and followed treatment prescribed by a dermatologist (n=50), with a significant improvement over the course of treatment (n=42). Patients diagnosed with venous leg ulcer had an average DLQI score of 11, while those with psoriasis 9. Both categories of patients recall that the disease has modified their daily habits, they have tried to cover their lesions mostly using clothes and have been encouraged by family and friends when dealing with the disease. Regarding knowledge level, patients with venous leg ulcers scored an average of 2.4 points on VAS scale, while those with psoriasis 3.2 points. Knowledge level was negatively correlated with the

DLQI score (R=-0.45,p=0.12) **Conclusions:** Life quality in psoriasis and venous leg ulcer is moderately, respectively severely impaired. A decreased knowledge level about a skin disease leads to higher impact of that specific disease on one's life quality. Further larger and more varied studies are needed.

Keywords: quality-of-life,, knowledge, DLQI score,, psoriasis,, leg ulcer.

CORONARY PLAQUE VOLUME AS DETERMINED BY CT ANGIOGRAPHY AS A FACTOR OF PREDICTION FOR CARDIAC EVENTS IN PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE IMPLANTATION (TAVI)

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Background: Transcatheter Aortic Valve Implantation (TAVI) has become a well-established therapeutic option for aortic stenosis in high- and medium risk patients. Coronary artery disease is a common finding in patients undergoing TAVI. **Objective:** The aim of the study is to determine whether coronary plaque volume as determined by CT-Angiography can be a factor of prediction for cardiac events in patients undergoing TAVI. **Material and methods:** The study included 17 patients (6 female/ 11 male). The values of the non-calcified- and the low-density non-calcified plaque (NCP) volume of the left anterior descending (LAD), circumflex (LCx) and right coronary artery (RCA) were being determined using the program "cvi42". The obtained values were being compared with each other in order to find particularities between the patient groups of: deceased <1-/>1 month after TAVI procedure, still alive patients until the end of the study, men and women. **Results :** 4/17 patients died until the end of the study. Three female patients died >1 month after the procedure and had in average lower NCP volumes (LAD 167,97mm3, SD 105,58mm3/ LCx 163,01mm3 SD 108,37mm3/ RCA 189,59mm3 SD 116,19mm3) compared with all patients still alive until the end of the study (LAD 297,02mm3 SD 160,30mm3/ LCx 314,35mm3 SD 157,47mm3/ RCA 262,51mm3, SD 78,82mm3). Furthermore they were older in average at the time of TAVI procedures (83,48yr, SD 4,04yr/ all patients still alive: 76,12yr, SD 7,29yr). The male person deceased <1 month post procedure had higher scores in average (LAD 416,56mm3, LCx 415,42mm3, RCA 235,37mm3) than all patients still alive, but his age (76,56yr) was close to their average age. In average the female patients were older (Women's age: 79,67yr, SD 7,96yr/ men's age: 76,23yr, SD 6,11yr) and had lower plaque volumes (Women: LAD 213,21mm3, SD 100,96mm3/ LCx 257,1mm3, SD 145,13mm3/ RCA 233,74mm3, SD 105,7mm3)(Men: LAD 318,40mm3, SD 171,47mm3/ LCx 313,4mm3, SD 163mm3/ RCA 253,34mm3, SD 76,36mm3). **Conclusions:** The patients deceased within the time span of the investigation were in average older than the ones surviving. It is possible that this is due to their lower life expectancy. The initially formulated hypothesis (NCP being a predictive factor for patients undergoing TAVI procedure) could not be confirmed using exclusively the present data set. The results of the present study do not support the assumption that the NCP can be used as a predictive factor for cardiac events in patients undergoing a TAVI procedure.

Keywords: Transcatheter Aortic Valve Implantation (TAVI), Non-Calcified Coronary Plaque Volume, Predictive Factor Cardiac Events

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ILLNESS RELATED ANXIETY IN PATIENTS WITH DIABETES MELLITUS IN RELATION TO ANTI-DIABETIC TREATMENT

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Background: Over the past decade, countless medical studies have sought to expose a possible association between anxiety and diabetes and its treatment. Studies have shown that people with type 2 diabetes have a high prevalence of anxiety disorders. **Objective:** The aim of this study was to estimate the prevalence and degree of anxiety in patients with diabetes mellitus. **Material and methods:** The present study is a cross-sectional, population-based study. We examined 101 patients with diabetes from the Diamed Medical Center in Târgu Mureș, 59.5% were women and 40.5% men, aged 38-86 years, the average age was 67 years. The patients completed 2 questionnaires, which measure the degree of suffering from diabetes and the appreciation of insulin treatment, according to the DDS 17 scale and the ITAS scale. For the statistical processing of the data we used the Microsoft Excel and SPSS program. **Results :** In the element of total suffering related to diabetes, the level of suffering was moderate in 31 (30.6%) patients and high in 13 (12.8%) patients. Emotional burned was the most pronounced

change with the highest mean DDS (1.70) and was present in 50 (49.5%) patients, and treatment-related anxiety in 48 (47.55%) patients. The mean of interpersonal anxiety did not reach the pathological threshold, and no patient showed anxiety related to the medical act. There were differences between insulin-treated and non-insulin-treated patients. Patients who not using insulin, had more negative impressions and attitudes towards insulin treatment than those already using insulin. 39 (38.6%) patients answered with agreement to the question "I have the feeling that I will develop long-term complications, no matter what measures I take". 58 (57.4%) patients agree that insulin treatment means failure to control diabetes with drugs and diet. **Conclusions:** Patients with diabetes who were not using insulin had more negative beliefs and attitudes towards insulin treatment than those who were already using insulin treatment . Emotional burden and distress related to treatment may be important in contributing to the development and maintenance of diabetes-related anxiety.

Keywords: Diabetes mellitus, Emotional burden, Anxiety, DDS 17

IMAGISTIC FINDINGS AND CORRELATIONS BETWEEN VASCULAR INFLAMMATION AND THE RISK OF ATRIAL FIBRILLATION

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Background: During the evolution of several cardiovascular diseases, atrial fibrillation (AF) can occur at any time on the basis of an inflammatory substrate. Coronary computed tomography angiography (CCTA) imaging is a useful toon in the evaluation of perivascular inflammation. The new pericoronary fat attenuation index (FAI) and the FAI Score (a personalised quantification of the inflammation of coronary arteries age and gender matched) can be a reliable indicator for future cardiovascular emergencies. **Objective:** The purpose of our study was to evaluate the link between pericoronary fat inflammation and atrial fibrillation among patients who presented with a coronary artery disease. Furthermore, we studied the CA-Ri Heart Risk based on the FAI Score values and other clinical risk factors in patients who suffered from an AF in comparison with those who had sinus rhythm. **Material and methods:** The study group consisted of 81 patients (mean age 64.75 ± 7.84 years) who presented cardiovascular diseases and underwent a CCTA examination. Patients were categorised in two groups: group 1: 36 patients with AF, and group 2: 45 patients without AF. For every patient the comorbidities, cardiovascular risk factors were studied, laboratory tests, echocardiography findings and the FAI and FAI score were established. **Results :** There was no significant difference between the two groups concerning the CaRI Heart Risk (18.14±14.09 vs. 18.09±13.59, p=ns). On the other hand, in patients who suffered from AF, the overall FAI Score was greatly increased (15.53 ± 10,29 vs. 11.09±6,70, $p<0.05$), also increased levels of coronary inflammation could be observed at the level of the left anterior descending artery (13.17 ± 7,91 in group 1 vs 8.80 ± 4,75 in group 2, p=0.008). **Conclusions:** In conclusion, in patients suffering from AF an increased level of inflammation in the epicardial fat could be observed, particularly in the case of the left coronary artery. A greater level of inflammation in the left coronary artery seems to be directly associated with a higher risk of a potential atrial fibrillation development.

Keywords: Atrial Fibrillation, Left Descending artery, Inflammation

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KNOWLEDGE GAP IN MEDICAL STUDENTS PERCEPTION OF ACNE: A SURVEY-BASED ANALYSIS

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Background: Acne is a common dermatological condition defined by inflammatory and non-inflammatory lesions of the pilosebaceous unit. The polymorphic clinical picture, as well as the prolonged and intermittent course of the disease, make the management of acne cases a challenge for both patient and physician. **Objective:** This paper aims to identify medical students' level of information regarding acne. **Material and methods:** A cross-sectional observational study targetting first and sixth-year General Medicine students from the University of Medicine, Pharmacy, Sciences, and Technology George Emil Palade of Targu Mures was carried on. The students were asked to anonymously complete a questionnaire. It encompassed 30 multiple-choice questions aiming to test information levels referring to risk factors, treatment modalities, and information sources associated with acne. **Results :**

Two hundred fifteen General Medicine students completed the questionnaire, out of which 110 were enrolled in the sixth year and 105 were first-year students; 75% of them were males. The majority of responders consider that acne is not an infectious disease (65.7%), nor is it contagious (91,6%). Only 57.5% of responders were able to completely point out acne-triggering factors. 97.2% of study responders acknowledge the fact that acne can be treated, but only 26 were able to cross-check all correct treatment options available for acne. Hormonal imbalances were considered to be involved in acne pathogenesis (n=213) by the majority of responders. Significant discrepancies were noted between the two study groups. **Conclusions:** Significant discrepancies were observed between the two groups on the level of knowledge about acne, highlighting the need for continuous medical education regarding this disease. Additionally, precocious intervention, targeting younger generations should prove to be effective. c

Keywords: acne, comedones, inflammation, adolescents

ACTINIC AND SEBORRHEIC KERATOSES AS POSSIBLE INDICATORS OF SUN-EXPOSURE BEHAVIORS: A CROSS-SECTIONAL STUDY

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Background: Actinic keratoses are premalignant skin lesions caused mainly by prolonged exposure to UV rays which, if left untreated, progress to squamous cell carcinoma. Sunburns may lead patients to develop a wider panel of skin tumors, both benign and malignant. **Objective:** This paper aims to assess whether sun exposure behaviors can be linked to the presence of various types of skin tumors, especially actinic and seborrheic keratoses. **Material and methods:** We conducted a cross-sectional observational study in the Dermatology Clinic between January and March of 2023. Patients admitted to the inpatient clinic who signed the informed consent form were clinically screened for actinic and seborrheic keratoses and were asked to answer a 28 item-questionnaire to assess their sun exposure behavior. Pearson correlation was used to assess the relationship between sun exposure and the presence of actinic and seborrheic keratoses. The p threshold of significance was set at 0.05. **Results :** 50 patients were included in this analysis, 26 being females. The patients had a median age of 65.34 years and resided mainly in the urban area. No patient presented with actinic keratoses or other malignant skin tumors. Most of the patients presented seborrheic keratoses, located on the anterior (n=47) and posterior (n=46) thorax with an average size of 2 mm. Pigmented nevi and cherry angiomas were frequent findings as well. Most patients do not use sunscreens (n=44), partly because they do not believe it to be necessary (n=30), with the other remaining six applying it only on the face and only when sunbathing. The majority of patients (n=35) never had a dermoscopy examination. A weak not significant negative correlation (R=-0.21, R2=0.04, p=0.14) between unprotected sun exposure and seborrheic keratoses was noted, but not for other types of skin lesions. **Conclusions:** Not using sunscreen leads to an increase of seborrheic keratoses, but not for other types of skin lesions. Further larger prospective studies are necessary.

Keywords: actinic keratoses, sun exposure, sunscreen

THE IMPORTANCE OF SUPPORTIVE TREATMENT IN PEDIATRIC ONCOLOGY FOR IMPROVING LIFE EXPECTANCY AS WELL AS LIFE QUALITY

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Background: Childhood cancer refers to any malignant process that occurs under the age of 18. It is a major health problem, it includes leukemia, lymphoma as well as solid tumors. Both genetic and environmental factors play a role in its etiology and is treated worldwide following protocols that include combinations of chemotherapy, radiation therapy, surgery and sometimes stem cell transplantation. Patients become very vulnerable due to this treatment so it is necesary to add antiinfection medication, blood substitution and other complementary products. **Objective:** The aim of this study was to see how supportive treatment can prevent, overcome and cure many side effects of the oncological treatment. **Material and methods:** We performed a retrospective analysis on 29 cases of patients treated between 2018 and 2021 at the hemato-oncology department in Pediatric Clinic of Mures County Hospital. There were included cases presented due to emergencies as well as those for reevaluation and

additional care. **Results :** In this period we treated 29 patients, 38% female and 62% male, aged between 2 and 18 years with an average of 8,03 years of age. We had 23 cases of hematologic disorders (one case - 3,44% was myeloid acute leukemia, 20 cases - 68,96% were lymphocytic acute leukemia, 2 cases - 6,89% were Hodgkin lymphoma) and 6 cases of solid tumors (20,68%). Four patients (13,79%) came only for cytostatic treatment, with no symptoms in the moment of presentation. Pallor was the most common sign seen in all patients due to anemia followed by fever due to neutropenia (51,72%). The gastrointestinal tract was affected in 65,51% of cases and the respiratory system in 31,03%. To prevent and treat viral and bacterial infections, all patients were administred appropriate medication as well as for prevention of pneumonia caused by pneumocystis carinii. Antiemetics and proper hydration were also ensured. Those using corticotherapy at risk to develop conditions as bone demineralization, gastritis and obesity or even diabetes were given calcium, magnezium, vitamin D, gastric protectors and nutritional counseling. **Conclusions:** Oncology protocols are using a few cytostatic drugs, very agressive and with multiple side effects, so for mantaining the patients life during this treatment it is necesarry to add supportive medications.

Keywords: child, cancer, supportive treatment

STROKE AND DIABETES- WORKING TOGETHER

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Background: Stroke is the third cause of death and first cause of neurologic disability. In addition of this worrying fact, diabetes mellitus is associated with 2 to 3 fold increased risk of suffering a stroke compared with nondiabetic patients. **Objective:** The aim of this study was to analyze the influence of DM and hyperglycemia on outcomes and clinical and paraclinical aspects in ischemic and hemorrhagic strokes. **Material and methods:** This retrospective case-control study included acute stroke consecutive patients with and without diabetes (n=323), admitted in Neurology I Clinic of Târgu Mureș Emergency County Hospital. Patients with transient ischemic attack were excluded. Out of 323 stroke patients, 96 (30%) had or were found with diabetes and formed our diabetic group. The severity of stroke was quantified by using NIHSS and the clinical outcome by using mRS. We used Mann-Whitney test and Spearman correlation test to compare the variables of the two groups. **Results :** We discovered a significant difference between the diabetic and nondiabetic groups in relation to MAP (p=0.0061), admission and next two days glucose level (p<0.0001), triglycerides (p<0.0001), VSH (p=0.0114), NIHSS (p=0.0292). We established weak correlations, but statistically significant (p<0.05) between glycemic mean and systolic BP (r=0.1461), HR (r=0.1394), MAP (r=0.1427); between day 3 glycemia and NIHSS (r=-0.1539), the length of hospital stay (r=-0.1234); between glycemic mean and triglycerides (r=0.2251), VSH (r=0.1586); between AGL and thrombocytes (r=-0.1226), day 2 glycemia and INR (r=-0.1201), day 3 glycemia and hemoglobin (r=-0.1708). No statistically significant difference was noted for the mRS in the diabetic group. To this extent diabetic patients suffered more of hypertension, hypertriglyceridemia, an increased VSH and other altered paraclinical data that added on to stroke severity and longer hospital stay. **Conclusions:** The association of diabetes with stroke, which are two complementary diseases, is well known as a health concern. To such a degree, this evidence will contribute to the current knowledge on stroke prevention and reducing the burden of stroke, focusing especially on modifiable risk factors, such as diabetes.

Keywords: stroke, diabetes, outcome, ischemic

COMPARISON OF NON-INVASIVE BIOMARKERS IN HCV PATIENTS

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Background: Fibrosis represents the accumulation of excess non-functional scar tissue in the liver, as part of a pathological process. Fibrosis accompanies any chronic liver disease characterized by the presence of hepatobiliary aggression (tissue destruction and simultaneous repair) or chronic inflammation. Chronic HCV infection causes slow progression of fibrosis leading to the development of cirrhosis, cirrhosis-related complications, and ultimately death from liver failure. The emergence of non-invasive methods for the assessment of fibrosis in chronic liver disease has allowed the discovery and early diagnosis of advanced lesions. **Objective:** Through this study, we wanted to highlight the clinical importance and utility of non-invasive methods and

biomarkers for different stages of hepatic fibrosis. **Material and methods:** We performed a retrospective study which included 115 patients diagnosed with chronic hepatitis C and/or chronic hepatitis B between November 2020 and November 2022. Investigations included assessment of usual laboratory tests, their pathological antecedents, lifestyle and calculation of body mass index. Correlations were made between 3 non-invasive biomarkers of fibrosis on one side and FibroMax on the other side, as well as between the values of cholesterol, triglycerides, platelet count and the presence of fibrosis and steatosis. **Results :** Our study included 115 patients diagnosed with chronic hepatitis C, of whom 45 were men and 70 were women. The patients included in the group were between 30 and 86 years old. FIB-4, APRI and AAR were calculated for patients with HCV infection undergoing specific treatment. The performance of each model and AUROC for predicting significant fibrosis were determined for all patients. Significant fibrosis was observed in 54% and 45% had advanced steatosis, with statistically significant correlation between BMI and the stage of steatosis. 3 patients with modified basal glycemia developed type II diabetes during the course of this study. The AUROC curve for patients with advanced fibrosis was 0.72 for FIB-4 and 0.66 for APRI, both having a statistically significant p=0,0001 and p=0,0017 respectively. **Conclusions:** Both FIB-4 and APRI are useful for highly accurate identification of those with advanced fibrosis. However, because they have poor positive predictive value, liver biopsy will continue to be used for assessment of patients with chronic hepatitis.

Keywords: Fibrosis, Hepatitis, Non-invasive, FIB-4

CORRELATIONS BETWEEN URINARY SYMPTOMS AND FEMALE GENITAL PROLAPSE

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Background: The increase in life expectancy in the last decade, has brought with it, in developed countries, the reporting of more and more cases of genital prolapse and urinary incontinence among adult women. Genital prolapse can be defined as the herniation or prolapse of the pelvic viscera at the level of the vulvo-vaginal opening. In this condition, there is a competition between the intraabdominal pressure and the ineffective means of support. **Objective:** To identify the correlations between urinary symptoms and genital prolapse and the possibilities of an accurate diagnosis of urinary tract infections in the family doctor's office. **Material and methods:** We correlated the data from a study conducted on a group of 126 patients with urinary symptoms investigated for genital prolapse during 2016-2017 at the Obstetrics and Gynecology I Clinic in Târgu-Mureș with the data obtained in a survey completed by 45 family doctors from Mureș county regarding the incidence of urinary tract infections. **Results :** Urinary symptoms are common in genital prolapse, regardless of its degree, and the symptoms that are most frequently present are abdominal discomfort, stress urinary incontinence, and difficulty urinating. 3 out of 5 family doctors have at least one patient per week with symptoms specific to urinary tract infections, 1 out of 3 family doctors consider that the access of patients to bacteriological analyses in order to establish the etiology of the infection and the correct therapeutic conduct is difficult, and the main reason that makes access to bacteriological investigations quite problematic for patients is the lack of NHIH funds. **Conclusions:** Abdominal discomfort, difficulty urinating and stress urinary incontinence are a "urinary triad" frequently encountered in all forms of genital prolapse. The incidence of the "urinary triad" is higher in grade I genital prolapse and decreases as the prolapse worsens. Urinary incontinence - it is not a specific symptom of urinary tract infections, rather it suggests the existence of a genital prolapse.

Keywords: urinary tract infections, genital prolapse, stress urinary incontinence

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THE UTILITY OF THE GENEXPERT MTB/RIF MOLECULAR METHOD FOR DETECTING MYCOBACTERIUM TUBERCULOSIS: A COMPARISON WITH THE TRADITIONAL DIAGNOSTIC METHODS

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Background: Tuberculosis (TB) represents an infectious disease of worldwide concern and is caused by the bacillus Mycobacterium tuberculosis. It is the most common cause of death among people with minimal access to health care, so an urgent diagnosis is essential. As growing cultures on Lowenstein-Jensen can take up to 60 days, the GeneXpert molecular method that displays result in 2 hours may be encouraging. **Objective:** The aim of

this study was to asses the reliability of GeneXpert MTB/RIF assay in order to detect Mycobacterium tuberculosis and its rifampicin resistance by comparing it to the classical methods of diagnosis. **Material and methods:** A total of 243 pulmonary and extra-pulmonary specimens which have been analyzed by smear microscopy, Lowenstein-Jensen culture and GeneXpert MTB/RIF molecular method, were centralized and used for this retrospective study. The clinical samples that were collected are the following: sputum, bronchial aspirate, pleural fluid, gastric aspirate and cerebrospinal fluid. **Results :** In our study, 5.34% of all tested samples were found positive by smear microscopy, 8.23% by Lowenstein-Jensen culture and 10.29% by GeneXpert MTB/RIF. Out of 25 samples that were tested positive by GeneXpert assay, 2 of them (8%) showed rifampicin resistance. The GeneXpert assay achieved 60% sensitivity and 97,7% specificity compared to growing cultures. In addition, the molecular method detected 2.05% more positive specimens than Lowenstein-Jensen culture and 4.93% more than smear microscopy. **Conclusions:** The molecular method GeneXpert MTB/RIF is an important element for the quick diagnosis of tuberculosis, but also for detecting the rifampicin resistant genes.

Keywords: Mycobacterium tuberculosis, GeneXpert MTB/RIF assay, Lowenstein-Jensen culture, rifampicin resistance

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HEPATIC ENCEPHALOPATHY – IMPACT ON LIVER FUNCTION TESTS AND MORTALITY

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Background: Hepatic encephalopathy (HE) encompasses a wide range of neurological and psychiatric dysfunctions, resulting from insufficient clearance of deleterious substances by the cirrhotic liver. Around 30-45% of patients, suffering from hepatic cirrhosis, develop clinically manifest hepatic encephalopathy during the course of their disease, producing a high financial impact on healthcare resources. **Objective:** The aim of this study was to evaluate differences in the values of liver function tests (LFTs), as well as in mortality between cirrhotic patients with encephalopathy and -without encephalopathy. **Material and methods:** A retrospective observational study was conducted, in which data of 282 patients, diagnosed with hepatic cirrhosis and admitted to the Gastroenterology Department of "Mureş County Clinical Hospital" of Târgu Mureş, Romania, between the 1st of January 2022 and the 31st of December 2022, were collected. The patients were divided into two groups, according to the existence of hepatic encephalopathy (84 diagnosed with hepatic encephalopathy and 198 without hepatic encephalopathy). The means of their liver function tests (LFTs), namely prothrombin time (PT), albumin and bilirubin; as well as their mortality were compared for significant differences, using Microsoft Excel and GraphPad. **Results :** Differences between the two groups regarding the three liver function tests were all considered extremely significant: prothrombin time with a mean of 60.84% in the group "with HE" and 72.12% in the group "without HE" (p=<0.0001); albumin with a mean of 29.88 g/l in the group "with HE" and 35.36 g/l in the group "without HE" (p=<0.0001); bilirubin with a mean of 4.84 mg/dl in the group "with HE" and 2.47 mg/dl in the group "without HE" (p=<0.0001). Also regarding mortality, the difference was considered very significant (p=0.0013). The group "with HE" showed a mortality of 10.71% (9 out of 84), whereas the group "without HE" of 1.52% (3 out of 198). **Conclusions:** Significantly decreased values of prothrombin time and albumin, whereas significantly increased values of bilirubin were seen in cirrhotic patients affected by hepatic encephalopathy compared to the ones without hepatic encephalopathy. Additionally, mortality was significantly higher in individuals with hepatic encephalopathy.

Keywords: Hepatic Encephalopathy, Hepatic Cirrhosis, Liver Function Tests, Mortality

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THE CONTRIBUTION OF 3D ULTRASOUND IN THE MORPHOLOGICAL STUDY OF THE FETAL SPINE IN THE SECOND TRIMESTER OF PREGNANCY

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Background: The pathology of the fetal spine is very extensive, and it has regularly etiopathogenesis most of the time during the embryogenesis process or is correlated with certain maternal deficiencies. These abnormalities may be singular or coexist with associated systemic malformations. The development of ultrasound techniques has made possible the prenatal diagnosis of many spinal congenital malformations, especially the innovations brought by 2D and 3D, which can bring valuable information and influence the therapeutic conduct. **Objective:** The main

purpose of the study is to analyze the ultrasound parameters of the fetal spine in the second trimester of pregnancy, in order to compare the values obtained in 2D and 3D. Also, an important aspect to point out is the identification of some pathological cases and the analysis of the obtained images. **Material and methods:** The work represents a prospective, observational study that took place in November 2022-March 2023 and includes 51 pregnant women in the 2nd trimester of pregnancy. Comparative 2D and 3D ultrasounds of the cervical, thoracic, lumbar, and sacrococcygeal spine were performed with the monitoring of several defining elements such as the number of vertebrae, presence of transverse, spinous apophyses, vertebral bodies, etc. **Results :** Results indicated a slightly higher precision in 3D ultrasound imaging compared to 2D ultrasound imaging ($p >= 0.5$), with sufficient evidence to assume based on the mean difference. The interobserved agreement for the visibility of regions of interest was substantial and demonstrated a high level of precision for the considered cases ($k > 0.45$). The agreement between the results computed from 2D ultrasound imaging and 3D ultrasound imaging was also substantial. Moreover, the inter-observer and inter-method agreement were higher with 3D ultrasound imaging ($k > 0.61$) than with 2D ultrasound imaging ($k > 0.49$). These findings suggest that 3D ultrasound imaging may be a valuable tool for the accurate diagnosis and analysis of pathologies in the cervical, thoracic, lumbar, and sacrococcygeal spine. **Conclusions:** These findings suggest that 3D ultrasound imaging may be a valuable tool for the accurate diagnosis and analysis of pathologies in the cervical, thoracic, lumbar, and sacrococcygeal spine.In regular cases, both investigation methods, 2D and 3D, reported the same parameters, therefore demonstrating identical effectiveness. In the circumstances of pathologies, 3D ultrasound can both, confirm and disprove the suspicions raised by the 2D method.

Keywords: Ecography, Prenatal diagnosis, Spinal pathology

BEYOND THE SKIN: AN ASSESSMENT OF PSORIATIC COMORBIDITIES

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Background: Psoriasis is a complex, immune-mediated disease with an increased genetic susceptibility. While it primarily affects the skin, the associated systemic inflammation leads to some extent to joint, cardiovascular and metabolic associated conditions. Patients' treatment should focus on addressing both cutaneous psoriasis and associated comorbidities. **Objective:** The aim of our research was to analyze the comorbidities that are associated to patients suffering from psoriasis and to highlight a possible link between those two. **Material and methods:** We conducted a retrospective, descriptive study that included patients diagnosed with psoriasis and admitted in the Dermatology Clinic of Mures Clinical County Hospital between 2017 and 2022. Data referring to sociodemographic status, disease course, subtype and associated comorbidities were extracted from patients' charts and statistically analyzed using Excel software. Pearson correlation was used to assess the relationship between comorbidities and patients' age, gender or disease subtype. P threshold value was set at 0.05. **Results :** 216 patients were enrolled in this study. 79 were females and 147 were males.90 were from urban areas. Patients ages ranged from 4 to 88 years old. The majority presented with chronic plaque psoriasis (n=183), followed by pustular psoriasis (n=18). Most patients had more than three comorbidities (n=170), while 8 patients had no comorbidities at all. The highest reported comorbidities were pro-inflammatory state (n=111), hypertension (n=83), dyslipidemia (n=72), and obesity (n=50). 15 patients presented with associated psoriatic arthritis. Comorbidities number was positively corelated with patients' age (R=0.45), but not with patients' gender or disease subtype. **Conclusions:** Psoriasis predisposes patients to developing metabolic comorbidities, most likely linked to the increased inflammatory state of these patients. The development of comorbidities is not associated with a specific clinical subtype of psoriasis, but to patients' age, highlighting the need of close monitoring for such patients.

Keywords: Psoriasis, Comorbidities, Inflammatory state

THE IMPACT OF ANXIETY AND DEPRESSION UPON THE CLINICAL EVOLUTION OF PATIENTS WITH MULTIPLE SCLEROSIS

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Background: Multiple sclerosis (MS) is a chronic inflammatory demyelinating autoimmune disease. Mood disorders, such as anxiety and depression are frequent. Anxiety is thought to be more common in MS patients than

in the overall population. The probability of getting depression is 50% higher in MS patients, making it the most prevalent mental comorbidity. As a psychological screening tool, it has been demonstrated that the Hospital Anxiety and Depression Scale (HADS) produces clinically relevant results. It is sensitive to change, both throughout the progression of the illness and in response to therapeutic and counseling initiatives. **Objective:** The purpose of this study is to assess the level of anxiety and depression in patients diagnosed with Multiple Sclerosis using the HADS. **Material and methods:** HADS scale has 14 items used to assess psychological distress. We applied the HADS questionnaire to 51 out-patients diagnosed with MS in the Neurology Clinic of the Emergency Clinical County Hospital. The inclusion criteria were: (1) MS diagnosis, (2) willingness to participate, (3) outpatient setting. The patients were than analyzed based on the clinical and socio-demographical characteristics. **Results :** Out of the 51 patients, the majority (82%) were female. The mean age at the onset of the disease was 31.41 ± 9.62 years, while the mean age at the diagnosis was 34 ± 9.66 years. We performed Mann-Whitney analysis for the evaluation of differences between anxiety and depression index in both males and females. A statistical significant result was found when comparing anxiety in female vs male patients ($p=0.04$), but when comparing depression based by gender there were no significant results ($p=0.09$). As expected, per the entire group and gender subgroups, we found a statistical significant correlation (all $p<0.001$) between the depression index and anxiety. **Conclusions:** HADS is useful for the assessment of anxiety and depression in MS patients. Risk scores of anxious and depressive states above particular HADS cut-offs can help identify these conditions in MS patients and may therefore be beneficial in therapeutic practice.

Keywords: Multiple Sclerosis, Anxiety, Depression, HADS

ORAL VERSUS DEPOT TREATMENT IN SCHIZOPHRENIA

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Background: Schizophrenia is a mental disorder that is part of the major public health problems and a cause of disability and suffering. It most frequently presents an episodic-remitting course, remissions being rare, thus long-term antipsychotic treatment being the cornerstone of therapeutic management. Despite recent progress, non-adherence to antipsychotic treatment in schizophrenic patients remains the main challenge facing psychiatrists. Poor insight plays an important role in lack of adherence to treatment and is associated with treatment discontinuation. **Objective:** The aim of the study was to measure negative and positive symptoms, awareness of illness and need for treatment, re-labeling the symptoms and to analyses the relationship between those mentioned and the way of antipsychotics administration: oral or depot. **Material and methods:** The cross-sectional and analytical study included 43 patients with schizophrenia from the Acute Psychiatric Clinic II, Târgu Mureș. Data were collected in the period from November 2022 to March 2023. The study was carried out by applying Brief Psychiatric Rating Scale (BPRS) and Birchwood Insight Scale (BIS). The patients were included in two lots: one with patients who were treated with oral antipsychotics and one with patients who were treated with depot medication. **Results :** The mean age of study population is 46 years and 53,49% are males. Of 43 patients with schizophrenic psychosis, 23 use oral antipsychotics and 20 use injectable treatment. Compared with those receiving oral medication (BPRS: M=52±15, BIS: M=5,8±3,1), those who are under the depot treatment (BPRS: M=30±9,8, BIS: M=10±1,7) present less symptomatology ($p<0,0001$) and increased insight ($p<0,0001$). Our results showed a negative statistically significant association between symptomatology and the patient's level of insight ($p<0,0001$, $r= -0,63$). **Conclusions:** The present study highlights a clinically superiority of depot medication compared to oral antipsychotics in patients with schizophrenia. Treatment adherence is evidenced by the reduction of positive and negative symptoms and also by the awareness of the disease and symptoms as well as the need for treatment.

Keywords: schizophrenia, antipsychotic, depot, insight

SLEEP QUALITY AND STRESS AMONG RESIDENT DOCTORS

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Background: Sleep disorders are common among resident physicians due to constant occupational stress and prolonged working hours. These factors can affect the individual's overall well-being and life satisfaction. **Objective:**

The aim of the study was to assess the correlations between occupational stress and sleep disorders, in addition the relationship between them and the quality of life among surgical and non-surgical resident physicians. **Material and methods:** The cross-sectional study included a total of 170 medical residents of different specialties and of all years of residency, who are working in university hospitals in Romania and Germany. Data were collected in the period from December 2022 to February 2023. To achieve the proposed goal a specifically designed questionnaire contained demographic information, number of shifts and working hours, the Pittsburgh Sleep Quality Index (PSQI), the Epworth Sleepiness Scale (ESS), the Perceived Stress Scale (PSS) and the World Health Organization Quality of Life- Beef (WHOQOL-BREF). Participants were divided into two lots: one included surgical residents and the other included non-surgical residents. **Results :** The present study did not highlight statistically significant differences between physicians practicing in surgical and non-surgical specialties in terms of the quality of sleep, quality of life and the level of stress felt. A statistically significant difference was observed regarding the level of quality of life in the case of the environment where the doctor lives. Thus, the doctors who carry out their activity in Germany have a higher level of quality of life in relation to the environment in which they live compared to the doctors in Romania (Germany: M=67±14, Romania: M=62±13, p=0,01). The study showed that there is statistically significant positive correlation between the quality of sleep and the level of daytime sleepiness (r=0,23, p=0,002) and a significant negative correlation between the level of sleepiness and the level of quality of life (r=-0,27, p=0,0002). A statistically significant positive correlation was also observed between daytime sleepiness and the level of stress felt by the physicians (r=0,27, p=0,0002). **Conclusions:** According to our results, sleep quality correlates with both quality of life and stress levels of medical residents. Sleep deprivation has a negative effect on quality of life, regardless of whether they work in a surgical or non-surgical specialty. However, doctors in Germany have a higher quality of life, in line with their live environment.

Keywords: sleep disorders, occupational stress, quality of life, medical residents

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HABITS OF PRESCRIBING ANTICOAGULATION TREATMENT IN ATRIAL FIBRILLATION: A SURVEY ON ROMANIAN CLINICIANS

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Background: Atrial fibrillation has a prevalence of 2-4% in the adult population and the current predictions estimate that it should double by 2050. Stroke and cardioembolic events are among the most common complications. However, the right therapeutic control can limit the associated mortality and morbidity. **Objective:** The paper aims to systemically analyse the oral anticoagulation treatment options currently used in medical facilities in Romania. The strategies are stratified according to speciality (cardiology, internal medicine, neurology and general practice), years of experience and the type of medical center (academic hospital, tertiary center or private practice). **Material and methods:** The survey is a cross-sectional web-based study with a questionnaire anonymously filled out by each study participant. The data collection period was between December 2022 and January 2023. In its final form, the questionnaire consisted of 13 questions of which: three were demographic questions and ten were regarding anticoagulant therapy preferences in atrial fibrillation. The questions targeted the preferences for direct-acting anticoagulants (DOAC) or vitamin K antagonists (VKA), the strategies in special circumstances such as acute coronary syndrome or non-pharmaceutical treatment options. **Results :** Out of 994 sent invitations, there were 82 participants in the survey, 50% of which work in university hospitals. They were grouped by speciality as follows 47.6% cardiologists, 22% general practitioners, 17.1% neurologists and 9.8% internal medicine doctors. When asked what is their attitude regarding atrial fibrillation detection via a non-medical device, 57.3% would request an ECG diagnostic before starting anticoagulation therapy. In regard to metrics for starting the anticoagulation therapy, 73.17% of the responders consider the haemorrhage risk the most important one, with the patient's opinion and cost impact ranking low. When choosing to change the therapy from VKAs to DOAC, most doctors cited the patient's compliance and labile INR ratio as reasons, arguing that DOACs offer better protection against cardioembolic events. The study results concerning prescribing preferences are in some regards in accordance with previous studies conducted in other countries. It is relevant to notice that the majority of the interviewed study population responded according to the latest guidelines. **Conclusions:** The current survey was the first one of its kind to interview the Romanian medical population concerning anticoagulation therapy practices. However, the response rate was modest and the results can not be extrapolated as the norm. Therefore, extensive studies are needed to achieve the optimum treatment for patients with atrial coagulation and thrombotic risk.

Keywords: atrial fibrillation, oral anticoagulation, stroke

IS THERE OCULAR INVOLVEMENT IN PATIENTS DIAGNOSED WITH ANKYLOSING SPONDYLITIS?

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Background: Ocular diseases can appear as isolated conditions and also as complications of systemic inflammatory diseases as ankylosing spondylitis (AS). While the primary target of AS is the musculoskeletal system, effects are by no means restricted to this. Other organ system subject to the ravaging effects includes the eye, ocular manifestations may be the first sign of the presence of AS **Objective:** The aim of the study is to demonstrate the occurrence of ocular involvement in patients diagnosed with AS. **Material and methods:** We conducted a retrospective study in which we analysed all the cases of ankylosing spondylitis from the Rheumatology Department of the Clinical Emergency Country Hospital Targu-Mures for a period of one year. We checked every patient into the database and we analyzed every observation document. **Results :** We found 172 patients diagnosed with AS, with the mean age of 53 years ± 11.47 SD, and the mean duration of the disease in years of illness was 15 ± 10,56 SD. 132 patients had ocular involvement, 84 patients were male and 48 females, and depending on the stage of the disease, most patients with ocular manifestations were in the fourth stage of the disease (9%), followed by patients in the third stage (6%). The most frequently ocular manifestation was iridocyclitis (77%) followed by glaucoma (12%), uveitis (11%) and less frequently cataracts (2%). The most common form of AS was mixed form (49%) followed by axial form (47%).We obtained statistically significant results from the association between the gender and the disease(p =0,0015) and between age and the disease (p=0,00000003). **Conclusions:** Eye damage in AS is an extra-articular manifestation, which must be looked for, diagnosed and treated early to prevent recurrence and complications.

Keywords: AnkylosingSpondylitis, Uveitis, Iridocyclitis

THE INFLUENCE OF FERRITIN VALUES IN NEOPLASTIC PATIENTS WITH SARS-COV 2 INFECTION

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Background: Since the beginning of this unprecedented pandemic, from the year 2020 until now, a number of more than 761 million cases have been confirmed with COVID19. While the virologic, epidemiologic, clinical, routine laboratory, imaging, and management characteristics of patients with COVID-19 have been rapidly defined, the immunologic and inflammatory profiles are not fully understood. **Objective:** The main objective of this paper is to investigate the correlation between the inflammatory profile and the characteristics of disease progression and outcome in patients with confirmed COVID19 infection and neoplasm. These include disease severity, survival status, and laboratory parameters. **Material and methods:** We used a retrospective study, by collecting the necessary information from the observation sheets of patients diagnosed with a neoplasm and infected with the SARS-Cov2 virus. These patients were admitted to the Pneumophthisiology section of the Emergency County Hospital in Târgu Mureș between September and December 2022. We have included 83 patients, and the information collected was: Gender, age, main diagnosis, secondary diagnoses, associated pathologies, survival status, laboratory and inflammatory markers: the level of ferritin, fibrinogen, the total number of leukocytes and the C Reactive Protein value. **Results :** Patients with severe disease form were older than the rest of the patients.The results of the univariate and multivariate logistic regression analysis for predicting the severity of the COVID19 disease indicate that the increased values of ferritin (p=0.001, OR=22.31 [4.57-108.81]) and fibrinogen (p=0.02, OR=13.41 [1.49-120.18])) increase the risk for a serious negative prognosis of the COVID19 disease. We have identified a moderate positive correlation between ferritin and disease severity, and weak positive correlations between fibrinogen, CRP, and disease severity. We have obtained a significant difference between the ferritin averages values in the 3 groups studied, namely the ferritin value increases significantly from the mild form to the moderate form, and also the ferritin value increases significantly from the moderate form to the severe form, p=0.01. The results show that deceased patients had significantly higher values of Ferritin and Leukocytes than

surviving patients, p=0.004. **Conclusions:** We can conclude that inflammation profile is closely related to the severity of COVID-19 in cancer patients. With increased levels of inflammatory biomarkers, special attention should be paid to possible changes in disease severity.

Keywords: covid-19, inflammatory profile, neoplasm patients

THE EFFECT OF AGE AND GENDER ON THE RADIOGRAPHIC APPEARANCE OF CERVICAL LORDOSIS

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Background: Cervical lordosis is a key radiographic parameter of the overall sagittal alignment and balance of the spine. Surgical procedures involving the stabilization or restoration of cervical lordosis must consider age and gender differences in the architecture of cervical lordosis to avoid further complications. An adequate degree of cervical lordosis is also essential for effective mastication, breathing control, phonation, eye movement, and serves as part of the shock-absorbing mechanism during walking and running. Loss of the normal curvature of the cervical spine can be associated with pain, dysfunction of temporomandibular joint and other disorders. **Objective:** The aim of this study is to evaluate the correlations of certain radiographic parameters of the cervical spine with gender and age. **Material and methods:** We conducted a retrospective observational study on a total of 160 lateral cervical spine conventional radiographs selected as a consecutive series of cases between SEP 2022 and APR 2023 from a private clinic in Tg.-Mures. Exclusion criteria were age less than 18 years and history of spinal surgery. Ethics Committee approval was obtained from the Research Ethics Committee of UMFST "GE Palade" Tg.-Mures. Five radiographic parameters of lordosis were measured: Cobb angle C2-C7, sagittal vertical axis C2-C7, high cervical angle O-C2, C7 slope, and spino-cranial angle (SCA). The results of the measurements were analyzed using SPSS software. **Results :** We identified a statistically significant correlation between the measured parameters and the gender of the patients ($p<0.005$). We will further present the graphical representations of the data distribution and the ROC curves. **Conclusions:** Lateral x-ray of the cervical spine is a useful tool for assessing and predicting the course of patients with cervical spine-related symptomatology.

Keywords: Radiography, Cervical lordosis, Prognosis

TREATMENT METHODS IN PEDIATRIC IMMUNE THROMBOCYTOPENIC PURPURA(ITP)

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Background: Immune thrombocytopenic Purpura is a rare, benign condition. Multiple data has been released about the risk factors predisposing to chronicization such as: diagnosis age over 13 years, females, mild thrombocytopenia, but the only data regarding treatment methods which may lower the chance of chronicization is immunoglobulin administration in the acute form of ITP. **Objective:** The aims of this study are identifying treatment efficacy regarding halting the disease's evolution, the frequency of administration depending on the clinical form of ITP and the frequency of chronicization in patients previously treated with immunoglobulins. **Material and methods:** This study is retrospective, including 32 patients diagnosed with ITP, hospitalized in Pediatrics 2 Clinic, Tîrgu Mureș County Hospital, between 2015 and 2022. This data has been statistically analysed using SPSS V20 (IBM). The significantly different values were considered at a p-value less than 0.05. **Results :** From 32 patients 78,1% of patients were chronic and recurrent, 44,4% being males and 55,6% females. The mean diagnosis age for the chronic form was 9,67 years. Comparing the mean values of the thrombocytes before treatment and after has shown a significant difference between both the initial mean and the mean after the first treatment as well as the mean after the second one for acute patients, but for chronic patients there was a significant difference only between the initial mean and the mean after the first treatment. The most used treatment is Prednisone (56,5%), but for the chronic form, the same percent has an association with Prednisone and Azathioprine. For the mild form of ITP only Prednisone (80%) and Methylprednisolone were administrated, for the moderate form the same and for the severe form the most used was Prednisone (46,7%) and Prednisone and Azathioprine (41,67%). Dexamethasone and Immunoglobulins platelets normalization rate is 100%, for Prednisone is 90,9% and for other drugs is lower. 33,3% of the chronic patients have received Immunoglobulins during the acute stage. **Conclusions:** Both chronic and acute patients have a statistically significant difference between the mean value of initial

thrombocytes and the mean value of thrombocytes after the first treatment. Prednisone was the most widely used despite the ITP form or severity, in chronic patients the combination Prednisone and azathioprine was chosen. Despite being given the most, prednisone is less efficient than Dexamethasone and Immunoglobulins. Most of the chronic patients did not receive immunoglobulins during the acute phase.

Keywords: Immune thrombocytopenic purpura (ITP), Treatment, Pediatric, Thrombocytopenia

CONTRACEPTION IN NULLIPAROUS WOMEN: WHEN? HOW? WHY?

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Background: Most of the women spend their adult life planning or avoiding a pregnancy. The rate of unintended pregnancies and abortions are remaining high and continuing to be a public health issue, even if we found ourselves in the era of contraception. **Objective:** The objective of the study is to evaluate nulliparous women's choice of contraceptive method based on their age, residence, abortion history and associated gynecological disease. The data collected from a pre-pandemic year will be compared to a pandemic year's data, observing the changes in addressability and contraceptive preferences of our patients. **Material and methods:** We investigated a total of 154 nulliparous women, seeking contraceptive counseling in the Family Planning Office from the polyclinical department of Emergency County Hospital in Targu Mures, from the years 2019 and 2020. The data was selected from medical records and medical letters. The following data was analyzed: age, residence, history of abortions, contraceptive method and associated gynecological disease. **Results :** In 2019, 91 nulliparous women sought contraceptive counseling, with ages between 15 and 49. Referring to residency, 54 (59,34%) patients lived in urban areas and 37 (40,66%) of them came from the rural area. From the total of 91 nulliparas, 16 (17,58%) women had history of abortions. About contraceptive choices: 59 (64,84%) patients chose barrier methods (condoms), 23 (25,27%) opted for combined oral contraceptive pills, 5 (5,49%) decided on intrauterine devices, 3 (3,30%) chose withdrawal method and 1 (1,10%) of them aimed for emergency contraception. In comparison, in 2020, a total of 63 nulliparas addressed the healthcare facility, with ages between 16 and 48. 44 (69,84%) of the patients had residency in urban areas and 19 (30,16%) of them lived in rural areas. From the total 63 nulliparous women, 4 of them had history of abortions. Contraceptive methods of choice □□41 (65,08%) women chose condoms, 12 (19,05%) aimed for combined oral contraceptive pills, 4 (6,35%) decided on intrauterine devices and 6 (9,52%) chose withdrawal method. Among the investigated nulliparas, we found several cases of associated gynecological diseases, such as bacterial vaginosis, PCOS, endometriosis or PID. **Conclusions:** The nulliparous women's addressability rate of decreased from the year 2019 to 2020 by 31%, due to the COVID-19 pandemic. The most preferred contraceptive method among the investigated sample of nulliparous women was the barrier method – condoms.

Keywords: nulliparas,, contraception,, family planning

STRESS ASSESSMENT AND MANAGEMENT IN MEDICAL STUDENTS

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Background: Stress is often an overlooked factor affecting medical practitioners, especially medical students. There are few implemented screening and assessment methods for stress, as well as ways of tackling it. **Objective:** The aim of this study is to find and evaluate stress factors among students in different years of study and to find ways of preventing and combatting the effects of stress. **Material and methods:** We conducted a prospective descriptive study of 170 medical students from the University of Medicine, Pharmacy, Science and Technology, Târgu-Mureș. Data were colected using an online survey, through Google Forms. We gathered data including age, sex, behaviours, like smoking or drinking coffee, stressors related to the academical environment, such as studying for exam sessions, studying for the residency exam or the change from semestrial to modular system, as well as means of coping with stress: medication, psychotherapy, meditation or hobbies. **Results :** From a total of 170 respondents, 95 of them were between 22-24 years old (55.8%), with a majority of female students □□□ 140 (82.4%). Regarding year of study, 39.4% of students were in the 6th year, 37.1% in the 4th year and 23.5% in the 1st year. Among them, only 24.1% were smokers, the majority of them (87.8%) smoking less than a pack per day. Conversely, 75.3% said that they drink at least one coffee every day and 55.3% admitting they tend to

consume more of it during periods of stress. Most students feel stressed about their exam session, with 63.5% of them grading the stress as above 7 on a scale from 1 to 10. As for studying for the residency exam, 61.2% graded it as above 7, with 59 students grading the stress as a 10. The outlook for stress management isn't great, seeing that most students don't go to therapy (90.5%) nor take medication (82.9%) for it. Instead, they reported using meditation techniques (27.8%) or other substances (37.1%) for coping with stress. **Conclusions:** Most students are stressed because of their academical environment and sometimes they resort to harmful ways of coping with it. There is need for better understanding and managing stress among medical students.

Keywords: stress,, management,, stressor,, medical students

ABNORMAL TRANSAMINASES VALUES IN CHILDREN WITH OBESITY

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Background: Obesity is a condition marked by an increase in body adiposity, resulting in a body mass index greater than or equal to the 95th percentile, depending on the patient's gender and age. Both in adults and children, the prevalence of this illness is steadily rising, placing both groups at risk for a wide range of problems. Non-alcoholic fatty liver disease is among the most severe complications. **Objective:** The aim of this study is to determine the correlation between the patient's weight and abnormal liver transaminases values. **Material and methods:** We conducted a retrospectiv, transversal-observational study, on a group of 83 obese patients, aged between 1 and 18 years old, admitted to the Pediatrics department of SCJU Tîrgu Mureș between 1st of January 2020 and 31st of December 2022. To calculate the Z score for weight (WAZ), height (HAZ) and BMI (BMZ), we used AnthroPlus program. The statistical analysis was carried out using statistical software: SPSS IBM V.20 for Windows and Microsoft Excel and Pearson correlation was applied to determine the relational degree between the different parameters. **Results :** According to the statistical analysis, the mean age was 11.73 (±4.33 SD), mean WAZ was 3.11 (± 1.27 SD), mean HAZ 0.54 (±1.13 SD) and mean BMI 26.50 (±4.64 SD). 7.2% (n=6) of the patients had a change in GOT, while 21.7% (n=18) of the patients had a change in GPT. WAZ and GOT have a moderately positive correlation (r=0.48, p0.026), as do WAZ and GPT (r=0.595, p0.004). **Conclusions:** The statistical results confirm the correlation between obesity and abnormal values of transaminases. It is thus necessary to strictly monitor the patients and encourage them to change their lifestyle and reduce their weight, in order to prevent the progression towards severe complications.

Keywords: Obesity, Transaminases, Non-alcoholic fatty liver, Complication

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CHANGES IN HEMATOLOGICAL PARAMETRES IN PEDIATRIC PATIENTS WITH COVID-19

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Background: In late 2019, a new coronavirus designated as SARS-CoV-2 emerged in the city of Wuhan, China, and caused an outbreak of unusual viral pneumonia. Being highly contagious, this new coronavirus disease (later named COVID-19), has spread quickly all around the world, causing more than 6 million deaths worldwide. The World Health Organization (WHO) declared it as a global pandemic on March 11, 2020. **Objective:** The aim of this study was to observe the changes in hematological parameters in children who were infected with this virus and to see if there is a correlation between clinical presentation of the disease and the laboratory changes. **Material and methods:** We carried out a retrospective, cross-sectional, descriptive study in which we included patients who were hospitalized at Pediatrics Clinic I in Târgu Mureș in the period of January 2021-December 2022 and had a positive test confirming the presence of the virus (PCR or antigenic). The patients were split in 3 categories, depending on the severity of disease: mild, moderate and severe. The analyzed parameters are: Age, Sex, WBC, RBC, Hemoglobin, Hematocrit, MCV, Platelet count, Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils, INR, PT, APPT, DD-MERI, Fibrinogen, CRP, ESR, LDH , Ferritin, Iron and Glucose. To compare the values, we used the Kruskal-Wallies statistical test. **Results :** Among the 192 patients, 56% are boys, 44% are girls and the age mean is 8 months. Regarding the severity of the disease, 75% developed a mild form, 16% a moderate form and 9% a severe form. Hematological changes observed: low hemoglobin (64%), low erythrocyte count (22%), low hematocrit (85%), low MCV (83%), leukocytosis (34%), neutrophilia (62%),

lymphocytopenia (28%), monocytosis (84%), eosinopenia (37%), basopenia (5%), thrombocytosis (18%), increased INR (24%), prolonged PT (52%), prolonged APPT (19%), increased DD-meri (51%), decreased fibrinogen (27%), increased CRP (42%), increased ESR (55%), increased LDH (53%), increased ferritin (74%), low iron (27%), hyperglycemia (36%). The percentage of eosinophils (p=0.001) and basophils (p=0.001) differs statistically significantly between the groups, in severe form we encounter lower values. **Conclusions:** Most of the children developed a mild form of the disease and had a good outcome. With the exception of the eosinophils and basophils, there are no statistically significant differences in hematological parameters depending on the severity of the disease, however, a dynamic follow-up of the parameters can help in making therapeutic decisions.

Keywords: COVID, hematological parametres, children

THE ADHERENCE TO COVID-19 PROTECTIVE MEASURES DURING POST-PANDEMIC AMONG MEDICAL STUDENTS

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Background: The COVID-19 pandemic has highlighted the importance of hygiene practices and personal protective equipment (PPE) usage to prevent the spread of the virus. Medical students are at higher risk of exposure due to their direct contact with patients. Therefore, adherence to preventive measures is crucial to ensure their safety and reduce the spread of the virus. **Objective:** The objectives of this study are to assess the frequency of hand hygiene and surface disinfection, determine the frequency of PPE usage and the type of PPE used, evaluate the discomfort caused by PPE usage, and identify the impact of the COVID-19 pandemic on hygiene practices among medical students. **Material and methods:** This is a cross-sectional study conducted among medical students from UMFST Târgu-Mureș. Data were collected using an online questionnaire between March 2023 and April 2023. The survey was anonymus and consisted of 43 questions covering demographics, hygiene practices, and PPE usage during the COVID-19 pandemic. **Results :** A total of 254 medical students participated in the study.Most of the participants claimed wearing a mask in crowded places (60%) and when presenting symp-toms of a respiratory infection (78.8%). Surgical masks were the most type of mask used (78,7%), and the average time interval for changing the mask was 7.8 hours. A significant proportion of participants reported discomfort caused by PPE usage (37,4 %), with 71.3% reporting that it hadn't caused them to avoid wearing a mask. Hand hygiene is performed frequently, with 47.6% of participants stating that washing their hands more than 10 times per day. Most participants (54.3%) reported having been presented with protocols for hygiene measures, but at the same time, a significant percentage of 40.6% suggested that they don't have confidence in the measures taken by the uni-versity to reduce the spread of SARS-CoV-2. 81.6% have stated that the COVID-19 pandemic has made them more aware of the benefits of hand washing. Before and after each patient contact, 79.5% and 94.5% of students, respectively, reported washing and sanitizing their hands. Additionally, 37.4% of the respondents reported having experienced dermatological reactions following PPE use, with acne and contact dermati-tis being the most common ones. **Conclusions:** This study showed that medical students are aware of the importance of hygiene practices and PPE usage during the COVID-19 pandemic. However, further training and education are needed to ensure the sustainability of these practices. The findings of this study provide valuable information for policymakers and educators in the healthcare system.

Keywords: COVID-19 protective measures, Hand hygiene, Personal protective equipment, Hygiene protocols

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ROMANIAN PARENTS KNOWLEDGE ABOUT CHILD REARING.

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Background: It is known that the way children are raised in the first years of life has an impact on their future health and wellbeing during adulthood. A healthy development in the first years of life is a factor that influences individual wellbeing, economic productivity and future social development. **Objective:** The aim of this study was to observe the level of education of Romanian parents and the way their children are raised, including how the parents were informed about the child's upbringing, how they feed the child in the first year of life, vaccines that are mandatory, dental hygiene of children, how often does the parent need the help of a doctor and the use of essential oils for treatment. **Material and methods:** We conducted a prospective, descriptive study, where 157

parents answered a questionnaire of 33 questions carried out between 01.12.2022 - 28.02.2023 in the Pediatric Clinic I of the Târgu Mureș County Emergency Clinical Hospital. **Results :** Among the 157 parents, 43.9% live in urban areas, 56.1% live in rural areas and the age mean is 32 years. 42.6% received higher education and 57.3% did not. Most parents have two children (36.3% of parents surveyed) and only 8 parents have more than five children (5.1%). 64% of parents did not read books or take courses on child rearing. Most parents (73%) asked their mother or mother-in-law for advice on how to take care of the child. 93% of parents consider the vaccines in the Romanian mandatory immunization program beneficial for their child. 43% of the surveyed parents do not know any of the diseases preventable by vaccination.78% did not use essential oils for child's treatment. 33% of children need medical care once every 2-3 months and 33% once a month. 88% trust and use the medicines prescribed by the attending physician and 40% use exclusively what the doctor prescribes. 63% ask for the help of a general practitioner. Most of the children (94%) who were included in the study clean their oral cavity periodically, 71% started this practice since their milk teeth erupted. 51% of children were exclusively breastfed for the first 6 months of life. **Conclusions:** When it comes to raising a child, most Romanian parents opt for family advice and not for reliable sources of information. However they opt for the help of a general practitioner when needed, tust the medication prescribed and the mandatory vaccines.

Keywords: children, parents knowledge, education, Romania

THE PHYSICAL AND PSYCHOLOGICAL ASSESSMENT OF THE INSTITUTIONALIZED CHILD

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Background: Placement centers occupy an important place in social and medical education. Considering the increased number of abandoned children in foster care centers - 58,013 in 2015 - it is imperative to provide support for their better development. **Objective:** This paper aims to raise awareness of the causal relationship between institutionalization and the physical-mental development of institutionalized children compared to non-institutionalized ones. **Material and methods:** We conducted a case-control study with institutionalized children from the Cehu Silvaniei Placement Center, Salaj County (group 1) and compared this group with children admitted to the Pediatric Clinic I SCJU Targu Mures (group 2). 35 children were included in group 1 and 70 children in group 2. The data collected and analyzed were age, sex, environment of origin, weight, mother's age at the birth of the child, personal pathological medical history of respiratory infections, the evolution of school performance, respectively the presence of ADHD and depression. The statistical analysis used the Student T test for continuous variables and the Pearson Chi square test for categorical variables. The threshold for statistical significance was set to 0.05. **Results :** The average age in both groups was 13 years. In the first group, 82.86% of the children were girls, 54.29% from rural areas, 68.57% had normal weight, 14.29% were obese and 14.29% underweight. The most common diseases from personal pathological history were acute bronchitis 40%; acute rhinopharyngitis 54.29%, ADHD 40% and depression 22.86% and 88.57% were students in the classes corresponding to their age. In the second group 50% were girls and 50% boys, 47.14% from rural and 52.86% from urban environment, 58.57% had normal weight, 11.43% were obese, 17.14% underweight. Diseases from the pathological medical history were acute bronchitis 21.43%; acute rhinopharyngitis 18.57%, depression 5.71% and 98.57% were students in the classes corresponding to their age. Statistically significant correlations were found between the two groups regarding female gender ($p<0.001$), respiratory infections ($p<0.001$) and depression/ADHD ($p<0.009$). Meanwhile, the correlations regarding the environment of origin ($p=0.490$) and weight status ($p=0.377$) were not statistically significant. The average age of the mothers in the first group was 24.26 ± 6.42 years and 23.69 ± 6.66 years in the second group. **Conclusions:** Patients from rural areas were more prone to abandonment.Children from the foster care center have more frequent associated respiratory infections, respectively depression and ADHD, unlike children from a family environment. The nutritional status was predominantly adequate in institutionalized children.

Keywords: institutionalized, depression, respiratory infections

IMPACT OF COVID-19 PANDEMIC ON CHILDREN WITH REFERENCE TO CLINICAL MANIFESTATIONS AND MENTAL WELL-BEING

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Background: COVID-19 (Corona virus disease 2019) is caused by SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) and was first detected in Wuhan, in the Hubei province of China, in December 2019. Its rapid spread has led the WHO to declare it a global pandemic in March 2020. The most common symptoms are dry cough, fever, nasal congestion, sore throat, dyspnea, chest pain, myalgia, arthralgia, and headache. The pandemic also had a significant impact on mental health due to isolation, anxiety, and depression as a result of lockdowns and social distancing measures. **Objective:** The study aims to determine if children suffered under the pandemic and its restrictions and also which have been the most common symptoms experienced during the infection with COVID-19. **Material and methods:** The study included 110 children (55 girls/54 boys/1 non-binary) aged 5 to 14 years and took place in Germany. The data was collected by an online questionnaire using Google Forms which parents had to fill out for their children and for analyzing, Microsoft Office Excel 2021 was used. **Results :** From 110 participants, a higher number of children (55,5%) experienced a reduction in mental health because of anxiety about the outbreak, measures such as quarantine, school closures, and social distancing. A lower number (44,5%) of children didn´t experience any change. The most common manifestations which were experienced have been loneliness (35%), anxiety (24%), stress (19%), and fatigue (15%). The pandemic led to diminished social interactions and physical activity and an increase in "screen time", sleep, and a change in eating habits. A high percentage (79,1%) was infected with SARS-CoV-2, where the most common manifestations have been nasal congestion, cough, headache, and fever. Only a small percentage was asymptomatic (3%). **Conclusions:** The COVID-19 pandemic and its measures, worsened the physical and mental well-being of the majority of the participants. Children which have been infected with COVID-19 showed mostly mild respiratory symptoms, not being specific.

Keywords: COVID-19, Pandemic, Children

COMPARISON OF PATIENTS WITH DIFFERENT DEGREES OF DIASTOLIC DYSFUNCTION IN RELATION TO NT-PRO BNP LEVELS AND ECHOCARDIOGRAPHIC MEASUREMENTS

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Background: Heart failure with preserved ejection fraction (HFpEF) is a persistent clinical entity with similar mortality and morbidity outcomes to heart failure with reduced ejection fraction (HFrEF). The leading cause of HFpEF is abnormalities related to diastolic function. Diastolic dysfunction (DD) is classified into different grades depending on how advanced the mechanical dysfunction is. Echocardiographic studies are the standard of care for detecting and staging DD. Measurement of natriuretic peptides is an essential measure in patients with HFrEF. However, in patients with HFpEF, NT-pro BNP levels play an increasingly important role. **Objective:** This study aims to evaluate and compare NT-pro BNP values and relevant echocardiographic measurements in patients diagnosed with DD. **Material and methods:** We conducted a retrospective study of 40 patients diagnosed with DD and admitted to the Cardiology Department of the Internal Medicine II Clinic in Targu Mures. General data were collected from clinical observations, paraclinical data and echocardiographic examinations. For each patient enrolled in this study, data on age, sex, degree of DD, NT-proBNP level, and the echocardiographic measurements required to detect DD were examined. Patient data were entered into the database, and statistical analysis was performed using the SPSS program with a 95 % confidence interval. **Results :** Out of 40 patients (mean age 65,17 ± 10,52 years), 27 were diagnosed with Grade 1 DD and 13 with Grade 2 DD. When comparing the two groups (DD1 vs. DD2), there was statistical significance in the deflection of the NT-proBNP value (mean NT-proBNP for Grade 1: 250,87 ± 185,06 vs. Grade 2: 912,70 ± 606,20) (p= <0,01). However, no significance was found for the echocardiographic parameters. The mean EA-ratio was for Grade 1: 0,88 ±0,22 vs. Grade 2: 1,16 ± 0,34) (p=0,110). The average E/e´ was for Grade 1: 9,59 ± 2,33 vs. Grade 2: 11,31 ± 4,00 (p= 0,251). The mean lateral e´velocity was for Grade 1: 9,0 ± 4,43 vs. Grade 2: 10,16 ± 2,97 (p= 0,351). The mean septal e´velocity was for Grade 1: 6,92 ± 1,56 vs. Grade 2: 7,67 ± 3,03 (p= 0,479). The mean TR velocity was for Grade 1: 2,29 ± 0,466

vs. Grade 2: 2,88 ± 0,477 (p= 0,466). The mean LAVI was for Grade 1: 203,45 ± 276,36 vs. Grade 2: 116,44 ± 93,47) (p= 0,103). **Conclusions:** As a result of this study, we found a positive association between the NT-pro BNP values in the different grades of DD. The other values showed no significance.

Keywords: diastolic dysfunction, HFpEF, NT-pro BNP

SYMPTOMS OF INFLUENZA IN PEDIATRIC POPULATION

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Background: One of the major public health problems facing humanity today is influenza infection, an acute, generalized viral condition with sudden onset caused by influenza virus (A, B, C, D), especially type A and type B. These viruses found in humans, belong to the family Orthomyxoviridae, genus Influenza. Receptivity is general, but it is known that children are more susceptible to infection. The common symptoms in the pediatric population are chills, myalgia, headache, cough, rhinorrhea, nasal obstruction and pharyngeal hyperemia. In addition, a significant number of children also experience gastrointestinal symptoms such as vomiting and diarrhea. **Objective:** The main objective of our study was to analyze the most common manifestations of influenza among the pediatric population. **Material and methods:** 92 medical records of patients diagnosed with influenza virus and admitted to Pediatrics I Clinic in Targu Mures were analyzed between 01/01/2018 and 31/05/2022. The criteria for inclusion in the study were the presence of influenza virus infection, while the exclusion criteria assumed the presence of other types of viral infections and patients with incomplete data. In this study we analyzed demographic and clinical parameters. **Results :** The age of the included patients varied between 0-13 years, with the majority originating from urban areas (52.7%). We also noticed a male predominance (57%) among infected patients. Among the patients included in our study, 78% of patients tested positive for influenza type A virus, 19.8% for influenza type B virus, and only 2.2% were found positive for both types of influenza virus, A and B. Regarding the symptoms, of the 92 patients, a large percentage presented cough (79.30%), pharyngeal hyperemia (72.80%), rhinorrhea (39.13%) and nasal obstruction (22.80%). Although less common, myalgia was also manifested by 3.30% of the patients, as well as chills (2.20%) and headache (2.20%). In terms of gastrointestinal symptoms, vomiting was found in 26.10% of the children included in our study, while diarrhea was present in 13.00%. **Conclusions:** Most patients included in the study were diagnosed with influenza A infection. The most common symptoms encountered in our patients were cough, pharyngeal hyperemia, rhinorrhea and nasal obstruction. Nevertheless, a smaller percentage of our sample presented also gastrointestinal symptoms.

Keywords: Influenza, symptoms, children

PROGNOSTIC FACTORS DETERMINING THE OUTCOME OF INFECTION IN PATIENTS WITH INFLUENZA

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Background: Causing between 300,000 and 650,000 deaths worldwide each year, the Influenza virus continues to threaten global health, as it has for the last four centuries. This respiratory virus has the ability to evade immunity through its continuous antigenic mutations which will potentially give rise to deadly pandemics and epidemics. Although most influenza infections result in forms of mild illness, this virus may induce life threatening conditions with the potential for severe outcomes, especially in those categorized as high risk. Understanding the factors that play a role in predicting patient outcome can potentially lead to improved healthcare management in these cases. **Objective:** The aim of this study is to analyze the independent host factors that play a role in determining disease severity in patients infected with Influenza virus. **Material and methods:** A retrospective cohort study was performed using data collected from 95 patients of all ages, male and female, diagnosed with Influenza virus between 2019 and 2022 at the Infectious Disease Clinic in Targu Mures, Romania. Patient information including age, gender, BMI, vaccination history, smoking status, comorbidities, disease severity, length of hospital stay, and treatment were recorded. The data was analysed using ANOVA with a significance level placed at $p<0.05$ to determine if the chosen variables influence the severity of disease. **Results :** The cohort included 43 women and 52 men, 38 (40%) of whom are older than 65, and 28 (29.5%) patients suffering a severe form of influenza. 29 (30.5%) patients were classified as obese according to their BMI, 23 (24.2%) patients with

pulmonary disease, 43 (45.3%) with cardiovascular disease, 13 (13.7%) with renal disease, and 18 (19%) of the patients were type II diabetic. The average length of hospital stay was 7.1 days (2-34). According to our analysis, age over 65 was statistically significant in determining a severe outcome (p=0.0001). Other statistically significant factors that were found to be associated with a severe outcome in influenza patients include obesity (p=0.0001), chronic pulmonary disease (p=0.0001), cardiovascular disease (p=0.0001), kidney disease (p=0.0001), diabetes (p=0.0001) and secondary bacterial infection (p=0.042). **Conclusions:** The results of this study outline an increase risk of severe influenza in patients older than 65 who suffer from obesity, pulmonary disease, cardiovascular disease, kidney disease, diabetes and who present a secondary bacterial infection.

Keywords: Influenza, Prognostic Factors, Infectious Disease, Disease Outcome

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PARANEOPLASTIC ANAEMIA DURING COVID 2020-2021. A RETROSPECTIVE POINT OF VIEW

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Background: Anaemia is defined as the decrease in the concentration of circulating red blood cells or that of the hemoglobin concentration at the same time as their decreased capacity to transport oxygen. Anaemia is also defined as paraneoplastic anaemia when it results from the destructive effects of the malignancy or due to its treatment. **Objective:** The aim of this study was to analyze the associations between the occurrence of anaemia in neoplastic patients and its different etiologies within a malignant disease. **Material and methods:** This is a retrospective study based on the evaluation of the medical records of 72 oncological patients who were admitted to the Internal Medicine Department of the Medical IV Clinic in Târgu Mureș between 2020-2021. **Results :** 72 cases were enrolled in this study: 39 males and 33 females. Out of all of the cases, 78% presented with anaemia and 22% did not. The study results indicated that there was a significant mean difference between Hemoglobin levels before and after the patients received erythrocyte mass transfusions (p=0.0168). Also, a statistically significant association was found between the risk of developing anaemia and chemotherapy (p=0.0186; OR=4.167; 95%CI: 1.297-13.381). On the other hand, another connection was discovered between the prevalence of anaemia and the presence of bone metastases (p=0.0403; OR=4.879; 95%CI: 1.010-23.562). No link was found between anaemia and possible haemorage from surgery (p=0.5649; OR=1.65; 95%CI: 0.5057-5.383). **Conclusions:** This study revealed that anaemia is frequently encountered in patients undergoing chemotherapy treatment and in those with bone metastases.The study also demonstrated the association between blood transfusions and subsequently the increase in Hemoglobin levels.

Keywords: paraneoplastic anaemia, chemotherapy, bone metastasis, erythrocyte mass transfusion

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THE INCIDENCE OF HAEMATOLOGICAL COMORBIDITIES IN PEDIATRIC PATIENTS DIAGNOSED WITH CELIAC DISEASE IN THE PEDIATRIC I CLINIC OF SCJU-TÂRGU MUREȘ

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Background: Celiac disease or gluten-sensitive enteropathy is part of the malabsorptive syndromes and it can be described as a chronic autoimmune inflammatory disease with a genetic component. Gluten represents the main trigger of CD for susceptible patients. After every ingestion of gluten-contaminated aliments, an immune inflammatory response occurs in the proximal small intestine which can lead to villous atrophy of the mucosa and chronic complications. The gastrointestinal symptoms vary from mild to severe and include chronic diarrhoea, recurrent abdominal pain, abdominal distension, weight loss and failure to thrive. Non-gastrointestinal symptoms can consist of iron deficiency anaemia, rickets, muscular atrophy etc. There is no cure for CD, the only treatment is to exclude gluten from the children's food intake. **Objective:** We started this study to show the incidence of haematological comorbidities that were observed on the complete blood count of pediatric patients who were previously diagnosed with celiac disease. **Material and methods:** We performed a retrospective and descriptive study that included 62 patients admitted to the Pediatric I Clinic of SCJU □□□Târgu Mureș (40 girls; 22 boys) previously diagnosed with CD between Jan. 2013 □□□Dec. 201 9. The patients were between 1 to 17 years old (M=7,78; SD=4,48). The inclusion criteria consisted of the selection of patients who presented clinical

manifestations of CD at the time of admission and didn't accuse other signs of other acute inflammatory pathologies of an organic or infectious nature, in order not to influence the results of the analyses. **Results :** After analyzing the data we could observe that 64.51% of the patients presented lower than normal MCV values and in 51,61% of the cases an association with lower than normal MCH values. 32,25% of the cases showed thrombocytosis, in association with an increased PLT count in 12,9% of cases. We also observed that those patients presented monocytosis in a proportion of 56,45%, from whom 30,64% were associated also with eosinophilia. **Conclusions:** The study showed the incidence of haematological complications in the Pediatric 1 clinic of SCJU- Târgu Mureș CD patients. We conclude that in this study these children could be at higher risk of developing microcytic anaemia and this could lead to further complications in their development.

Keywords: Celiac disease, pediatric patients, microcytic anaemia

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THE EFFECTS OF PSYCHOLOGICAL STRESS ON EATING PATTERNS AMONG HIGH SCHOOL STUDENTS

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Background: Adolescence is a period of great nutritional vulnerability due to the major impact of external and internal factors on the eating behavior that is being formed and that can be maintained throughout life. The prevalence of stress among adolescents is increasing, and this is the reason why it is crucial to understand the impact of stress on adolescents and their eating patterns. **Objective:** This study aimed to investigate the relationship between stress and eating habits observed among high school teenagers, with a particular focus on the negative effects following the exposure to various stressful factors. **Material and methods:** A cross-sectional survey was conducted among a sample of 233 high school students from three public high schools in Mureș County. The collection of the data was carried out between January 9, 2023 and February 10, 2023. The subjects included in the study were addressed a questionnaire containing a number of 49 questions related to the topic covered by the current study. **Results :** According to the current study, the majority of high school students reported alterations in their dietary intake during stressful periods (77.7% versus 22.3%). Given that not all participants experienced changes in their eating habits when exposed to stress, the study assessed the likelihood of these findings being affected by the co-occurrence of other risk factors. Following the anthropometric evaluation of the participants, the study found that high school students with a higher BMI were significantly more likely to suffer weight changes during stressful periods (p= 0.0048, OR=3.06) and are more likely to engage in emotional eating (p= 0.0256, OR=2.19). Moreover, students with poor eating behaviors were more likely to experience an exacerbation of their unhealthy eating habits during stressful periods. For example, the absence of adherence to the three daily meals by high school students was found to be associated with quantitative changes in food intake during periods of psychological stress. (p=0.0102, OR=4.03). Furthermore, adolescents who follow an obesogenic diet by consuming frequently fast-food are considered to be at risk of increasing their consumption of these products under stressful conditions (p=0.0025, OR=2.69). **Conclusions:** The study provides evidence for the relationship between stress and eating habits among high school students. Findings suggest that individuals with a higher BMI and poor eating behaviors may be at higher risk of negative eating habits during periods of stress.

Keywords: stress, adolescents, eating behavior, BMI

NEUTROPHIL/LYMPHOCYTE RATIO IN CRITICALLY ILL PATIENTS WITH ISCHEMIC STROKE

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Background: The neutrophil lymphocyte ratio (NLR) has been studied in recent years for its role as a predictive factor of patient mortality in different specialties. This is an easily accessible tool, useful in establishing the aspects that influence the evolution of patients. Ischemic stroke is a common pathology in the intensive care unit and the role of NLR remains to be explored through further research in this case. **Objective:** The aim of this study was to evaluate the ability of NLR as a predictive factor in the mortality of critical patients with ischemic stroke and its relationship in the inflammatory process with other factors such as age, gender and the presence of infection. **Material and methods:** The data from 112 patients (n=50 women, n=62 men) were analysed to highlight

significant differences between the groups based on age, gender and the presence of infection on mortality determined by the values and changes of NLR during hospitalization in the intensive care unit. **Results :** There was a statistically significant difference between the NLR values at discharge and the values of the NLR differences between admission and discharge in participants who passed away and patients who survived (NLR in deceased patients = 12,15±11,64; NLR in patients who survived = 5,83±7,47; P<0,0001). Furthermore, an association between patient mortality and increased NLR in ischemic stroke patients was established (OR=4.78, P=0.0001, 95% CI 2.08 to 11.07). Regarding the relationships between the age groups, the differences between the genders and the impact of the presence of infection in the case of the participants, no significant statistical differences or correlations were identified that would highlight an increased mortality depending on the given variables or variations of the NLR values depending on these criteria. **Conclusions:** Even though large-scale studies that take into account multiple variables are needed to establish the effectiveness and reliability of the NLR, this study shows promising results concerning its ability to be used in patients with ischemic stroke admitted to the intensive care unit, regardless of gender, age or the presence of infection at the time of evaluation.

Keywords: NLR, Ischemic stroke, Mortality prediction, Inflammatory response

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NEUROINFECTIONS IN PEDIATRIC PATIENTS

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Background: Central nervous system infections represent one of the leading cause of morbidity and mortality amongst pediatric patiens , even with the proper treatment they can evolve into severe neurological conditions, such as seizures, motor dysfunction, cardiorespiratory arrest and even death. **Objective:** The purpose of this study was to determine the correlation between different patogens involved in the Central Nervous System infections and the clinical manifestations, sequelae and the outcome after the propper treatment protocols have been applied. **Material and methods:** We conducted a retrospective, observational case-control study, on a group of 69 pediatric patients, aged between 1 month and 17 years old, admitted to the Pediatrics Department of SCJU Targu Mures between 1st of January 2018 and 1st of March 2023. We took into consideration the blood tests, cerebrospinal fluid cultures, C Reactive Protein and Procalcitonin.The statistical analysis was conducted using Graph Pad Prism and Windows Microsoft Excel and the following tests were applied: Pearson-R, Mann-Whitney, Unpaired t-Test and Spearman-r, Chi-Square and Fisher to determine the correlations between different parameters. **Results :** According to the statistical analysis, the mean age was 3.74 (±4.51 SD), 41 patients of the 69 involved in this study had a pathogen identified,the most common being Neisseria Meningitidis (25%). The admission diagnosis which was found in most patients was meningoencephalitis, followed by encephalitis. The mortality rate out of the 69 patients was 18%. The white blood cell count amongst patients with an identified pathogen was bigger, at the limit of statistical significance, than the ones without an identified pathogen(p=0.08) and also another statistically significant finding was that the C Reactive Protein was higher within patients with an identified pathogen (p=0,019). **Conclusions:** The statistical analysis results confirm that bacterial Central Nervous System infections are more commonly diagnosed using blood tests and cerebrospinal fluid findings and benefit targeted antimicrobial treatment, but are also more violent regarding morbidity, mortality rates and invalidant complications amongst children.

Keywords: central nervous system, infections, sequelae, mortality

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THE ETIOLOGY OF FEBRILE SYNDROME IN NEWBORNS AND INFANTS HOSPITALIZED AT THE PEDIATRIC CLINIC NO. 1 IN TÂRGU-MUREȘ

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Background: The febrile syndrome regardless of age can have a variety of etiologic factors that activate the onset of fever, such as bacteria, viruses or any other triggering factors. **Objective:** The main objective of this study is to notice which are the most frequent etiologies that triggers the fever in newborns and infants who were hospitalized for a period of time. **Material and methods:** This research study will follow a retrospective and descriptive design that interested 195 subjects admitted to Pediatric Clinic No. 1 Târgu-Mureș between January and December 2022. All data for the study were analyzed from the subject's medical records. All subjects were between 0 and 12

months old during their continuous hospitalization and they had no day admissions. Each subject had a different fever range and a variety of organ systems were affected by different germs or other mechanisms. **Results :** The outcomes found from medical records were analyzed by genre, age, fever range and etiology of febrile syndrome after all the data were collected and sorted by categories. Broadly the study shows evidence of almost half of all the subjects had a viral infection and only a third from the batch of subjects had a bacterial infection causing the fever. The organ systems like respiratory, urinary and digestive were more involved in the development of external contacted microorganisms and producing a fever in the infant's body. **Conclusions:** It can be said that viruses can influence more often the homeostasis of an infant causing a febrile syndrome than bacteria. In conclusion, a high temperature for a newborn or infant should raise the suspicion of an infection which can lead to complications in diagnosis and treatment management.

Keywords: infants, febrile syndrome, etiology, pediatric

CLUSTER B PERSONALITY DISORDERS AND THEIR ASSOCIATED COMORBIDITIES

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Background: Personality disorders have always been a point of interest for medical personnel. The peculiar way of behaving and the unnatural human interrelations these patients present have put doctors on a journey to find the cause and evolution of these mental disorders and raised questions such as "what is the normal personality and how can we define it?". More specifically, we will be studying the Cluster B personalities, which are the following: Antisocial, Narcissistic, Borderline and Histrionic, and their associated comorbidities. **Objective:** The objective of the study is to find correlations between the presence of a Cluster B personality disorder and other specific psychiatric comorbidities. Comorbidity, as an entity, is commonly found in all medical fields, psychiatry included, but an analysis of the incidence of certain comorbidities with these specific personality disorders could help ease the formulation of a final diagnosis for future patients. **Material and methods:** The study we present is a retrospective study and the data has been collected from the medical files of patients who had been admitted in the "Psihiatrie II" clinic between 2017 and 2022 with a diagnosis of a Cluster B personality disorder. **Results :** We found that certain personality disorders such as histionic personality disorder highly correlated with a couple of other mental disorders such as depression, anxiety or attempted suicide. Thus, the clinician should take into account the possibility of such co-occurrences. **Conclusions:** Among the conclusions, we consider that the clinician should be always on the watch for these comorbidities and should be ready to administer the appropriate treatment in a timely manner. Furthermore, additional research is needed as our study has its limitations regarding the batch of patients included.

Keywords: Personality disorders, Cluster B, Comorbidity

FREQUENCY OF HYPOVOLEMIA AND FEBRILE SEIZURES AMONG ROTAVIRUS-INFECTED CHILDREN

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Background: Rotavirus infection is the most typical cause of diarrhea in infants and young children worldwide and presents a high level of contagiosity. It can cause vomiting and watery diarrhea, but also fever and abdominal pain. As the most common symptoms of this pathology are diarrhea and vomiting that can lead to severe dehydration in children. **Objective:** The aim of this study was to asses the presence of hypovolemia induced by the dehyadration which was initially caused by diarrhea and vomiting, and the presence of the fever cases that led to febrile seizures. **Material and methods:** This retrospective study included 67 pediatric patients (0-9 of age) who were registered between 2019-2022 at the Pediatric Clinic I from the Emergency County Hospital of Târgu Mureș with Rotavirus infection. The data was collected from the clinical charts. **Results :** There were 30% patients of female sex and 70% patients of male sex. Among the patients included in the study the prevalence of the main symptoms caused by Rotavirus is: diarrheal stools present in 64% of the patients, vomiting in 63% of cases, fever in 40% of the cases and abdominal colic in 9%. From the total of 67 cases of children infected with Rotavirus, diarrhea and vomiting led to severe dehydration in patients, which determined hypovolemia in 46% of the patients from the study, of which one went into hypovolemic shock. On the other hand, from the 40% cases of fever, 10% of patients

suffered febrile seizures. **Conclusions:** Although at first the symptoms following a Rotavirus infection seem common and not very serious, they can quickly lead to more severe manifestations in children such as hypovolaemia and febrile seizures, which are often life-threatening conditions.

Keywords: dehydration, hypovolemia, fever, febrile seizures

POST-TIPS HEPATIC ENCEPHALOPATHY: CLINICAL SOLUTION TO META-ANALYSIS DERIVED PREDICTOR TREND

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Background: Transjugular intrahepatic portosystemic shunting (TIPS) artificially connects the portal vein to a systemic vein as to decrease the vascular resistance of the diseased liver. Hepatic encephalopathy (HE) is a complication that lowers patient's quality of life. Thus, pre-intervention patient selection is mandatory. HE predictors have been identified through cohort meta-analysis. An individual patient data (IPD) meta-analysis would allow for superior control over confounding variables. **Objective:** Our preliminary objective was to perform an IPD meta-analysis and derive a trend for post-TIPS HE covariates. The primary objective was to assess this trend in comparison to our own patients. **Material and methods:** We included all PubMed individual-data studies reporting on adults with bloodwork pre-TIPS and any grade HE post-TIPS. Out of 102 case reports and series, 28 were included, comprising 81 patients. We divided the population based on the presence of HE at one month. Data was analyzed using RStudio, with a significance of $p<0.05$. We gained two variables from literature: gender, MELD score pre-TIPS. A third was presumed based on the correlation to post-TIPS HE: portosystemic pressure reduction before and after shunting (PPSr). Following extraction, individual-data was evaluated for normality and variance. Unavailable data was produced through multivariate imputation by chained equations. The predictor population was generated through bootstrap resampling. The novel sample totaled 272 patients, divided in the same groups. We ran tests of non-discrepancy with the extracted data. Then, univariate and multivariate logistic regressions were performed. The results were used to build a nomogram for easier visualization of the obtained trend. For our primary objective, we included 16 patients from our institution. Patients underwent TIPS and were evaluated for HE using the Psychometric Hepatic Encephalopathy Score and Critical flicker frequency. **Results :** No discrepancy was observed between extracted and predictor populations. There was a weak association between HE and non-HE patients in the predictor sample for all variables. Univariate regression resulted in gender and MELD being covariates. Multivariate regression showed significant predicting power in all variables, suggesting that the relationship of PPSr to HE outcome was no longer confounded. The trend showed increased risk in: males, compared to females (Log Odds [LogO] -1.013), higher MELD (LogO +0.297), lesser reduction of portosystemic pressure (LogO +0.088). This trend was maintained in our own population: gender (LogO -0.684), MELD (LogO +0.247), PPSr (LogO +0.242). **Conclusions:** Individual-data evaluation is necessary to increase power of prediction. Our institution's cohort supports the trend that links HE to male gender, MELD and PPSr.

Keywords: TIPS, Hepatic encephalopathy, Predictor, Nomogram

TRANSCRANIAL DOPPLER INTERVARIABILITY BETWEEN STUDENT AND EXPERIENCED DOCTOR: A PERSPECTIVE OF THE FUTURE

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Background: Transcranial Doppler (TCD) ultrasonography is a noninvasive technique to obtain bedside neurologic information that can assist the physical examination. In critical care, this can be extremely useful in patients who are unconcious and have an inconclusive neurologic examination because Transcranial Doppler findings can help medical professionals in making decisions about more comprehensive imaging examination and relevant therapeutic measures. **Objective:** Following the study, we wanted to demonstrate the importance of a handly technique which can improve outcomes in the neuro-intesive care unit. **Material and methods:** We performed a prospective cross-sectional study which included 10 healthy subjects from the ICU department of Târgu Mureș Clinical County Emergency Hospital who have had Doppler measurement taken by a 2 MHz impulse probe. We positioned the probe above the zygomatic arch, on a horizontal line passing through the external ear canal. Our study is centered on the middle cerebral artery which allows the measurement of the cerebral blood

flow. We comapred bilateral measurement parameters, respectively pulsatility index and velocity measurement (systolic, diastolic). Data was processed with Excel Microsoft and analyzed using F-Test and T-Test. **Results :** There were no significant differences between the two measurements. We compared the average if the indices measured on the right side of 1.0138 with 0.921, respectively the left side of 0.8931 with 0.9068. Applying the F-Test formula we obtained a p-value >0.05 which validates the null hypothesis and the variants are equal. Subsequently the T-Test shows that there are no statistically significant differences between the two types of measurements. **Conclusions:** Based on the results of our study and measurements performed there is no statistically significant differeces between the measurements performed by a student and an experiened doctor. Through this study we will highlight the importance of the use of Trnscranial Doppler used by any information provided to the patient using a non-invasive device that minimizes the risk and costs, opening new opportunities for better management.

Keywords: Intervariability, Transcranial Doppler, Pulsatility Index

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ROMANIAN VS INTERNATIONAL MEDICAL STUDENTS: A STUDY ON LIFESTYLE AND DIET DIFFERENCES

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Background: Medical students often experience high-stress levels and a demanding workload, negatively affecting their lifestyle choices and eating habits. Furthermore, international medical students from Romania, face unique challenges in adapting to a new culture and environment, which may impact their lifestyle as well. **Objective:** We aimed to compare the dietary and lifestyle habits of Romanian versus international medical students from Romanian universities, with the ultimate goal of promoting healthier lifestyle choices and improving their health outcomes. **Material and methods:** This study recruited 181 medical students, consisting of 101 Romanian and 80 international medical students, from various medical schools in Romania, selected using a convenience sampling approach. We used a questionnaire of 38 questions regarding their lifestyle habits, distributed online using the Question Pro platform. Participants were asked to complete the questionnaire anonymously and with consent. **Results :** The results indicated differences in the lifestyle and dietary habits of Romanian versus international medical students. Romanian medical students tended to use more fat when cooking or in their diets and eat fewer fruits than international medical students. Conversely, international medical students reported drinking more coffee, tea, and sugar-free drinks; they also tended to eat more fish, pasta and rice, ice cream, and jam, also drank more wine and hard beverages such as rum. **Conclusions:** These findings suggest that cultural differences and environmental influences play a role in shaping the dietary habits of medical students, and interventions aimed at promoting healthy eating behaviours may need to be tailored to specific cultural contexts.

Keywords: dietary, lifestyle, nutrition, health

IMPACT OF NUTRITION ON ACUTE DIARRHOEAL DISEASE IN CHILDREN

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Background: Acute viral diarrhoeal disease is one of the most common pathologies in children under 5 years, being an important cause of mortality and morbidity. **Objective:** The aim of this study is to evaluate different demographic and clinical-paraclinical parameters and to determine if there is a correlation between the type of diet and the occurrence and evolution of diarrhoeal disease in children. **Material and methods:** We performed a retrospective study of 51 paediatric patients hospitalized in the pediatric department of Emergency County Hospital Târgu Mureș between January 2018 and April 2022. The data were taken from the patients' observation records. We analyzed: age, sex, environment of origin, symptoms, etiological agent, number of days of hospitalization, laboratory tests and complications. Data were statistically analysed with the T-student test and Chi-square test. **Results :** From a total of 51 patients, 25(49%) were formula fed, 18(35.3%) were mixed fed and 8(15.7%) were breast fed. All three groups of patients were predominantly male (64%vs61.11%vs75%) and rural environment (72% vs 61.11% vs 50%). Average age was higher in the breast-fed group. In terms of symptoms, diarrheal stools were present in the majority of patients (96% vs 94.44% vs 87.50%), vomiting predominated in those fed formula

and mixed feeding (64%, 72,22%), fever was present in a low percentage in all three groups (36% vs. 44,44% vs. 50,0%). Rotavirus was the main etiological agent in all three groups of patients. In terms of complications, acute dehydration syndrome was present in significant numbers in most patients (100% vs. 88,89% vs. 87,50%), and metabolic acidosis was common in formula-fed patients (32%). Laboratory tests showed a low haemoglobin value and an increased C-reactive protein 5 times above normal in all three groups of patients, increased lymphocytes in formula-fed patients and a predominant cytolysis syndrome in formula-fed patients. **Conclusions:** In conclusion, we can see that the number of cases of diarrhoeal disease was significantly lower in naturally fed children compared to mixed or formula fed children. Breastfed patients had milder symptoms and fewer complications, but not in significant numbers. Another thing observed is the influence of the environment on the disease, most cases being in rural areas where conditions are poorer.

Keywords: Gastroenteritis, Rotavirus, viral

THE USEFULNESS OF THE DETECT ALGORITHM VERSUS CARDIAC CATHETERIZATION IN THE EARLY DETECTION OF PULMONARY HYPERTENSION IN SCLERODERMA PATIENTS

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Background: Pulmonary hypertension is a major cause of mortality in patients diagnosed with scleroderma, being responsible for approximately 30% of the causes of death. Despite the treatments applied, the survival rate at 1 year is 78%, respectively at 3 years it is 47%. **Objective:** In the early stages, pulmonary hypertension associated with scleroderma is asymptomatic. Right heart catheterization is the gold standard for the diagnosis of pulmonary hypertension. Due to the fact that it is an invasive method and cannot be applied as a routine screening, late diagnosis of pulmonary hypertension is frequently encountered. That is why the new objectives in medical research aim to create a specific model for predicting pulmonary hypertension in scleroderma based on the use of serum or imaging biomarkers. The use of these biomarkers should allow the improvement of risk stratification and the initiation of early therapy of arterial hypertension in scleroderma. **Material and methods:** A meta-analysis aiming for the use of the DETECT algorithm versus the cardiac catheterism for the early detection of pulmonary hypertension in scleroderma patients. The inclusion criteria were: studies published in medical data bases such as: PubMed, PlosOne, clinicaltrials.com, studies published in open access journals, studies with similar objectives, clinical case-control or randomized studies. The exclusion criteria were: studies not published in data bases such as: PubMed, PlosOne, clinicaltrials.com, studies not published in extenso or not published in open access journals studies with different objectives irrelevant of DETECT algorithm, clinical case reports. **Results :** A number of 3 studies were selected after applying the inclusion and exclusion criterias. 197 patients were registered in the 2 groups: the ones were the DETECT algorythm eas applied and the one who undergone the cardiac catheterism. Even though the meta-analysis didn't showed a significant difference between the two groups (p:0.09), more events were registered in the DETECT algorythm vs the cateterism group 114 events were registered in the DETECT group vs. 81 in the cateterism group. **Conclusions:** The DETECT algorithm demonstrated superior efficiency versus cardiac catheterization. The DETECT algorithm does not completely eliminate the need for cardiac catheterization, but only restricts its indications.

Keywords: pulmonary hypertension, DETECT algorithm, cardiac catheterization, scleroderma

CLINICAL - SURGICAL

INTRACRANIAL HEMANGIOBLASTOMA: A REPORT OF 17 CASES

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Background: Hemangioblastoma is a benign, WHO grade I neoplasm, of vascular origin which accounts for a mere 1-2.5 % of all CNS tumors. **Objective:** The aim of this study relies in outlining the clinical signs and symptoms, radiological and pathological features as well as treatment options of hemangioblastoma, with the goal of improving the preoperative diagnosis and guiding the management for better outcomes. **Material and methods:** The study included 17 patients known with intracranial hemangioblastomas of ages between 28-68 years old, who have been hospitalized and undergone surgery in the Neurosurgery Department of SCJU Târgu Mureș in the past ten years. The main criterias that were followed included: age, gender, symptoms, tumor locations, MRI features, histopathological aspects and the specificity of the surgical interventions. **Results :** Gender-wise, the majority of patients were men (82,4%), while age-wise, the most affected group were those in between 40-49-years-old. About 47,06% of the tumors occurred in the left cerebellar hemisphere, 17,65% in the right side, the cerebellar vermis accounted 23,54%. Particular cases included two lesions that involved the paravermal zone as long as a case in which the frontal operculum was concerned. All patients had symptoms due to rICP and signs of cerebellar syndrome. The headache was the predominant symptom (94,11%), followed by ataxia (64,7%), nausea, vomiting (52,94%) and vertigo (41,17%). Among the rarest symptoms encountered in patients were: sensorineural hearing loss, monocular temporal hemianopia, paresthesia, paralysis of the left upper limb, paresis of the left lower limb and Hakim-Adams triad. A peculiar discovery in four of these cases consisted in recurrent hemangioblastomas in the posterior fossa, from which only two have been genetically tested and positive for Von Hippel-Lindau syndrome. From a radiological point of view, nine lesions presented with extra-tumoral cysts. Intra-tumoral cysts, mixed and solid hemangioblastomas accounted as two cases for each. Two of the patients had multiple posterior fossa lesions. Microscopically, the specific pattern consists of the stromal and endothelial cells forming vascular channels. For en bloc microsurgical resections of hemangioblastomas, the most frequently used approach was the left retrosigmoid craniotomy (47,06%), followed by the median (29,41%), right suboccipital in three cases, and left pterional in one case. **Conclusions:** Although hemangioblastoma is a rare and benign tumor, the process of diagnosis and tumor ablation can be challenging. Thus, recognition of the basic landmarks of this tumor, proper differential diagnosis, histopathological confirmation, genetic testing for possible cases are all essential elements in guiding the best management of hemangioblastoma.

Keywords: Hemangioblastoma, Von Hippel-Lindau Syndrome, En bloc resection

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IMPAIRMENT OF BEHIND-THE-BACK REACH IN RESIDUAL NEONATAL BRACHIAL PLEXUS INJURY

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Background: Neonatal brachial plexus injury (NBPI) is one of the main causes of disability and major muscle contracture, due to the impaired growth of certain muscles that suffered a denervation process. Its presence is well known as being associated with one expected deficit which is shoulder movement impairment. Therefore, children that do not recover in the first 2 months will almost certainly develop changes in the shoulder morphology, leading to persistent adduction and internal rotation, disrupting the possibility of performing activities of daily living that require behind-the-back reach. **Objective:** Our study was aimed to evaluate the prevalence of shoulder extension alteration and the effect on the behind-the-back function in residual NBPI. **Material and methods:** We have conducted a retrospective clinical study on data collected from the patients' evaluation reports, including 245 children, who presented to the clinic from January 2019 to August 2022. We have extracted demographic features, as well as clinical details, such as lesion extension (Erb's palsy/extended Erb's palsy/global plexus palsy), previous surgical history, Mallet scale scores and the range of motion (ROM) for passive glenohumeral extension (PGE), and active shoulder extension (ASE). **Results :** Among the evaluated children, we have encountered 57.6% with Erb's palsy, 28.6% with extended Erb's palsy and the others presented with global palsy. The impossibility of lumbar spine reaching, Mallet hand-to-spine (HTS) score lower than 3, was found in 66% of the children, from which 26.2% had the absolute need of a voluntary impulse to reach the desired position. The subjects were divided

into 2 groups for statistical purposes, considering the Mallet HTS score. The PGE and ASE range of motion were compared between the 2 groups of patients and results proved that subjects with an HTS score equal or higher than 3, had significantly greater ASE and PGE than the other group, with ROM values situated at 30º (0º-80º) and 20º (-10º-60º) respectively. We have found significant correlations between the hand-to-spine score and the degrees of movement for the studied extensions, with ASE being strongly correlated (r=0.705, p<0.0001) and PGE being weakly correlated (r=0.372, p<0.0001). The cut-off values for the possibility of achieving the hand-to-spine position were found at 10º for both ASE and PGE. **Conclusions:** Loss of the ability to touch the spine, caused by loss of both ASE and PGE was very common in the studied children, with a prevalence of 66%, children needing at least a ROM of 10º to be able to achieve the required position.

Keywords: neonatal brachial plexus injury, shoulder extension, behind-the-back, activities of daily living

ASSESSMENT OF THE CASES OF MASSIVE POSTPARTUM HEMORRHAGE IN REPUBLIC OF MOLDOVA

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Background: Postpartum hemorrhage (PPH) is a major cause of maternal deaths, accounting for 27.1% globally, especially in developing countries and countries. **Objective:** The aim of the study was to assess the etiological factors of HPP ≥1500 ml clinical cases, in tertiary perinatal center. **Material and methods:** A retrospective study, that included 64 cases, was aimed to assess the etiological factors of HPP ≥1500 ml, during the years 2020-2022. **Results :** The majority of the patients were multiparous (49, 76.6%). In 37 cases (57.8%) the patients had a history of miscarriage or medical abortion. Hence, 23 patients (35.9%) had C-section in anamneses. In 37 cases (57.8%) the patients presented different somatic conditions. The evolution of the pregnancy was complicated by iron deficiency anemia (44 cases □□□68.8%, hypertensive states induced by pregnancy □□□25 cases (39.06%), among them severe preeclampsia in 9 cases (14.1%). In the majority of cases (71.9%) at term birth occured. In 47 cases (73.4%) C-section was performed, of which 26 cases (34.0%) an emergency intervention. The indications for C-section were: scar on the uterus □□□21 cases (44.7%) ; in 6 cases (2 3.1%) scar insufficiency was diagnosed; premature detachment of the normally inserted placenta (5 cases □□□19.2%), severe preeclampsia (11 cases □□□ 42.3%), placenta praevia (9 cases □□□14.1%), insufficiency of con traction forces (4 cases □□□15.4%) with fetal distress (8 cases □□□30.8%), etc. In 17 cases (26.6%) the patients gave birth naturally. Placenta adherens was appreciated in 3 cases (17.6%). The weight of newborns between 4000-4999 g was assessed in 8 cases (12.5%). Deep lacerations of the soft birth canal were determined in 4 (23.5%) cases, placental remnants □□□in 3 cases (17.6%); uterine rupture □□□in one case (5.88%). The volume of the estimated hemorrhage was: 1500-1999 ml in 10 (15.6%) cases, 2000 ml □□□in 19 (29.7%) patients; between 20 00-2499 ml □□□in 30 (46.9%) patients; between 2500-2999 ml □□□in 3 (4.7%) patients; between 3000-3500 ml □□□ in 2 (3.1%) patients. Disseminated intravascular coagulation syndrome was determined in 29 (45.3%) cases. PPH was managed according to the national guidelines. In 6 cases (9.4%) B-Lynch compression sutures were applied, and in 45 cases (70.3%) □□□hemostasis hysterectomy was performed. In 11 cases (17.2%) the relaparotomy was required due to the blood loss volume exceeding ≥2500 ml. **Conclusions:** PPH is a major obstetric complication, which requires medical and surgical efforts in its management, in order to improve outcomes.

Keywords: Postpartum hemorrhage, Preeclampsia, C-section, Premature detachment of placenta

CESAREAN SECTION ASSOCIATED WITH SEVERE INTROPERATIVE BLEEDING MANAGED WITH PABAL ADMINISTRATION: A RETROSPECTIVE COHORT STUDY

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Background: Due to higher incidence of cesarean section in both developed and undeveloped countries , the risk of possible complications increases simultaneusly. Among those, postpartum hemorrhage (PPH) is one of the leading causes of maternal morbidity and mortality worldwide. Different categories of medications are used for

pharmacological management of PPH. **Objective:** Explore the association of the increased rate in cesarean section with the administration of Carbetocin as pharmacological management of PPH. **Material and methods:** The retrospective-cohort study includes 97 patients who give birth through cesarean section in the County Hospital of Targu Mures between January 2021 and October 2022.The diagnosis of PPH is established by the surgeon in charge. According to this, other characteristics associated with Carbetocin are considered. Estimations are done based on data recollected. **Results :** 63% of women administered with Carbetocin are between 26-35 years of age. 44% of multiparas' women received Carbetocin vs. 38% singletone women. Gestational groups (GG) have been established according to gestational age (GA). 64% belongs to the IV GG for which GA corrisponds to 38 weeks. Among them 65% receive Carbetocine. Spinal and General anesthesia are mainly used. Out of the patients with general anesthesia, 50 % receive Carbetocin, vs. 37% patients with spainal Anesthesia are administered with Carbetocin. In total 40 patients out of 98 received Carbetocin as PPH managemnt. **Conclusions:** Cesarean section is an invasive procedure, which causes trauma to the patient's body. As the rate of cesarean section will increase so will the number of PPH, strongly associated to surgery. At last due to the severity of PPH, adoption of Carbetocin as management is seen to be very frequent in Mures County Hospital.

Keywords: Incidence of cesarean section, Post-partum hemorrhage, Carbetocin

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ANTERIOR CIRCULATION RUPTURED ANEURYSMS – RESULTS OF SURGICAL VERSUS ENDOVASCULAR TREATMENT

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Background: Cerebral aneurysms are dilatations of the blood vessel's wall, usually found at the arterial bifurcation level. They represent a significant dangerous cerebral pathology, as their rupture is associated with extremely high mortality. **Objective:** Anterior circulation aneurysms can be properly treated via transcranial and more recently with endovascular approaches. We aimed to compare the results of these two procedures in our hospital. **Material and methods:** A retrospective study was performed, on patients surgically or endovascularly treated for ruptured anterior circulation aneurysms between 2014-2022 at the Targu Mures Clinical Emergency Hospital. All data were collected from electronic patient files from the Department of Neurosurgery of the County Hospital of Targu Mures. Admission status, imaging, and discharge status were analysed between the two study groups. **Results :** A total of 146 patients were treated for ruptured anterior circulation aneurysms. 72 were surgically treated while 74 patients received endovascular treatment. Age ranged from 31 to 83 in the surgical group, and respectively 25 and 82 years old for the embolized patients. In the surgical group, 71% (n=51) of patients were discharged in good neurological condition, 10% (n=7) had an aggravated neurological status, and mortality was 3% (n=2). In the endovascular group, 83% (n=61) of patients had good clinical outcomes, 3% (n=2) aggravated neurological conditions, and mortality was 6% (n=4). There was no statistically significant difference between the two study groups (p=0.131, Chi-Square). **Conclusions:** Even though statistically similar in our study, the endovascular treatment of anterior cerebral circulation aneurysms seems to provide discretely better outcomes, especially regarding good clinical neurological status. Nevertheless, surgery is still an important alternative, particularly in difficult and challenging cases where embolization is not feasible.

Keywords: Anterior circulation aneurysm, endovascular, embolization, rupture, surgery

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CERVICAL SCREENING IN THE REPUBLIC OF MOLDOVA (RM)

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Background: Cervical cancer (CC) is the only oncological disease of the reproductive system, which can be eliminated, due to the slow evolution of premorbid conditions. The peak for the detection of CC is the period of 45-55 years, and the evolution of precancerous conditions lasts, on average, 10-12 years. Cervical screening (CS) contributes to the early detection and elimination of precancerous conditions and/or early stages of CC, which reduces the level of mortality and morbidity, and preserves reproductive function. **Objective:** Analysis of the results of the population CS organized within the state program in the Republic of Moldova, for the period 2019-2022. **Material and methods:** 304.000 asymptomatic women (36.8%) aged 25-61 were evaluated. Beneficiaries were informed. The Pap test was taken. Screening was performed every 3/1 years in women with

immunodeficiency. The results were interpreted according to the Bethesda system and finalized by colposcopy according to the criteria for the management of results with atypia. **Results :** 4393 women with suspected precancerous pathology were colposcopically investigated at the RCC, of which 2784 with: ASCUS □□□in 542 cases (19.4%), LSIL □□□in 496 (17.8%); HSIL □□□in 1141 (40.9%), ASC -H □□□in 394 (14.1%), and AGC □□□in 211 cases (7.57%). HPV was investigated in 555 women (19.9%). Among women referred for colposcopy: 3014 (68.6%) women of reproductive age (25-49 years); 754 (17.2%) aged 30-48 years and 635 (14.4%) in the premenopausal and menopausal period (50-61 years). For ASCUS and LSIL, biopsy and excisional treatment were required in 182 cases (17.5%), and repeat Pap test and/or colposcopy monitoring was discontinued in 856 cases (82.4%). At the time of taking the Pap test, combined oral contraception was used by 102 women (2.32%), and intrauterine device □□□by 136 beneficiaries (3.09%), interrupted coitus being pract iced in 96 cases (2.1%). Of the total number of women, 17 were pregnant, with an average age of 33 years, and required colposcopy and/or biopsy to confirm precancerous conditions. Precancerous pathology was confirmed in 1095 women (24.9%), mainly, aged between 30-36 years. CC was diagnosed in 104 cases, of which in 73 cases (70.1%) in stage I, being referred for specific treatment in the Oncological Institute. **Conclusions:** CS is an important method for assessing the pathologies of the cervix, preventing mortality and morbidity through CC, in order to align with the WHO prerogative of 90% vaccination, 70% Pap-test coverage and 90% patients with cancer pathology to benefit from colposcopy.

Keywords: Cervical cancer, Cervical screening, Pap test, Colposcopy

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NEUROSURGERY - STILL A CARDINAL STEP IN THE MANAGEMENT OF BRAIN METASTASES? A LITERATURE REVIEW WITH AN ILLUSTRATIVE CASE

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Background: Brain metastases (BMs) represent a major complication for any patient suffering from a systemic malignancy. It is estimated that 20-40% percent of patients with solid cancer will develop brain metastasis over the course of their primary disease. Historically, surgery was one of the cornerstones in combating brain metastasis-induced morbidity and mortality. However, recent years have witnessed a surge in modern local and systemic treatment options, highlighting the need of reevaluating the role of surgery within the therapeutic scheme of a patient with metastatic brain tumor. **Objective:** The purpose of this paper is to ponder the position of surgery in the multidisciplinary approach required for this pathology by reviewing the literature available and by analysing an illustrative case. **Material and methods:** A search was performed with all possible combinations of MESH terms such as "Brain Metastases," "Surgery," "Neoplasms, Intracranial", "Malignant Neoplasms, Brain", using acknowledged medical research databases (Pubmed, ScienceDirect) and renowned neurosurgical journals and books. English language studies have been selected, providing relevant information about the aforementioned keywords. A custom time interval ranging from 2015 to 2023 was added to the search. The case of a patient with brain metastasis referred to and operated in the neurosurgery department of the Târgu Mureş County Emergency Clinical Hospital was also included. **Results :** After a meticulous analysis of the sources included, we noticed a consensus regarding the impact of surgical resection of BMs. While the immediate benefits of the resection (e. g. reduction of ICP, alleviation of neurological deficits) remain undisputed, it is postulated that surgery is also advantageous relative to diagnostic considerations, improvement of the functional status and overall survival of patients. Nevertheless, it is of utmost importance to take into consideration a number of factors and variables for each patient in order to assess the suitability for surgery. **Conclusions:** Despite vital progress in diagnostic and therapeutic principles, surgery remains a keystone in the approach of brain metastases. A collaboration is needed between professionals of medical specialties including neurosurgery, medical oncology, radiation oncology, radiology and immunology in order to elaborate a treatment algorithm based on the patient's clinical profile. Ultimately, it is crucial to emphasize that benefits of surgical resection are not restrained by outcomes measured in medical studies and trials, meaning that recommendation for surgery should also rely on clinical thinking.

Keywords: brain metastases, surgery, functional status

ORBITAL CELLULITIS - COMPLICATION OF AN UNTREATED RHINOSINUSITIS

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Background: Orbital cellulitis is an infection of the soft tissues of the eye socket behind the orbital septum, being one of the complications of untreated rhinosinusitis. Most of the cases with orbital complications, although treated with medication, also require the association of surgical treatment with rhinosinus drainage and orbital decompression, which must not be delayed, in order to avoid vision loss. **Objective:** The aim of this paper is to discuss the orbital complications of rhinosinusitis and the treatment modality, highlighted by the presentation of a clinical case of a patient with recurrent episodes of maxillary and ethmoidal rhinosinusitis, who was urgently hospitalized for the exacerbation of an exophthalmia accompanied by palpebral edema, chemosis, decreased visual acuity and mobility of the right eyeball, fetid purulent rhinorrhea, nasal obstruction, headache and febrile condition. **Material and methods:** The ENT clinical examination was performed and the nasal endoscopy highlights hyperemia and hypertrophy of the nasal turbinates, septal deviation and purulent secretions in the middle meatus. The CT examination reveals significant proptosis of the right eyeball, with elongation of the optic nerve and blocked sinuses with purulent secretions. Endoscopic surgery was performed: the laterodeviated part of nasal septum was removed for maxillary antrostomy acces and right ethmoidectomy, with drainage of purulent secretion and orbital decompression. **Results :** Postoperatively, the patient's evolution was favorable, with the disappearance of proptosis, reduction of eyelid edema, improvement of visual acuity and mobility of the eyeball. The postoperative control CT revealed the disappearance of pus, inflammation from right sinuses and the reduction of edema, inflammatory reaction of the orbit and proptosis. **Conclusions:** Early diagnosis of rhinosinusitis and orbital cellulitis is important in order to prevent this type of complications. In addition to correct and timely administration of medical treatment, the surgical stage, with sinus drainage and orbital decompression, plays an important role.

Keywords: Orbital cellulitis, subperiosteal abscess, preseptal cellulitis, proptosis

SPHENOIDAL RHINOSINUSITIS ASSOCIATED WITH PARESIS OF THE NERVE ABDUCENS

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Background: Isolated sphenoid rhinosinusitis is a rare disease, with an incidence of 1-2% of all sinus infections. In the literature, there are very few cases of unilateral sphenoid rhinosinusitis associated with abducens nerve palsy. This type of sinusitis may present complications due to the anatomical location of the sphenoid sinus in relation to the intracranial and orbital contents. Because of the difficulty of diagnosis, sphenoid rhinosinusitis is characterized by significant morbidity. **Objective:** A 41-year-old patient presented to the Neurology Department of the Braila Emergency County Hospital, with right hemicrania and ipsilateral paresis of the abducens nerve, afebrile, without any other ENT pathology in history. **Material and methods:** Surgical treatment (transnasal endoscopic sphenoidotomy) was preceded by 24 hours of general antibiotic and steroidal anti-inflammatory drugs administration. **Results :** The evaluation performed on day 7 and 30 post-surgically revealed the complete disappearance of diplopia, with complete abduction of the right eyeball. The cranio-facial CT exam performed on day 30 postoperatively revealed the paranasal sinuses without pathological changes. Laboratory tests did not reveal any major changes. The lateralization of the gaze to the right caused horizontal diplopia, which disappeared when closing an eye. The examination of the other cranial nerves did not reveal other associations. The examination of the ocular fundus and the bilateral visual acuity showed no changes. **Conclusions:** Unilateral sphenoid rhinosinusitis accompanied by diplopia and hemicrania is rare. In such situations, one should exclude an intrasinusal or intracranial neoplastic process extended into the region of the sphenoid sinus. The CT and the MRI exam have an essential role in establishing the diagnosis, the etiology of the disorder and the surgical treatment. Early surgery with antibiotic and anti-inflammatory treatment has an excellent result, with complete resolution of the symptoms.

Keywords: sphenoid sinusitis, abducens nerve palsy, diplopia

EXTRA-ANATOMICAL UNILATERAL AXILLOFEMORAL AND AXILLOBIFEMORAL BYPASS GRAFTING: LONG-TERM OUTCOMES OF THE LAST RESORT

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Background: Abdominal aorta and iliofemoral occlusive disease significantly decrease the quality of life for affected patients, placing them at a high risk of limb loss and posing a challenge for surgical management. While direct aortoiliac or aortofemoral replacement with grafts is considered the gold standard treatment for aortoiliac occlusive disease, for patients who have failed angioplasty or present with advanced atherosclerotic plaques or a hostile abdomen, extra-anatomic bypass may represent a viable alternative. This method involves creating a non-natural vascular pathway for the revascularization of the lower limb. **Objective:** The purpose of this study is to present the role of extra-anatomical bypass for patients with abdominal aorta and iliofemoral occlusive disease. **Material and methods:** This study is retrospective, observational, and monocentric, including all patients diagnosed with abdominal aorta and iliofemoral occlusive disease who were admitted for surgical treatment at the Vascular Surgery Clinic of the Emergency County Hospital Targu Mures between 2016 and 2021. These patients were considered to have a high cardiovascular risk and underwent extra-anatomical bypass surgery. Patients were followed up for 12 months post-surgery, with 3 visits scheduled (2 weeks, 6 months, and 12 months post-surgery). Patients who did not attend the follow-up appointments were excluded from the study. The primary endpoint was graft patency at 12 months, with patients being divided into two groups based on primary patency at 12 months. **Results :** In this study, 87 patients with a mean age of 70.66 years were enrolled. Of these, 63 patients (72.41%) underwent unilateral axillofemoral bypass, while 24 patients (27.59%) underwent axillobifemoral bypass. Laboratory analyses did not reveal any statistically significant differences between the two groups. However, patients with negative outcomes had a higher incidence of comorbidities such as atrial fibrillation (p=0.03), malignancy (p=0.004), and active smoking (p=0.008). At 12 months post-surgery, the patency rate was 87.3% in patients who underwent unilateral axillofemoral bypass, compared to 62.5% in those who underwent axillobifemoral bypass (p=0.001). **Conclusions:** In situations where anatomical revascularization is not feasible due to occlusive disease involving the abdominal aorta and iliofemoral region, extra-anatomic revascularization continues to be a viable option. This technique offers an acceptable medium-term patency rate and has the potential to rescue the affected lower limb.

Keywords: Extra-anatomical bypass, Aortoiliac occlusive disease, Graft patency, Revascularization

HEMATOLOGICAL RATIOS AS PREDICTION FACTORS IN THORACIC TRAUMA PATIENTS

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Background: Trauma is one of the main causes of death worldwide, and the chest is the third most frequently affected body region after the abdomen and head. The first step in addressing major thoracic trauma is identifying and anticipating complications linked to the mechanism of trauma occurrence. **Objective:** The purpose of the present paper is to identify and evaluate the associations between the hematological ratios NLR (neutrophil-to-lymphocyte ratio), PLR (platelet-to-lymphocyte ratio) and MLR (monocyte-to-lymphocyte ratio) and the severity of patients suffering from chest injuries. **Material and methods:** We designed the study to be a retrospective, observational study, over a period of 8 years, for 253 patients ,where we included all patients over the age of 18 who had suffered from blunt chest trauma, presented and admitted at the Mures County Emergency hospital. **Results :** We found age, tobacco usage, and obesity to be significantly associated with the development of posttraumatic pneumothorax (p = 0.002, 0.01, and 0.02, respectively). Additionally, pneumothorax incidence is directly correlated with high levels of all hematological ratios, including the NLR, MLR, PLR(p=0.001). Moreover, higher NLR determinations upon admission predict a longer hospital stay (p = 0.003). **Conclusions:** Our findings prove a strong association between increased neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR) and monocyte-to-lymphocyte ratio (MLR) levels at admission and pneumothorax occurrence in thoracic trauma patiens.

Keywords: NLR , PLR, Posttrauamtic, chest trauma, Pneumothorax

DIFFUSE CORONARY SPASM AS A POSTOPERATORY COMPLICATION

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Background: Coronary artery vasospasm is an unforeseen, acute vasoconstriction of the epicardial coronary arteries, that may generate a major or entire vessel occlusion. It is a cause of incomprehensible hemodynamic or electrical instability in which promptly suitable measures must be taken even from the beginning of the manifestations. The symptoms of coronary vasospasm vary from ECG changes such as ST elevations, to severe hypotension or circulatory collapse. **Objective:** Our paper aims to present the developing postoperative coronary vasospasm after a surgical management of an 75-year old male patient diagnosed with coronary artery disease, severe left main, anterior descending, circumflex and right coronary artery stenosis. **Material and methods:** The patient was admitted to our department diagnosed with coronary artery disease, unstable angina, left main sever stenosis, bilateral carotid atheroma, cardiac insufficiency NYHA stage III, arterial hypertension stage II, obliterative chronic arteriopathy of the lower limbs stage IV. The coronary angiography revealed 60-70% left main stenosis, 90% circumflex artery stenosis,75% right coronary artery stenosis. Coronary artery bypass grafting was performed, using an autologous saphenous vein graft isolated at the level of obtuse marginal artery and interventricular posterior artery, and with the anastomosis of the left internal mammary artery to the anterior descending artery. **Results :** A few hours postoperatively, the patient develops hemodynamic instability, with severe arterial hypotension, bradycardia, ST elevation in the anterior leads, followed by cardiac arrest responsive to ressuscitation maneuvers. He is transferred to the angiography laboratory for emergency coronarography, which confirmed the patency of the grafted vessels, but revealed severe diffuse vasospasm at the level of the descending anterior and right coronary arteries, unresponsive for Nitrogylcerin administration. Emergency angioplasty was performed, with implantation of two pharmacologically active stents at the level of the left main coronary artery, anterior descending artery and balloon angioplasty at the level of circumflex artery. **Conclusions:** The particularity of this case is the occurrence of diffuse coronary spasm, which is a rare but major adverse cardiovascular event that may cause severe ischemic damage.

Keywords: diffuse coronary spasm, aortocoronary by-pass, hypotension, hemodynamic instability

A RETROSPECTIVE UNICENTRIC STUDY OF CRYPTORCHIDISM: EPIDEMIOLOGY, SURGICAL MANAGEMENT AND COMPLICATIONS

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Background: Cryptorchidism, i.e undescended testis is defined as the failure of one or both testicles to descend to their natural position in the scrotum. This is the most common congenital anomaly of the genitourinary tract, and in order to preserve fertility and lower the risk of malignancy, orchidopexy should be performed by twelve months, or eighteen months at the latest. **Objective:** This study aims to determine the relevant demographic traits of the patients in the sample, to assess various aspects of the types of treatment they were offered, and to evaluate their associated pathologies. **Material and methods:** This is a descriptive cross-sectional study of 400 patients with undescended testis who were admitted into the Paediatric Surgery and Orthopaedics Department of the Târgu Mureș Emergency County Hospital over the course of three years, from 2019 to 2021. Data were extracted from operative reports and from the Hipocrate electronic platform. **Results :** 94,75% of the patients received surgical treatment. Only 8,70% were treated in the recommended time frame, with 40,89% presenting between the ages of 18 months and three years. 62,93% of patients had bilateral cryptorchidism. In unilateral cases, right undescended testis was the more frequent variant (62,41%). Testicular hypotrophy was detected in 24,53% of all cases, most frequently in patients over five years (39,78%), and in those between 18 months and three years (38,70%). The most frequently used procedures were Bianchi orchidopexy (46,43%) and inguinal orchidopexy (37,99%). The incidence of postoperative complications was 2,11%. 44,59% of the patients suffered from other pathologies, the most prevalent of which were inguinal hernia (25,06%), phimosis (11,87%) and hypospadias (4,22%). An average of 1894,13 RON was spent per patient. Hospitalisation accounts for 73% of this sum, and length of stay is the variable which most influences costs. Most patients (67,01%) spent between 24 and 48 hours in the hospital, and

longer stays were caused by early post-operative complications (scrotal haematoma). **Conclusions:** Due to late presentation, most patients received treatment significantly later than recommended. Scrotal or inguinal approach orchidopexy was the treatment of choice, with laparoscopy being performed in select cases. The incidence of postoperative complications was only slightly higher than in literature. Inguinal hernia was most frequently associated, but a considerable number of patients suffered from hypospadias, which is indicative of a disorder of sexual development. Further research involving long-term follow-up is needed in order to complete the findings of this study.

Keywords: cryptorchidism, undescended testis, epidemiology, orchidopexy

THE INVERTED SCHNEIDERIAN PAPILLOMA: A ONE YEAR CLINICAL STUDY

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Background: The inverted Scheniderian papilloma is a rare benign epithelial tumor arising from Schneiderian mucosa that occurs during the 5th decade. Its three characteristics make this tumor different from other sinonasal neoplasms: a relatively strong destructive ability of nearby structures, high rate of recurrence, and a risk of carcinomatous evolution ranging from 5% to 15. The main manifestations of this tumor include nasal obstruction, headaches, runny nose, hemorrhage and impaired sense of smell. **Objective:** This study aims to investigate how many cases of inverted Schneiderian papilloma have been diagnosed at the Otorhinolaryngology Clinical County Hospital of Targu-Mures during the year 2022. **Material and methods:** This retrospective, analytical study aimed to examine the data gathered from 40 patients that underwent sinonasal surgery for nasal tumor removal at the Otorhinolaringology Clinical County Hospital of Targu-Mures in 2022. **Results :** Forty patients who underwent sinonasal surgery were identified. There were 13 (32,5%) females and 27 (67,5%) male subjects at an average age of 52 years (range, 23□□□□□years). From the histopathologic reports of the patients, there were 27 (67.5%) patients diagnosed with nasal polyposis, 8 (20%) with chronic rhinosinusitis with nasal polyps and 5 (12.5%) with inverted Schneiderian papilloma. The patients diagnosed with inverted papilloma are 3 (60%) females and 2 (40%) males with an average age of 55 (range, 46-66 years). All of them presented manifestations like runny nose, nasal obstruction and an impaired sense of smell, and with 2 (40%) of them presenting headaches and only 1 (2,5%) suffering from epistaxis. **Conclusions:** The study concluded that 5 (12.5%) pacients were diagnosed with inverted Schneiderian papilloma of the total of 40 that underwent surgey during 2022 at the Otorhinolaryngology Clinical County Hospital of Targu-Mures.

Keywords: Schneiderian papilloma, Inverted papilloma, Sinonasal tumor

NEW METHODS OF THE SPINAL CORD INJURY TREATMENT

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Background: Spinal cord injury (SCI) happens for a wide variety of reasons. Therefore, creating new treatments for spinal injuries is one of the most difficult challenges of medicine. Modern treatment strategies combine using of drugs and grafting which together have the greatest beneficial effect. Spinal cord injury (SCI) happens for a wide variety of reasons. Therefore, creating new treatments for spinal injuries is one of the most difficult challenges of medicine. Modern treatment strategies combine using of drugs and grafting which together have the greatest beneficial effect. **Objective:** The aim of this study is cure spinal cord injury and decrease it´s consequences. **Material and methods:** Treatment with use of microelectrode arrays in monkey model presented by Gregoire Courtine, professor of Institute of Technology Lausanne, showed a little success. Microelectrode arrays implanted in the brain of the paralyzed monkeys sent signals wirelessly to devices in the lower spine which generated electric impulses leading to movement of their legs.Peripheral nervous system has a stronger ability to regenerate, than central nervous system (CNS). The latter contains certain substances, which suppress the growth of neurons. Therefore, spinal cord, being a delicate and tremendously complicated structure, has very limited ability to regenerate after several injuries. Nevertheless, human brain has two parts in which neurogenesis are happening: hippocampus and subventricular zone (SVZ). It was widely accepted that neurogenesis occurs in the dentate gyrus of the adult mammalian hippocampus. These adult born neurons become functionally active and are also thought

to contribute to learning and memory. Adult hippocampal neurogenesis is a multistep process that originates from a sequence of proliferative precursor cells and leads to the existence of a new granule cell in the dentate gyrus. Neural stem cells of SVZ can be grown in culture with epidermal growth factor, fibroblast growth factor, or the two combined. As such, the SVZ represents an important reservoir of progenitors in the adult brain, perhaps harboring cell populations that could be used for neuroregenerative therapy **Results :** Decrease of spinal cord injury related defects (problems).Treatmen patients with spinal cord injury traumas, defects. positive feed back in monkey and laboratory mouse. **Conclusions:** Nowadays, there are medications wich is considered to stop the damage to neurons and inflamation ,and surgery which is applied for repair of vertebrae but we can find more effective ways to cure SCI with the help of neuro surgery, cellular therapy,laboratory medicine and engineering medicine.

Keywords: Spinal cord injury, transplantation, regeneration

SURGICAL MANAGEMENT IN PANCREATIC TUMORS

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Background: Pancreatic tumors, although being relatively rare in Romania, they still represent a real challenge in terms of both diagnosis and treatment. Malignant neoplasms, such as pancreatic cancer, are a major contributor to cancer-related mortality, with a survival rate of less than 10% after 5 years from the time of diagnosis. The frequency of benign tumors is considerably lower, but they can still cause significant health problems and require surgery. **Objective:** The main purpose of this study was to assess the contemporary surgical treatment of both malignant and benign pancreatic tumors, respectively, to compare the short-term postoperative outcomes. **Material and methods:** A retrospective assessment was performed on a cohort of 93 patients who were admitted and underwent surgery at the 1st and 2nd Surgical Departments of the County Emergency Clinical Hospital of Tîrgu Mureș, between January 2016 and December 2022. We compiled demographic, biological, and clinical data of patients, details about operative procedures and anatomopathological findings for tumor evaluation into an electronic database. **Results :** Of the total 93 patients, 81 were diagnosed with malignant tumors, while 12 had benign tumors, and these groups were analyzed separately. Among the 81 patients with malignant tumors, 51% were female and 49% were male, and the average age of the patients was 64,02 years. 21 cases (25.93%) underwent emergency surgery, whereas the remaining 60 patients (74.04%) received elective surgery. The curative surgical treatment included: duodenopancreatectomy (45.68%), distal splenopancreatectomy (13.58%) and cephalic pancreatectomy (3.7%). Biliodigestive anastomoses were the only adjuvant surgical option for 25 patients (30.86%). In the second group the average age of patients was 60.25 years. Regarding the surgical treatment of the 12 benign tumors, 33.33% of them underwent caudal pancreatectomies, 33.33% duodenopancreatectomies, 25% distal splenopancreatectomies, and one patient underwent biliodigestive derivation. **Conclusions:** Despite similarities in surgical treatment for both malignant and benign tumors, pancreatic surgery remains a significant obstacle, with increased morbidity and mortality rates attributed to late diagnosis and advanced stage of the disease.

Keywords: pancreatic tumors, duodenopancreatectomy, biliodigestive anastomoses

THE IMPORTANCE OF EARLY DIAGNOSIS IN CONGENITAL HIP DISLOCATION

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Background: Developmental dislocation of the hip is a complete or partial displacement of the femoral head out of the acetabulum. This condition occurs due to congenital hip dysplasia of which etiopathology is unknown. However, there are some risk factors which include: feminine sex, advanced gestational age, advanced age of the mother, genetic factors etc. To obtain the best results, treatment is recommended to begin as early as possible. Uncorrected, this pathology can lead to long-term morbidity such as inability to walk, chronic pain and degenerative arthritis. **Objective:** The main objective of this study is to determine if there is a correlation between the age of diagnosis and the method of treatment. Other objectives are to analyze the age at first admission to the clinic, the type of treatment used and the early postoperative outcome. **Material and methods:** We performed a retrospective study targeting all the patients admitted to the Pediatric Surgery and Orthopedics Department of the County Emergency Clinical Hospital of Târgu-Mureș which were diagnosed with congenital hip dislocation between

the years 2013 and 2022. The data were gathered from the patients' observation sheets and analyzed with statistical programs IBM SPSS Statistics 20. The number of patients was 62, which corresponds to a number of 199 hospitalizations. **Results :** Regarding the age of first admission to the clinic, 32 out of 62 patients were before the age of 6 months, 18 between 6 and 12 months, 9 between 12 months and 4 years and only 3 over 4 years. The treatment applied was in 69.35% of cases an orthopedic one while the remaining patients had, at least, one surgical procedure. A Kendall's tau-b correlation was run to determine the relationship between the age of first treatment and the type of therapy used amongst 62 participants. There was a medium, positive correlation which was statistically significant (τb = 0.420, p = 0.00006). **Conclusions:** An early diagnosis is essential for prompt treatment which leads to great results. Moreover, non-surgical treatment is the best option for patients with congenital hip dislocation. Screening of the developmental dysplasia of the hip is an extremely useful and necessary procedure to identify people who are prone to this disease so they can be admitted without delay to a specialized clinic.

Keywords: hip, dislocation, orthopedics

EXTERNAL FIXATION VERSUS INTRAMEDULLARY NAILING – ADVANTAGES AND DISADVANTAGES OVER THE LAST YEARS

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Background: The external fixator and the centromedullary system are some of the most appreciated and known methods for the treatment of fractures. Each system has advantages and disadvantages in reducing and stabilizing fractures with internal and external fixation. **Objective:** The goal of the study was to evaluate the effectiveness of intramedullary nailing against external fixation as the initial treatment for fractures. **Material and methods:** With the help of the keywords "external fixation", "reduction", "stabilization", "intramedullary nailing", we searched in the , Google Scholar, Cochrane, PubMed, Web of Science, Elsevier Embase and Cinahl databases the mos valuable results . We selected and integrated in our paper, the most representative results and tried to use only articles written in the last 5 years. With the help of the found papers, we tried to balance the advantages and disadvantages of the 2 systems and to find the best situations for their use, in relation to the medical systems in the world and in our country. **Results :** The external fixator is chosen by doctors and clinics because of the short operative times so necessary for polytrauma patients, while Intramedullary Nailing is chosen, especially for isolated fractures, because it has better healing rates, quick discharge and a lower rate of complications (some studies coming with a high reporting of infections). **Conclusions:** Both systems have their advantages and disadvantages, but each doctor and each clinic has the right to choose which stem systems are feasible according to the quality/price and risk/benefit ratio necessary and available in that clinic or in that country.

Keywords: centromedullary system, external fixation, reduction, stabilisation

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SEVERE OBSTETRIC HAEMORRHAGE DURING CESAREAN SECTION FOR PLACENTA ACCRETA SPECTRUM

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Background: Placenta accreta spectrum (PAS) disorders are severe maternal complications characterized by abnormal adherence of the placental trophoblast to the uterine myometrium. Placenta previa is a major risk factor for PAS and placenta previa itself is a severe pregnancy complication that can lead to substantial postpartum hemorrhage and organ injuries. **Objective:** The aim of the present work was to assess current practice in obstetric hemorrhage due to PAS and placenta previa, in the light of the rising cesarean section rate to an unprecedented level. **Material and methods:** A 33-year-old woman with an obstetric history of two term lower uterine cesarean deliveries presented for antenatal care. Ultrasound at 25 weeks showed an invasive placenta previa at the incision site of the prior cesarean sections, with loss of myometrial interface and bladder wall invasion, suggestive of placenta percreta. Magnetic resonance imaging (MRI) then showed progression to percreta with possible invasion into the urinary bladder wall. A scheduled cesarean hysterectomy at 35 weeks, to reduce the potential for adverse perinatal outcomes, was performed by a multidisciplinary team involving senior obstetricians, urology team, intensive care senior specialist and transfusion team. At the time of surgery, the placenta protruded through the

previous cesareans incision site. A 2500-gram healthy female neonate, Apgar 8, was delivered, before hysterectomy. Because of the invasion of the urinary bladder wall to mucosa, a resection of the bladder dome was necessary. During surgery, massive bleeding □□□estimated blood loss o f 7,5l - with hemorrhagic shock occurred, imposing bilateral hypogastric artery ligation and extensive transfusion of 42 units of blood products. **Results :** Placenta accreta is considered a severe pregnancy complication that may be associated with massive and potentially life-threatening intrapartum and postpartum hemorrhage. According to the current estimates, the incidence rate of PAS will increase to 1 in 200 women undergoing cesarean delivery by 2025. Romania has one of the highest cesarean rates in Europe, and to improve the clinical outcomes of this severe maternal complication, clinical guidelines as well as a multidisciplinary approach to alleviate maternal and surgical morbidities are essential. **Conclusions:** Along with a steady increase of cesarean sections, there is compelling evidence that PAS will become more frequent and will change the landscape of obstetric hemorrhage. An early detection and a multidisciplinary management is highly recommended in order to reduce the risk of massive obstetric hemorrhage.

Keywords: placenta accreta spectrum, placenta previa, cesarean section, multidisciplinary management

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TRANSVERSUS ABDOMINIS RELEASE (TAR) FOR COMPLEX INCISIONAL HERNIAS: LESSONS FROM THE FIRST HUNDRED

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Background: Of the many techniques for abdominal wall reconstruction in complex incisional hernias, posterior component separation with transversus abdominis release continues to gain popularity and it is increasingly used with promising long-term results. **Objective:** Our objective was to evaluate early and late results of the efficacy of transversus abdominis release with retrorectus mesh reinforcement in a series of complex incisional hernias. **Material and methods:** From November 2014 to March 2019, patients who underwent transversus abdominis release procedure were identified in the Department of Surgery database and were retrospectively reviewed. Outcome measures included demographics, pre- and peri-operative details, wound events and recurrences. **Results :** One hundred consecutive transversus abdominis release procedures (15.7% of all incisional hernias) were analyzed. Mean age was 61 with a mean body mass index of 35.7 kg/m2 (range 25□□□□□□Diabetes and chronic obstructive pulmonary disease were the main major comorbidities. Mean hernia defect area was 580 cm2 (range 180□□□□□□□□Twenty surgical site events occurred of which 13 were surgical site infections. Only two patients required mesh debridement and no mesh was removed. At least 1-year follow-up was obtained in 78 patients with 8% recurrence rate (7 patients). **Conclusions:** The study concludes that transversus abdominis release with retrorectus mesh reinforcement provides a sound repair with acceptable morbidity, even in patients with large defects. The recurrence rate was relatively low and comparable to other studies, transversus abdominis release is a promising technique for the reconstruction of challenging ventral hernias, and its popularity is increasing in surgical practice.

Keywords: incisional hernia, transversus abdominis release, posterior component separation, release

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OXFORD ARTHROPLASTY FOR MEDIAL KNEE OSTEOARTHRITIS: IS IT A GOOD OPTION?

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Background: The Oxford unicompartmental knee arthroplasty (UKA) is indicated for patients with primary or secondary medial osteoarthritis of the knee with a functionally intact anterior cruciate ligament (ACL) and knees that have no retro-patellar or lateral arthritis and have no more than 15% varum. UKA can provide shorter recovery times, hospital stays, and better physiological function than classic total knee arthroplasty. Also, the long-term follow-up demonstrated by Oxford UKA is good to excellent. **Objective:** The objective of this case series is to evaluate the knee articular function after Oxford UKA using the Oxford Knee Score (OKS) and the patient's symptom and functional state at 6 and 12 months after Oxford UKA compared with the preoperative assessment. **Material and methods:**

We report a short case series consisting of 10 patients - 11 UKA, 8 women with a mean age of 54 (range 48-60), and 2 male patients with a mean age of 58 (range 55-61) who have been operated on for medial osteoarthritis. One patient was simultaneously operated on bilaterally. Inclusion criteria include primary or secondary anteromedial knee osteoarthritis stage 3 or 4, genu varum < 15 degrees, with functionally intact ACL, with retro-patellar arthritis grade 1 or maximum grade 2. Exclusion criteria included arthritis in the external compartment, tri-compartmental arthritis, the lack of intact ACL, and genu varum > 15 degrees. All patients were adequately preoperatory prepared and had the surgery in combined spinal-epidural anesthesia with pneumatic tourniquets and tranexamic acid. The Zimmer Biomet Oxford 2 Partial Knee prosthesis with cross-linked polyethylene mobile bearing was used in all cases. The patients were mobilized 6-12 hours after surgery and discharged 3 days post-surgery. The outcome was measured using a 12-item knee OKS questionnaire with two domains, knee pain, and function. Five response options for each question are combined into a single score ranging from 0 to 48, with high scores indicating low disability. **Results :** The mean follow-up was one year. The OKS questionnaire was collected at the preoperative consultation. The mean OKS change (95% CI) was 32.6 (28.37 to 36.84) reflecting high patient satisfaction. We had one failure at 10 weeks post-surgery polyethylene mobile bearing dislocation which was later revised with a bigger insert. No other complications in this series. **Conclusions:** Oxford UKA is a good option for a select niche of patients. The procedure is safe, reproducible, and efficient in accordance with the literature data.

Keywords: oxford prosthesis, arthroplasty, polyethylene, ACL

VERTICAL RECTUS ABDOMINIS MYOCUTANEOUS FLAP (VRAM) - A SURGICAL TECHNIQUE TO COVER LARGE PELVIC OR PERINEAL DEFECTS

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Background: Musculo-cutaneous flaps play a role in pelvic reconstruction of patients submitted to radical resections for malignant disease. **Objective:** To describe the surgical technique of vertical rectus abdominis musculo-cutaneous flap and its indications and possible complications. **Material and methods:** VRAM flap procedure was used to cover large perineal defects in 2 patients both previously operated and irradiated submitted to a total infralevatorian exenteration with vulvectomy for central pelvic recurrences after vulva cancer involving perineum, lower vagina and urethra in the First Obstetrics and Gynecology Clinic in Targu Mures. **Results :** The skin island was harvested from the right upper abdomen using as a vascular supply the right inferior epigastric artery. The paddle shape skin flap was not separated from the anterior rectus fascia aiming to preserve the perforated vessels from the muscle to the skin. The posterior rectus fascia is left intact to reduce the frequency of postoperative hernias. The skin island, together with the right rectus abdominis muscle is pulled through the empty pelvis, tailored, and sutured to the remaining perineal skin. **Conclusions:** The VRAM flap could be a useful technique in gynecologic and rectal oncologic surgery.

Keywords: pelvic exenteration, musculo-cutaneous flap, vulva cancer

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CERVICAL CANCER IN PREGNANCY: NEOADJUVANT CHEMOTHERAPY, FOLLOWED BY CONCOMITANT CAESAREAN SECTION PLUS RADICAL HYSTERECTOMY, AND ADJUVANT RADIOTHERAPY - A CASE REPORT AND REVIEW OF THE LITERATURE

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Background: Cervical cancer during pregnancy is a challenging association. The treatment aim is to save both mother's and baby's life, but also, if possible, to preserve the fertility. **Objective:** To analyze the therapeutic protocol in a patient with a cervical cancer discovered in the second trimester of pregnancy, who was submitted to neoadjuvant chemotherapy followed by surgery and adjuvant radiotherapy. **Material and methods:** A G4, P1 with a squamous carcinoma of the cervix stage IB3 was referred at 21 gestational weeks in the First Obstetrics and Gynecology Clinic in Targu Mures for obstetrical and oncological management. **Results :** MRI was performed to assess the cervical cancer staging. Because the distance between the tumor and the cervical internal os was only 6 mm, the case is considered inappropriate for an abdominal radical trachelectomy during pregnancy. The patient

is referred then for 3 cycles of chemotherapy at 22, 25 and 28 gestational weeks, with Cisplatin as monotherapy due to an allergic reaction to Paclitaxel during the first cycle. Between the second and the third chemotherapy cycles the gravida experiences a premature rupture of fetal membranes. The inflammatory parameters remain normal under prophylactic antibiotics, so the obstetrical conservative management is followed and the third chemotherapy cycle is administered consequently. At 32-33 gestational weeks a caesarean section is performed and a 2040g newborn is delivered with normal adaptation. A concomitant radical hysterectomy + pelvic lymphadenectomy is performed. During surgery, tumor invasion in the right parameter involving the ureter is found so a ureteric partial resection and a ureteric-bladder anastomosis and a bilateral ovarian transposition are performed. Post operative evolution of both mother and newborn is in normal parameters. The patient is sent for adjuvant radiotherapy. **Conclusions:** The therapeutic management of cervical cancer during pregnancy is extremely difficult and must be individualized depending on the stage, gestational age, and the patient's will to preserve her pregnancy and fertility.

Keywords: cervical cancer, pregnancy, chemotherapy

PRIMARY PELVIC EXENTERATIONS: OUR INITIAL EXPERIENCE IN 27 PATIENTS

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Background: A pelvic exenteration can be achieved in specific patients in late stages of cancer as a curative option when the tumor is still limited to the pelvis and mainly when a vesico- or a recto-vaginal fistula is present. **Objective:** To analyze our intraoperative and postoperative complications, oncological results and overall survival on our patients submitted to a primary pelvic exenteration. **Material and methods:** A retrospective study of 27 patients who had a primary pelvic exenteration performed on them, in a tertiary university hospital, between 2011 and 2022, was done. **Results :** The patients' mean age was 54.7 years and their surgical indications were: stage IVa cervical cancer (13 cases, 48.1%), stage IVa vaginal cancer (7 cases, 25.9%), stage IVa endometrial cancer (1 case, 3.7 %), stage IVa bladder cancer (4 cases, 14.8%), stage IVb rectal cancer (1 case) and undifferentiated pleomorphic sarcoma of the pelvis (1 case). Anterior, posterior and total pelvic exenterations were performed in 11, 5 and 11 of the cases, respectively. Related to levator ani muscle, 14 exenterations were supralevatorian, 12 infralevatorian, and 5 infralevatorian with vulvectomy. All interventions were completed without major complications. 8 patients (30.7%) developed complications shortly after the intervention, and 5 of them (17.4%) had to be reoperated. Two perioperative deaths were recorded (7.4%), both caused by cardiovascular complications. Two late complications □□□a urostomy stenosis and a parastomal hernia needed surgical repair. The patients were subsequently analyzed for a period of 40 months, in which 9 (33.3%) patients didn't survive. The observed survival rate was an average of 33 months. The survival rates were 83% for a 2 year period and 46% for a 5 year period. **Conclusions:** Primary pelvic exenteration can be associated with long-term survival, but with possible postoperative complications which could be lethal.

Keywords: Gynecology, Exenteration, Bladder

EVALUATION OF RISK FACTORS IN THE OCCURRENCE OF INTESTINAL OCCLUSIONS BY ADHESION SYNDROME

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Background: People with a history of surgery, in the abdominal cavity, most often develop adhesions or bride. The presence of adhesions is the most common cause of the intestinal occlusion occurance. This is mainly manifested by diffuse abdominal pain, nausea, vomiting, absence of intestinal transit and abdominal distention. **Objective:** The purpose of this work is to categorize patients: with intestinal occlusion through extensive adhesion syndrome, with a history of major surgeries in the abdominal cavity, depending on the average length of time that patients spent hospitalized, as well as depending on the age at admission, the symptoms at admission and complications of the operation. **Material and methods:** We conducted a retrospective study, on a group of 58 patients, out of which 24 men and 34 women, with the purpose to assess the risk factors that lead to intestinal occlusion through adhesion syndrome. The study took place within the General Surgery Department I of the Târgu Mureș Emergency County Clinical Hospital and included patients with intestinal occlusion through adhesion

syndrome continuously hospitalized on this ward for medical care, between January 2020 and December 2022. **Results :** In the last 3 years, we have registered a total of 58 patients, of which 59% were women and 41% were men. The average age at admission was 68 years for men and 65 for women. Most commonly men were hospitalized in the fifth decade of age, and women reached a peak in the seventh decade. Most often patients presented themselves with abdominal pain, 93%, then vomiting, 90%, constipation, 86% and abdominal distention, 83%. 52% of patients have a history of surgery. Appendectomy, 14%, and cholecystectomy, 12%, were the most common interventions present in the personal pathological history, as well as operations in the genital sphere in women, 14%. The most common complication was suppuration of the superficial wound, in a percentage of 10% and the appearance of hemorrhagic ulcer in a percentage of 2% . The average duration of hospitalization by sex was 11 days in men and 8 days in women. **Conclusions:** Analyzing all risk factors, we have found that a personal medical history of surgery plays a major role in the appearance of intestinal adhesions and can cause intestinal occlusion at some point in the patient's life.

Keywords: occlusion, adhesions, surgical history, abdominal pain

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MORPHOPATHOLOGICAL FINDINGS IN GASTRIC SPECIMENS AFTER BARIATRIC SURGERY

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Background: Obesity is a severe health care problem, with alarming prevalence in the last years, that impacts the patients' overall health as well as their survival rate, often associating life threatening comorbidities. Bariatric surgery is considered to be the most effective treatment option for patients having severe obesity (BMI>40) or class II obesity and worrying comorbidities, such as high blood pressure, type II diabetes mellitus and other treatment refractory diseases. Regarding bariatric procedures, there are 3 types of interventions: restrictive (limiting the food intake capacity), malabsorptive (reducing the absorption surface of the gut) and mixt **Objective:** The aim of our study was to analyse the morphological changes in the gastric mucosa of obese patients, who underwent bariatric surgery. **Material and methods:** We conducted a retrospective study by analysing clinical, surgical and histopathological data of 50 patients who were admitted to our surgical department between 2017-2022 with severe obesity or class II obesity with associated comorbidities and who underwent bariatric surgery. **Results :** The majority of the patients were females (70%), aged between 40 and 50 (30%), 22% having comorbidities alongside severe obesity. Laparotomy with gastro-jejunal by-pass was performed in 2% of cases, 2% underwent gastric bypass and for the rest of 96% gastric sleeve surgery was done. The histopathological study showed that only 4% of the patients presented normal gastric mucosa,2% had gastric angiodysplasia and 94% were suffering of gastritis, from which 44% had active Helicobacter pylori gastritis. **Conclusions:** Obesity can be a major factor in the etiology of gastric diseases, especially in gastritis and gastric ulcers and bariatric surgery not only improves the patients' physical appearance, but also their health and survival rate, with an important role in the improvement and remission of comorbidities associated with obesity.

Keywords: Bariatric surgery, Obesity, Gastritis, Helicobacter pylori

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OBSTETRICAL FACTORS ASSOCIATED WITH WOMEN UNDERGOING PSYCHOLOGICAL COUNSELING IN EARLY POSTPARTUM

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Background: An inadequate psychological adaptation in women prior and during the transition process to motherhood can occur at any time during pregnancy and especially during postpartum. Numerous obstetrical factors can be directly correlated with an increased risk of alteration of psychological status of the new mother. Therefore a proper knowledge about the risk factors associated with this scenario can bring help into providing the psychological counseling to the susceptible patients in order to facilitate their recovery or to diagnose any psychological or psychiatric condition early. **Objective:** The aim of this study was to analyze the most common obstetrical factors associated with the requirement of psychological counseling in postpartum women. **Material and methods:** We retrospectively analyzed 57 female patients, giving birth between 2018 and 2021 in the Obstetrics and Gynecology ward of Emergency County Hospital of Târgu Mureș, that benefited from psychological

counseling in their early postpartum. **Results :** The following data was obtained: 16 (28%) patients were assigned to the extreme maternal age group, less than 20 or more than 35 years of age; 26(46%) were primipara, 19(33%) were secundipara, while the rest of 12 (21%) had history of 3 or more childbirths; regarding the gestational age, 1 (2%) gave birth before 25 weeks of gestation, 4 (7%) between 25 and 27 weeks, 6 (10%) between 28 and 32 weeks, 10 (18%) between 33-37 weeks and the rest of 36 (63%) later than 37 weeks of gestation; at the same time, in 8 (14%) of these cases the birthweight was lower than 1500g, in 5 (9%) cases between 1500g and 1999g, in 8 (14%) cases between 2000g and 2499g and in 36 (63%) cases above 2500g; in 10 (18%) cases, fetal abnormalities have been diagnosed; 4 (7%) patients experienced stillbirth; in addition, 27 (47%) delivered through C-section while 30 (53%) delivered vaginally; furthermore 28 (49%) patients presented psychiatric history or psychological disturbances during hospitalization. **Conclusions:** According to the risk factors associated to increased probability of negative psychological birth experience, which have already been described in the medical literature and also according to the prevalence of each obstetrical diagnosis, this study indicates the presented obstetrical factors such as primiparity, prematurity, C-section delivery and psychiatric history as strong risk factors associated to increased need of psychological counseling in postpartum.

Keywords: obstetrical factors, postpartum, psychological counseling

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THE TOTAL LAPAROSCOPIC RADICAL HYSTERECTOMY: OUR INITIAL EXPERIENCE

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Background: As medicine constitutes a domain of perpetual innovation and advancement, the procedures and treatment options in multiple pathologies, including neoplasms, have become varied. In that sense, it is only natural that the practice of a minimally invasive approach represents the future of surgery. In the case of cervical cancer, the total radical laparoscopic hysterectomy (TLRH) is regarded as a viable treatment option. It entails the laparoscopic removal of the uterus, with or without the adnexae, with the superior part of the vagina and the pelvic lymph nodes. It is especially indicated for small tumors or for patients with a conization prior to the intervention. **Objective:** The aim of this study is to present the practice of total radical laparoscopic hysterectomy at the First Obstetrics and Gynaecology Clinic in Târgu Mureș, as it has been a controversial surgical procedure subjected to an ongoing debate in recent years. **Material and methods:** A TLRH procedure was performed on a series of 13 patients diagnosed with cervical cancer stages 1A1 - 1B1. Some of the patients underwent prior conization, which has become the standard of practice at the previously mentioned clinic. Laparoscopic lymphadenectomy has also been done in order to evaluate the lymphatic dissemination. **Results :** The participants were aged 32 to 55 (with a mean of 43.1 years). The surgery was performed with no intraoperative complications and most of the patients experienced a favorable recovery. The postoperative complications encountered in our series were the following: a left ureteric-vaginal fistula in one patient, who needed reoperation and a Lich-Gregoir ureteral-bladder reimplantation, bladder disfunction and prolonged catheterization in 10/13 patients and one dehiscence of the vaginal suture. All patients presented clear resection margins. 92.3 % (12/13) of patients are currently alive and disease free, 15.4 % (2/13) followed postoperative adjuvant radiotherapy and 7.69 % (1/13) developed cancer recurrence and has died of the disease. **Conclusions:** Total laparoscopic radical hysterectomy is described as a safe treatment choice that can be used as the modus operandi for cervical cancer, when performed after a prior conization or for small tumors.

Keywords: Total radical laparoscopic hysterectomy, Cervical cancer, Complications, Results

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OUTCOME DIFFERENCES BETWEEN SUBARACHNOID HEMORRHAGE AND SUBARACHNOID HEMORRHAGE WITH INTRACEREBRAL HEMATOMA: A COMPARATIVE ANALYSIS

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Background: Aneurysmal subarachnoid hemorrhage (aSAH) is an acute and severe neurological condition that occurs when there is bleeding in the subarachnoid space of the brain, typically as a result of a ruptured cerebral

aneurysm. In our study, the location of the aneurysm was specifically in the anterior communicating artery. It is a condition with a high mortality and morbidity rate and can negatively impact the quality of life of surviving patients. **Objective:** By analyzing the clinical, paraclinical, and treatment characteristics of each case we want to highlight the risk factors and demonstrate, through different grading systems, the implications of intracerebral hematoma (ICH) on the prognosis of affected patients. **Material and methods:** We have revised the database of the Neurology department of Spitalul Clinic Judeţean de Urgenţă Târgu-Mureș regarding subarachnoid hemorrhage caused by aneurysmal rupture of the anterior communicating artery and found 104 qualifying cases between 2014 and 2022, comprising 87 (83.65%) patients with SAH (38 males and 49 females) and 17 (16.35%) patients with SAH and intracerebral hematoma (9 males and 8 females). The study participants underwent treatment using two techniques, aneurysmal clipping and coiling by embolization. **Results :** To test our hypotheses, we conducted multiple statistical tests, including t-tests, regression analysis, U-tests, and chi-square tests, which were chosen based on their appropriateness for our research questions and the type of data we collected. Our analysis revealed a significant association ($\chi 2 = 5.2619$, df = 1, p-value = .021797) between the presence of ICH and poorer outcomes, as well as lower performance status at discharge. Additionally, patients with intracerebral hematoma had a significantly longer duration of hospitalization (mean length of stay = 20.17 days) compared to patients with SAH alone (mean length of stay = 14.51 days). However, the age distribution did not show a significant difference ($t = 0.5150$, p-value = .6077) at the $p < .05$ level. **Conclusions:** While SAH has been widely studied, the outcomes of patients with SAH-ICH have not been extensively compared to those with SAH alone. Understanding the differences in outcomes between these two patient populations is crucial for optimizing treatment strategies and improving overall patient care. By conducting a comparison, this study aims to provide valuable insights that will contribute to the development of more effective clinical approaches for the management of SAH and SAH-ICH patients.

Keywords: Subarachnoid Hemorrhage, Intracerebral Hematoma, Outcome Differences, Comparative Analysis

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ECMO IN A PATIENT WITH COMPLEX CARDIAC PATHOLOGY AND INCREASED PULMONARY RESISTANCE.

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Background: Patients with aortic and mitral valve pathology can develop dilated cardiomyopathy and increased pulmonary resistance that can be prohibitive. Extracorporeal Membrane Oxygenation (ECMO) is a life support system used to treat cardiac and pulmonary dysfunction. Patients with increased pulmonary resistance are at an increased risk of perioperative morbidity and mortality when undergoing cardiac surgery. **Objective:** ECMO therapy in a complex cardiac patient **Material and methods:** A 43-year-old patient known with dilated cardiomyopathy, annuloaortic ectasia, aortic root aneurysm, severe aortic insufficiency, moderate tricuspid and mitral insufficiency, severe pulmonary hypertension with an increased pulmonary resistance (5.23 Uwood), NYHA III heart failure, essential hypertension grade III, chronic venous disease, chronic alcoholism, smoking and dyslipidemia was surgically treated by modified Bentall procedure and "Alfieri" mitral valve repair. Intraoperatively, the patient presents low flow syndrome despite maximal inotropic and vasoactive support, heart with important hypokinesia and cannot be weaned from the bypass pump which is why peripheral veno-arterial ECMO is instituted. Postoperatively, the evolution is good with the improvement of cardiac function but with congestion and loading of the lungs, which is why peripheral veno-venous ECMO is mounted with favorable evolution. On the 7th day ECMO was removed, the patient was extubated and discharged on the 15th postoperative day cardiac stable and without subjective complaints. **Results :** Patients with increased pulmonary reistance who are scheduled for cardiac surgery require complex and well-thought decision making by a multidisciplinary team, and perioperative planning to ensure a good outcome. Taking into account the complex cardiac pathology and increased pulmonary resistance, the surgical intervention was on the limit but it was the only chance of success for the patient in whom ECMO was the main pillar. **Conclusions:** High-risk surgery, like cardiac surgery is associated with increased mortality and morbidity in patients with increased pulmonary resistance and ECMO can be a therapeutic solution.

Keywords: ECMO, pulmonary resistance, dilated cardiomyopathy

SURGICAL TREATMENT IN LEFT COLON CANCER – POSTOPERATIVE RESULTS

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Background: Colorectal cancer is the third most prevalent form of cancer in men and the second most common in women, worldwide, accounting for 10% from all neoplastic cases. At presentation, a significant proportion of patients, ranging from 20-50%, already experience symptoms related to complications such as obstruction, perforation or bleeding, which are typically associated with an advanced stage of the disease. **Objective:** The aim of this study was to assess the surgical treatment used in left colon cancer (LCC) in correlation with the achieved postoperative results. **Material and methods:** We conducted a retrospective study on 212 cases of patients who underwent surgical treatment for LCC at the 1st Surgical Department of the County Emergency Clinical Hospital of Targu-Mures, during a five years' interval (January 2018 to December 2022). Data were collected on clinical and laboratory parameters, results of pathological evaluation of the tumors. Using statistical analysis, we aimed to establish correlations between these factors, the surgical treatment applied and the immediate postoperative outcome. **Results :** Among the 212 patients with LCC, 61.3% were male and 38.7% were female. Of these cases, 43.4% required emergency surgery, while 56.6% underwent elective procedures. The tumor was located in the left-sided colon in 125 cases, in the recto-sigmoidian junction in 79 cases and the splenic angle in 8 cases. Curative surgical treatments included recto-sigmoidian resection (45.7%), segmental resection of sigmoid colon (20.3%), left hemicolectomy (15.1%), subtotal colectomy (8.5%), total colectomy (3.3%) and for 15 patients the only choice was a palliative surgery (an internal or an external derivation technique). The postoperative morbidity was of 11.8% and the immediate mortality was represented by 11 cases. **Conclusions:** Patients with left colon cancer, often present with an advanced disease stage, in emergency conditions, when radical surgery becomes difficult to perform. Nonetheless, favorable postoperative outcomes were attained for the majority of cases. In some instances, palliative treatment was the sole feasible option used to improve the patient's quality of life.

Keywords: left colon cancer, surgical treatment, postoperative results

SURGICAL TREATMENT OF PATIENTS WITH GASTRIC CANCER - A 5- YEAR ANALYSIS

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Background: Gastric cancer represents an important public health problem, being the second frequent among the digestive malignancies and one of the main causes of cancer mortality. Usually the symptoms appear at an advanced stage of the disease, making the surgical radical treatment more difficult to obtain and only as a part of a complex therapeutic management. **Objective:** The aim of this study was to evaluate patients diagnosed with gastric cancer, according to the types of surgical therapeutic approach and to analyze their early postoperative results. **Material and methods:** We conducted a retrospective study on a number of 188 patients hospitalized and operated for the diagnostic of gastric cancer, from January 2018 to December 2022, in the 1st Surgical Department of the County Emergency Clinical Hospital of Târgu Mureș. Emergency admitted and elective patients were included. We collected demographic and clinical information, biological parameters, data on operative procedures and pathological results to create a database and, using statistical analysis, we tried to obtain correlations with the postoperative outcome. **Results :** In this 5-year interval, a predominance of male patients with gastric cancer (66%) and of patients in the 61 to 70 years of age interval were noted. Emergency interventions were performed in 47 cases (25%), and an elective procedure was done for the rest of the patients (75%). In 47 of cases, a total gastrectomy was performed, for 117 patients were made subtotal gastrectomies and for another 24 only a diagnostic laparotomy or laparoscopy, with biopsy, was done. The early postoperative rate of overall complications was of 18% and the mortality in the studied group was represented by 20 patients. **Conclusions:** In most of the cases with gastric cancer to whom a radical procedure was done, satisfactory results were achieved. The morbidity and mortality rates are correlated to the advanced stage of the disease and the pathological history of the patient.

Keywords: gastric cancer, gastrectomy, postoperative complications

LYMPHADENECTOMY IN GASTRIC CANCER

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Background: Over the years, various studies have attempted to identify the optimal type of lymphadenectomy, that should accompany gastrectomy in the treatment of gastric cancer. **Objective:** This study aims to analyze the surgical procedures and the types of ganglion dissections used in gastric cancer. It's objective is to determinate the duration of the surgical intervention, the postoperative complications and the short-term results. **Material and methods:** Out of a group of 251 patients, who were hospitalised in the 1st Department of Emergency County Hospital Tîrgu Mureș in the period 2010-2021, we studied a number of 181 patients who fit the criteria of undergoing gastric surgery. Data were taken from observations sheets, discharge summary and histopathological examination sheets. We analyzed: age, sex, types of anastomosis and lymphadenectomies, localization, tumor stage. Included data were statistically analyzed using Student T test, Pearson's chi-square test. **Results :** The majority of patients enrolled in the study were male (127 patients; 70%), with an average age of 70,22 years. The most common type of gastric neoplasm was adenocarcinoma (132 cases; 72,93%), with a frequent localization at the antro-pyloric level (59,44%; 107 patients). D I lymphadenectomy was performed in 74,03% of patients, D II in a percentage of 28,89%, and D III only in 13 patients (7,18%). The average number of nodes resected was 23,54 ± 13,76 ganglions. Eso-jejunal anastomosis was the most used reconstruction (41,99%). Most patients presented with gastric neoplasm in the stages pT3N0 and pT4aN3a (13 cases each, 7,18%). **Conclusions:** Numerous aspects are involved in the choice of gastric cancer treatment. Ganglion dissection associated with gastric resection, plays an important role.

Keywords: gastric cancer, lymphadenectomy, anastomosis, gastric resection

BIOCHEMICAL PREDICTIVE SCORE OF CONVERSION IN LAPAROSCOPIC CHOLECYSTECTOMY

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Background: Various scoring systems have been developed to help improving the diagnosis of cholecystitis and the assessment of surgical approach. The parameters that are usually taken into consideration are both clinical and laboratory, along with imaging (CT). **Objective:** The aim of this study is to evaluate different biochemical factors that can be involved in the intraoperative conversion of laparoscopic cholecystectomy (LC) to open cholecystectomy (OC). **Material and methods:** We performed a retrospective study of 85 patients hospitalized in the 1st Department of Emergency County Hospital Târgu Mureș between 2015□□□□□□□Data were taken from the hospital records from the observation sheets and the discharge summary. We analyzed: age, sex, previous attacks with a more in depth medical history, imaging and laboratory findings. Furthermore, data obtained were statistically analyzed with Student T test, Pearson's chi-square test. **Results :** From a total of 85 conversions from LC to OC, 53 patients were over 65 years old (62,4%), with a majority of female patients (48 cases, 56,5%). Laboratory findings showed: leukocytosis in 56 cases (65,9%), modified liver enzymes in 43 cases (50,6 %), hyperbilirubinemia in 44 cases (51,8%) and in fewer patients: hyperamylasemia (14 cases, 16,5%) and hypercholesterolemia (17 cases, 20%). CT-scan showed dilated ducts in 9 cases (10,6%). The distribution of cholecystitis was dominated by acute forms, 62 cases (72,9%). All patients presented previous attacks and a distended or contracted gallbladder (100%). Surgical history was present in 46 cases (54,1%). The medical history ranked comorbidities as it follows: hepatic (60 cases, 70,6%), cardiac (57 cases, 67,1%), pulmonary (15 cases, 17,6%). The score value was obtained between 5-20 points to an average value of 13,82 points. Statistical value was attributed to: age ($p < 0.001$), sex ($p = 0.005$), leukocytosis ($p=0.030$), liver enzymes ($p=0.001$), hyperamylasemia ($p=0.003$), hyperbilirubinemia ($p<0.001$), type of cholecystitis ($p=0.003$), preexisting affections: hepatic ($p<0.001$), cardiac ($p<0.001$), pulmonary ($p=0.003$), (95% CI). **Conclusions:** A correctly targeted assessment, based on clinical, paraclinical and imaging criteria, could prevent the conversion of LC to OC.

Keywords: conversion,, cholecystectomy,, score

FACTORS ASSOCIATED WITH THE RISK OF RECURRENCE AFTER SURGICAL TREATMENT OF OVARIAN ENDOMETRIOMA

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Background: Endometriosis is a benign chronic pathology affecting women of any age and is defined by the presence of endometrial tissue lesions outside of the uterine cavity (pelvic, abdominal, or thoracic) and is predominantly associated with infertility, chronic pelvic pain and dyspareunia. The ovarian endometrioma is one of the subdivisions of endometriosis and is characterized by the presence of endometrial tissue in the ovarian parenchyma and on the ovarian surface, mainly affecting patients of reproductive age, being one of the main causes of dysmenorrhea, infertility and continuous pelvic pain. **Objective:** The purpose of this presentation is to find and highlight the factors associated with the recurrence of ovarian endometrioma after surgical intervention and medical treatment. **Material and methods:** We have conducted a retrospective analysis of 63 female patients aged between 21 to 59 years old, who underwent the first or the second surgical treatment for ovarian endometrioma at the Obstetrics and Gynecology I Department of the Emergency Hospital Târgu Mureș, starting from November 2020 to November 2022. The patients underwent laparoscopic surgery that revealed the presence of endometriosis. The subsequent histopathological examination of the removed cyst confirmed the diagnosis of ovarian endometrioma. We collected the following data: name, age, diagnosis, histopathological examination, staging and localization of endometriosis, presence of adnexal mass syndrome and surgery type. **Results :** Out of o total of 63 patients, 12 (23,52%) underwent surgery for ovarian endometrioma recurrence, 44 (69,84%) of them presented adnexal mass syndrome, 49 (77,7%) presented with pelvic endometriosis and on the histopathological examination 20 (31,74%) of them revealed cytological atypia. **Conclusions:** The presence of ovarian endometrioma indicates that the endometriosis disease is advanced and is associated with pain, infertility and an altered quality of life for the patient. Even if the treatment is effective, unfortunately, ovarian endometriomas have a high risk of recurrence. Therefore, the main difficulty is the lack of definitive treatment, thus the symptoms may reoccur.

Keywords: ovarian endometrioma, recurrence, endometriosis, infertility

IMPORTANCE OF BODY MASS INDEX IN TOTAL KNEE ARTHROPLASTY REHABILITATION

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Background: Given the span of total knee replacement (TKR) surgery, rehabilitation is demanding but essential to the procedure's success. Body mass index (BMI) is a commonly used indicator of obesity and has been correlated with patient outcomes in many surgical fields. Uncertainty still persists over how BMI affects total knee arthroplasty recovery. **Objective:** This scoping review's focus is to investigate the significance of BMI in total knee arthroplasty rehabilitation. **Material and methods:** The PRISMA-ScR guidelines were used to perform a scoping review of the current literature. The inclusion criteria were limited to studies published in English in the last 10 years, that investigated the relationship between BMI and total knee arthroplasty recovery in adult patients, had a minimum 2 years follow-up and inlcluded more than 10 pacients. Due to high heterogenity of the studies, a meta-analysis was not suitable to perform. **Results :** A total of 6 studies were eligible for inclusion. These studies' findings imply that BMI is crucial for post-knee arthroplasty recovery, higher BMIs have been associated with poorer post-operative functional scores. Complications include infections, venous thromboembolism, and implant failure were all correlated to higher BMI. Additionally, higher BMI (≥30 kg/m²) was associated with poorer functional scores and a longer hospital stay. **Conclusions:** This scoping review highlights the importance of BMI in post-knee arthroplasty recovery. According to the research, individuals with higher BMIs may need more rigorous rehabilitation and post-treatment care to achieve a full recovery. Surgeons should consider educating their patients before surgery and encourage them to loose weight before undergoing TKR'

Keywords: : knee arthroplasty, body mass index, post-operative recovery

THE PREVALENCE OF TESTICULAR TORSION DIAGNOSIS IN THE PATOLOGY OF THE ACUTE SCROTUM IN PEDIATRIC SURGERY

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Background: The acute scrotum in pediatric patients is a common situation which can lead to difficulties in the diagnosis. One of the most incriminated factors is the torsion of the testicles, whose cause is still unknown. Other situations that lead to acute scrotum are epididymitis, orchitis, testicular appendix torsion and trauma. **Objective:** This paper aims to identify the prevalence of the testicular torsion compared to the others. **Material and methods:** A descriptive retrospective study targeting the pediatric patients of the Pediatric Surgery Department of Targu Mures County Hospital hospitalized from 2017 to 2022 was carried on. The discharge sheets were studied for the final diagnosis in order to see the most common diagnosis in the acute scrotum surgical pathology. The pediatric patients involved were between the age of one to eighteen years old. **Results :** Two hundred and twenty-five patients were involved in the study, out of which 66.67% were diagnosed with testicular torsion (one hundred and fifty children). The following category was represented by the patients with orchitis, epididymitis and orchiepididymitis without abcess (sixty- three cases)- 28.0%. From this one hundred and fifty cases, ninety four had the left hemiscrotum targetted (66.20%) and fifty-six had the right one affected (67.47%). The interval of age with testiclular torsion diagnosis was between eight to twelve years old. Every patient with the diagnosis of testicle torsion in the discharge sheet was hospitalized after presenting themselves to the emergency service. **Conclusions:** Significant difference in quantity was observed between the number of pediatric patients with the final diagnosis of testicular torsion compared to any other one that lead to acute scrotum, highlighting the importance and the prevalence of the pathology in the pediatric surgery practice.

Keywords: scrotum, testicle, torsion, pediatric

QUALITY OF LIFE AFTER TOTAL KNEE ARTHROPLASTY USING THE KNEE SOCIETY SCORE (KSS)

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Background: Total knee arthroplasty (TKA) is the standard surgical treatment for patients suffering osteoarthritis. The quality of life after total knee arthroplasty (TKA) depends on the type and intensity of post-operative rehabilitation. **Objective:** The aim of our study is to compare fast track rehabilitation and conventional rehabilitation in the early post-operative period and to observe the functional recovery and pain changes on these patients. Furthermore, the study aims to underline a significant increase of life quality in the first 3 months after the surgery. **Material and methods:** This prospective study, included 73 patients (51 females, 22 male, mean age 67 years, range 56-79 years). All patients underwent total knee arthroplasty between December 2022 and March 2023. The patients were included in two groups: fast track and conventional rehabilitation. The fast track group mobilization took place after 24 hours and had an intensive rehabilitation program. For the conventional rehabilitation group the mobilization was done after 48 hours and had a standard post-operative rehabilitation care. As method of investigation we used the KSS pre-operative, post-operative and after 3 month. **Results :** The KSS rating system score after TKA and fast-track rehabilitation was included in an interval between 79,5-97,7 with an average score of 88,6. Post-TKA hospital stay averaged 9,4 days of which fast track rehabilitation averaged 5.8 days. The average time to get to the edge of the bed was 1.4 days post-operative, to reach standing position was 1.8 days and to walk with assistive devices was 1.9 days. The KSS rating scale was determined 3rd day after surgery. **Conclusions:** Our study demonstrates that early fast track rehabilitation (within 24 hours) after TKA is beneficial for early mobilization, upright body posture and the start of walking without severe pain in patients. All this reduced the average length of stay (LOS) in the hospital to only 5 days. The results after 3 months are the same.

Keywords: fast-track rehabilitation, knee, arthroplasty, pain

DEGREE OF LUMBAR FACET JOINT EFFUSION IN PATIENTS WITH VERTEBRAL INSTABILITY

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Background: Spinal instability is a complex pathology that affects the daily lives of patients and is one of the major public health problems of our time. The various pathological lesions of the facet joints are considered to be one of the underlying etiological factors of the pathology. **Objective:** To examine paraclinical, mainly imagistic parameters of individuals with proven spinal instability and individuals with healthy vertebral column. **Material and methods:** In this retrospective study, data of 80 patients admitted to the Neurosurgery Clinic of the Târgu Mureș County Emergency Hospital between 2015 and February 2023 were processed. Patients were divided into two groups based on lumbar MRI scans, 40 patients with confirmed vertebral instability and 40 patients with healthy vertebral column. Imagistic differences were described using Radiant and Horos. Statistical processing was performed using Microsoft Excel and GraphPad Prism programs. Statistical significance was considered at $p<0.05$. **Results :** Of the patients, 41 (51.25%) were female and 39 (48.75%) were male, with a mean age of 52.98 years (SD: ±13).A significant correlation was found between age progression and the appearance of fluid excess ($p = 0.03$). Synovial fluid excess was found in 38 (95%) of 40 patients with spinal instability, of which 27 (71%) at the level of the lesion, 3 (7.9%) below the level of the lesion and 8 (21.1%) above the level of the lesion, while in the control group, 13 (32.5%) of 40 patients had synovial fluid excess. In the first group, 23 (60.52%) of the 38 patients with synovial effusion had bilateral and 15 (39.47%) unilateral synovial effusion, whereas in the control group, 5 (38.46%) of the 13 patients with synovial effusion had bilateral and 8 (61.54%) unilateral effusion. The degree of effusion in facet joints was significantly larger in patients with vertebral instability compared to the control group ($p<0.0001$). **Conclusions:** The imaging analysis of our cases can contribute to the description of early imaging signs of lumbar spine instability, which may facilitate a faster diagnosis and more accurate treatment. The presence and amount of synovial fluid in magnetic resonance images of the articular surfaces of the lumbar spine may indicate an incipient or progressive instability that may require surgical intervention.

Keywords: Vertebral instability, Facet effusion, Imagistic

ACL RECONSTRUCTION IN PATIENTS OVER 40 YEARS OLD

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Background: Active people frequently sustain anterior cruciate ligament (ACL) injuries, and surgery to repair the ligament is frequently advised to regain the stability and function of the knee. The best way to treat ACL rupture in older but still active patients, who can have concomitant conditions or musculoskeletal changes brought on by aging, still remains poorly defined in the literature. **Objective:** This scoping review's goal is to review the most recent research on patients over 40 who have had ACL reconstructions. The aim is to analyze the results after ACL reconstruction surgery, the impact of graft selection, possibly the progression of knee osteoarthritis (OA), and the best care approaches in elderly patients. **Material and methods:** A scoping review of the published research on ACL reconstruction (ACLR) in patients older than 40 years was done respecting the PRISMA-ScR guidelines. The PubMed data base was used for that purpose. Inclusion criteria were studies written in English that had patients who were at least 40 years old, provided specific Patient Reported Outcome Measures (PROMs), reported information about complications, and had at least a two-year follow-up. Studies with fewer than 10 participants and studies with individuals whose arthrosis could only be managed otherwise were excluded. Due to the high heterogeneity of the studies, a meta-analysis was not suitable to perform. **Results :** Fourteen articles met the inclusion/exclusion criteria. The 910 patients from the chosen studies were the subject of this study. The papers that were examined in this review concentrated on several facets of ACL restoration, such as graft selection, success rates, and knee OA development. Lysholm, IKDC, IKDC grade, Tegner, KOOS, ACL-QoL, Cincinnati, Ahlback, Kellgren□□□□□□□□□□scores, and the radiographically documented OA were the outcomes that were most frequently reported. The analysis showed that the outcomes for older individuals and younger ones were comparable. **Conclusions:** In active elderly patients, ACL restoration can result in better knee function and pain reduction, with comparable results to younger people. According to the study's findings and published data, the

scores are comparable to those of younger patients, thus age should not be a factor in determining how well an ACL reconstruction goes.

Keywords: ACL reconstruction, graft, older patients

POSTOPERATIVE COMPLICATIONS OF POSTMASTECTOMY BREAST RECONSTRUCTION: COMPARISON BETWEEN LATISSIMUS DORSI FLAP AND OTHER RECONSTRUCTIVE TECHNIQUES

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Background: Breast cancer is the most common malignant tumor among women, requiring adequate treatment to be combated. The most frequently used surgical treatment of breast cancer is the mastectomy because of the favorable risk-benefit ratio. The disadvantage of mastectomy is represented by the deterioration of the physical appearance of the patients, which in many cases will also lead to emotional and psychological trauma. Breast reconstruction surgery can have an extremely important role in this situation, because it can restore the patients self-confidence and can contribute to the improvement of the psychological status. **Objective:** The aim of this study is to compare the risk of postoperative complications of different breast reconstruction techniques. **Material and methods:** A retrospective, comparative, observational study was performed on a group of 15 female patients all aged between 29 and 66 years who underwent postmastectomy breast reconstruction in the Department of Plastic and Reconstructive Surgery of the Clinical County Emergency Hospital in Târgu Mureș, Romania, between 2018 and 2022. The evolution of each patient was analyzed in order to identify possible postoperative complications. **Results :** Over the past 5 years, the mean age of hospitalized patients was 48,9 years, 53,3% of the patients were over the age of 50, while 46,6% were under the limit of 50 years. The most frequently used technique was latissimus dorsi flap (86,6%) and 6 out of a total of 13 breast reconstructions performed with latissimus dorsi flap presented complications, half of the complications occurred in patients undergoing the first intervention, while the other half were patients who needed a reoperation. The most common complication is the necrosis of the latissimus dorsi flap (30,7 %), the equivalent of 4 patients, which can be associated in 75% of cases with cardiovascular comorbidities, smoking and BMI >25 kg/m2. The second most used surgical technique is TRAM, being used in one primary breast reconstruction and in a reoperation, but in both cases were complications such as wound dehiscence and epidermolysis bullosa. **Conclusions:** Regardless of the surgical technique that was used, brest reconstruction surgery is a safe procedure, with non-fatal complications in most of the cases, being obvious that the benefits outweigh the risks.

Keywords: Breast reconstruction, postoperative complications, latissimus dorsi flap, reconstructive techniques

NUTRITION AND DIETETICS

THE POTENTIAL OF CHATGPT FOR TIME OPTIMIZATION AND ENHANCED PRACTICE AMONG DIETITIANS: A QUESTIONNAIRE-BASED SURVEY

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Background: Efficient time management is crucial for Dietitians to deliver optimal patient care. The adoption of artificial intelligence (AI) based tools like ChatGPT could potentially enhance time optimization and improve practice efficiency. **Objective:** This study aimed to investigate the attitudes and practices of Romanian Dietitians while exploring the potential benefits of integrating ChatGPT into their practice. **Material and methods:** A cross-sectional survey was conducted among 51 respondents who completed a questionnaire, which assessed demographics, level of nutritional education, subjects of interest, and time allocation for various professional activities, including nutritional care, patient case studies, meal plan creation, patient progress monitoring, and food recipe creation. The number of patients under observation and the use of ChatGPT software were also investigated. **Results :** Most of the respondents are spending 2-5 hours per week on a patient's nutritional care (50%), patient case studies (25%), meal plan creation (32%), and food recipe creation (52%), while 50% spent under 2 hours per week monitoring patient progress. 33% of participants are spending 5-10 hours per week preparing presentations. The adoption of ChatGPT software was low (7.8%). The study population was predominantly female (92.2%), with a primary interest in chronic conditions (76.5%) and malnutrition or obesity (74.5%). **Conclusions:** The survey revealed that Dietitians are spending a moderate amount of time on professional activities, with the exception of patient progress monitoring, which was less prioritized. Given the potential of AI-based tools like ChatGPT to streamline various tasks, Dietitians could benefit from adopting such technologies to optimize their time allocation, enhance patient monitoring, and improve overall practice efficiency. Further research is needed to investigate the barriers to technology adoption and to develop strategies for integrating AI tools like ChatGPT into the daily practice of dietitians for better patient outcomes.

Keywords: artificial intelligence, time optimization, dietitians, technology

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THE INVOLVEMENT OF PSYCHONUTRITION IN IMPROVING THE NUTRITIONAL STATUS OF THE YOUNG OBESE PATIENT

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Background: Obesity, a chronic and complex disease that has become alarmingly widespread worldwide, especially among young people, is largely preventable. Its impact on health care expenditures and the overall health status of the population is consequential. Psychonutrition steps in to give them more tools and coping strategies to improve the nutritional status. **Objective:** The purpose of our paper was to evaluate the change in the nutritional status of obese young people who benefited from psychonutrition consultation. **Material and methods:** A study was carried out in the medical office by 1 nutritionist-dietetitian and 1 psychologist, in April and September 2022, on 31 obese patients aged 20 to 22. The evaluation and monitoring were done during the initial consultation, marked with T0, and at the final consultation, marked with Tf. The following methods were used: diversifying the babies' diet, the description for awareness of the ingredients, the role transfer. **Results :** At the initial consultation, the average weight of the patients was 99.24 kg, and at the final consultation it was 95.49 kg ($p=0.0048$). We noticed that the average Body Mass Index at the initial consultation was 36.34 kg/m2, and at the final consultation it was 34.98 kg/m2 ($p<0.0001$). Binge eating disorder has been mentioned at the initial consultation by 67.74% of the patients, and at the final consultation by 19.35% ($p=0.0003$). **Conclusions:** In our study, the nutritional status of obese young people who benefited from psychonutrition consultations improved significantly. Furthermore, extended research on this area is imperative.

Keywords: nutritional status, obese patient, psychonutrition, young people

PREVALENCE OF VITAMIN D DEFICIENCY IN TYPE 1 DIABETES PATIENTS AND ITS ASSOCIATION WITH DIABETES ONSET AGE

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Background: Type 1 diabetes is a chronic autoimmune disease. Patients with chronic illnesses are more likely to have a deficiency in vitamin D. **Objective:** We aimed to evaluate the prevalence of vitamin D deficiency and the association with the onset age in pediatric patients with type 1 diabetes. **Material and methods:** A cross-sectional study was conducted in January and February 2023, on 39 patients with type 1 diabetes. The levels of vitamin D were measured and the prevalence of vitamin D deficiency was assessed. The sample was divided into two age categories: those who developed diabetes before the age of 10 and those who developed diabetes at or after the age of 10. A t-test was performed to test the significance of the difference in the mean vitamin D levels between the patients with the diabetes onset age before and at or after the age of 10. **Results :** Among the 39 patients, 27 (69.23%) had vitamin D deficiency. In patients in whom diabetes was diagnosed early, the mean age was 4.83 ±2.39 years, and 12.00 ±2.21 years in those in whom it was diagnosed late. Vitamin D deficiency was detected in 64.10% of those with early diabetes compared to 5.13% of those with later diagnosed diabetes ($p<0.001$). Vitamin D levels were 18.16 ± 3.81 ng/mL in those with early diabetes compared to 19.13 ± 6.25 ng/mL in those with later diagnosed diabetes ($p<0.05$). **Conclusions:** In the present study, the prevalence of vitamin D deficiency was high, affecting 7 in 10 pediatric patients with type 1 diabetes. Moreover, the prevalence of vitamin D deficiency was significantly higher in patients in whom diabetes was diagnosed early, before the age of 10, than in those in which diabetes had later onset. Given the deleterious impact of chronic vitamin D deficiency, these findings highlight the importance of monitoring vitamin D levels in type 1 diabetic patients, and suggest that age of onset may be an important factor in the development of vitamin D deficiency.

Keywords: pediatric patient, screening, type 1 diabetes, vitamin D

A STUDY REGARDING THE EFFECTS OF DIETARY SUPPLEMENTS USE REGARDING ONE'S INDIVIDUAL HEALTH

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Background:
Dietary supplements use has increased drastically in the last years, following social media popularity regarding physical improvement, as well as a quarantined and hybrid system of living all around the world. As of this, the general population has switched to alternative ways to maintain and supplement any supposed deficits in their daily nutrient intake. **Objective:** The aim was to evaluate the use of food supplements for athletes or young adults regularly attending the gym units from Targu Mures city, Romania, as well as raising awareness regarding the benefits and possible side effects that might result from the incorrect use and dosage. **Material and methods:** An observational study has been carried out on 154 subjects, in 2022, towards the use of dietary supplements in the general population of Targu Mures and surroundings, by asking the participants to anonymously respond to a set of questions regarding their own health and consumption of food supplements (vitamins, minerals, plant extracts, amino acids and proteins, essential fatty acids, and/or probiotics). **Results :** In our group, 73.37% of participants were male, with most of them from urban area, from which 6.34% reported never using any kind of nutritional supplements. Out of the participants using dietary supplements, vitamins and minerals (36.3% and 21.61% respectively) were the most used substances, with least used being probiotics (for 0.28%). 51.94% said they have experienced different types of side effects, with most of them resulting from vitamins and minerals use, with 22.72% and 11.68%. Side effects that are worth noted have been: dizziness, nausea, abdominal discomfort and/or pain, constipation or laxative effect, flatulence, retention of water, weight gain, and palpitations, with an average of 3 weeks, to 1 month for the onset of bad side effects. **Conclusions:** Although the role of food supplements is to fulfill the daily need of micro and macronutrients for the human body, due to its nature, side effects are either a deterrent of continuous use, or wrongly correlated with other signs or symptoms, and neglected or mistreated. Because of this, more severe medical problems may arise with a wrong dosage of certain over-the-counter nutrients. We sustain the needs for nutrivigilance, through education, knowledge, promotion, communication with

patients and regular screening of consumption as well.

Keywords: nutrivigilance, dietary supplements, vitamins, probiotics

THE RIGHT METHOD OF HYDRATION FOR ONCOLOGIC PATIENTS

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Background: Water contributes to maintaining normal physical and cognitive performance, with a consumption requirement between 1.5 and 4L per day depending on the physical activity and health status. A continuing monitoring of fluids intake is essential both for healthy people and patients. **Objective:** Estimating the impact of dehydration upon the cancer patients health status. **Material and methods:** Determining common causes of dehydration is essential, for example for fluid intake (stomatitis, pharyngitis, obstructions, neglect), excessive fluid losses (sweating, renal-diuresis, gastrointestinal- diarrhea, vomiting), increased insensible fluid losses (fever) or fluid mobilizations (ascites, burns, sepsis), chemotherapy or diabetic ketoacidosis (osmotic diuresis). The causes of dehydration in oncology patients are: vomiting, diarrhea, bleeding, fever, anorexia, respectively surgical interventions or other procedures with fluid loss. **Results :** The consumption offer to the cancer patients is represented by water, fruit/vegetable juices, fruit nectar/fresh, sports drinks, teas, specific functional drinks (with food supplements). Chemotherapy can be dehydrating so plenty of water is recommended before, during and after treatment (8-10 glasses of fluids with electrolytes daily) as it helps the body absorb the drugs and eliminate excess toxins. **Conclusions:** For preventive purposes, we recommend assessing the state of hydration in vulnerable groups (children, seniors and patients with terminal illnesses), ensuring that sufficient water and fluids are consumed, in case of heatwaves, to check the elderly if they are fine, to avoid drinking alcohol or caffeine, especially in the hot season.

Keywords: hydration, cancer, chemotherapy, stomatitis

EFFECTS OF THE CORONA PANDEMIC ON HEALTH AWARENESS AND LIFESTYLE CHOICES

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Background: The coronavirus pandemic presents a global health crisis which has influenced nearly every aspect of people's life. Besides restriction policies and health recommendations the public was confronted with great fear and a constant health threat with continuous media presence. **Objective:** This study aimed to compare the health awareness and lifestyle behaviour of medical students regarding nutrition, time of sportive activity, hours of sleep, amount of alcohol, smoking behaviour, mental health and vaccinations in 2019 compared to 2021. **Material and methods:** The study included 115 participants, all of them were medical students. The subjects were questioned by using an online questionnaire. The results were analysed using the statistics software GraphPad InStat version 3. **Results :** Statically significant changes could be observed in the number of standard servings of fruits and vegetables eaten by the participants per day (p=0.0007) with an increase of 0,2 portions from 2019 to 2021. Weight gain was reported by 30% of the individuals and 35% reported weight loss during these years. 22% of the students took special care of their mental health before the coronavirus pandemic, while in 2021 this was reported by 55% of the students. The majority (61%) of the participants reported to be more attentive regarding there immunization schedule and stated to be more health aware in general (72%) in 2021 compared to the period before the pandemic. The results regarding hours of sport activity (p=0.2143), alcohol consumption (p=0.2642), number of smoked cigarettes (p=0.6493), consumption of ultra-processed foods (p=0.3450), hours of sleep per night (p=0.6240) and hours spent outside (p=0.3953) were not statistically significant different before and after the pandemic. **Conclusions:** As adaption to the circumstances medical students integrated more fruits and vegetables into their diet and took more attention regarding their mental health and their immunization schedule. These findings align well with the fact that mental health and vaccinations were topics strongly influenced by the coronavirus pandemic and their consequences. In conclusion, the study was able to demonstrate a substantial increase in health awareness and lifestyle behaviour of students as consequence of the coronavirus pandemic.

Keywords: Coronavirus, Health awareness, Lifestyle

HOW MENSTRUAL CYCLE PHASES AFFECT EATING HABITS ON STUDENTS

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Background: For a better understanding on how hormones affect eating habits during the different phases of the menstrual cycle, our study evaluates young students responses on how their food preferences changes throughout their cycle. **Objective:** Throughout the length of the menstrual cycle, women get to experience different changes in their hormones, that affects their mood, eating habits, and many more. In this study, we aimed to asses how women change their eating preferences during different stages of their menstrual cycle. **Material and methods:** Until now we collected data from 156 young students, all women, who still have their period , with ages between 18-50 years. The study is conducted through a questionnaire. The questionnaire has 42 questions , the first 14 questions are general information about each student, and the rest are devided into specific food groups that they consume on each phase of their menstrual cycle. The study is still in progress and the questionnaire is still open . **Results :** Out of 156 participants, all of them are female, aged between 18-50 years, of which 153 are currently studying at a college/university, the average duration of bleeding during menstruation is 5 days. 149 women do not use contraceptives and most of them are used to going on routine consultations (ob-gyn and endocrinology). 85% tend to have cravings during menstruation. It was observed that the women who participated in the study tend to have cravings for carbohydrates , sweets and alcohol during the premenstrual phase. In the rest of the phases, the eating habits were all the same. **Conclusions:** During all of the menstrual cycle, the study showed us, indeed, that young students crave specific food groups like carbohydrates, sweets and alcohol due to their ongoing stress factors , like studying for an exam, or going to classes, etc. Hormonal changes are real, and women need to know how to control these food cravings, by diet.

Keywords: menstrual cycle, food, carbohydrates, students

FORMATION OF NITRITE ION IN HOMEMADE FERMENTED VEGETABLES

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Background: The effect of nitrite found in the human diet has been a controversial topic among the years. The presence and the concentration of nitrite in fermented vegetables is considered to be detrimental for people . There are studies made on humans in which consumption of preserved vegetables, by the method of fermentation, was linked with teratogenic effects (spina bifida).In this study, the concentration of nitrites in five different varieties of home made fermented vegetables in the process of fermentation is determined. **Objective:** The aim of this study is to determine the kinetics of nitrite in home prepared vegetables by the fermentation method. In addition to the kinetics evaluation of the nitrite ion accumulation, the second purpose is to determine if the daily accepted intake is exceeded. **Material and methods:** In total, 273 samples of liquid were taken from 39 recipients where the five types of vegetables were preserved in 3-4% NaCl solution. The samples were collected periodically in a period of approximatively 11 weeks. After the liquid was collected, samples were prepared in order to be analyzed using the HPLC-UV method . Nitrite anion was measured after a derivatization process with sulphanilic acid and alfa-naphtylamine, and nitrate anion was measured using the ion pair technique. **Results :** The study reached the sample preparation phase, concentration of nitrite was not determined yet. **Conclusions:** Reversed-phase liquid chromatography method after a derivatization process is suitable to detect toxicologically important concentrations of nitrite after a derivatization phase; nitrate can be detected by the ion pair method, using tetrabuthylamonium as an ion pair reagent.

Keywords: nitrite, fermented vegetables, nutrition, HPLC-UV method

RISK PROFILE EVALUATION AND DIETARY BEHAVIOR IN PATIENTS WITH HASHIMOTO'S THYROIDITIS AND HYPOTHYROIDISM IN ROMANIA

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Background: In Hashimoto's thyroiditis the genetic factors are very important, but the environmental factors are necessary to provoke the attack of the immune system: stress, infections, small intestinal bacterial overgrowth, intestinal dysbiosis, malnutrition or overweight. Recent studies focused on the correlation between lactose intolerance and levothyroxine medication and possible interaction between gliadin from gluten ingestion and thyroid antigens.The role of adequate levels of protein, antioxidants, dietary fiber and unsaturated fatty acids, has been indicated. **Objective:** The first aim of the study is to evaluate the dietary habits, quality of life and BMI of the study group that suffers from Hashimoto disease. The second part of study is meant to analyze the association of dietary factors and plasma thyroid antibodies: thyroglobulin (Tg- Ab) and peroxidase (TPO- Ab). **Material and methods:** The first part of the study included 153 female participants (22-53 years old) diagnosticated with autoimmune thyroid disease Hashimoto. All of them completed an online questionnaire that included 39 questions. The second part of the study included a group of 9 subjects with Hashimoto disease. This part was designed to serve as an online dietary intervention. For 8 weeks, the intervention includes dietary recommendations for Hashimoto and hypotirodism. Both groups had to follow the same rules for completing the questionnaire. A seven-days food log was part of the trial. The research assessed the following thyroid parameters: TSH, free T4, plasma thyroid antibodies: thyroglobulin (Tg- Ab), and peroxidase(TPO- Ab). The research group weighs themselves each week and measures their abdominal circumference. **Results :** The statistics of the first part of the study show that from a total of 153 women, 71.2 % mentioned the presence of daily bloating, 51% presence of constipation and are overweight or obese. The second part of the study is still not complete. Once the study will be over the group will go through another round of evaluation. **Conclusions:** After reviewing the statistics, we conclude that the study group has very little knowledge about nutrition.

Keywords: Hashimoto disease, autoimmune disease, nutrition, thyroid

PHYSIOTHERAPY

ASSESSMENT OF POSTURE AND BODY ATTITUDES WITH THE USE OF THE LEONARDO POSTURAL LAB SYSTEM

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Background: Global postural analysis has been used since the 19th century in the field of medical rehabilitation, but it gained popularity in the last few decades, along with the development of technology and more performant equipment in the field. In Romania, the use of advanced postural assessment technology is limited due to economical reasons and untrained personnel. **Objective:** The purpose of this research was to demonstrate the usefulness of the Leonardo Postural Lab system in the assessment of different postural attitudes. We wanted to highlight the usefulness of this kind of postural analysis system and how it can improve the quality of the patients' rehabilitation path and, to a certain extent, ease the work of the physiotherapist in the field. **Material and methods:** In this study, 10 subjects were analyzed: 5 men and 5 women (mean age 50.20 ± 14.22) who work in various fields, both static and dynamic. The subjects were photographed from the frontal and sagittal planes with the help of the Leonardo Postural Lab system; the mirror attached to the system above the patient was used for the transverse plane. Their postural control, balance, static support, rear foot and ankle posture were assessed with the help of a stabilometric platform integrated into the system. **Results :** Postural deficiencies and asymmetries of the patients were detected in both the frontal and sagittal planes, and from the point of view of balance and foot analysis, most of the subjects presented deviations or asymmetries. **Conclusions:** With the help of the Leonardo Postural Lab system, it was found that regardless of the various characteristics of the patients, such as their place of work, age, or body mass index, they all presented certain asymmetries, postural or foot deficiencies, which were found in the form of angles and distances and then interpreted and interconnected. Postural analysis with the Leonardo Postural Lab system is a very important technique in the field of physical therapy and medical rehabilitation because it allows physiotherapists to perform a very accurate assessment of body posture and stability.

Keywords: Physiotherapy, Posture, Leonardo, Assessment

FUNCTIONAL ELECTRICAL STIMULATION OF THE LOWER LIMB IN POST-STROKE GAIT REHABILITATION: EFFECTS ON FOOT DROP AND GAIT KINEMATICS

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Background: Stroke is the second leading cause of death among the adult population worldwide, and one of the most common physical disabilities after a stroke is Hemiplegia. Conditions such as Stroke and other disorders that affect Upper Motor Neuronal pathways can lead to Foot Drop due to weakness of the Anterior Tibial Muscles or Spasticity of the Plantar Flexors. This condition makes walking difficult and causes instability, increasing the risk of falls. A modern and practical treatment option, compared to traditional ankle-foot orthoses that limit overall ankle function, is Functional Electrical Stimulation (FES.), which involves applying electrical stimulation to the Common Peroneal Nerve to activate the muscles responsible for Dorsiflexion and Eversion of the foot during the swing phase of gait, providing active muscle assistance. **Objective:** The present study aims to assess the effects of FES. use in individuals with Stroke employing Range of Motion, Gait Kinematics and Spatio-temporal Parameters. **Material and methods:** Functional electrical stimulation involves administering electrical pulses to the peroneal nerve in order to create a motor function in an artificial manner. When used for the purpose of compensating for foot drop, it has both therapeutic and helpful properties. The research involves ten subjects of various ages who suffered a Stroke and present Hemiplegia, having their Gait and Range of Motion analysed before and a day after treatment. The Setting is a private recovery institution in Târgu Mureş. During two weeks, the ten patients follow a physical therapy program five times a week for 2 hours. The treatment consisted of 10 sessions of 30 minutes of walking while using the wearable FES. device, device only used on five of the patients (experimental group). and the rest of the session, consisting of Conventional Physical Therapy, focused on Hip control exercises, Knee extension exercises and Upper Limb rehabilitation. The Spatio-temporal parameters in the anterior direction and Gait analysis were computed from video data and the Range of Motion parameters by Goniometer assessment. **Results :** Given that our study is ongoing, the outcomes of the subjects will be presented during the Marisiensis International Scientific Congress. **Conclusions:** The study's conclusion will be presented at the Marisiensis

International Scientific Congress together with the results.

Keywords: Stroke,, Gait Rehabilitation,, Functional Electrical Stimulation,, Foot Drop

THE IMPORTANCE OF VISION IN HUMAN GAIT

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Background: Maintaining the balance in the human gait requires the coordination of multiple sensory systems of the human body. The most important sensory systems that compose a balanced gait are the vestibular system, somatosensory system and the visual system. A stable gait makes good use of information about the orientation of the swaying body in relation to the enviroment, provided mainly by vestibular and visual system. **Objective:** Our goal in this research was to show that vision plays an important role during gait. This reasearch also shows that in the absence of vision, healthy individuals without serious visual impairments lose their balance, this being shown in the app. **Material and methods:** This study took place at the University of Medicine, Pharmacy, Science and Technology "George Emil Palade" from Târgu Mureș. The subjects of this study, voluntarily participated in this research. The subjects took two tests: a subjective test, where the participants had to walk a distance of 10 metres along a straight line, this test was taken two times, once with their eyes open, and second with their eyes closed; the second test, a objective one, was taken with the Balanced Gait Test app, that uses a mobile phone fixed on the subject□□□□waist. The subjects also had to take this test two times, once with visual control, and second without it. **Results :** Following the two tests, we observed the differences between gait performed with and without visual control. During the subjective test we observed that some subjects had minor dificulties in keepig their balance. This was also observed with the app, and we could see what parameters have differed when the test was taken with the open eyes, and with their eyes closed. **Conclusions:** Our study showed us, that vision plays an important role in keeping the balance of the body during gait. We have come to the conlcusion that using an app that analyses the human gait, such as Balanced Gait Test, is a lot more useful than a subjective test because it shows much more clearly where the balance of the body is lost, during the gait phases, rather than a subjective test where we could say if a gait is balanced or not.

Keywords: Human gait, Balanced Gait Test, Visiom, Gait apps

HABITUAL SKILLS THAT INFLUENCE THE POSTURE OF SECONDARY SCHOOL CHILDREN

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Background: This study examines the habitual habits that influence the posture of secondary school children and their impact on children's health. In general, secondary school children are exposed to a number of habits that can lead to poor posture, such as carrying heavy backpacks, excessive use of electronic devices and sitting in incorrect positions at the office or at home. These habits can lead to health problems such as back, neck and shoulder pain which over time will lead to functional postural impairments. **Objective:** To demonstrate the influence of habitual skills on secondary school children and to correct them on the basis of conclusive recommendations. **Material and methods:** The research involved 125 subjects, who were divided by secondary school grades, predominantly grade 8, an almost insignificant gender difference and age group 10-15 years. Questionnaire method was used as the research method. **Results :** Of the subjects surveyed 22.4% said they already had postural deficiencies. Of the remaining respondents it is assumed that 30% answered negatively to multiple questionnaire items. The survey shows that 72% of the subjects reported back pain at least once, which is alarming given the young age of the subjects. **Conclusions:** In conclusion, this study demonstrates the importance of educating children about correct posture and promoting healthy habits to prevent health problems associated with poor posture.

Keywords: postural deficiency, habitual learning, posture

FITNESS STATUS OF THE STUDENTS OF THE BALNEOPHYSIOKINETOTHERAPY AND REHABILITATION STUDY PROGRAM OF THE UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE AND TECHNOLOGY ,,GEORGE EMIL PALADE'' FROM TÎRGU-MUREȘ

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Background: Fitness refers to the ability to perform physical activities with vigor and alertness, without excessive fatigue and with sufficient energy.It includes components such as cardiovascular endurance, muscular strength and endurance, flexibility and body composition. **Objective:** Our main goal in this research was to assess the physical status of first-and second- year students from Physiotherapy and Rehabilitation Department of ,,George Emil Palade'' university of Medicine, Pharmacy, Science and Technology from Târgu Mureș, and to corelate the applied effort test with the physical activity questionnaire. Our second goal was to highlight the benefits of physical activity on different systems of the human body. **Material and methods:** This study was conducted within the Department of Movement Sciences and the Alma Mater Rehabilitation Centre of "George Emil Palade" University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș. The subjects of this study were first and second year students of Physiotherapy and Rehabilitation bachelor's degree, who voluntarily participated in this research. On all the included subjects we assessed different anthropometric measurements, (such as height and weight), which allowed us to determine the body mass index (BMI) and we applied three tests: the Harvard step test (HST), the flamingo test (FT) and the plank test (PT). All students participating in the research had to complete the physical activity questionnaire (IPAQ - short form) that monitors physical activity over the last 7 day. **Results :** Following the tests and the completion of the questionnaires, the results reflected the physical condition of the subjects: those who reported that they were active and exercised regularly fell within the normal parameters of the tests, while those who were not physically active have obtained results that do not fall within normal parameters. **Conclusions:** Our study assessed the physical condition and fitness status of the subjects. Following the applied questionnaire, we were able to correlate the subjects' answers with the test results, results in the subjects' exercise capacity. The anthropometric that were taken on the subjects (height and weight) were a reference point for being able to interpret more easily the results obtained from the tests. The majority of subjects who had a body mass index within normal parameters obtained very good results during the tests performed, and subjects who obtained a body mass index that did not fall within normal parameters had difficulties during testing.

Keywords: fitness, physical activity, health, students

THERAPEUTICAL EFFECTS OF STRETCHING ON NONSPECIFIC CHRONIC LOW BACK PAIN

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Background: Nonspecific chronic low back pain represents a common pathology that affects both elderly and young people. Even though it doesn't have a well-defined cause, the pain can appear as a result of the pressure applied to the spine. The manifestation of this pathology it is represented by low back pain, that if it persists more than three months, it can be considered chronic. **Objective:** The goal of this research was to prove the effects of hamstring stretching in decreasing low back pain and increasing the quality of life of subjects with nonspecific chronic low back pain. **Material and methods:** Twenty subjects, aged between 30 and 78, were evaluated on the first and the last day of a ten-session rehabilitation program. The subjects were divided in two groups. One group followed a classical therapeutical exercise program, while the other group benefited, beside the same therapeutical exercise program, from a series of six stretching exercises, applied daily, at the beginning of the rehabilitation program. The initial evaluation included the Fingertips to Floor Distance Test and 36-Item Short Form Health Survey, and the final evaluation included the Fingertips to Floor Distance Test and Pain Scale. **Results :** During the 10 days rehabilitation program, both groups managed to improve the mobility of the lumbar spine. **Conclusions:** Our research demonstrates the effects of hamstring stretching on subjects with chronic low back pain. Improvements were achieved regarding the low back mobility and the pain and disability.

Keywords: low back pain, stretching, rehabilitation, physiotherapy

THE ROLE AND IMPORTANCE OF PHYSIOTHERAPY IN EDUCATIONAL UNITS

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Background: Physiotherapy uses physical techniques to improve joint mobility and muscle strength, realign various postural imbalances, reduce pain, speed up the healing process, restore function to the body or body segment, increase the quality of life, and for whole-body prophylaxis. Paediatric physiotherapists work with children from newborn to adulthood. They have knowledge of the developmental stages, the development of movements in relation to advancing age and any deviations from these. **Objective:** The objective is to investigate the impact of the physiotherapist's influence on students' physical well-being. The physiotherapist plays a crucial role in promoting physical activity and health. They are also responsible for preventing disabilities and injuries and improving life quality. The study wants to bring evidence of the benefits of having at least one physiotherapist in educational units. **Material and methods:** Our study is a prospective/longitudinal cohort study in which thirty children participated, and they were divided into two groups: the experimental and the control groups. They answered a questionnaire about their daily habits and were evaluated three times regarding posturology and anthropometry (before, during and after the experiment). Following the initial assessment results, we designed a personalised exercise program for each child. **Results :** Results will be presented during the Marisiensis International Scientific Congress because the study is still ongoing. **Conclusions:** The study's conclusions will be presented at the Marisiensis International Scientific Congress with the results.

Keywords: Physiotherapy, Physical activity, Educational units

PATIENT AND HEALTH PROFESSIONAL ADHERENCE TO ROBOTIC MEDICAL REHABILITATION

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Background: The importance of exoskeletons in medical rehabilitation can be observed following spinal cord injury, regaining an independent mobility being the main priority. The ReWalk exoskeleton is revolutionary in its ability to achieve this goal. The immediate effects on mental health, social inclusion, and overall quality of life derived from being able to stand in front of loved ones are undeniable. Published research has consistently demonstrated the positive effects of exoskeleton-assisted walking on these problems in the injured spinal cord population. These effects are the ones that ReWalkers report as the most life-changing, often after the first time they stand up and walk. **Objective:** Evaluate patient and health professional adherence to a new rehabilitation method using robotic medical equipment **Material and methods:** A cross-sectional study will be carried out using questionnaires. Questionnaires will be designed according to the Delphi model. Both own questionnaires and questionnaires used by other research groups will be used for validation purposes. The questionnaires will be addressed to the main beneficiaries of exoskeleton use, patients, carers, health professionals - physiotherapist, nurse and doctor, to assess adherence and perception of exoskeleton use in patients with complete or incomplete spinal injuries. Subsequently, responses will be quantified in binary data and evaluated using GraphPadPrism statistical software. **Results :** The study found that more than 85% of people have never worked with a medical robot, but would like to do so. In the exoskeleton category, 95% have never worked with such a device, 80% saying they would work with them as an innovative device, a much faster and efficient recovery. The other 20% said they would not work with them because they do not have senses, are not human or do not trust. **Conclusions:** The vast majority of people who participated in this questionnaire considered exoskeletons to be an innovative device and considerable psychic help that can speed up the recovery process through its qualities and those who disagree believe that this equipment cannot be compared with the help of a physical therapist, because the exoskeleton is without the senses or simply does not trust him.

Keywords: exoskeletons, medical robotics rehabilitation, low back pain, quality of life

POSTURAL REEDUCATION IN KYPHOSCOLIOSIS

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Background: Kyphoscoliosis is a curvature of the spine in both lateral and posterior directions. It can involve the thoracic region, the lumbar region or both but most commonly in the thoracolumbar spine region, it can also be seen in the cervicothoracic region. Severe thoracic deformity can cause a consequence of pulmonary disease, pulmonary hypertension, heart failure, cardiac compression. Moderate kyphoscoliosis represents a Cobb angle between 25 and 100 degrees, while severe kyphoscoliosis represents a Cobb angle greater than 100 degrees. **Objective:** The primary objective of this research is to highlight the effectiveness of a six-month physiotherapy programme. The study samples 12 patients diagnosed with kyphoscoliosis.Objectives: -increased mobility of the spine -toning of the muscles on the convexity side; -normalization of tone in the elongation regime of the muscles on the concavity side; -correction of the deficient attitude of the shoulders, shoulder blades and pelvis; -reduction/disappearance of the deficient attitude of the body and formation of the correct body attitude reflex; **Material and methods:** The methods used in this research were: - bibliographic study method, - observation method, - the method of tests and measurements - survey method (questionnaire) Tests applied: - Schober test - Ott test -Cobb angle. **Results :** At the end of the study the results will be: decreased Cobb angle , increased mobility of the spine , patient's posture is more correct. Final testing has not yet taken place and the results obtained are only intermediate. **Conclusions:** These results have been possible due to the well-conducted rehabilitation program, carried out systematically and organized in specialized institutions and using appropriate means according to the differentiated diagnosis. The use of these means in combination leads to the effectiveness of recovery, both in terms of duration and effect.

Keywords: kyphoscoliosis, Cobb angle, posture, mobility

THE INCIDENCE OF CASES OF LUMBAR DISCOPATHY IN PATIENTS FROM PHYSICAL MEDICINE AND RECOVERY LABORATORIES

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Background: Lumbar disc disease has been around since ancient times. The first people to refer to this condition were the ancient Greeks when they described the symptom of back pain . Hippocrates also referred to disc herniation, which is a condition caused by advanced disc disease . Some recent studies reveal that the first people to be discovered with lumbar disc disease are those who helped build the pyramids. The remains of these people showed wear and tear on the vertebral discs. **Objective:** This study focuses on one of the most common back diseases of all the time which is lumbar discopathy. Also this study aimed to investigate the presence of degenerative disc disease among patients in the physical medicine and rehabilitation clinic. Other objectives are to study the effectiveness of secondary prophylaxis and recovery methods. **Material and methods:** Material: It is composed of the total number of patients who will present to recovery during the course of the study, during 2-3 months. There will be 2 groups: the first group will include patients presenting with the condition studied - lumbar disc disease and the second group will be made up of patients presenting with another type of condition. Methods used: bibliographic study method, observation method, statistical-graphic processing method. **Results :** During the 2-3 months that the study was conducted, approximately 120 patients were admitted to the rheumatology ward and treated in the hospital's rehabilitation laboratory. Each patient was treated with physiotherapy, kinesiotherapy and massage procedures. Of the 120 patients, 45 presented with the diagnosis of lumbar disc disease, 30 of the patients presented with symptoms associated with mild lumbar disc disease. The rest of the patients without lumbar disc disease or associated symptoms had lower limb and neurological disorders. **Conclusions:** Following the study, it was found that the frequency of spinal disorders is increasing year on year. Workplace, ageing, vicious postures, genetic factors cause back pain and lead to various diseases. Among the most common conditions in physical medicine and rehabilitation labs is lumbar disc disease due to unbearable pain . In the US 8 out of 10 people suffer from low back pain.

Keywords: incidence, lumbar disc disease, lumbar discopathy, physiotherapy

EFFICACY OF PHYSIOKINETIC THERAPY TECHNIQUES IN THE RECOVERY OF CARPAL TUNNEL SYNDROME IN THE PREOPERATIVE STAGE.

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Background: Carpal tunnel syndrome is the most common canalicular neuropathy of the upper limb. The onset of this syndrome is caused by compression of the median nerve at the wrist where the carpal tunnel passes through. **Objective:** The main objective of this research is to highlight the effectiveness of physiokinetic therapy techniques in patients with carpal tunnel syndrome in the preoperative stage. In order to demonstrate the effectiveness of these techniques we have subjected all patients included in the study to a treatment over a period of ten days, at the end of which we will show whether the treatment is effective. **Material and methods:** Methods used The patients included in the study underwent an individualized physiokinetic therapy treatment that was prescribed by the specialist setting over a period of ten days. The treatment included electrotherapy, massage and physiotherapy. The electrotherapy procedures were aimed at pain relief and the current used was recommended by the doctor according to the indications/contraindications each individual patient has. The following were used in the treatment of patients: LASER biostimulation which is a specific program for the median nerve; Pulsed continuous field ultrasound, used with 0.3 W lasting 3-5 minutes; TENS with individualised intensity for each patient, lasting 10 minutes; Massage is intended to boost blood circulation before the kinetotherapy programme. The following techniques were used for this procedure: Neuroses; Frictions; Gentle shaking; Tractions. Kinesiotherapy intervenes to prevent joint stiffness, muscle atrophy and to increase muscle mobility and strength. We conducted the assessment using the following methods: Visual Analogue Pain Scale (VAS); DASH questionnaire; AUSCAN Index.**Results :** Results: The pain intensity assessed by the VAS scale decreased significantly for each individual patient at the end of ten days of treatment compared to the initial pain intensity felt by each individual patient. The results of the DASH questionnaire showed a significant decrease for each patient i.e. the degree of disability was significantly reduced. The results of the AUSCAN index showed a significant decrease in pain and joint stiffness and an increase in functional capacity for each patient. **Conclusions:** Finally, the results showed the effectiveness of physiokinetic therapy techniques in the recovery of carpal tunnel syndrome in the preoperative stage.

Keywords: Carpal tunnel syndrome, preoperative stage, physiokinetic therapy techniques

KINETIC METHODS AND TECHNIQUES APPLIED POSTOPERATIVELY IN FUNCTIONAL RECOVERY AFTER ACHILLES TENDON RUPTURE.

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Background: Achilles tendon rupture is a quite common condition in people who practice competitive and non-performance sports. When an Achilles tendon rupture is noticed, pain is also present. In addition to the very strong pain, the Achilles tendon rupture is also accompanied by certain changes in the mechanical structures of the tendon. **Objective:** The primary objective of this research is to highlight the long-term recovery method on the anti-gravity treadmill -ALTER G, after surgery and post-surgical period in case of Achilles tendon ruptures, by combining kinetic and physiotherapeutic methods. **Material and methods:** The research methods we used were: bibliographic method, case study method, experimental method, observational method of subjects' evolution, method of tests and evaluations, statistical method, methods of physiotherapy and physiotherapy techniques and graphic method of presentation of results. Following an analysis of the problematic of our study , we issued the following working hypothesis: A. Applying conservative treatment in the first phases after surgical treatment of Achilles tendon rupture was analyzed on a group of 8 subjects (patients) for 5 months in which different methods of treatment are applied such as: application of anti-inflammatory creams, physiokinetic therapy and walking on anti-gravity band. Statistically significant changes will be produced in the effectiveness of the different treatment methods and in the symptomatology and recovery influence of the tendon on the return to sport or daily activities. B. The effectiveness of the applied treatment is more beneficial in conditions of combining different types of therapeutic treatments. **Results :** In the first group, 8 subjects were included who received the included ALTER-G anti-gravity band therapy at the end of each 15-minute physiotherapy session under the supervision of the

physiotherapist. In contrast to the first group, the control group who did not benefit from the anti-gravity band sessions, only physiotherapy and physiotherapy. Pain intensity assessed by the VAS scale decreased significantly in the study group compared to the control group. Range of motion increased remarkably and joint mobility was assessed by ankle joint balance, the comparison term was the angle of mkition of the same segment. **Conclusions:** The results showed that the inclusion of the antigravity band in the kinetic treatment has favorable long-term effects on recovery in achilles tendon rupture, therefore it can be considered one of the most elective treatment methods for achilles tendon recovery.

Keywords: Achilles tendon rupture, postoperatively in functional recovery, Kinetic methods and techniques

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PANDEMIC INFLUENCES ON YOUNG PEOPLE WITH LOW BACK PAIN

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Background: The pandemic due to the infection with COVID-19 came together with a prolonged period spent in isolation for the entire world, having a negative impact on young people both in a social and physical point of view. **Objective:** The purpose is to study the impact of the pandemic on low back pain among young people. **Material and methods:** We conducted a retrospective observational study on a total of 129,027 patients presented at the Emergency Unit of Sibiu in 2019 and 2021, one year before and one in the middle of the pandemic to see how lumbar pain in young people was influenced. **Results :** The total number of presentations in the Emergency Reception Unit was lower by 15.01% in 2021 (59,276 cases) compared to 2019 (69,751 cases). The number of cases of low back pain in the case of young people aged between 18-35 decreased from 1272 cases in 2019 to 251 cases in 2021, but the percentage of young people with low back pain was increased in percentage in 2021 (22.31% representing 56 cases) compared to 2019 (19.73% representing 251 cases). The difference between young people coming from the urban environment is 1.19% in 2019 and 7.15% in 2021, the rural environment predominating in 2019 while the urban one prevailed in 2021. **Conclusions:** Lumbar pain is the reason why several people seek medical assistance every year, approximately 1 of 5 being young, aged between 18 and 35. The pre-pandemic and pandemic comparison has a special weight due to the impact of the restrictions on the individual's health. Although the total number of presentations to the emergency room decreased, people avoiding contact with hospitals, the percentage of total presentations of lumbar pain syndrome remained unchanged. Closing and restricting the activity of the Physiotherapy and Medical Recovery departments during the pandemic will ultimately cause an explosion and aggravation of cases of lumbar pathology. One of the most famous studies in Malta shows a worrying increase of the cases of lumbar pathology among young people during the pandemic. Corroborating these data and the limited access to medical assistance, but not restricted to symptomatic therapies, we can expect that the pressure on medical recovery and emergency medicine services will explode in the coming years, especially with young patients. The differences between urban and rural environments are minor from a percentage point of view, young people probably having the same lifestyle based on sedentarism, regardless of where they come from.

Keywords: lumbar pain, pandemic, emergency room

THE ROLE OF HIPPOTHERAPY IN THE REHABILITATION OF CHILDREN WITH NEUROMOTOR DISABILITIES

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Background: Hippotherapy is an equine-assisted therapy that uses horse movement to facilitate rehabilitation goals. It originated in Europe in and is based on the principle that the horse's sensory experience can improve neuromuscular control, postural stability, and sensory integration. Sessions are conducted by licensed healthcare professionals such as physiotherapists and occupational therapists with specialized training in equine-assisted therapy. Although not a cure, it can be an effective complementary therapy for individuals with disabilities or special needs. **Objective:** Hippotherapy aims to improve sensory integration, motor coordination, postural control, balance, muscle tone, joint mobility, and overall physical endurance. It can reduce spasticity, promote relaxation, and develop social skills, and self-confidence in individuals with neuromusculoskeletal disorders or cognitive/behavioral impairments. **Material and methods:** Hippotherapy, which assists children with neuromotor

disorders, uses special equipment such as a special saddle and special stirrups to facilitate spasticity reduction, muscle control, muscle strengthening, balance improvement, and postural education or re-education. As a means of initial evaluation, anamnesis was carried out for each patient by the therapy team's doctor, followed by psychomotor development assessment for proper classification of the child's developmental age in accordance with their physical and cognitive capacities. The development sheet was then reviewed after 8 months to assess any progress compared to the initial evaluation. **Results :** In this study, 10 out of 10 participants with spasticity showed temporary reduction during therapy sessions, attributable to the riding position and neuroproprioceptive facilitation techniques employed. 4 out of 10 children improved balance maintenance during the 8 months study. Further, over this same timeframe, it was also noted that 4 out of 10 patients exhibited an improved riding position as a result of the forces acting in the sagittal, frontal, and transverse planes, and the exercises undertaken in these planes. One child with tetraparesis achieved upright standing while riding, joining 5 others who had already achieved it, while the rest worked on improving muscle tone. **Conclusions:** Based on research and clinical experience, it can be concluded that hippotherapy is a beneficial therapeutic intervention for children with neuromotor disabilities. Hippotherapy can facilitate improvements in physical function, balance, coordination, muscle strength, and flexibility. In addition, it can positively impact cognitive, emotional, and social development. The engaging and motivating nature of hippotherapy can increase children's participation in therapy, leading to greater gains in functional outcomes. Therefore, hippotherapy represents a valuable treatment modality for healthcare professionals to consider when working with children with neuromotor disabilities.

Keywords: hippotherapy, spasticity, tetraparesis, children

NURSES

IMPACT OF THE OVERWEIGHT IN CRITICALLY ILL PATIENTS – ARE RESPIRATORY VALUES DIFFERENT FOR A SPECIFIC BODY MASS INDEX?

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Background: Effects of obesity on the clinical prognosis for critically ill patients and the relationship between obesity and outcome are widely discussed by scientific literature. Critically ill obese patients are characterized by complex needs and multiple nursing strategies were proposed. Still, the relationship between body mass index (BMI) and respiratory pattern is controversial, especially regarding the nursing management. **Objective:** We aimed to characterize respiratory pattern in critically ill obese patients and to investigate the relationship between BMI and acid-base balance results. **Material and methods:** We conducted a prospective observational study in the Intensive Care Unit of Târgu Mureș Emergency Clinical County Hospital. Two groups of patients were assessed: ten patients with normal weight (18.5□ □□□□□ kg/m2) and ten patients obese class 1 (30.0□ □□□□□ kg/m2). To appreciate mortality risk SOFA and APACHE II scale were used. An arterial blood gas analysis was performed at patients' admission. We analyzed pH, partial pressure of oxygen, partial pressure of carbon dioxide, and Horowitz index fir lung function. **Results :** No statistically significant difference was noticed regarding the gender and the age of the two groups (p>0.05). When assessing the severities scores, for the normal weight patients SOFA was between 5 and 13 points and APACHE II between 19 and 32 points, respectively higher values were noticed for obese class 1 patients, SOFA between 5 and 15 points and APACHE II between 17 and 41 points. Being admitted for acute respiratory failure, hypoxemia (PaO2 <80mmHg) was noticed for 2 patients in each group and hypercapnia (PaCO2 >45mmHg) for 4 patients in each group. No statistically significant difference was noticed between the groups regarding P/F ratio, the same number of patients being characterized by severe respiratory failure (p>0.05). **Conclusions:** Our pilot study identifies that both normal weight patients and obese patients have impaired respiratory function, with no statistically significant difference regarding hypoxemia, hypercapnia and respiratory failure.

Keywords: overweight, critical ill patient, respiratory failure, arterial blood gas analysis

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MANAGEMENT OF INFANTS WITH CONGENITAL CARDIAC DISEASE

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Background: Congenital heart defects (CHD) refer to malformations in the structure or function of the cardiovascular system that is present from birth and continue to be one of the most prevalent birth defects. There are various types of CHD, and the most common involves the heart's internal walls, valves, or major blood vessels that transport blood to and from the heart. While certain defects are straightforward and require no medical intervention, others are complex and demand prompt treatment shortly after birth. The management of CHD involves receiving regular follow-up care and monitoring to lessen complications and enhance the quality of life. **Objective:** The purpose of this study is to evaluate and monitor the parameters of this malformation in infants while observing the outcome. **Material and methods:** This retrospective study aims to analyze the medical records of 74 pediatric patients admitted to the Pediatric Clinic, County Hospital Târgu-Mureș between January 2019 - January 2022, diagnosed with congenital heart defects and other comorbidities. Patients were grouped according to criteria such as gender and age while they were hospitalized. **Results :** After we examined the medical charts, we obtained the following results. Out of 74 patients, 34 (45,94%) were female, 40 (54,05%) were male, all aged between 1 month and 14 years old (Avg=2,12). Most of the patients were underweight (41 cases, 55,40%), 21 (28,37%) had normal weight and only 4 patients (5,40%) were overweight. The minimum weight reported was 2260g while the maximum was 41kg, with an average of 10kg. The longest admission period of a patient was 17 days, with an average of 3 days. There were patients who experienced difficulties such as poor nutrition 15 (20,27%), anaemia 14 (18,91%), and rickets 3 (4,05%). In addition to the congenital heart disease the infants also presented symptoms of upper respiratory tract infections 8 (10,81 %), lower respiratory tract infections 23 (31,08%), gastroenteritis 13 (17,56%), and urinary tract infections 3 (4,05%). Most of the patients required parenteral nutrition and rehydration. **Conclusions:** All patients were hospitalized for different infections, which caused cardiac decompensation. The high incidence of respiratory disease in children with congenital heart

disease causes these children to be frequently admitted to the general pediatric service. It is very important the correct management of these children and the prevention of complications, to have an adequate life quality.

Keywords: management, congenital heart disease, child

THE ASSESSMENT OF BURNOUT IN ICU NURSE PRACTICE – A DESCRIPTIVE TRANSVERSAL STUDY

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Background: Nurse's activities in critical settings imply emotional, mental and physical participation in the management of critically ill patients. Burnout is described by World Health Organization as an occupational phenomena caused by excessive and prolonged stress. Heightening awareness of both intensive care nurses and hospital administrators is of great importance regarding burnout in their work setting. **Objective:** The main purpose of this research was to examine the relationship between burnout components and demographic variables in a group of intensive care unit nurses. **Material and methods:** A transversal descriptive study was conducted in the Intensive Care Unit at the Emergency Clinical County Hospital of Târgu Mureș. Study design was to assess the extent of burnout according to three dimensions: exhaustion, negativism and reduced self-confidence, respectively reduced professional efficacy. Seventy nine intensive care nurses the research questionnaire of the Maslach Burnout Inventory (MBI). Statistical analysis included non-parametric tests. **Results :** Burnout was considerable among nurses. Study results indicated moderate to high levels of total component scores in intensive care nurses and on all three subscales of the assessment instrument. The results showed that the nurses had emotional exhaustion, high depersonalization, and high reduced personal accomplishment. **Conclusions:** The findings in this study recommend support for ICU nurses. Steps to prevent burnout in critical care settings should be taken; especially learning to identify the early warning signs to avoid a problem that could put patients at risk.

Keywords: Burnout, nurses, intensive care, critically ill patients

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THE ASSESSMENT OF PERIOPERATIVE ANXIETY: GENERAL ANESTHESIA VERSUS SPINAL. ARE THERE DIFFERENCES?

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Background: Anxiety is the subjective unpleasant feelings of dread over something unlikely to happen, such as the feeling of imminent death. Preoperative anxiety is a challenging problem in the preoperative care of patients. A common level of anxiety is an expected reaction to the unpredictable and potentially life-threatening circumstances, especially for a patient's first surgical experience. **Objective:** The aim of this study was to identify predictors of perioperative anxiety and to quantify the relevance of specific fears particularly associated with general or spinal anesthesia. **Material and methods:** We conducted a cross-sectional survey at the Emergency Clinical County Hospital of Târgu Mureș, in patients scheduled to undergo elective surgery. Examined patients were admitted in General Surgery Department or Orthopedics Department. Demographics such as sex, age, habits and diagnosis were assessed. State-Trait-Anxiety-Inventory (STAI) was used as measure of state anxiety and trait anxiety. Patients offered their consent and answered 40 questions in total. **Results :** Aged between 29 and 94 years old, thirty nine patients answered the questionnaire. Two groups of patients resulted: patients who needed general anesthesia and patients who needed spinal anesthesia. Scores range from 20 to 80, with higher scores correlating with greater anxiety. The S-anxiety scale would only measure S-anxiety and the T-anxiety scale would only measure T-anxiety. Patients related: "I am presently worrying", "I feel nervous", "I have disturbing thoughts" when it came to both general and spinal anesthesia, with no statistically significant difference ($p>0.05$). **Conclusions:** It may be of interest to adopt in clinical practice STAI evaluation. Exploring the factors and detecting the severity of symptoms of anxiety are important to the patients and could be addressed in the course of medical care. This study could help clinicians to monitor anxiety levels in the perioperative population.

Keywords: Perioperative anxiety, STAI, General anesthesia, Spinal anesthesia

PHYSICAL EDUCATION AND SPORT

COMPARATIVE EVALUATION OF PROPRIOCEPTIVE CONTROL AT 6-10 YEARS OLD ATHLETES AND CHILDREN WHO HAVEN'T PRACTICED SPORT

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Background: Proprioception means the awareness of body position in space, and the capacity to use your body limbs in a proper way. This has an essential role in athlete's movement, proprioception helps them to move with accuracy, control, coordination, balance and stability. **Objective:** The aim of this study is to emphasis the benefits of sports on athlete's proprioception. **Material and methods:** Two groups of children between the age of 6 and 10 years participated in this study, group "A" was composed of taekwondo athletes, and group "B" of children who haven't practiced sports. Five specific tests were applied on both groups, such as Matorin Test, Balance test with balance board, Shark Skill test, Space perception and dynamic balance test and Hand kinesimetry test. At the end, both group's results form each test were compared. **Results :** The most significant results were, for example at the Matorin test, the biggest jump from group "A" was 405° in both right and left direction, while from group "B" was 360° on the right side, and 405° on the left. Also, at the Balance test with balance board, children from group "A" managed to maintain their balance with opened eyes the longest for 1'52", while from group "B" for 1'45". With closed eyes children from group "A" maintained for 31".52, whereas from group "B" for 29".72. The shortest time in which the Shark Skill test was completed by group "A", was 8".17 with the right leg, and 8"56 with the left leg. The shortest time from group "B" was 10".70 with the right leg, and 11".31 with the left leg. **Conclusions:** According to the results, the study's hypothesis is confirmed, which means that the proprioception of athletes is more developed than of those children who haven't practiced sports.

Keywords: proprioception, athlete, postural control, taekwondo

PRECLINICAL DENTAL MEDICINE

LUTING CEMENTS IN THE CASE OF DENTAL VENEERS

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Background: Dental veneers can be manufactured from different types of ceramics and zirconium. Their long-term success depends on the type of luting cement, as well as respecting the luting protocol instructions. **Objective:** When choosing the luting cement a few conditions need to be taken into consideration such as: The ceramic substrate and the tooth surface, to select the right cement and also the correct adhesive protocol. The goal of this study is to determine, in vitro, the effectiveness of actual cements and to analyze factors that can influence the quality of fixation and changes in properties of the cement over time. **Material and methods:** 10x10 mm squares-shaped samples were made in the dental technique laboratory from different types of ceramics to simulate dental veneers. For every type of ceramic, we used 3 samples of 10x10 mm. To get a better understanding of the physical properties of cement and the influence of external factors we used glass slides. We studied 3 types of cements, 3 types of ceramic masses and the influence of physical and chemical factors on the properties of the cements. Dual cements and photopolymerizable cements can be applied on feldspathic ceramics, therefore we monitored the effect and quality of photopolymerization, as well as the temperature variations, factors that could compromise the fixation quality. **Results :** We determined modifications of viscosity, depending on temperature changes, chromatic alterations, discernable in the case of transparent luting cement. Incidence-appropriate light curing but followed by non-observance of the time required for photopolymerization, produces quality as well as quantity modifications of the luting cement that has been objectified through glass slides. Furthermore, luting protocols could be altered by humidity. **Conclusions:** Picking the right luting cement needs to be done selectively, being aware of the properties, requirements of the ceramics used for veneers, taking into consideration the luting protocols, because any small error could lead to failure undetectable on the moment, but devastating in the future.

Keywords: luting cement, veneers, ceramics, protocol

STAMP TECHNIQUE: SIMPLE AND THAT'S ALL?

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Background: Nowadays, when almost all medical procedures can be performed minimally-invasive, new treatment methods are appearing in dental practice that capitalize on this principle. "Stamp technique" is a new method of reproducing the anatomy of the occlusal surface, close to perfection, applied in the case of composite restorations in the lateral area. **Objective:** The aim of the study was to establish in vitro, which are the most suitable materials for this technique, both for the impression of the occlusal surface and for the final restoration, as various variants are described in the specialized literature. **Material and methods:** 24 molars, with intact occlusal morphology, were framed on plaster arches, mounted in the occluder. For the impression of the occlusal surface, materials such as: silicone A, silicone C, composite flow and liquid dam were used, and their properties were compared. For dental restorations, flow composite, composite resin and the combination of the two have been used. Final restorations were evaluated for marginal closure, occlusal fit,and need for polishing. Fillings were made using combinations of different materials and methods, and the advantages and disadvantages of each were noted. Superficial and medium cavities were made. **Results :** The method using silicone A as an impression material is inaccurate due to the incompatibility between silicone A and composite resins.The method using silicone C for impressioning the occlusal surface can be accurate, but it has shortcomings, because between the impression material and the obturation material, a plastic sheet is interposed, which can cause changes in the morphology of the occlusal surface. However, the method can be useful, in the case of medium cavities, with surface extension. Liquid Dam is the most suitable material for the Stamp Technique, due to its fidelity and stiffness after setting, allowing pressure to be applied without deforming. The photopolymerization of the composite is obtained with the impression applied to the occlusal surface, which allows obtaining restorations with superior fidelity, without deformations. Among the filling materials, using the combination of normal consistency composite and flow composite, aesthetic, functional fillings with superior marginal closure are obtained. **Conclusions:** Nature is the master of creation, and man's purpose is to preserve what she has created. Today, practitioners have a variety of materials and methods at their disposal, which, when chosen carefully, can produce spectacular results.

Stamp Technique is a method by which the "RESTITUTIO AD INTEGRUM" of the morphology can be obtained, if used correctly.

Keywords: stamp technique,, minimally-invasive,, liquid dam,, composite resin.

MICROBIOLOGICAL AND BIOCHEMICAL ANALYSIS OF THERMOPOLYMERIZABLE ACRYLIC RESINS: IN VITRO STUDY

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Background: Prosthetic stomatopathies are one of the main problems faced by edentulous patients with total or partial acrylic dentures, thermopolymerizable acrylic resins being the most used materials for denture bases. **Objective:** Demonstration of the hypothesis that natural solutions and substances can have an efficient antifungal effect on acrylic resins used for denture bases without chemically affecting the acrylic resin. **Material and methods:** Substances and solutions with potential anti-candidal and antimicrobial action currently on the market were used. In the first part of the study, we made several samples of thermopolymerizable methyl polymethacrylate, respecting all the conditions imposed to simulate the conditions in the oral cavity. Afterward, we analyzed the acrylic resins both from a microbiological and biochemical point of view. The acrylic resin samples were subjected to a microbiological seeding process on a special culture to qualitatively and quantitatively determine the antifungal effect of the solutions used. Microbiological culture media were carefully selected and handled to avoid the risk of contamination. After incubation at the thermostat, we determined the substance that was the most effective in terms of antifungal effect. In the second part of the study, from a biochemical point of view with the help of a specific chemical reagent we demonstrate there is an interaction between the antifungal substances and the acrylic resin translated by degradation and chemical denaturation. **Results :** With the help of an automatic device connected to a computer that transmits the information in real-time, we counted the colonies grown on the inoculated microbiological media. Of the substances used, mouthwashes had the best antifungal effect, even with total inhibition of Candida growth. From a biochemical point of view, it was highlighted that there is a possibility of chemical degradation of acrylates with irreversible changes that can lead to the degradation of prostheses in the oral environment. **Conclusions:** To avoid the installation of prosthetic stomatopathies, the appropriate use of substances with anti-candidal and antimicrobial potential must be carried out consciously, respecting several criteria. Likewise, solutions known to have an antimycotic effect can lead to the chemical degradation of acrylic resins. Completing the means of sanitizing acrylic prostheses can contribute to reducing the risk of relapses because most of the time the risk of recontamination is caused by the base of the infected prosthesis.

Keywords: acrylic resins,, microbiology,, degradation,, biochemistry,

CLINICAL DENTAL MEDICINE

BRUXISM RELATED TO STRESS AMONG UNIVERSITY STUDENTS

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Background: Bruxism is "a repetitive jaw-muscle activity characterized by clenching or grinding of the teeth and/or by bracing or thrusting of the mandible." Teeth grinding can occur during sleep (sleep bruxism SB) or awake (awake bruxism AB). Bruxism can affect 8-13% of the adult population, irrespective of gender. The etiology is multifactorial and psychological factors are considered a significant component in the initiation and progression of this condition. Several studies reported that it is a strong correlation between stress and bruxism. **Objective:** The aim of this study was to find a correlation between bruxism and stress, particularly among university students. **Material and methods:** The study involved 370 (253 F) volunteers, all students at the George Emil Palade University of Medicine, Pharmacy, Science and Technology of Targu Mures, Romania. Participants were asked to complete an anonymous questionnaire with 27 questions divided into three sections. The first section included general questions about the person, the second section, based on the Fonseca Questionnaire, included questions and a scale related to bruxism, and the third section included the Perceived Stress Scale (PSS). Statistical analysis was performed with the GraphPad Prism 9 for macOS version 9.3.1. The statistical significance was set at $p < 0.05$. **Results :** The mean value of the stress score was 19.53 (SD 6.67 CI 18.85 - 20.21) for all study groups. Over 50 percent (52.43) of the study group experienced an average level of stress (score 20 and above). Statistical difference was found between female and male participants (20.53 vs. 17.36 $p<0.0001$) regarding stress. The prevalence of SB was 32.97% (F=35.18%; M=28.21%) and for AB was 30,27% (F=33.60%; M=23.08%) without gender significant difference. A positive correlation was found between AB and SB and stress scores for all study groups. **Conclusions:** The stress level and bruxism are higher among university students than in the general population. The high-stress level can lead to bruxism or make it worse.

Keywords: Student, Bruxism, Stress

INVESTIGATING FGFR4 GENE EXPRESSION AND MUTATION IN PATIENTS WITH ORAL SQUAMOUS CELL CARCINOMA AND ADJACENT HEALTHY TISSUE

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Background: Background: Oral squamous cell carcinoma (OSCC) is the most common malignancy of the oral cavity and affects more than 500,000 people in the world every year. The etiology of this cancer includes several internal and external factors, among which the genetic background of people is one of the important factors involved so new researches are investigating this factor. The treatments that are currently used include a combination of surgical excision, radiotherapy and chemotherapy, however, more than half of the patients suffer from severe defects after these treatments, so efforts should be made to use new treatment methods. **Objective:** Objectives: Recently, many studies have been conducted on the genetic basis of this disease, and one of the genes that can be involved in the occurrence of this cancer is the gene FGFR4. In the future, the genetic information can take a step towards new treatment methods such as target therapy. The aim of the current study is to investigate the mutation and expression of the FGFR4 gene in the Squamous cell carcinoma and adjacent healthy tissue. **Material and methods:** Material and Method: 52 paraffin tissue samples from people with oral squamous cell cancer were collected from the Cancer Institute of Imam Khomeini Hospital (Tehran, Iran), and in 36 cases, the samples contained both tumoral tissue and adjacent healthy tissue, which were considered as controls. First, RNA was extracted and after making cDNA, gene expression was measured by RT-PCR method. Then the DNA of the samples was extracted and the doubling mutation of this gene was checked using the MLPA method. **Results :** Results: In examining the results of RT-PCR with REST software, the FGFR4 gene expression increased by 1.45 times in tumoral samples compared to normal samples and this relationship was significant ($p<0.05$). Also, in the study of duplication gene mutation, by analyzing the MLPA results with SPSS and Gene marker software, gene mutation was observed in 15% of the samples, which was not significant. **Conclusions:** Conclusions: Considering the existence of a positive relationship between OSCC and increased expression of the FGFR4 gene, as well as mutations in this gene in patient samples, it is possible to use this information on extensive clinical trials and promote newer treatments, including target therapy.

Keywords: oral squamous cell carcinoma, FGFR4 gene, gene expression, Gene Therapy

DENTAL FILLINGS FROM BELOW SEA LEVEL TO BEYOND THE CLOUDS

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Background: The different values of the atmospheric pressure occurred during scuba-diving, airplane flight or skydiving induces dento-maxillary modifications with objective manifestations at the level of the oral cavity. **Objective:** Examination of the oral cavity, clinical teeth examination and radiological assessment in persons who have done scuba-diving/skydiving, who are pilots and travel by plane and felt discomfort, pain or dental sensitivity, as well as the identification of the factors and conditions that led to the appearance these problems. **Material and methods:** The study is based on a questionnaire addressed to people who practice extreme sports or carry out their professional activity in the following fields: scubadiving, skydiving or airplane pilots, and includes several questions related to gender, age, depth/height at which scubadiving/skydiving/plane flights were performed, situations that caused dental pain or sensitivity in the orofacial area, description of the type of pain felt, character, intensity, duration, identification of the tooth (if it could be accurately identified), the necessary manoeuvres to stop the pain or improve the state of discomfort, if medication was necessary. In cases with dental pathology and specific symptomatology we requested dental intraoral x-ray. **Results :** Out of a total of 20 participants in the study, 10 are divers and 10 are from the aerian field. Of the divers, 40% had dental problems while diving, of these 75% were men between the ages of 30 and 50 and 25% were women. For each of them, the pain persisted and intensified until the moment they returned to the surface. In 100% of them, there is an incorrect crown or endodontic filling of the tooth that presented symptomatology. Those who carry out their activity in the air field, 20% felt dental pain during the plane flight/skydiving, all of them being males aged between 25-45 years. In each of these there was incorrect dental treatment, the pain ending with the completion of the flight/jump mission. **Conclusions:** The study shows us that incorrect fillings or improperly performed endodontic treatments can cause dental pain, in conditions where the atmospheric pressure changes its values at different altitudes. Dental control before starting the extreme sports or those who work in these fields presented above is essential to avoid unpleasant situations.

Keywords: atmospheric pressure, depth, altitude, dental pain

MANDIBULAR ANTERIOR CROWDING AND THE EFFECT OF THE THIRD MOLAR

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Background: Dental crowding is a term that refers to an inconsistency between tooth dimension and arch size resulting in malocclusion. Late mandibular crowding is a problem that affects patients, that have received and have not received orthodontic treatment. The etiology of late mandibular crowding is still discussed among dental professionals. Multiple professionals are referring to lower third molars (impacted or not) as being the contributing factor for the anterior crowding of the lower arch. Other professionals are considering other factors, such as craniofacial growth, as the etiological factor of late mandibular crowding. **Objective:** The Objective is to reevaluate the opinion among professionals from different time periods about this specific topic and include other factors that might have an effect. Furthermore, we will discuss, if a third molar extraction should be performed in order to prevent late mandibular crowding and if it is justified **Material and methods:** Literature from the period from 1970-today has been collected and analyzed regarding our topic. All this literature has been collected from the MEDLINE sites such as PubMed and Google Scholar. The most common measurement in most of the studies was the Littles irregularity index. In most of the literature a radiographic, as well as a clinical examination was performed. **Results :** The result of our literature review shows that the opinion of wisdom teeth being the cause of late mandibular anterior crowding has not changed significantly. In 19 reviewed studies only 15.78% have established a significant relationship between lower third molar and mandibular anterior crowding. On the other hand, 84.22% of the studies denied a relationship between the third molars and mandibular anterior crowding. In 36.84% of the studies, an explicit indication of wisdom teeth extraction to prevent anterior crowding was considered as not justified. **Conclusions:** Regarding late mandibular crowding there are multiple factors that have an effect, and it is not only related to lower third molars. Factors, such as craniofacial growth, have been found to

have an effect on mandibular anterior crowding. Due to the lack of a relationship between the third molar with anterior crowding found in the studies, the extraction has been considered as not justified. The analyzed studies however are not significant enough to rule out the effect of wisdom teeth or deny the justification for the extraction of wisdom teeth.

Keywords: Wisdom teeth, crowding, extraction

COMPUTER GUIDED IMPLANTOLOGY: A STEP TOWARDS THE FUTURE OF TOOTH REPLACEMENT

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Background: Computer Guided Implantology is a newer, modern method used for implant placement. It uses computers to create an accurate 3D scan and model of the patient's dental arch and surrounding anatomical structures. This technology allows the dentist to plan the optimal procedure in advance and perform an optimum procedure. Although there are many different software available, they mainly rely on overlaying/combining radiological (DICOM) files and clinical (STL) files. In more detail, DICOM files are created by a Cone Beam X-Ray or scanner, whilst STL files are digital impression of the patient's mouth. Combining these files aims to synchronize radiological data with tooth and gingival surfaces. This allows the creation and placement of the guide. **Objective:** As a goal we have set to determine whether or not computer guided implantology truly delivers the promised precision during implant placement. Furthermore a comparison between traditional implantology and Computer Guided Implantology. We have also considered patient and Doctor reactions and sentiments towards this newer technology. With the evaluation of this data we can determine how much patients and Doctors are willing to undergo procedure with newer technologies and how likely Doctors or future Doctors are to perform them. **Material and methods:** A combination of clinical data (from clinical cases presented on PubMed and Research Gate) both in traditional implantology and computer guided implantology and a study in the format of a Questionnaire (answered by patients, dental students and Doctors) will be used. **Results :** Although Computer Guided Implantology offers great precision it is also very much dependent on the surgeon's skills. Traditional implantology still remains the most commonly used type of implantology but considering the data analyzed computer guided implantology is a rapidly progressing technology that is being used more and more as it improves. **Conclusions:** It remains no secret that patients or Doctors can be skeptical about newer, less studied methods but by no means does it mean that older is always better. According to our research we can determine that computer guided implantology is giving better and better results as it progresses. The younger medical generation also seems to be more open and willing to try-out and/or use this newer technology.How could we increase the trust and confidence in these newer techniques and how much further will modern implantology progress in the future?

Keywords: Computer Guided Implantology, Precision Implantology, Implantology

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FROM PAIN TO PREVENTION: HOW INCORRECT POSTURE IS HARMING YOUR DENTIST LIFE

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Background: The incorrect posture among dental professionals is causing more and more concern due to the high prevalence of musculoskeletal disorders. Prolonged periods of time sitting in an incorrect posture and doing repetitive movements can easily lead to chronic pain, disability, and decreased quality of life. This has been a long-standing issue and various studies have tried to evaluate the prevalence and how the effects of these disorders can harm in time. On the other hand, researchers have also tried to find various solution, in order to promote long term health. Therefore, ergonomic inventions between dental professionals have been increasing. **Objective:** The objective of this study is to uncover the hidden danger of long-term incorrect posture. Not only this, but also to point the effective ergonomic intervention that can dramatically lower the cases of musculoskeletal diseases between dental professionals. **Material and methods:** After a rigorous analysis over numerous studies on the topic of musculoskeletal disorder we will mention some. Many of the studies were based on a validated self-eligible questionnaire given to dental professionals participants working in a multitude of specialities. **Results :** As our

paper have shown so far, after an extended duration of time, an incorrect posture can cause extended pain and can even become chronic and start to affect the long-term health. A proportion from 65 to 93,5 % of dental professionals have shown symptoms for musculoskeletal disorder. Usually when we read about musculoskeletal diseases a dental professional is mentioned, describing all sorts of pain, from neck, shoulder, and back pain to carpal tunnel syndrome. We can observe after studying several articles about clinical examination, that the treatment plan can include medication, physical therapy and other, like ergonomic interventions. **Conclusions:** This review has shown that the ethology of the musculoskeletal disorders is usually a static or incorrect posture. To name a few of this incorrect work posture we can mention: extreme flexion of the head and neck forward, the rotation and inclination on one side only of the trunk and lifting the shoulders. We can say that is more than just important, it is critical, for the health of the dentists to adopt ergonomic measures and to adjust their posture to become more neutral and balanced. I believe that a profound ergonomic training should be promote in the dentistry curriculum at all the universities.

Keywords: incorrect, posture, ergonomic, dentist

UNRAVELING THE MYSTERY OF HEADACHES AND FACIAL PAIN: A COMPREHENSIVE GUIDE

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Background: When we talk about pain within the cephalic extremity, headaches are very common and there are various factors that can cause these type of pain, including migraine, odontogenic pain and sinusitis. All can present very similar symptoms making diagnosis a very challenging task. The studies we observe tried to focus on the understanding of the pathophysiology of every type of headache and to contrast clinical features so we can choose the best treatment option available. **Objective:** The goal of this study is to explore the fascinating world of cephalic extremity pain. We aim to compare and contrast the characteristics of the elusive migraine, the tooth and odontogenic pain and the sneaky sinusitis. We will try to provide and gain a deeper understanding for these common yet quite complexe types of pain and to empower the ability and knowledge to effectively manage them. **Material and methods:** A retrospective of the various studies from eligible sources and a systematic review of the literature helped us understand and differentiate these quite similar types of pain. The studies we carried out approached different methods like imaging techniques such us computer tomography (CT) and magnetic resonance imaging (MRI). **Results :** Some of the studies we reached have described two types of headache classified by the International Headache Society. Primary headache disorder including migraine and tension type headaches and secondary type are resulting from some other disorder like sinusitis and dental pain. As we can see almost 90% of the headaches are a primary type headache. Furthermore, migraines are a chronic disease that affect the quality of patient life. The treatment can start from non-pharmacologic measure to prophylactic medication. **Conclusions:** In conclusion we can see that headaches are a complex and multifaced helth issue with a huge range of causes. All the studies underline the fact that an accuracy diagnosis will be preceded by a good plan of treatment.

Keywords: headache, migraine, sinusitis, odontogenic

CLINICAL DIFFERENCES BETWEEN ALLOGRAFT AND ALLOPLASTIC MATERIALS IN REGENERATIVE PERIODONTAL THERAPY

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Background: The equilibrium between the gum, bone, ligament, and cement ensures the anchorage of the tooth in the supporting tissues and the physiological function of the attachment. When this attachment is damaged, periodontal treatments aim to eliminate the etiological factors and promote healing. Regenerative periodontal therapy is a treatment method that focuses on restoring the periodontium affected by chronic inflammatory disease or injury. It involves using different biomaterials, such as alloplastic and allograft, to restore the attachment apparatus completely. **Objective:** The objective was to compare the clinical outcomes to provide recommendations for the optimal selection and use of allograft and alloplastic materials in regenerative periodontal therapy. **Material and methods:** We reviewed the literature to summarise the different results of studies and

cases. We used databases such as PubMed, Journal of Periodontal Research, and book references. The main parameters considered were the clinical attachment gain, the pocket depth reduction, the gingival recession, and the bone repairment (osseous fill). **Results :** The results demonstrated that allograft and alloplastic materials offered reduced pocket depth, a gain in clinical attachment, and bone repairment. The variation observed indicated that allografts showed a slightly more significant clinical attachment gain and a superior bone fill than alloplastic ones. Suggesting that allografts enhance osteogenesis and provide a greater capacity for repair in periodontal defects **Conclusions:** In conclusion, alloplastic materials act as a basic bone 'filler.' The difference in repair potential between allograft and alloplastic is minor or negligible. However, alloplastic is synthetic and naturally derived, offering availability, cost-effectiveness, and usage safety advantages. More research is needed to explore the long-term effectiveness. Improving clinical parameters via healing by the long junctional epithelium seems acceptable, but the ultimate goal is periodontal regeneration. Much research goes toward this objective, including research on bioactive agents such as recombinant human platelet-derived growth factors, platelet-rich plasma, enamel matrix derivative, and the P-15 peptide.

Keywords: Allograft, Alloplastic, Regenerative periodontal therapy

ANALYSIS OF THE SAGITTAL CONDYLAR INCLINATION

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Background: The correct approach of the oral rehabilitation includes a complex evaluation of the patient and in order to a successful outcome, its necessary an accurate transfer of information, record from the patient to the technician. Face-bows are a considerable help in achieving the transfer of 3D spatial relationship of the maxillary arch, and to position the maxillary cast in articulators. This devices help us to obtain successful restorative works, but we need to remember that they are only tools. In oral rehabilitation the key is in reproducing mandibular dynamics and to record accurate sagittal condylar inclination (SCI), which can facilitate the fabrication of restorations without occlusal interferences. **Objective:** The aim of the study was to determine and to investigate the variations of the sagittal condylar inclination, separately for the right and left joint, and to see the differences of our results comparing to the mean values defined by the international literature. **Material and methods:** Our study included individual face bow records of 20 patient, aged between 18 and 40 years, both of the sex was represented equally. The inclusion criteria for selection included participants with full complements of the teeth and Angle Class I relation. Measurements were done using a CeraMill □□□□□□□□virtual face bow, every subject had to make opening, closing, lateral and protrusive movements, from which the device's software calculated the mean left and right SCI values used for setting the articulator. **Results :** The mean SCI value was 38.3° for the right joint and 37.6° for the left joint. The results of this study suggested the average articulator setting for sagittal condylar inclination is 38° in relation to Midfacial plane. The results showed significant differences between the values for the right and left joint. **Conclusions:** Our results suggest that the average values correspond to the literature but they are not uniform inter-individually, so they can't give an adequate information for individual articulator setup.

Keywords: Oral rehabilitation, sagittal condylar inclination, virtual articulator, reference plane

STRIPPING, A NON-EXTRACTIVE METHOD OF OBTAINING SPACE ON THE ARCH

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Background: Dental stripping is a therapeutic procedure frequently used in dental practice to obtain the space needed to align the teeth at the level of the arches. The treatment method consists of minimal polishing of the enamel on the aproximal surfaces, being an alternative to extraction procedure. **Objective:** The present study aims to evaluate the dental sensitivity present in orthodontically treated patients who underwent therapeutic stripping. **Material and methods:** The research was based on a questionnaire, which includes a number of 11 questions with simple or multiple choice answers addressed to patients. Dental sensitivity was evaluated immediately after the interproximal enamel reduction and at a distance of 3 months, respectively 6 months after the therapeutic procedure. The study analyzed a group of 65 patients with orthodontic treatment (30 men, 35 women), aged between 16-25 years, who underwent dental stripping. Those with dental restorations were excluded from the research. The subjects were divided into 2 groups: Group 1 comprising 47 people without dental sensitivity before

dental stripping; Group 2 comprising 18 subjects with tooth sensitivity present in teeth undergoing enamel reduction. **Results :** Of the 47 subjects without painful complaints before the treatment, only 8 described the appearance of dental sensitivity conditions after its completion. 3 months after practicing the manipulation, 2 people still presented pain with the application of exciting stimuli, and at 6 months only one individual had this type of response. Of the 18 patients included in the second group, 12 did not present exacerbations of the initial condition even after the treatment. However, the other 6 patients (including 5 female and 1 male) had more pronounced characteristics of the painful sensation, due to the non-extraction procedure. **Conclusions:** The stripping procedure can be used with a minimal rate of occurrence of the discomfort felt by the patient. To improve the remineralization capacity of the abraded proximal surfaces and prevent the development of tooth hypersensitivity, fluoride-based varnishes may be used to the tooth surface once the stripping procedure has been completed.

Keywords: Enamel Stripping, Dental Sensitivity, Interproximal Surfaces, Orthodontics

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EVALUATION OF FRICTION FORCE IN FIXED ORTHODONTIC BIOMECHANICS

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Background: Friction affects tooth movement associated with all fixed appliances and is relevant to the edgewise technique which is often based on sliding teeth along a wire arch. **Objective:** The purpose of this study is to evaluate the static friction force that occurs when using brackets and archwires made of different materials in fixed orthodontic treatment. **Material and methods:** The study was conducted on standardized maxillary dental arch models numbering 28 on which 5 brackets of each type were passively bonded, namely conventional and self-ligating metal and ceramic brackets. All brackets were double (Siamese) with MBT prescription and 0.022 slot. The wires were 0.016 and 0.019x0.025 size, round and rectangular section made of stainless steel and nickel-titanium (NiTi). Transparent elastomeric ligatures with a diameter of 0.12 were used to ligate the wire-bracket system in the conventional ones. **Results :** It was observed from this study that the metallic conventional and self-ligating brackets generated the lowest static frictional force values. Differences were noted depending on the size of the orthodontic wire with which they were tested. In the case of polycrystalline alumina self-ligating brackets with metal slot tested with 0.019X0.025 SS rectangular wires, significantly lower static friction forces were observed than in the case of polycrystalline alumina brackets associated with the same type of archwires. Differences between the surface morphology of conventional and self-ligating brackets were also revealed depending on the material from which they are made. **Conclusions:** An important role in the generation of frictional forces is played by the bracket material and the size of the archwire used. There is a significant reduction in frictional force when a metal slot is incorporated in ceramic brackets.

Keywords: Orthodontics, Archwire, Frictional Force, Brackets

PHARMACY

DANGEROUS CHEMICAL INCOMPATIBILITIES DURING THE ADMINISTRATION OF SOME NEWLY APPROVED DRUGS

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Background: Chemical incompatibilities are qualitative interactions with a secondary quantitative component, which occur between two or more active pharmaceutical ingredients (APIs), APIs and pharmaceutical excipients/parenteral vehicles or between APIs and their primary packaging materials. These incompatibilities can destabilise the product, cause a loss of pharmacological activity and lead to the formation of toxic by-products. Many chemical interactions occur in clinical settings, during the co-administration of drugs or when reconstituting powders for parenteral preparations. Considering the number of new APIs entering the pharmaceutical market annually, it can become challenging for specialists to keep track of incompatibilities. Therefore, they must understand the underlying mechanisms of chemical interactions to avoid them. **Objective:** This paper aims to present several incompatibility occurrences of newly approved drugs that entered the European pharmaceutical market in the last two decades, along with their mechanism and practical strategies to overcome them. **Material and methods:** Relevant chemical incompatibilities were found in scientific reports published between 2011 and 2021 regarding twelve approved drugs or combinations. The Google Academic search engine and "chemical incompatibilities", "in-/ compatibility of", "drug incompatibilities", "Y-Site administration" (intravenous therapy), and "protein denaturation" as keywords were used. **Results :** Most identified interactions occurred when mixing two drug solutions with incompatible pH values, precipitating one or both APIs. Thereby, drugs such as posaconazole, telavancin hydrochloride, plazomicin, ceftolozane tazobactam, tedizolid phosphate and remimazolam besylate precipitate soon after mixing with alkaline solutions. In contrast, meropenem/vaborbactam, pantoprazole, imipenem/cilastatin/relebactam and daptomycin should not be associated with acidic solutions. In addition, two monoclonal antibodies (trastuzumab and bevacizumab) experienced aggregation upon dilution with a 5% dextrose solution. The solution's pH is a crucial physicochemical determinant of this incompatibility. Some practical preventive strategies have been described, such as compatibility databases and implementing standard operating procedures in each department. Thus, using infusion filters and multi-lumen catheters and creating a colour code system and a compatibility crosstable to identify incompatible drug pairs quickly will avoid many dangerous incompatibilities. Lastly, working with a multi-professional healthcare team is crucial to prevent errors. **Conclusions:** This paper highlights three ways in which incompatibility can occur for twelve APIs approved in the last twenty years by EMA and seven relevant preventive strategies. The importance of this study lies in the fact that pharmacists must take responsibility for identifying potential drug incompatibilities.

Keywords: chemical incompatibilities, precipitation, Y-site administration, pH modification

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MAJOR ADVANCES IN ANTIMICROBIAL THERAPY: THE OLIGODEOXYNUCLEOTIDES (ODNS) GENE SILENCING TECHNOLOGY

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Background: Bacterial resistance is becoming a major problem due to the inappropriate use of antibiotics and non-medical exposure to antibiotics and antibacterial chemotherapeutics (food, environment). Therefore, obtaining new antimicrobial active compounds, which have different therapeutic targets compared to the molecules already used, is a pressing problem. Finding therapeutic alternatives to fight infections has become an emergency recognized by the WHO. A promising therapeutic area appears to be the use of oligodeoxynucleotides (ODNs) gene silencing technology. This method is used to down-regulate target gene, which drastically diminishes bacterial viability and virulence. As a result, this therapeutic tool could increase the susceptibility of bacteria to treatment. **Objective:** This paper aims to make a synthesis of the most important aspects of the use of ODNs in the treatment of infections. We will describe the mechanisms of action, how they can be designed and used and the most important challenges in their development. **Material and methods:** A literature search was conducted to collect relevant published research using PubMed, Google Scholar, Web of Science and Science Direct databases. The search terms used was "antibacterial antisense agents", "antisense therapies", "inhibition of gene expression", "antisense oligomers", "antisense antibiotics", "alternative therapeutics of infectious disease". **Results :** Antisense oligomers are a linear sequence of nucleotides which is complementary to the "sense" strand of a specific nucleic acid

sequences with the aim of interfering with the transcription of the translation. The efficacy, specificity and safety of treatment depend on the structure of the antisense sequence and the type of pharmacophore groups involved. The potential benefits are given by sparing of commensal bacteria, post-antibiotic efficacy and reduced risk of resistance. **Conclusions:** The new therapeutic class seems very promising. The critical next step, randomized clinical trials, will decide which compounds will be widely available in therapy in the coming years.

Keywords: oligodeoxynucleotides, antisense antibiotics, gene silencing technology, bacteria

INNOVATIVE TOPICAL PEPTIDES USED IN ANTI-AGING THERAPY

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Background: Topical peptides are relatively new ingredients used in dermatocosmetics. The main categories of topical peptides are 1) Signal peptides; 2) Transport peptides; 3) Neurotransmitter-inhibitory peptides; 4) Enzyme-inhibiting peptides; 5) Keratin-based peptides. As a result, new opportunities have been challenging to develop innovative, effective, and safe topical peptides. **Objective:** This paper highlights the recent discoveries of topical peptides used in dermatocosmetics. New biological effects of the innovative peptides were targeted. **Material and methods:** The work was carried out based on the relevant articles identified in PubMed, Science Direct, Wiley Online Library, Elsevier and Springer Link databases using the keywords "topical peptides", "anti-ageing peptides", "cosmeceutical peptides", in combination with the names of the relevant topical peptides. **Results :** Some topical peptides with different biological effects on the skin have been identified. For example, the signal peptide Carnosine and its derivatives can capture Reactive Oxygen Species (ROS) and membrane lipid peroxidation products, protecting against oxidative stress, having antioxidant action, photoprotective effect and wound healing activity. Decorinyl, a synthetic signal peptide, is an excellent firming and sun protection agent which increases the skin's suppleness and decreases the roughness of the skin. Another synthetic signal peptide, Syn-Coll, supports collagen formation via the growth factor TGF-β and inhibits matrix metalloproteinases involved in collagen degradation. GHK, a transport peptide, presents an essential role in dermal repair. Also, this topical peptide inhibits the growth of cancer cells, reactivates the cell apoptosis system and stimulates the growth of healthy human fibroblasts; it exhibits potent antioxidant and anti-inflammatory activity. Finally, Argireline, an inhibitory neurotransmitter peptide, reduces wrinkles (similar effect to botulinum toxin) and has a moisturizing action. **Conclusions:** The use of peptides in anti-ageing cosmetic products is constantly increasing due to their multiple properties and the different ways they act on the skin. They can treat the signs of ageing by a topical application without toxic effects or adverse reactions on the skin. Other beneficial effects of the topical peptides are the antioxidant, photoprotective, skin regeneration and healing effect, hydration, depigmentation and skin uniformity. The number of anti-ageing cosmetic products containing peptides in their composition is increasing, suggesting consumers' greater demand and interest for topical peptides and manufacturers' focus on developing new peptides.

Keywords: topical peptides, anti-ageing peptides, cosmeceutical peptides, skincare

INDIGENOUS, INVASIVE CANNABIS SATIVA. FRIEND OR FOE?

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Background: *Cannabis sativa* is a plant species that is widely known for its psychoactive effects and medicinal properties. However, it can frequently become an invasive species and negatively impact the local ecosystem. In Romania, it is usually found in the sunflower cultures. Uninformed people occasionally use it as a recreational or medicinal plant, despite the fact that this variety may vary from the cultured varieties in terms of chemical composition and potency. **Objective:** The aim of this study was to perform a phytochemical screening of the herbal drug collected from an indigenous, invasive *Cannabis sativa* variety, collected from the spontaneous flora of Romania. **Material and methods:** Cannabinoid content was assessed using thin layer chromatography (TLC). Quantitative evaluation of hydroxycinnamic acids, flavonoids and total polyphenolic content was carried out according to the spectrophotometric methods described in the European Pharmacopoeia 10th edition. Inorganic anion composition was determined using a Dionex ICS-3000 Ion Chromatography System with an IonPac® AS23 Analytical Column. The analysis has been performed using a carbonate/bicarbonate eluent, under suppressed

condition, with conductometric detection. Antioxidant potential was evaluated using two *in vitro* assays: DPPH and ABTS. **Results :** TLC analysis of the extracts revealed the presence of cannabidiol and other three cannabinoids. Spectrophotometric determinations indicated that the herbal drug contains moderate concentrations of hydroxycinnamic acids, flavonoids and total polyphenols. Ion chromatographic determination showed the presence of trace amounts of fluoride, chloride, nitrate, phosphate, and sulfate ions. Four unidentified anions were also present, possibly low molecular weight organic acids. The extract had a strong antioxidant activity, determined with the DPPH method, with an IC50 of 0.068 +- 0.004 mg/ mL, similar with the IC50 of ascorbic acid (0.053 +- 0.003 mg/ mL). **Conclusions:** Although the preliminary analysis revealed that the herbal drug had an acceptable composition, an extended analysis is required in order to fully evaluate the presence of toxic trace elements and other compounds. *This work was supported by the George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureş Research Grant number 163 /7/ 10.01.2023.*

Keywords: Cannabis sativa, canabidiol, inorganic anions, antioxidant activity

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THE IMPORTANCE OF THE FIVE-ATOM HETEROCYCLES IN DRUG DESIGN

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Background: Heterocycles are structural elements that are particularly important in drug design. They allow researchers to control and improve the molecule's lipophilicity and polarity. They also impart physicochemical, pharmacokinetic, pharmacodynamic and toxicological properties to drugs. Heterocycles are cyclic compounds with two or more types of atoms in the nucleus. Five-atom heterocycles are derived from the compound cyclopentadienyl, and some carbon atoms have been replaced by one or more nitrogen, sulphur or oxygen atoms. **Objective:** This study aims to identify the essential aspects of five-atom heterocycles with biological potential and their valuable contribution to the structure of the most widely used classes of drug compounds. **Material and methods:** Relevant information was searched using Google Scholar, PubMed, Clarivate Analytics Web of Science database, Science Direct and keywords "heterocycles", "pyrrolidine", "tetrazole", "thiazole" and "triazole". The selected content refers to the role of heterocycles in the drug's structure and the structure-activity relationships. **Results :** In recent years, the chemistry of heterocycles has received significant interest due to their biological importance. Structure-activity studies have shown that the pyrrolidine in the Cefiderocol structure can improve antibacterial activity and give the molecule an amphoteric character due to the quaternary nitrogen atom. Tetrazole is viewed as a bioisosteric of carboxylic acids and can improve the pharmacokinetic profile of drugs by reducing polarity and increasing lipophilicity for better membrane permeability. As a structural element in the molecule of several drugs, it increased the compounds' half-life, potency and selectivity. The thiazole heterocycle in the structure of cephalosporins led to increased activity on Gram-negative bacteria, stability against β-lactamases and improvement of their pharmacological profile. The thiazole ring is considered the main structural element responsible for the activity of Ceftaroline against methicillin-resistant *Staphylococcus aureus* (MRSA). Triazole ring has been used in the structure of antifungal drugs to increase their water solubility and potency. Triazole exhibits increased stability and selectivity, and the pharmaco-toxicological profile of the compounds is improved. Other new compounds have been developed starting from previously mentioned heterocycles, such as Oteseconazole, Alpelisib, Ziritaxestat, Elexacaftor, Ensitrelvir, and LY3372689. **Conclusions:** Five-atom heterocycles represent precious structural elements in the structure of drugs used in medical practice and the discovery of new compounds with therapeutic potential. Heterocycles lead to drugs with a long half-life, favourable antibacterial and antifungal activity, metabolic stability and increased selectivity. In addition, researchers are using strategies to discover new scaffolds with improved affinity and efficacy, for example, molecular docking, molecular hybridization, and fragment-based drug design.

Keywords: heterocycles, thiazole, pyrrolidine, tetrazole

APPLICATION OF QUALITY BY DESIGN (QBD) IN ESTABLISHING AN OPTIMAL FORMULATION FOR A MICONAZOLE HYDROGEL

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Background: For the past decades the development of stable oral formulations has been a subject of major

interest in the scientific world. Hydrogels are three-dimensional polymeric networks with unique properties such as hydrophilicity, good biocompatibility, and great potential for application, that have been used to obtain dispersions with water-insoluble substances. The selected active pharmaceutical ingredient (API) - Miconazole is a wide-spectrum antifungal agent used to treat superficial fungal infections. **Objective:** This study aims to develop an optimal gel formulation with miconazole (MIC) as a poor-water soluble active ingredient, for the treatment of oral infections with *Candida albicans* and *Candida parapsilosis*, using a D-optimal design. **Material and methods:** Two series of gels were prepared (GO1-GO7 without the active ingredient and GM1-GM7 with miconazole). The gels were analyzed in terms of consistency, spreadability, drug content, antifungal activity, rheological characteristics and tangential tension, the latter two both at 1 and 11 levels of speed while destructuring and reconstructing the gel matrix. Based on the acquired data, a D-optimal design was applied where the following independent parameters were considered: Carbopol®940 (CBP) concentration (0.8%, 0.9%, and 1%), sodium hydroxide amount (0.3%, 0.35%, and 0.4%) and the presence/absence of MIC. The MIC gels were evaluated regarding microbiological activity. **Results :** The gel that presented the highest consistency (29 mm) was GM5 (0.9% CBP, 0.35 % NaOH) whilst the lowest (23.2 mm) was registered in the case of GO2 (1 % CBP, 0.3 % NaOH). The spreadability ranged from 1384 mm2 (GO7 0.9% CBP, 0.35 % NaOH) to 3525 mm2 (GO1 0.8% CBP, 0.3 % NaOH). The rheological behavior described a pseudoplastic flow, the results showed different values depending on the composition of the gel. One important factor of influence in the development process is the presence of MIC, decreasing both spreadability and consistency and increasing the viscosity behavior. In addition, increasing the CBP concentration resulted in an elevated tangential stress and viscosity. The drug content was within the limit accepted by the European Pharmacopoeia (Ph.Eur.10) of ±15%. All formulations containing MIC (GM1-GM7) demonstrated antimycotic activity against Candida albicans and Candida parapsilosis. **Conclusions:** The major factors of influence were identified by analyzing the technological process and it has been demonstrated the significant role of MIC in the development of hydrogels. The determinations performed showed satisfying results for all gel formulations. Using the software MODDE® 13.1 an optimal formulation was developed and analyzed comprising 0.84% Carbopol® 940, 0.32% sodium hydroxide and miconazole.

Keywords: miconazole, gelling agent, D-optimal design, hydrogels

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DERMALINFUSION - AN INNOVATIVE PATENTED COSMETIC PROCEDURE

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Background: The desire to maintain a healthy and youthful complexion in modern society has driven the development of new minimally invasive technologies and cosmetic ingredients. Microdermabrasion is the forerunner of the technology used in the Dermalinfusion device. This innovative cosmetic procedure simultaneously exfoliates, extracts and infuses the skin with unique ingredients in serums specific to each skin type. Dermalinfusion addresses the treatment of acne, wrinkles caused by photodamage, melasma and various pigmentation disorders, and post-acne scars. **Objective:** This paper highlights the advantages of innovative Dermalinfusion technology. Microdermabrasion and the main ingredients used in the associated serums, called Pro-Infusion serums, are discussed. **Material and methods:** PubMed, Google Scholar, Elsevier and ScienceDirect databases were used. The search terms were "mechanical exfoliation", "microdermabrasion", and "dermalinfusion", combined with the name of each relevant active ingredient. **Results :** The benefits of mechanical exfoliation, combined with the simultaneous infusion of active ingredients, are the immediate hydration of the tissue after removing *Stratum corneum*, resulting in a plump of the Epidermis by up to 70%, studies show. The key to Dermalinfusion's technology is the four professional serums called Pro-Infusion serums, formulated with complex ingredients proven beneficial to the skin. Ultra Hydrating Serum contains sodium hyaluronate, allantoin and a new ingredient complex called ACQUACELL. It improves the skin's hydration level, reduces the appearance of fine lines and helps the natural synthesis of collagen. Vitamin C serum includes substances with antioxidant properties, mainly a stable derivative of vitamin C (sodium ascorbyl phosphate), tocopheryl acetate and Grape Seed Extract. The serum prevents photoaging and transepidermal water loss (TEWL). Skin Brightening Serum is suitable for hyperpigmented skin, as it contains the patented decapeptide-12, called Lumixyl, ethyl ascorbic acid and Licorice Root Extract, which inhibits the catalytic properties of tyrosinase. Pore Clarifying Serum treats inflammatory and non-inflammatory acne lesions. It is formulated with salicylic acid, an ingredient of choice in treating acne, through its keratolytic and anti-inflammatory properties. Other active ingredients in this serum are Bakuchiol which presents retinol-like properties in reducing sebum secretion and has antioxidant activity, and Oregano Leaf Oil, an antimicrobial agent. **Conclusions:** Dermalinfusion is a versatile, minimally invasive cosmetic treatment due to the

simultaneous use of several serums, thus allowing the targeting of several skin conditions. In addition, the complex ingredients used in the four types of serums are well documented and safe in combination with the patented technology of the Dermalinfusion device, representing new types of non-invasive aesthetic treatments.

Keywords: Dermalinfusion, microdermabrasion, cosmetic ingredients, cosmetic treatment

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DRESSINGS – MEDICAL DEVICES WITH TOPICAL ADMINISTRATION IN THE PALLIATIVE AND CURATIVE TREATMENT OF WOUNDS

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Background: The dressing is the most commonly used medical device in standard wound care. The main objectives that such a dressing must fulfill are: to provide a physical barrier of temporary protection against the external environment, to absorb wound drainage and to provide necessary moisture for re-epithelialization at the wound site. **Objective:** This study aims to highlight the role and benefits of using dressings in different wounds, as well as to determine their advantage depending on the type of components found in them. **Material and methods:** A scientific literature was conducted to gather relevant published research from the last 10 years in databases such as PubMed and Science Direct. **Results :** The collected data reveals that the optimal environment for a faster and more efficient healing is the environment with increased humidity. The hydrogel dressing is indicated in the treatment of non-infected, dry or low-secretion wounds, but also in first and second degree burns. The transformation of the hydrocolloid into a gel upon contact with the wound provides a moist environment that favors the healing of dry wounds, surgical wounds or superficial ulcers. Calcium alginate has a high capacity to absorb moderate or abundant secretions, making them very useful in deep, hard-to-reach wounds. Ethacridine lactate, due to its strong antimicrobial and antimycotic action, is indicated in wounds with a high risk of superinfection, skin ulcers, infected eczema and mycotic dermatitis. Silver dressings are indicated in colonized or infected wounds. Polyurethane foams contain solutions of polymers with small, open cells, which absorb fluids and ensure the semi-permeability of the dressing, being indicated for the retention of exudate in the cells and for the cushioning of the pain suffered in trauma. Polymer membrane dressings relieve pain by inhibiting the nociceptor response, proving to be effective in reducing swelling, bruising and have an analgesic effect. Hydro-reactive dressings are designed from an outer waterproof film that prevents the passage of exudate to the surface, a middle layer with a core composed of PSA (super-absorbent polymer), cellulose fibers and Ringer's solution, which has a rinse-absorb mechanism and a silicone wound contact layer preventing wound adhesion. **Conclusions:** The dressing is a material applied to the damaged skin, which contains substances to heal and prevent further infection. They can provide thermal insulation, enzyme and growth factor supplementation. Modern dressings have additional benefits over classic dressings, they protect free nerve endings for pain relief and have antimicrobial action.

Keywords: wound dressing, topical administration, medical device

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DEVELOPMENT AND EVALUATION OF NEW SILVER SULFADIAZINE HYDROPHILIC GELS FORMULATIONS FOR TOPICAL BURNS

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Background: Silver sulfadiazine is a topical sulfonamide antibiotic discovered in the 1960s used to prevent, manage, and treat burn wound infections. While its mechanism of action is still unknown, its bactericide properties are well known (it has a broad antimicrobial activity). In Romania are approved topical formulations such as creams and pastes that contain 1% silver sulfadiazine. **Objective:** This study aims to develop and evaluate the pharmaco-technical characteristics of four new hydrophilic gel formulations containing silver sulfadiazine. **Material and methods:** Four formulations of hydrogels containing 10 mg/g of silver sulfadiazine were developed with varying types of gelling agents and their concentrations: F1 □□□0.5% Carbopol®940; F2 □□□1% Carbopol®940; F3 □□□ 0.6% Ultrez 10; F4 □□□0.8% Ultrez 10. For these formulations, the following properties have been analyzed: the pH, consistency, spreadability, flow characters, microscopic aspect, and texture using a TX700 texture analyzer. **Results :** The formulation F3 had the biggest spreadability, while F2 had the lowest spreading capacity. The pH values of all formulations varied between 6.1 and 6.7. The penetrometric measurements show a connection between a higher percentage of polymer and a higher viscosity, with the formulations F2 and F4 having lower

values than F1 and F3. It also showed that the gels containing Ultrez 10 (F3, F4) had a lower viscosity than the ones containing Carbopol (F1, F2). Whilst analyzed on the microscope, the silver sulfadiazine was well-dispersed in the gel matrix in all formulations. Texture-wise, F4 has the least rubber-like feeling out of all the formulations and Ultrez formulations have a greater cohesiveness than the Carbopol ones. All gel formulations have a plastic thixotropic flow, F2 being the most viscous formulation. **Conclusions:** It can be concluded that the Ultrez gels have better properties, the F3 formulation being the better formulation in terms of spreadability, consistency, and texture. The microscopic analysis indicated that the active substance was well dispersed in all the gel bases used in this study.

Keywords: silver sulfadiazine, Carbopol, Ultrez, TX700 texture analyzer

DEVELOPMENT AND CHARACTERIZATION OF NEW IBUPROFEN POLYMERIC FILMS FOR TRANSDERMAL DELIVERY

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Background: Ibuprofen is a non-steroidal anti-inflammatory commonly used to relieve pain and reduce inflammation. Transdermal polymeric films are modern forms of administration designed to achieve a local or systemic effect and represent a viable alternative for people with swallowing difficulties. **Objective:** The purpose of the study was based on the development of four formulations of transdermal therapeutic films containing Ibuprofen in a concentration of 1.4 mg/cm², which are based on a polymer matrix formulated with a cellulose derivative to ensure a constant and sustained release of the drug for a period of at least 12 hours. **Material and methods:** Four polymeric films formulations were developed by solvent evaporation technique coded as: F1, F2, F3, F4. The formulation variables set in the study were the matrixes-forming polymers: hydroxypropyl methylcellulose E3, hydroxypropyl methylcellulose E5 (Vivapharm® HPMC E3/HPMC E5) and the concentration in which they were present: 10% or 15%. With the role of ensuring the flexibility of the film but also as absorption promoters, two excipients were incorporated: propylene glycol and polyethylene glycol 400. The films were evaluated in terms of appearance, weight, thickness, elongation capacity correlated with tensile strength, and behavior in different humidity conditions. The in vitro study was performed using a Franz diffusion cell and phosphate buffer pH=7.4 as the acceptor medium. Samples were taken over a period of 12 hours, and the drug content was quantified at 214 nm through a validated HPLC method. **Results :** Four transparent films with a smooth, uniform, and skin-adhering surface were obtained, with an available surface area of 78.5 cm², weighing between 0.27-0.36 g, and a maximum thickness of 0.9 mm. Under the action of a force generated by the addition of increasing weights, the films elongated by up to 18.75% compared to the initial length. In controlled humidity conditions (relative humidity≈0%, respectively relative humidity≈80%) it was observed that the absorption of water vapor is two times higher than the water loss from the film, which highlights the importance of the protective membrane present both during storage of the films, as well as after application to the skin. The amounts of active substance released after 12 hours were: 38.66% for F1, 42.97% for F2, 48.55% for F3, and 36.85% for F4. **Conclusions:** Ibuprofen transdermal polymeric films may represent a novel approach to pain therapy for patients with swallowing difficulties. Formulation F3, based on 10% Vivapharm® HPMC E5 releases the highest quantity of ibuprofen being proposed for optimization.

Keywords: HPMC, polymeric film, Ibuprofen, transdermal delivery

MILITARY MEDICINE

HISTORICAL DEVELOPMENT OF TOURNIQUET USE: FROM IDEA TO REINFORCEMENT OF A REFLEX

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Background: From the early days of human warfare and the appearance of penetration weaponry such as spears and swords the need for a fast and efficient method to stop exsanguination on the battlefield has been felt. Throughout history haemorrhage has been the primary cause of preventable death on the battlefield and although CATs and SOFT-Ts are efficient devices trends in the development of emergency tourniquets show a parallel trajectory with the development of explosive munitions and weight of soldier equipment carried in battle, two trends that are unlikely to slow down any time soon. **Objective:** Analysis of historical attitudes, implementation and outcome of tourniquet use on the battlefield as well as conceptualization of future improvements using recent studies regarding the use of arterial tourniquets. **Material and methods:** Review of scientific literature regarding the use of tourniquets on the battlefield, development of artificial blood substitutes, changes in fluid dynamics associated with arterial haemostasis as well as recent developments in sensor and autonomous systems with hemodynamic applications. **Results :** Standardization of emergency tourniquets has been positively correlated both with projectile velocity and accuracy of weaponry as well as the weight of equipment carried into battle by individual soldiers. At the same time, development of autonomous tourniquets as well as flexible near-field radio frequency sensors enables the conceptualization of autonomic tourniquets. A third result of our review consists in suggesting adjuvant technologies such as infusion of oxygenated, albumin encapsulated, perfluorocarbon emulsions that aim to reduce tissue damage distal to application site through plasma oxygenation in trans-osseous circulation. **Conclusions:** In the context of efforts to implement heavier and more encompassing body armour, redundancies such as manual tourniquets may become impossible to use effectively thus soliciting the implementation of autonomic systems in accordance with the Defensive Onion model of Force-on-Force Encounters. Mitigation of tissue damage due to prolonged ischemia should be taken into consideration as aerial supremacy, as well as the rapid evacuation time that comes with it, is no longer a guarantee in the context of combat drone proliferation and so countermeasures are to be explored, developed and implemented since the cost of manpower loss due to death or injury on modern battlefields increases as soldier become more specialized.

Keywords: Care under fire, Tourniquet, Automation, CAT

THE RISK FACTORS OF GASTROESOPHAGEAL REFLUX DISEASE AMONG MEDICAL FELLOWS IN TRAINING

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Background: Gastroesophageal reflux disease(GERD) is a medical problem worldwide which occurs when the reflux of gastric content flows up into the esophagus causing troublesome symptoms and/or complications. Although GERD is a common medical complaint, there is currently no study among medical fellows in training based on our knowledge. **Objective:** The aim of this study was to determine the main risk factors of GERD among medical fellows in training and the prevalence of disease. **Material and methods:** This is a descriptive and retrospective study that included 415 medical fellows in training from Romania and was conducted during November 2022 to March 2023. The Frequency Scale for the Symptoms of GERD score was used to the diagnosis of GERD and determined possible risk factors with a semnificative impact on daily life. Data was collected using an online questionnaire performed in Google Forms and statistical analysis was analyzed through Microsoft Office Excel 2019. **Results :** A total of 415 medical fellows in training completed the questionnaire. Eighty-nine percent of them had a medical speciality and eleven percent a surgical speciality. The prevalence of GERD was 52%. Statistical analysis found significant association between GERD and the following risk factors: eating quickly and eating beyond fullness ($p=0.0081$), an interval of less than three hours between dinner and bedtime ($p=0.01$), dinner after 8 pm ($p=0.0088$) and high-fat diet ($p=0.000642$). Moreover, using NSAIDs/aspirin and anxiety were also statistically significant risk factors for GERD ($p<0.05$). Age, speciality, shift work, smoking, alcohol consumption and intake of coffee were not found significant statistically as the risk factors of GERD. **Conclusions:** This study revealed a 52% prevalence of GERD among medical fellows in training. The current study identified many risk factors that were almost similar to previous studies results. In the future, raising awareness about these

risk factors and detailed studies with larger number of subjects are required for aproachable management of GERD among health care personnel.

Keywords: GERD, medical fellows in training, risk factors, prevalence

UAVS - AN EVOLUTION OR A REVOLUTION?

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Background: Unmanned aerial vehicles (UAVs), also known as drones, are self sustaining or remotely controlled aerial aircrafts. While initially used exclusively for military functions, using drones has progressively spread into healthcare settings. **Objective:** This paper aims to highlight the multiple uses of UAVs that can bring a lot of benefits both in the medical field and in the military field. Studies show that drones can significantly reduce the time of action in an operative framework and to the same extent its costs. **Material and methods:** PubMed, Google Scholar, Microsoft Academics and EMBASE databases were used to comprehends the latest studies on the topic from the last five years. **Results :** The studies used have shown that UAVs have reduced operational costs, human risks, environmental impact, and delivery time. Addittionally, with their capacity of providing a visual overview in real time of remote areas, drones have successfully increased safety and security. **Conclusions:** Drones are carried out in some settings for transporting samples and delivering blood, vaccines, drug treatments, organs and other medical supplies. Furthermore, UAVs are used for surveillance of disaster sites, battlefields and areas with biological hazards, as well as in epidemiology for research and tracking disease spread.

Keywords: UAV, Healthcare, Telemedicine, Military operations

MDMA - FROM RECREATIONAL TO THERAPEUTIC USE: A REVIEW

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Background: Posttraumatic stress disorder (PTSD) is a chronic, debilitating psychiatric disorder. Anxiety, depersonalization, derealization, insomnia, recurrent nightmares, depression, and suicidal thoughts are common symptoms. Moreover, it can result in stress-related physical health issues such as cardiovascular disease, type 2 diabetes, and vicious habits. Currently, the treatment includes trauma-focused psychotherapies and antidepressants. Commonly, treatment resistance occurs when PTSD sufferers are overwhelmed by the negative memories of their trauma that they cannot engage in therapy. **Objective:** This review aims to present recent findings regarding the effectiveness and safety of 3,4 methylenedioxymethamphetamine (MDMA)-assisted therapy for treating chronic PTSD in both civilians and military personnel. **Material and methods:** This review comprehends the latest studies on the topic published by Multidisciplinary Association for Psychedelic Studies (MAPS) and by the most relevant databases such as PubMed, Google Scholar, Microsoft Academics, and EMBASE, from the last 4 years. Data was gathered regarding finished clinical trials. **Results :** In comparison to anxiolytics, antidepressants, and antipsychotics, MDMA does not require daily dosing. The treatment strategy may lessen subsequent medication adherence issues seen in PTSD patients as well as the frequency of adverse events. Anxiety, headaches, exhaustion, muscle tension, and insomnia were the most frequently reported adverse reactions during experimental sessions. As a releaser of serotonin, noradrenaline, dopamine, and oxytocin, MDMA increased levels of self-confidence, awareness, and closeness among participants and motivated them to engage in therapy by reducing reactivity to trauma reminders. **Conclusions:** Compared to current treatments, MDMA-assisted therapy has the potential to help patients suffering from treatment-resistant PTSD. There remains a long way to convince critics that a compound that is experienced recreationally by people may have benefits in its clinical form, only under medical supervision and in doses that are strictly regulated.

Keywords: MDMA, PTSD, MAPS

FACIAL TRAUMA DURING WORLD WAR I

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Background: The Great War (1914-1918) is one of the horrendous events that led to an expeditious development of weapons and unfortunately, due to the major wounds, military medics had to adapt and to improvise for saving soldiers' lives. Machine guns, poison gas, grenades and artillery, those were the biggest misfortune that humanity wasn't ready to defy. Hence, in trench warfare a lot of soldiers were disfigured and killed by the incoming hostile bullets. **Objective:** The aim of this paperwork is to explain how soldiers with facial injuries were evacuated and treated using the medical resources and knowledge from that time. **Material and methods:** The data from this paper is based on medical history books, case files and medical articles. **Results :** With advancements in weaponry technology, surgeons had increasingly atrocious wounds to content with in caring for the injured. Doctor Harold Gillies is one of the pioneers of plastic and reconstructive surgery played a very important role in functional repairing and aesthetically reconstructing men's faces. He developed the tubed pedicle technique that allowed tremendous quantities of still-living skin to be transplanted from one section of the body to another. Along with Doctor Gilles worked another important personality, the dentist, Charles Valadier. Thanks to an opportune treatment Valadier did to a General, dental officers were incorporated into the military force structure of Great Britain. Also, he was a pioneer in treatment of jaw injuries and invented a device that was known as "the fire engine" that helped with frequent irrigation of the wound so it would prevent infection. **Conclusions:** The Great War was one of the horrific events humanity ever faced, but along with the atrocities that happened, the medical field also improved and evolved in such a powerful way that we still use the methods and techniques that were developed a century ago.

Keywords: Facial trauma, World War I, Tactical Field Care, Tactical Evacuation Care

G LOAD EFFECTS ON CARDIOVASCULARY SYSTEM

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Background: The human body is continuously subjected to the gravitational forces of the earth, they determine a continuous acceleration of +1G. In aviation, the applied acceleration is noted by G and can be linear, radial or angular. Linear acceleration is produced by changing the speed without changing the direction, it is generally produced at the moment of take-off or landing, as well as in the case of an ejection. Radial acceleration is produced by changing direction without changing speed. This is felt during steep turns or vertical developments when the acceleration can reach 9G, being maintained for several seconds. The effects of acceleration in the body depends on the duration to which the body is exposed, thus a long period refers to intervals greater than 2 seconds, the intermediate period is 0.5-2 seconds, and short durations are below 1 second. **Objective:** Analysis of the effects of overload on the cardiovascular system and its manifestations during long exposures. **Material and methods:** 12 military pilots aged between 23-30 years who passed the centrifuge examination were analyzed. **Results :** Of the pilots analyzed, 100% showed fatigue, weakness and pain in the arms during the test, 80% felt dizzy when decelerating, 77.8% felt dehydrated after the examination, and 66% during the test . Peripheral vision was reduced in 90% of the subjects, 66.6% mentioned a reduction in vision between 0-50%, 55% did not notice any changes in the color of the images, and 33.3% mentioned the fact that for a while the color of the images it was maintained, and after repeated exposures to the overload the images became pale, slightly gray. 66.7% showed profuse sweating during the examination. The presence of petechiae at the level of the arms and the lumbar region was 77.8%, while at the level of the chest it was 22.2%. **Conclusions:** Through the results obtained after exposure to overload in the centrifuge or in real flight, an increased incidence of physiological changes is observed and a special pilot training is necessary to reduce the effects of acceleration on the body.

Keywords: G load, Acceleration, Aviation

TRAUMA SUFFERED BY MILITARY PERSONNEL PERFORMING PARACHUTE EXERCISES

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Background: Trauma suffered by military personnel performing parachute exercises **Objective:** In general, military parachutists are described in the literature as relatively small components of the military population, but indispensable to military tactics, who are at high risk of injury due to the jumps they practice. The objective of this study is to examine the circumstances and characteristics of injuries sustained by soldiers who practice parachute jumping. **Material and methods:** Military paratroopers are the ones who constantly perform drills from planes and helicopters and are more prone to training accidents. In the Romanian Army, but also in the other armies of the world, paratroopers are distributed to various units (Air Force, Infantry, Special Forces). Training, its frequency, equipment, operational procedures, environmental conditions are different from unit to unit and can increase the incidence of military injuries. **Results :** Parachuting involves two types of injuries when it comes to how they occur: injuries that occur on contact with the ground (spontaneous) and those that occur over time from repeated executions. Exposure to high pressure on the human spine, repeated fractures of the legs or hands can lead to a decrease in performance and quality of life in soldiers. For this reason it is important to determine the prevalence and severity of degenerative changes in the lumbar spine and to allow sufficient time for spontaneous injuries to heal. **Conclusions:** Further studies should then be done, comparing military paratroopers with a group of non-paratroopers or physically active people, to assess the development of degenerative processes on the spine and to observe how much an old, apparently healed fracture is affected when subjected to different pressures.

Keywords: paratroopers, spine, accidents, fractures

INCIDENCE OF PTSD AMONG MILITARY PERSONNEL RETURNING FROM WAR THEATRES

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Background: Incidence of PTSD among military personnel returning from war theatres **Objective:** Post-traumatic stress disorder is a condition specific to soldiers returning from combat. Over the years, it has gone by various names, from shell shock (in World War I), to battle fatigue and operational exhaustion (in World War II), and finally (after the Vietnam War) post-traumatic stress disorder (PTSD). **Material and methods:** The modern battlefield, in all its determinations, is the main cause of combat stress and, in the most favourable conditions, of combat psychological trauma. A psychological definition of stress is that it is a state of tension, tension and discomfort caused by affective agents of negative significance, frustration or repression of motivational states (needs, desires, aspirations) of difficulty or impossibility of solving problems. Research has shown a three-fold increase in the incidence of PTSD among deployed veterans. **Results :** Manifestations of PTSD include, first of all, intrusive symptoms associated with the traumatic event (disturbing memories of past events, repetitive dreams, flashbacks during which the person relives the defining moment, behaving as if the event were happening at that moment. The same event can generate different psycho-behavioural states among the individuals participating in it. The different behaviour can be explained by different reception and interpretation of the event. Other symptoms may be related to inability to remember an important aspect of the trauma, self-blame or blaming others, anger, guilt or shame, aggressive behaviour. However, the military environment does not encourage emotional openness either, perhaps because it is associated with vulnerability or weakness. All this can lead the suffering soldier to take refuge in various addictions (alcohol, in general) in an attempt to alleviate their post-traumatic symptoms. It can therefore be said that the event has an important role to play in the individual, but the decisive factor in triggering the psychophysical state is the internal meaning that the individual reports in relation to the event. **Conclusions:** Military personnel returning from theatres of operations have rarely been diagnosed because the soldier shies away from saying he has an emotional problem, denying symptoms for fear that his career will be affected or he has an inability to express his emotions.

Keywords: PTSD, battlefield, soldier, flashbacks

A MENTOR'S PROFILE: PSYCHO-MEDICAL FEATURES DESIRED IN THE HEALTHCARE SYSTEM

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Background: I considered it necessary to conduct such a study, as I identified the great significance of mentorship regarding my personal and professional development during my college years. The working hypothesis that was also the starting point of the paper: do young doctors appreciate the importance of the presence of a mentor during their residency? and if so, what traits must he possess? **Objective:** Therefore, the aim of this paper is to identify the most important psychological and medical characteristics of a mentor in the healthcare system. **Material and methods:** In order to carry out this study, we applied a questionnaire with 27 questions, through google-forms, to a number of 122 medical residents. The data collection period was during 14.10.2022-09.01.2023, and their processing consisted of using SPSS statistical software in order to generate frequency tables expressed by absolute and relative frequency; the expression of statistical significance in relation to the value of p, where $p<0.05$ is considered statistically significant. **Results :** The decoding of the our data was based on the statistical interpretation of the applied questionnaire. The connotation of the term "mentor" is known to all respondents and 99.2% of them consider mentorship necessary during their training as resident doctors while 96.7% desire one. However, only 50.8% are currently under the guidance of a mentor. Residents consider the following character traits as important in the selection process of a mentor: 41% care, 45.1% acceptability, 54.1% compassion, 57.4% sociability, 67.2% flexibility, 82% integrity, 82.8% wisdom, 86.9% openness. Moreover, competences such as: the medical knowledge, the ability to provide feedback and constructive criticism, communication skills or the ability to be a good listener were appreciated of great value. **Conclusions:** In conclusion, the undertaken study highlighted the demand of introducing medical mentorship while the quality of the mentor fancy the existence of high-profile professional and psycho-pedagogical criteria, and the additional value that the mentor's existence confer to their training.

Keywords: mentorship, mentor's profile, psycho-medical features

THE NEGATIVE HEALTH EFFECTS OF NUCLEAR BOMBS

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Background: Nuclear bombs, being the most powerful instruments of war, utilize atomic power for mass destruction. They have both immediate effects on the environment, due to the energy released at peak levels in about 10 seconds, and delayed effects, due to ionizing radiation. The latter primarily causes chromosomal anomalies that constitute the basis of mutagenesis and various forms of cancer. **Objective:** This study aims to highlight the negative biological consequences of nuclear weapons on living beings and the environment, both in terms of immediate and latent manifestations affecting organic matter. **Material and methods:** This study employs a comparative analysis of the health impact on the human population of the nuclear disasters in Hiroshima and Nagasaki in August 1945 and Chernobyl in April 1986. **Results :** The immediate effects of the shock wave and amount of energy released in the form of fire, resulting in building collapses, mechanical injuries, severe burns, and rapid fatalities within the first few hours after the explosion, accounted for nearly half of the total number of casualties. However, the death toll nearly doubled over the subsequent years, attesting to the imbalance induced by exposure to a colossal quantity of radiation. Cancer constitutes the most frequently reported disease, with the lymphatic system being especially susceptible, including leukemia, thyroid, breast, and gastrointestinal cancer. Severe fetal malformations have been documented, affecting not only pregnant women directly exposed to radiation but also those whose pregnancies occurred long after the event. Over time, anemia and cataracts have also emerged as common afflictions. **Conclusions:** The use of biological weapons, such as nuclear bombs, bears world-shaking consequences for humanity, leading to a substantial number of victims that remain elusive owing to the long-term ramifications of radiation.

Keywords: mutagenesis, cancer disease, ionizing radiation

GENERATION OF 3D PRINTED TWIN OF THE HEART FROM ANGIOCT

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Background: In order to adapt to a new technological medical era, we must combine medical knowledge with the solutions that engineering offers us. Reconstruction and, then, 3d printing come to support the medical staff and the patient, combining technologies and knowledge to understand the anatomy and pathology specific to each individual. **Objective:** Our goal is to do a research about the benefits of obtaining 3d models and to transform DICOM files, obtained through noninvasive imaging techniques, from patients with different pathologies and anatomical variations (ruptured acute myocardial infarction, congenital heart malformations, valves and aorta, etc) in printable models to be used in the medical decision-making process, design of valves and other devices, preoperative planning and medical training. **Material and methods:** In this work, we used non-invasive imaging explorations made for patients from the Cardiology Clinic of SCJU Targu Mures, reconstruction and 3d printing software, the Ultimaker 3d printer from the Technological Transfer Center in Cardiovascular Imaging and specific polymer materials (PLA). The acquired images were segmented and manually edited to obtain 3d models that were then printed. Studying numerous bibliographic resources, we identified applications and directions for future development. **Results :** We managed to obtain the printed twins of the anatomical structures from the analyzed patients. Models could be used both in digital and physical format to facilitate the medical decision-making process, the communication process with the patient to explain the treatment solutions and the students' learning process. **Conclusions:** In conclusion, by combining knowledge from cardiology, cardiovascular surgery, anatomy, radiology and non-invasive medical imaging, programming and materials engineering, we can obtain digital and printed 3D models that provide a better understanding of anatomy and pathology, in order to improve the quality of the treatment and medical interventions . Obtaining these models allows a personalized approach for the patient, improving the medical prognosis.

Keywords: 3D-printed modeling,, cardiac models,, personalized approach for the patient,, medical training.

THE MEDICAL DIAGNOSIS OF THE FUTURE BY PROCESSING LARGE DATABASES WITH ARTIFICIAL INTELLIGENCE SOLUTIONS

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Background: At the global level, the tendency to increase the population is noticeable, doubled by the difficulty of training qualified medical personnel. Algorithms for processing large databases, known as artificial intelligence algorithms, support medical decision-making by analyzing multiple data sources and correlating them in a clinical context to personalize the patient's diagnosis and treatment options. **Objective:** The work aims to identify the level of state of the art in the field of oncological diagnosis that offers the chance of screening and early identification of malignancy. The analysis of medical databases in order to predict the most accurate diagnosis of cancer will be carried out during the presentation. **Material and methods:** We analyzed the specialized literature and used special programming, annotation and analysis software that use artificial intelligence algorithms for oncological diagnosis. For the discovery of solutions to increase medical diagnosis, large databases of training and research data are needed in order to obtain precision. **Results :** In the diagnosis of cancer, nothing is simple and a lot of data must be analyzed, but artificial intelligence algorithms offer promising results. Our study focused on classification algorithms to determine whether or not the patient has malignant changes and the accuracy was analyzed, which is between 80 and 90% depending on the training database. **Conclusions:** In conclusion, the computer programs that come to support medical diagnosis come to the support of patients and doctors, being in continuous development and training, which allows beautiful perspectives. It is important to identify, understand and develop artificial intelligence software solutions.

Keywords: artificial intelligence,, oncologic diagnostic,, personalised solutions,, medical databases.

EXPLORING NEW HORIZONS: INVOLVING DRONES IN SAVING HUMAN LIVES THROUGH SEARCH AND RESCUE.

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Background: Drones, also known as unmanned aerial vehicles (UAVs), were initially developed for military purposes, but later founds applications in a variety of fields, including agriculture, construction, aerial photography and many others. The continually evolving technology and their undeniable advantages have made drones an indispensable tool in many industries. **Objective:** The main reason we approached this topic is to understand how important drones have become in the medical field. Their operability becomes a significant advantage even when used for saving lives. **Material and methods:** In today's global context, many specialists and military personnel have recognized that drones can increase medical support in the context of war, natural disasters or other events that result in casualties. The Nordic Atlantic Treaty Organization (NATO) has released several documents acknowledging the potential of drones in the medical field and has begun exploring how they can be used in emergency medical assistance and intervention operations. By consulting other specialized websites, we have concluded that medical drones have even been introduced by public services in other states, for mountain rescue operations. **Results :** There are several examples of drone usage in the medical field, but the first documented case was in 2011 when a drone was used to deliver medicines to a village in Haiti after the devastating earthquake in 2010. This drone was designed and used by a non-profit organization. Since then, drones have been used for a variety of medical purposes, including delivering medical equipment and supplies in hard-to-reach areas. Therefore, drones facilitate access and can provide significant medical support to patients, as well as a quicker response from search and rescue teams, offering even aerial imagery and capacity to adapt to the environment. **Conclusions:** Therefore, drones can be used for medical purposes as follows: delivery of medical equipment and supplies, search and rescue of individuals, transportation of blood and other medical products. When it comes to using drones for medical purposes, we think that they could be a game changer.

Keywords: Drones, Medical field, Search and rescue, Emergency

DIAGNOSIS AND TREATMENT OF ACUTE POISONING PRODUCED BY CHEMICAL WEAPONS

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Background: Chemical weapons have been used since the Peloponnesian War, around the year 424bH, representing an important threat to the population. In our country, one of the important attacks was the one on April 17, 1917, launched by the German Army on the 1st Mountain Hunter Regiment. Their use continued, although over time, there were numerous attempts to regulate their use. **Objective:** Following an incident caused by a chemical weapon, the number of victims is significant, so a prompt and efficient intervention is important. The paper aims to highlight the main signs and symptoms of an acute intoxication produced by an attack with chemical weapons, as well as the specific treatment measures. **Material and methods:** For this study was used articles and materials found in the scientific databases. More than 30 documents were consulted, with the main topic being medical intervention in the case of chemical closures. **Results :** A prompt and efficient intervention in the case of such an incident involving multiple victims is based on good preparation in advance, which starts with prevention. The chemical agents used can be classified into several categories: tear gas, lung irritants, blistering substances, cyanides and hydrocyanic acid and substances with an effect on the nervous system. Thus, depending on the chemical agent involved, the clinical manifestations are different. Also, depending on the type of intoxication, the therapeutic measures are different using specific antidotes. The most common poisoning is with cyanide or cyanuric acid. **Conclusions:** Although over time there have been attempts to regulate the use of chemical weapons, there have been incidents. Thus, knowledge of the main signs and symptoms that appear in the case of acute poisoning is necessary for a quick diagnosis. Also, the rapid application of the necessary treatment by using the antidote corresponding to the type of intoxication or the necessary therapeutic measures is very important for patients.

Keywords: Chemical weapons, acute poisoning, antidote

THE IMPORTANCE OF SLEEP FOR DAILY AND ACADEMIC PERFORMANCE OF MILITARY STUDENTS

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Background: Military students must adapt to a demanding schedule that includes both educational and athletic activities, as well as night and day duty. This study highlights the relationship between sleep and daily performance. **Objective:** The main objective of the study is to highlight how sleep quality influences daily and academic performance, taking into account the harder periods of a military student's life, such as exam sessions and guard duty at the academy. **Material and methods:** For this study, a questionnaire was administered to 215 students from all military academies. **Results :** The majority of students (67.4%) have a normal, healthy sleep schedule most of the time. Changes occur, however, during the session, when a significant percentage of students (47.4% between 6-8 hours, compared to 67.9% normally; 32.6% between 4-6 hours; 5.1% less than 4 hours) report fewer hours of sleep during the night, although the majority (93.5%) feel that the need for rest is greater during a stressful time like this. Also, a high percentage of students (94.9%) feel that night-time guard duties affect their daily schedule, needing one or more days to recover. **Conclusions:** This study shows that respecting the minimum number of hours of sleep and ensuring that it is quality sleep is imperative in the life of a military student. Lack of these leads to problems with concentration, communication and affects the smooth performance of daily tasks, which hinders the training process of students and makes their educational development difficult.

Keywords: military students, sleep, exam, activities

WHAT IS THE RELATIONSHIP BETWEEN NUTRITION AND PHYSICAL ACTIVITY OF THE MILITARY STUDENT?

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Background: The broad diversity of specializations in the military academies raises a question regarding the adequacy of nutrition and food intake based on the amount of physical effort at each force category. The schedule of military instruction and lectures varies from one academy to another, as well as both instruction camps and long-lasting learning sessions are characterized by an increased need of nutrients compared to a typical day. Besides, as a result of the extended time between the three main meals, there is an increased demand of a consistent snack that is able to supply the body's need of calories. **Objective:** As the daily amount of nutrients represents the genesis of all the biochemical processes in the organism, which leads to a certain quantity of energy, is important to highlight the tight connection between how much effort the students from each specialization make and what food they get. Another important aspect we followed is the saturation level of the students after they eat at the academy canteen. **Material and methods:** In order to complete this investigation, we designed a questionnaire addressed to the students from all the national military academies. **Results :** It is statistically proven that one half of the students are not full after the meal, in the context in which the majority of them (84,3%) have a daily physical activity of at least 1-2 hours. Moreover, almost all of them (95%) supplement the food intake from the main meals with one or more snacks everyday. If we refer to the quality of the meals, it is noticeable that there are students (28,4%) who eat only one meal from the canteen and a percentage of 54,9% eats at least two meals from outside the academies. **Conclusions:** Remarking that all the fluctuations and differences between the schedules affect directly the way military students eat, it seems almost mandatory to look close at the daily menu and to adjust it periodically depending on several factors, mentioned already above.

Keywords: Nutrition, Physical activity, Food intake, Students

MILITARY

UNLOCKING THE POTENTIAL OF ARTIFICIAL INTELLIGENCE IN CYBERSECURITY

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Background: In today's digital era, the risk of cyber-attacks is increasingly high. The costs of a data breach can be stunning in terms of economic loss and can also damage reputation and trust. As a result, cybersecurity has emerged as a crucial issue for organizations and governments worldwide. Artificial Intelligence has the power to reform the entire cybersecurity industry as it uses machine learning techniques, so it can help in automatizing the detection of malicious activity and intrusion prevention. **Objective:** This presentation will explore the applications of artificial intelligence in cybersecurity and analyze how it is used to detect and prevent cyber threats. It also addresses the challenges and risks associated with the use of artificial intelligence in cyber security and explains the ability to ensure the responsible and effective use of artificial intelligence. **Material and methods:** Literature review: Realising a systematic review of articles, books, and reports related to AI and cybersecurity.Case studies: Case studies of organizations that have used AI to improve their cybersecurity. **Results :** The paper could highlight the need for new and innovative approaches to cyber security, continued investment in research, integration of AI technologies in this field, and development to keep pace with emerging threats. **Conclusions:** There is no question that AI will be playing an increasingly vital role in cybersecurity in the future. With the lightning-fast pace of innovation in technology, it is critical to keep funding research and development to stay up with future dangers and develop new and innovative methods for cybersecurity.

Keywords: Artificial Intelligence, Machine learning, Cybersecurity, Natural language processing

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MEDICAL DATA BANKS AND REMOTE MONITORING OF PATIENTS FOR MEDICAL DECISION-MAKING OUTSIDE THE THEATERS OF OPERATIONS

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Background: Medical decisions can be made based on anamnestic data. The current context of technological and medical development allows the collection of a lot of data related to identification information, current and current diseases, treatment decisions and the monitoring of vital parameters for patients. Storing it in a system allows medical decisions to be supported by evidence and the clinical context to be established by the staff at the patient's head as well as by the staff located kilometers away. analyzing the statistical data from the history of military activities, military medicine was the weapon that had the biggest losses. correlating this with the time and difficulty of training competent medical personnel, the development of telemedicine solutions and storage of medical data in accessible data banks is required. **Objective:** The project comes to support the research for the outsourcing and remote access of the medical data banks to be accessible for medical decision-making and personnel outside the theaters of operations. The objective is to develop a reliable database that is accessible to doctors and staff and protects them, allowing them to carry out their work remotely **Material and methods:** We analyzed sources of bibliographic data, among which we mention specialized articles, doctoral theses, studies, medical data of patients to find out the current state of database storage and remote patient monitoring in the military field, and we made analytical algorithms for the storage of cestor databases and their processing. the modeling of the database structure was done by correlating in the clinical context the medical needs of the ATI department at SCJU Mures. **Results :** We created a functional database that can be accessed and modified from mobile or desktop devices, thus supporting the storage of patient data entry and their transmission in the system. We used software and programming environments such as VisualStudio, MySQL, HTML, Java, JavaScript programming languages, and anamnestic data sheets used by clinicians. **Conclusions:** In conclusion, the creation of a database and the remote monitoring of patients brings a real benefit for making medical decisions, knowing the patient's history and allows the protection of the medical staff so that they can carry out their work optimally.

Keywords: medical databases,, software,, protection of the medical staff,, remote patient monitoring

ANALYSIS OF PROTOCOLS IN CASE OF EMERGENCIES INVOLVING MASSIVE NUCLEAR IRRADIATION

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Background: Irradiation emergencies are acts done intentionally or unintentionally that can cause major damage to the body, therefore it is important to research safety levels, behavioral protocols in case of accidental radiation exposure and to understand the pathology following radiation exposure. Through acts of terrorism or war, exposure to radioactive material from the environment or from power plants and installations that use such materials, great damage can be caused to military personnel and civilians. **Objective:** The aim of the study was to identify and interpret the emergency protocols for such situations, the absorbed and maximum permitted doses, pathologies and treatments in case of exposure. we looked for data in protocols and specialized literature to find the risks of exposure to radiation depending on the dose and the measures to prevent and reduce damage in cases of nuclear emergencies. We have to think of solutions ahead of time to use them when we only have time to act. **Material and methods:** To make the presentation we have analyzed multiple bibliographic sources including articles, protocols, researches and doctoral theses and data provided by the radiation laboratories of the Mures medical directorate about effects of bright flash, blast wave, radiation, fire and heat, electromagnetic pulse and fallout associated with explosions. There are numerous agencies at the world level that deal with the study of radiation and radioactive emergencies whose statements we studied in order to prepare the synthesis. **Results :** Based on the events of the past, with the help of current medical technologies and knowledge, we managed to identify the emergency measures according to the international protocols to alleviate the damage in case of a nuclear event. In accordance with national and international regulations, we have estimated the risks for public health and military personnel. The impact varies depending on where the bomb is placed. The most powerful declared nuclear weapon is the B83 which is in the possession of the US military. It could produce approximately 700,000 direct victims. **Conclusions:** In conclusion, understanding the protocols and assuming them through quick implementation measures can save lives and give what is essential. Although these radiations do not fall within the visible spectrum, they must be understood physically and their medical impact must be studied on real cases like the impact of B83.

Keywords: accidental radiations exposure,, emergency protocols,, public health,, radiation laboratories

SIMULATION OF 3.5 GHZ PLANE WAVE PROPAGATION IN A HUMAN HEAD MODEL: ABSORBED POWER DEPOSITION ANALYSIS

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Background: With the transition to the technological age, an unprecedented quantitative increase in means of mobile communication has been recorded, without which whole populations could no longer live together. Human exposure to electromagnetic fields is a relatively new field in the world of science and technology, which became more pronounced after the 1970s, with the development of various types of radio communication systems. Fifth-generation (5G) cellular technology raises a lot of questions but offers significant improvements over its predecessor. The most sensitive issue is related to human exposure safety in the 3.5-3.6 GHz NR-1 frequency range, which is usually used in 5G-enabled mobile phones and within the 4G and 5G bandwidth. **Objective:** The aim was to address the problem of electromagnetic energy absorption and distribution from an incident plane wave in a simulated head model, in CST Studio Suite 2019, in the following cases: a) when the applied plane wave acts in the sagittal plane of the head. b) when the applied plane wave acts in the coronal plane of the head. **Material and methods:** The study involved importing in the CST Studio Suite 2019 software a human head model composed of 20 tissues, which have dielectric parameters variable with frequency in the established frequency range (3.5-3.6) GHz. The incident wave had an amplitude of 1V, while the monitors of electric (E)-field level and specific absorption rate of energy deposition (SAR) are activated. **Results :** Following the simulation, local and average E-field strengths were computed, together with peak and average SARs over either 10g or 1g tissues. Hot spots localization is analyzed for each frequency in the range and absolute levels of the computed parameters are compared against the safety limits present in exposure standards in use. The two situations of exposure are also

compared, from the point of view of energy depositions and locations. **Conclusions:** The simulations of this study form the starting point for further simulations which will not use a plane wave, but a realistic exposure case, when the antenna of a device is simulated and placed in front or in lateral of the head. Also, realistic values of the signal's amplitude will be used in future studies.

Keywords: 5G-FR1 signal, SAR in the head, incident plane wave, electromagnetic energy absorption

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THE EFFECTS OF DIELECTRIC PARAMETERS IN CELLS AT RADIOFREQUENCIES

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Background: Technology has advanced so quickly that it is now impossible to live without your smart phone. Electromagnetic fields is a new science domain that now starts to be explored in order to achieve a lot more information about how it affects humans and how it can be developed for the best. It is crucial to take into account the dielectric parameters of materials, especially electric conductivity and relative permittivity. They have a significant impact on the electric field's penetration of the material and tissues as well as the cells. **Objective:** The purpose of this study was to see how the electric potential distribution inside and on the surface of a generic cell is affected by an applied voltage, for a spectrum of frequencies, but also for a complex cell that closely mirrors reality. It shows a comparison between the ideal case and the real case of this matter. **Material and methods:** Firstly, a real-sized cell was created in COMSOL Multiphysics using the real dimension of a spherocyte, having the volume equal to 95 mm3. The cell was placed in a cylinder filled with 0.9% saline solution with volume of 6283,2 mm3, having a membrane with a high conductivity and also a aqueous cytoplasm with higher permittivity, representing the idealistic case. Secondly, the complexity of the study was gradually increased, thus we used the real dielectric parameters of a healthy red blood cell for defining the cell materials depending on frequency, in an well-established range(0,1MHz-0,1GHz) , making the study more relevant. For both cases, we applied a 1V voltage on the upper surface of the solution cylinder and compare the results. **Results :** Following the simulations, the results regarding those cases were compared so the differences between them can be more clear. The potential value right on the surface of the cell and also in a specific range of points, inside the simulated cell, which are defining our workspace, were computed to realize this particular study. It was observed that the results obtained in both cases are very different from each other: in the ideal case, the potential is significantly changed, but in the real case there were no major changes. **Conclusions:** The simulations made in this study form the base for further research regarding healthcare industry to improve the application of the electric field in day-by-day situations.

Keywords: electric potential, dielectric constants, spherocyte, membrane electroporation

FUNDAMENTAL SCIENCES - PHARMACY

SYNTHESIS OF PIPERAZINE AND HEXAHIDROPYRIMIDINE DERIVATIVES AS POTENTIAL PROTEIN INHIBITORS

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Background: Piperazine is a cyclic organic compound that contains two nitrogen atoms in opposite positions within a 6-member heterocyclic ring that serves as a backbone for piperazine derivatives and acts as a gamma-amino-butyric acid (GABA) receptor agonist. Hexahydropyrimidine is a compound with a similar structure, with the two nitrogen atoms in positions 1 and 3. Derivatives of this organic compound are existent in many pharmaceutical and natural agents and recent studies show that they may have a beneficial effect on the memory, learning processes, orientation and locomotor activities. **Objective:** The aim of the study is the synthesis of piperazine and hexahydropyrimidine derivatives, compounds that are believed to be potential protein inhibitors. **Material and methods:** Starting from commercially available ammonia, formaldehyde and malonic acid or malonic diethyl ester, we have attempt to synthetize hexahydropyrimidine derivatives through a Mannich-like condensation reaction with and without catalysts. Both ferric chloride and cupric chloride have been used in catalytic amount. **Results :** Esterification of malonic acid has been done in quantitative yield using thionyl chloride as catalyst starting from malonic acid and ethanol in 4 hours reflux type reaction. When attempting to close the ring a precipitate should be noticed, instead either clear solution either unreacted starting material have been separated. Using metal salt catalyst did not yield desired compound most probably due to complexation of metal by carboxyl group. Using diethyl ester malonate changes have been noted in reaction. **Conclusions:** Several routes for synthesis of hexahydropyrimidine derivatives have been exploited but up to date we have not managed to get the desired compound despite of different catalyst or conditions used as been described in literature. Further conditions should be tested for attempting to synthesize the desired compounds.

Keywords: Mannich-condensation, piperazine, hexahydropyperidine, protein-inhibitor

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REVOLUTIONIZING ANTIOXIDANTS: GALLIC ACID-ZINC SYNERGISM

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Background: Gallic acid is an antioxidant present in plants that has the ability to combat oxidative stress by neutralizing ROS. However, the effects of gallic acid do not stop here, tests performed on animals reflect cardioprotective and antihyperglycemic effects. Coupling this acid with zinc salts had a positive impact on glycemic control, antioxidant effect and lipid profile. **Objective:** The effects of zinc and gallic acid are well known in the pharmaceutical sphere, but their therapeutic activity can be potentiated by the manufacture of a gallic acid-Zn acetate complex, with a wide spectrum of applications. **Material and methods:** In this study, a complex of Zn(II) acetate and gallic acid was synthesized in a molar ratio of 1:2, dissolved separately in methanol. Subsequently, under continuous stirring, both solutions were mixed, resulting in a milky white precipitate of a gelatinous consistency, which was subjected to three washings with 50% (v/v) methanol and drying. Its storage was done in sealed glass vials. **Results :** The formation of the gallic acid-Zn acetate complex was confirmed by FTIR analysis, which revealed the decrease of the absorption band characteristic of the hydroxyl group from the carboxylic group. Thus, the involvement of the carboxylic group of gallic acid in the formation of the studied complex is proven. Also, the 1H NMR analysis confirms the formation of the complex at the carboxylic group by the characteristic bands of the H-2 and H-6 protons that appear as a singlet at δ 6.91 in both spectra, as well as by the disappearance of the peak at δ 12.2, which is characteristic of the proton in the carboxylic group. **Conclusions:** This complex has a high therapeutic potential, due to its antioxidant and antihyperglycemic effects.

Keywords: galic acid, zinc, antioxidant, antihyperglycemic

THE RUTOSIDE-ZINC COMPLEX IN THE TREATMENT OF HEART DISEASES

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Background: Flavonoids are polyphenolic compounds present in plants that are responsible for a variety of biological functions. Rutoside is a flavonoid that belongs to the flavone family and is also known as vitamin P. It has a protective role in mesenchymal stem cells in the bone marrow. Rutosides and other flavonols are undergoing preliminary clinical research for their potential biological effects, such as in reducing post-thrombotic syndrome, venous insufficiency or endothelial dysfunction, but there has not yet been high-quality evidence for their safe and effective uses. Rutoside has a multitude of coordination bonds with transition metals in its chemical structure, and the complexation of rutoside with metals enhances its biological capabilities. **Objective:** Since the bioavailability of rutoside is very low due to its rapid absorption, metabolism and excretion, the synthesis of a complex of rutoside with zinc(II) will be pursued in order to increase its potential use as a therapeutic agent. **Material and methods:** We set out to study different synthesis methods of the rutoside-zinc(II) complex. A first method uses a solution of zinc acetate added to a solution of rutoside dissolved in methanol. Another method of complex synthesis is based on the use of zinc chloride as a complexing agent. And a last method uses zinc perchlorate hexahydrate as a complexing agent from which a stock solution of 6x10-2 M concentration is made. **Results :** Comparing the absorption spectrum (200-500 nm) of rutoside and the rutoside-zinc(II) complex, a shift from 353 nm to 393 nm (band I) and another from 259 nm to 269 nm (band II) were observed. **Conclusions:** Synthesis of the rutoside-zinc(II) complex causes a comparative increase in bioavailability compared to that of free flavones. Further studies will show whether this will increase the bioavailability of the drug administered to patients with diseases of the cardiovascular system.

Keywords: rutoside, zinc, flavonoids, cardiovascular system

PHARMACEUTICAL SCIENCES - PHARMACY

ROLE OF OTUD5 IN ANTI-PROTEASOMAL DRUG RESISTANCE AND ONCOGENESIS

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Background: b-AP15 is a "first in class" inhibitor of proteasome deubiquitinase (DUB) activity that inhibits the constitutive DUBs, UCHL5 and USP14. Several studies have shown that many morphologically different cancers require proteasome activity to regulate protein homeostasis and avoid triggering apoptotic stimuli. Although b-AP15 effectiveness has been established, its mechanism of action and the potential for resistance are not understood. **Objective:** To further delineate mechanisms of action and identify resistance markers, we performed a Crispr-CAS9 DUB knockout screen on HCTT116 cells, followed by b-AP15 treatment to identify which DUBs are necessary for b-AP15 activity. Surviving cell populations were harvested and sequenced to identify DUBs that had a pro or anti-survival effect following b-AP15 treatment. Interestingly, OTUD5 was identified as a DUB required for b-AP15-mediated toxicity, not USP14 and UCHL5, as expected. This study elucidates if the OTUD5-mediated resistance was a significant variable in the b-AP15 anti-tumor action. **Material and methods:** In order to investigate the mechanism of OTUD5 resistance, colon carcinoma HCT116 OTUD5 knockout cell lines were produced, characterized, and included in the study (cell lines used: WT and KO Cell Lines). In addition, a related DUB, OTUD3, was used as a control (HCT116, OTUD3 WT, and KO). PCR investigated Knock-out to confirm CRISPR knockout. Following the identification of OTUD5 and OTUD3 knockout clones, cells were characterized for sensitivity to b-AP15 by MTT survival assay and western blotting. **Results :** Our results showed that OTUD5 knockout did not confer resistance to b-AP15, contrary to our previous data. Our assays show that b-AP15 cytotoxicity depends on cell density and that wild-type cells are more resistant to b-AP15 than OTUD5 and OTUD3 knockouts. This effect was not due to alterations in drug efficacy since b-AP15 induced ubiquitin accumulation in all cell lines tested. Furthermore, DUB activity probe labeling of treated cells showed no compensatory upregulation in alternative DUBs suggesting the increased sensitivity of OTUD5 and OTUD3 cells is not due to changes in DUB expression. **Conclusions:** In conclusion, this study should be considered the iceberg tip of a deeper investigation into the mechanisms of b-AP15 resistance. The discovery of new therapeutical resistance markers by correlating the possible compound effects with the OTUD family gene expression could be a breakthrough for this specific drug and the entire class of anti-proteasome drugs. Indeed, the discovery of OTUD as a marker could dictate future clinical application, giving clinicians a precious tool to monitor the patient's status and decide the proper therapeutical algorithm.

Keywords: tumorresistance, OTUD, b-AP15, markersmonitorining

POSTER - SURGICAL

THE GRACILIS MUSCULOCUTANEOUS FLAP AS A METHOD OF CLOSURE FOR ISCHIORECTAL FOSSES

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Introduction: The gracilis musculocutaneous flap approach is a surgical procedure that involves using the gracilis muscle from the inner thigh to reconstruct tissue defects, such as those resulting from cancer or trauma. The muscle flap with the corresponding cutaneous-subcutaneous flap is used in anal trauma reconstruction. **Case Report:** We present a 69-year-old male patient with a complex perineal trauma state after an attempt to jump over a fence and traumatic impact with the spike. Current state with complete avulsion of the anal canal and inferior rectum (bilateral levator ani and external sphincters). Prostatic lodge hematoma, a complete section of the urethra membrane with perineal cutaneous-subcutaneous necrosis involving both ischiorectal fosses and the left posterior hemi-scrotum are visible. Fracture of the left ischial-pubic ramus and left terminal colostomy at the current state.The surgical approach started with debridement with necrotomy at perineal level with hemostasis and flushing. Suturing of the urethra at the membranous portion followed the procedure. Axis preparation of the straight gracilis muscle and of a cutaneous-subcutaneous flap with the preservation of the proximal peduncle for its tunnelling at the perineal level corresponding to the mid-perineal zone (perineal transverse muscles) were the next steps. Exposure of the gracilis is facilitated by abduction and external rotation of the hip with the knee flexed. Drainages for the ischio-rectal fosses were placed. Flap fixation and contact drain at right femoral level were performed. Fixation of the rectum to the tegument and sterile bandages complemented the procedure. **Discussions :** The main goal of this surgery is to reconstruct the defect with healthy tissues and to fill in the ischial-rectal fosses. The gracilis muscle is a long, thin muscle located in the inner thigh and lies posterior to a line that is drawn from the adductor longus tendon to the tibial tubercle. When the knee is flexed, the muscle may be relaxed and sag posteriorly to this line. In the rotated gracilis muscle flap procedure, this muscle is detached from its original location and rotated 180 degrees to the anal region. The muscle is still connected to the proximal blood, allowing it to survive in its new location. The corresponding cutaneous-subcutaneous flap procedure is optimal for usage to reconstruct the anal region. A permanent colostomy is lifelong needed. **Conclusions:** These procedures are complex and require a skilled team with experience. Recovery time can vary but typically involves a hospital stay of several days and several weeks of restricted activity.

Keywords: anal reconstruction,, musculocutaneous flap,, gracilis muscle flap,, anal trauma

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JEJUNAL PERFORATED DIVERTICULITIS - A RARE CAUSE OF ACUTE SURGICAL ABDOMEN

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Introduction: Diverticulitis is an acute inflammatory condition of the diverticula, which is manifested by symptoms such as abdominal colic, abdominal distension, and constipation. The condition is more frequent in people over 60 years old, with a predominantly localized prevalence in the sigmoid colon in approximately *64%* of cases, *19%* in the descending colon, *15%* in the cecum, and only *0.5-1%* in the small intestine. **Case Report:** A 76-year-old female patient had an insidious onset of the disease with the appearance of abdominal pain with colic character, followed by the appearance of diarrhea, for which she addressed the emergency department. During surgery, an exploratory laparotomy was performed, as a result of which slightly dilated jejunal anastomoses were detected, and during the inspection of the entire jejunal complex, an abscess area was revealed at approximately 20 cm from the Treitz angle where we find an obstructed jejunal diverticulum, and downstream multiple diverticula without inflammatory signs. We performed a segmental jejunum resection, which included the perforated diverticulum and the area with multiple diverticula, approximately 30 cm, followed by a manual jejuno-jejunal T-T anastomosis, at approximately 15 cm from the Treitz angle. The postoperative evolution was favorable, with the resumption of intestinal transit on the 5th postoperative day, the surgical wound in the healing process and the suppression of the drains and the discharge of the patient after 9 days of hospitalization. **Discussions :** The pathogenesis of diverticulitis can have a multifactorial etiology, including a diet rich in fat, consumption of red meat, sedentary lifestyle, old age, but also a poor diet in fibers. Jejunal diverticulitis perforation is a challenge both in terms of

tomography and clinically, with an increased mortality rate due to the surgical acute abdomen. **Conclusions:** It is recommended that jejunal diverticulitis perforation be taken into consideration as a cause of the surgical acute abdomen. In the case of perforation, surgical resection of the affected segment with primary anastomosis is the ideal therapeutic option.

Keywords: diverticulitis,, diverticulosis,, acute surgical abdomen,, perforating jejunal diverticulitis

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SURGICAL MANAGEMENT OF KLATSKIN TUMOR – A CASE REPORT

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Introduction: Cholangiocarcinoma represents a rare malignancy that originates in the epithelium of the biliary ducts and it accounts for approximately 10% of hepatobiliary tumors and 2% of all malignant tumors. According to the Bismuth-Corlette classification, three types of cholangiocarcinomas can be distinguished, among which we can name the Klatskin tumor, with perihilar localization. **Case Report:** We present the case of a 62 years old man known with colonic neoplasm removed 12 years ago. The patient presents with upper abdominal pain, inappetence, weight loss and jaundice, symptoms that debuted approximately 2 months before. During a follow-up abdominal ultrasonography, the steatotic appearance of the liver was found, as well as an isoechoic 4 cm parenchymatous structure that interests the hilum and partially the left hepatic lobe. The MRI scan confirms the presence of a tumoral structure that has the characteristics of a cholangiocarcinoma, more specifically, of a Klatskin tumor. The echo-endoscopy revealed the aspect of an erosive bulbitis and that the tumor is contiguous with the duodenum. Our objective is to report a situation in which relieving biliary obstruction went along with removing the tumoral mass through a major surgical procedure with inherent difficulties in reconstructing the biliary flow. **Discussions :** A hostile abdomen was ascertained during the surgery, which needed extensive adhesiolysis. The massive left hepatic tumor invading the gastric antrum, the duodenum, the biliary confluence, the main biliary duct, and the left portal vein was confirmed during the adhesiolysis. It was also remarked an enteral preocclussive nodule which demanded performing segmentary enterectomy with isoperistaltic latero-lateral entero-enteral anastomosis. A left hepatectomy was performed en bloc with the invaded antrum and duodenum, as well as with the extrahepatic biliary ducts and the biliary confluence. The left portal vein was also debranched from its confluence. The biliary reconstruction was possible with colangio-duodenal anastomosis on D2 and two intrahepatic stents. The gastric reconstruction was achieved with a termino-lateral Hoffmeister Finsterer gastro-jejunal anastomosis. **Conclusions:** Klatskin tumor is a severe malignancy and if left untreated, it can lead to death due to progressive jaundice. In our patient, a double-located obstruction was associated. Both the biliary and the digestive obstructions could be relieved through surgical resection with good results. This association rendered the palliative surgery and drainage attempts ineffective. An invading Klatskin tumor can favorably be removed through major surgery, implying multivisceral resection.

Keywords: Klatskin tumor, biliary obstruction, digestive obstruction, biliary flow reconstruction

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CASE REPORT: IMPLANT VS AUTOLOGOUS IN A SECOND BREAST RECONSTRUCTION

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Introduction: Breast cancer is one of the most common forms of cancer, as a result of genetic abnormalities in the ageing process in 85% of cases. The abnormal breast cells grow out of control, forming a solid mass, called a tumor, which can invade the nearby tissue when malignant. The treatment of choice to ensure a successful recovery is mastectomy with or without radiotherapy, followed by breast reconstruction. **Case Report:** We present the case of a 74-year-old female diagnosed with right breast cancer with a history of deep vein thrombosis. As the primary treatment, a unilateral skin-sparing mastectomy with axillary lymph nodes removed was conducted, in March 2021 in Timișoara. In addition, the surgeon performed immediate breast reconstruction using a tissue expander during the same surgical time. A tissue expander represents an empty temporary breast implant in which saline liquid will be injected gradually via an injection port on its surface, to stretch the remaining soft tissue and improve the success rate of the operation. The patient received ten months of radiotherapy as an adjuvant. In July 2022, we admitted the patient to the Department of plastic surgery in Sibiu. The local examination revealed lateral

displacement of the implant, causing her right thoracic pain. The surgery consisted of an incision at the level of the postmastectomy scar, dissection of a poorly filled tissue expander with its injection port, insertion of a surgical drain and closing via primary sutures. The excess skin was left intact for a second reconstruction. **Discussions :** In this research, we want to emphasize the importance of thinking long-term about the method of reconstruction chosen. We cannot fill a tissue expander during radiotherapy; complications appear after twelve months of use (capsule contracture, displacement or rupture, fluid migration). Her best options comprise removing the excess skin without reconstruction or autologous reconstruction. The second approach consists of different flaps, chosen based on the body type of the patient, the surgeon's knowledge and no history of venous thromboembolism or fat grafting, a modern technique applied for over 20 years with great success by using the patient's adipocytes to fill and rebuild a new breast in a less invasive manner. **Conclusions:** Fat grafting is the best option for breast reconstruction in patients undergoing adjuvant radiotherapy, with minor complications and an improved physical and psycho-social outcome. The patient chose this method in full knowledge in September 2022 and recovered fast.

Keywords: breast reconstruction, autologous breast reconstruction, tissue expander, fat grafting

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MANAGEMENT OF A FEMALE NEWBORN WITH LARGE GASTROSCHISIS USING A ‘SILO-LIKE’ TECHNIQUE IN THE CLINIC OF PEDIATRIC SURGERY OF TÂRGU MUREȘ

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Introduction: Gastroschisis represents one of the most common congenital abdominal wall malformations. Large defects which can not be closed primarily need to be treated via staged 'silo bag' reduction of the intestines into the abdomen. The management of large gastroschisis still remains a challenge in centers on modest budgets. We report a case of gastroschisis treated at our clinic. **Case Report:** A female newborn from a non-monitored pregnancy, daughter of a 17-year-old mother was delivered through cesarean section. The large-sized wall defect was recognized on ultrasound just before the delivery. Associated cardiac anomalies and mild pulmonary hypertension were noted. **Discussions :** The baby was referred to the NICU unit to stabilize and prepare for surgery. Intraoperatively severe gastroschisis was found with exposure of small and large intestines, intestinal malrotation, and malfixation. Primary closure was not possible, an improvised silo bag was fashioned to protect the bowels. Postoperatively the condition was well tolerated at first, with moderate reduction of the intestines into the abdomen. The clinical condition was deteriorating after. The patient required inotropic support and mechanical ventilation, enteral feeding was not tolerated with increasing gastric residual volumes. On the 8th postoperative day, signs of intestinal occlusion developed reintervention were needed. Adhesions of the intestinal loops and small bowel obstruction due to an adhesion band were found. Surgical adhesiolysis and bridectomy were performed. Reduction and secondary closure of the protruded intestines were possible with the help of paramedian decompressive skin incisions. After 5 days of sedation and mechanical ventilation, the patient was extubated. She was stable hemodynamically and respiratorily without inotropic support. On the 7th day postoperatively she started to present signs of bowel movements, and enteral feeding was initiated, well tolerated with increasing volumes. **Conclusions:** Treatment of large gastroschisis might require the classic 'silo bag' procedure, also intuitive silo-like cost-effective approaches could help pediatric surgeons to prevent complications and improve outcomes for congenital malformations.

Keywords: gastroschisis, abdominal wall defects, silo-bag, pediatric surgery

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POST TRAUMATIC RADIAL NERVE PALSY: TENDON TRANSPOSITION FOLLOWING THE “TSUGE” TECHNIQUE

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Introduction: Radial Nerve palsies are a common complication associated with humeral shaft fractures, as a result of its proximity to the humeral shaft, as well as its long and tortuous course, the radial nerve is the most frequently injured major nerve in the upper limb. Tendon transfers to restore function in radial nerve palsy are the best solution and the most predictable in the upper extremity.The motors available for transfer for a patient with isolated radial nerve palsy include all the extrinsic muscles innervated by the median and ulnar nerves, in this

specific case an FCR transfer "Tsuge" was performed. **Case Report:** 17/04/2022. A 49 years old patient is hospitalized urgently with a comminuted fracture, dislocated humeral diaphysis after a trauma by falling at home.After an adequate preoperative preparation, surgery is performed (osteosynthesis with locking centro-medullary nail).Preoperatively, the patient presented a partial motor deficit of the radial nerve, but post-operatively, a complete motor deficit and a limited area of hypoesthesia is observed, neurological consultation interpreted it as a Sunderland IV/V lesion, axonotmesis/neurotmesis.27/05/2022A second surgical intervention is performed to inspect the nerve: Intraoperatively, the radial nerve can be observed, thinned, embedded in abundant fibro-connective tissue, hard, adherent to the bony plane of the posterior surface of the humerus. **Discussions :** Given the compromised structure of the radial nerve, neurosurgical or reparative plastic surgery are considered.14/03/2022Plastic Surgery InterventionA double "S" shape incision is performed: On the volar surface the following tendons are identified: Palmaris Longus, Flexor Carpi Radialis with distal sectioning, Identification and harvesting of the Pronator Teres Tendon together with a fragment of the radial periosteum (vital to ensure adequate length for transfer).On the dorsal surface the following tendons are identified: Extensor Pollicis Longus, Extensor Carpi Radialis Brevis and Extensor Digitorum Communis with dissection and transposition following the "TSUGE" technique: FCR to EDC ,FCR must be freed up extensively to create a direct line of pull from its origin to the new insertion into EDC tendon, PT to ECRB and PL to EPL out of dorsal retinaculum, creating a combination of abduction and extension force on the thumb. **Conclusions:** Postoperatively, patients showed good extension of the metacarpophalangeal joint measured at the middle finger, useful flexion of the wrist joint, and decreased radial deviation of the wrist. At 3-4 weeks post-op the therapeutic plan will continue with physio-kineto therapy, until good extension and grasping functions are re-gained.

Keywords: Humeral fracture, Radial nerve palsy, Tendon transposition, Tsuge technique

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MINIMALLY INVASIVE APPROACH IN T1AN0M0 RENAL CELL CARCINOMA -CASE REPORT

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Introduction: Minimally invasive approach has revolutionized the surgical management of renal cancer since the initial report of laparoscopic nephrectomy in 1991. The most common histological subtype of kidney cancers is clear cell renal carcinoma, around 85% of all renal cell carcinomas. Our goal is to highlight the benefits of minimally invasive approach in T1aN0M0 renal cell carcinoma. **Case Report:** We report a case of a 45 years old female patient diagnosed due to a CT scan with a renal tumor mass in superior right pole of the kidney □□□3x2 cm - T1aN0M0. Right partial laparoscopic nephrectomy was performed, 10 minutes ischemia time, 20 ml blood loss, no bleeding at the resection site after declamping the renal pedicle. **Discussions :** 3 incisions, the longest 2cm long thorough the renal tumor mass was extracted. The patient presents a favourable postoperative following , with bowel movement recovery 2 days after surgery, removal of drainage tube on day 1 and being discharged four days after surgery. Histopathological examination revealed clear cell renal carcinoma WHO/ISUP grade 2, pT1aR0. **Conclusions:** Laparoscopic partial nephrectomy is the gold standard treatment for T1aN0M0-RCC being associated with good control of bleeding, minimal blood loss, reduced perioperative morbidity, shorter hospital stay and a better functional and cosmetic recovery.

Keywords: minimally invasive, laparoscopic partial nephrectomy, renal cell carcinoma

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CURRENT SURGICAL LAPAROSCOPIC APPROACHES OF A CLEAR CELL RENAL CARCINOMA WITH VENOUS TUMOR THROMBUS

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Introduction: Derived from the renal tubular epithelium and known as hypernephroma or Grawitz tumor, clear cell renal carcinoma (ccRCC) is nowadays considered the most common primary malignancy of the kidney in adults, more than twice as prevalent in male patients than females. With a rare incidence, less than 20% of ccRCC are associated with venous thrombotic events at the time of the diagnosis. **Case Report:** A 45-year-old male patient with painless gross hematuria as an only clinical presentation is admitted to our Urology department of the Clinical County Hospital, Bistrița-Năsăud with a referral diagnosis of a bladder tumor suspicion. For further evaluation,

advanced radiological studies were performed and abdominal CTs revealed a giant tumor formation of approximately 57/122/80 mm in the right kidney with an aggressive neoplastic wide-spreading into the minor renal calyces and pelvic area, producing an ureteropelvic junction obstruction as well. Imaging findings also disclosed a tumour thrombus that extended along the right renal vein lumen, obstructing it up to the level of spillage in the inferior vena cava. Due to the expanded endoluminal occlusion by the malignant growing tissue with a 3,6 cm average diameter in the distal part of the renal vein and considering the CT-urography findings which emphasized a reduced right flow excretion arising only from a few superior calyces, surgical intervention is demanded. The chosen therapeutic strategy was a transperitoneal laparoscopic right radical nephrectomy with the complete ablation of the intravascular tumor thrombus successfully achieved by cavotomy, while as well performing intraoperative laparoscopic ultrasounds for real-time imaging of the pathological lesions. **Discussions :** The histopathology reports confirmed to be our patient's final diagnosis a pathological stage T3a of a clear-cell renal carcinoma with no lymph nodes affected, neither distant metastasis. Both combination of the hilar fat invasion and extrarenal malignant extension to the venous muscle layer producing stenosis by the over-growth neoplastic cells have a great impact in the oncologic outcome and evolution. **Conclusions:** The patient is oncologically supervised even today, but no signs of local or systemic evolutions of the lesion were newly discovered. The presented case report highlights the importance of an appropriate surgical management, which based on our patient found disclosures the transperitoneal laparospcopic tumorectomy was considered the most effective surgical technique with a substantial superiority considering the limited traumatic effect, fast recovery, and curative outcomes.

Keywords: nephrectomy, cavotomy, laparoscopic, Grawitz tumor

LOWER LIP DEFECT RECONSTRUCTION AFTER GIANT TUMOR EXCISION- SURGICAL MANAGEMENT

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Introduction: Reconstructive surgery for medium or large lip defects is one of the greatest challenges in plastic surgery, since it aims to obtain a balance between functional restoration and an aesthetic outcome. The Karapandzic flap is an effective reconstructive option for medium or large upper or lower lip defects. This technique stands out because it avoids full-thickness incisions, which preserves natural sensations and improves tissue vascularity and muscle performance while conserving the critical neurovascular input to the lip musculature. The results are even more remarkable in the light of the method's ability to reconstruct the orbicularis oris muscle in a single operation. **Case Report:** A seventy-two-year-old male patient was admitted with a facial mass. After a clinical examination, the diagnosis was a 4/3 cm soft tissue tumor localized on the lower lip. The tumoral mass was excised with 0.5 cm of safety surgical margins. The reconstruction of the lower lip proved challenging due to the size of the mass that was removed. The technique used was a Karapandzic local flap, which consists of a horizontal incision starting in the mentolabial sulcus then around the melolabial and labiomandibular crease. The incisions were made between the inferior margin of the defect and the nasal ala, separating the orbicular oris muscle from the rest of the facial mimicry structures, followed by the suture in the anatomical planes. The neurovascular bundle was preserved to maintain flap viability and the excised mass was afterwards sent for histopathological examination. **Discussions :** The postoperative evolution was favorable; the wound was clean and displayed no signs of inflammation. The flap was viable without any indication of vasculopathy. In terms of aesthetic appearance, after the procedure, a truly satisfactory result was obtained. **Conclusions:** Based on the progress seen in this case, the Karapandzic flap for lip carcinomas should be taken into account, considering its outstanding curative and aesthetic outcomes.

Keywords: reconstruction, lower lip, Karapandzic flap, tumor

CASE REPORT: THE KOCHER-LANGENBECK APPROACH TO POST-TRAUMATIC ACETABULAR FRACTURE AND HIP DISLOCATION

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Introduction: The dislocation of the hip is a serious injury that nowdays is more and more seen as an outcome of

vehicle-accident. In many cases, it is associated with acetabular fractures. Complications such as ischemic bone necrosis and sciatic nerve damage are common in this condition and may occur either post-traumatic or postoperative. Even though a well-established treatment is done, long-term reevaluation can reveal osteoarthritis. **Case Report:** This paper aims to present the case of a 39 years old man who suffered a car accident and presented to the emergency department accusing severe pain in the left hip and absolute loss in left leg function. After further investigations, X-rays detected a fracture with displacement of the left iliac bone, posterior disclocation of left hip and left acetabulum fracture, pelvic CT confirming the diagnosis. Our patient was admitted in the Orthopedic and Traumatology Departmen where he received a surgical treatment consisting of restoration of coxofemoral luxation with open reduction and internal fixation. Osteosynthesis of the posterior wall of acetabulum was done with Kocher-Langenbeck approach, a posterior approach including more steps: pre-op planning, preparing and positioning the patient, making a vertical incision centered by the trochanter followed by the reduction and fixation of the fracture- in our case, it was fixed with an anatomic plate held by 7 screws, and, in the end, wound closure and post op dressing and care. 4 days after the operation RTG revealed that the hip dislocation reoccurred, and the patient was subjected to a second surgical procedure. Transcondylar traction was applied to limit the movements after the second open reduction and internal fixation. **Discussions :** Our patient is uncooperative and has an inappropriate behavior; he mobilized himself to walk and stayed in improper positions, which led to complications and the need for a second surgery. Post op transcondylar traction was used for additional reduction due to the instability of the dislocation. **Conclusions:** Hip dislocation is a complex condition that can evolve in many ways, wether good or bad. Early imobilization is important after hip surgery and the doctor's recommendations should be followed rigorously. Regularly evaluation is necessary to monitor the healing process and possible complications.

Keywords: hip dislocation, Kocher-Langenbeck, open reduction, acetabulum

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BRACHIAL ARTERY PSEUDOANEURYSM AFTER PERCUTANEOUS CORONARY INTERVENTION

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Introduction: A pseudoaneurysm (frequently called "false aneurysm") represents a vascular pathology that usually affects the arteries of the lower extremity, being in the most of the cases the result of a trauma- diagnostic and interventional arterial catheterizations represents the most common etiology. It consists of an accumulation of blood around the vessels surrounding soft tissues- a pulsatile, painful hematoma- caused by traumatic injuries due to damage to the artery wall. **Case Report:** A 69 years-old woman with a past medical history of hypertension, cardiac failure (NYHA II), coronary artery pathology, and dyslipidemia, was admitted to the Cardiovascular Surgery Department of Emergency County Hospital from Târgu-Mures, due to pain complaints of the right upper limb associated with edema and hematoma. Her symptoms appeared five days prior to admission. Relevant personal pathological history reveals that the patient underwent percutaneous coronary intervention with a right brachial approach one month prior, with no intraoperative or immediately postoperative complications. After the anamnesis and the physical examination, the patient was diagnosed with a post-traumatic pseudoaneurysm of the right brachial artery. In this case, the medical decision consisted of surgical intervention to remove the hematoma. The whole intervention lasted two hours with no postoperative complications. **Discussions :** An observational study shows that the most common location for a peripheral pseudoaneurysm is the femoral artery(90%), followed by the radial artery(5%) and the brachial artery(2%). According to specialists, pseudoaneurysms less than 2 cm have a predisposition to spontaneous regression or thrombosis, but the evolution of a larger lesion could be unforeseeable and needs a specific treatment. The optimal management modality of a pseudoaneurysm is based on its accessibility, size, location and etiology. Traditional surgery is still considered to yield the best results for patients with massive hematomas, although minimal invasive intervention as endovascular graft implantation, glue injection or USG-guided thrombin can be used. **Conclusions:** As with all invasive procedures, cardiac catheterization involves different grades of risks including pseudoaneurysm. The particularity of this case is represented by the rare location of the injury in the upper extremity. It is necessary to diagnose and treat the pseudoaneurysm as early as possible to prevent the most common complication: the compression of the surrounding structures.

Keywords: vascular pathology,, pseudoaneurysm,, hematoma,, brachial artery

SURGICAL TREATMENT OF PHEOCHROMOCYTOMA IN MEN 2A SYNDROME SUSPICION-CASE REPORT

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Introduction: By definition, an adrenal adenoma is a benign growth that develops at the upper pole of the kidney and which is given rise on the neoplastic cell proliferation in the glomerular, fascicular and reticular sections of the adrenal cortex or the medullary adrenal. The typical catecholamine-secreting tumor, originated from the medulla of the gland, is the pheochromocytoma, arising by a non-specific mechanism from chromaffin cells, representing modified postganglionic neurons generated from embryonic neural crest cells. **Case Report:** We relate the case of a 19-year-old boy, initially admitted to the paediatric ward, followed by the endocrinology department at the age of 13, accusing widespread colic, abdominal discomfort and obesity. Continuous renal colic was seen throughout admissions and investigations, along with back pain, positive Giordano maneuver on the left side, macroscopic hematuria, possibly due to renal lithiasis, for which analgesic and antispasmodic medication were given, and secondary juvenile hypertension. Starting in 2020, serum calcium values were slightly elevated and in 2021 the diagnosis of secondary hyperparathyroidism was made. In addition, metanephrine and normetanephrine determinations were also performed. The increased levels led to the suspicion of pheochromocytoma, which had previously been detected in 2022, thus making an association between grown metanephrines and suspected MEN 2A syndrome. Subsequent CT scans, both parathyroid and abdominal, highlighted a moderate hyperabsorbent area, indicating a left lower parathyroid adenoma, and an adenoma about 6mm in the left adrenal gland. The decision to undergo a laparoscopic left adrenalectomy was ultimately taken after performing these exams. **Discussions :** Although in terms of occurrence, pheochromocytoma often occurs sporadically, it can also be discovered in connection with multiple endocrine neoplasia type 2, an uncommon disorder. The diagnosis of MEN 2A syndrome is not confirmed in this patient, however it is suggested based on increased parathyroid hormone level, a CT scan that revealed a left lower parathyroid adenoma and a previous diagnosis of secondary hyperparathyroidism outlined in the patient medical history. **Conclusions:** To draw to a close, histopathological analysis performed after laparoscopic left adrenalectomy indicated a focally enlarged cortical area, caused by hyperplasia of the fasciculata and reticularis zones, whereas the thickened medullary area displayed expansions towards the cortex. Also, in accordance with WHO guidelines, it will be examined whether the pheochromocytoma is a component of the MEN 2A syndrome, taking into account the factors mentioned above that brought this concern to light.

Keywords: MEN 2A syndrome, adrenalectomy, pheochromocytoma, hyperparathyroidism

THE GRACILIS MUSCLE FLAP AND ITS USE IN COVERING SYNTHETIC VASCULAR PROSTHESES IN A PATIENT WITH MULTIPLE LOWER LIMB REVASCULARIZATION CASE REPORT

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Introduction: Infections in vascular surgery are rarely reported (between 1%-5%), the incidence increasing in vascular reconstructions performed in the inguinal area (up to 44%). Pedicle muscle flaps can cover vascular grafts in the groins, abdomen, or pelvis (the gracilis, sartorius, rectus abdominis, etc.), along with vigorous anti-infectious treatment. This paper aims to present the gracilis muscle plasty used in covering the extra-anatomic femoral-femoral right-left bypass graft in a patient diagnosed with peripheral arterial disease and multiple lower limb revascularization surgeries. **Case Report:** We present the case of a 74-year-old patient, cachectic, known to have a peripheral arterial disease with occlusion of the abdominal aorta and bilateral iliofemoral axis for which an aorto-bifemoral bypass was performed two years ago. The patient also underwent 3 angioplasties with implantation of coronary stents. He presents himself to the Emergency Room with sudden onset of high-intensity pain in the lower left limb, marbled integuments, impaired motility, and sensitivity in the same stem. CTA of the lower limbs highlights the left branch occlusion of the aorto-bifemoral bypass. The vascular surgery team

attempted deobstruction without success. Consequently, the chosen procedure was an extra-anatomic femoral-femoral right-left bypass. The patient was discharged five days post-op, with remission of symptoms, without signs of acute ischemia. After eight months, the patient presents himself in the vascular surgery outpatient clinic with transcutaneous externalization of the graft. A local bacteriological examination is taken and given the negative result; it is decided to perform tissue restoration with the transposition of the gracilis muscle. Twelve hours postoperatively, the patient is mobilized. Three days post-operatively, he is discharged with a favorable evolution, without signs of inflammation at the level of the inguinal surgical wound, with normally colored integuments, and bilaterally present pulses up to the periphery. **Discussions :** Studies have shown that S.aureus, Pseudomonas, Staphylococci, and MRSA represent the most common pathogens in infected prosthetic groins. Our patient was in a poor nutritional state and had other comorbidities. Inadequate soft tissue coverage may expose the synthetic graft, which, due to the pulsation, can produce erosion at the tissue level, making them vulnerable to rupture. The procedure aims to shield the area with healthy soft tissue while maintaining vascular permeability. Potent muscle tissue furnishes coverage for the structures underneath and permits effective treatment and proper healing. **Conclusions:** The retroflexed GMF in groin wounds has a high healing rate, and it can be safely accomplished even when a synthetic graft was inserted.

Keywords: Gracilis muscle flap, Bypass, vascular prostheses

PLATELET-RICH PLASMA IN THE TREATMENT OF DIABETIC FOOT ULCERS

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Introduction: Lower extremity ulcers are major complications of diabetes mellitus. Although conventional therapies such as surgical debridement, pressure offloading, and wound dressings can be used, they do not provide satisfactory healing. Platelet-rich plasma (PRP) is an autogenously harvested plasma, with platelet concentrate, that was extracted from the patient's peripheral blood and contains high concentrations of growth factors and cytokines. It stands as a novel method used for the treatment of non-healing ulcers as it enhances the healing process. **Case Report:** We present a series of 8 cases of patients with insulin-dependent type 2 diabetes, and poor glycemic control but with no significant arterial hemodynamic damage, that were admitted to the Vascular Surgery Department with trophic digital lessons for which amputations and necrectomies were carried. Postoperative, local PRP treatment was initiated at the ulcers' site and was administered weekly until they fully healed. The mean area of ulceration was 8.44 cm2, with no sign of infection and a negative bacteriological exam. The average total healing time was 5 weeks. However, additional necrectomies were necessary in 2 of the 8 cases, without disarticulation or further bone resection. In evolution, 6 cases presented complete healing at 7 weeks post-treatment, one patient required 8 weeks of therapy, and one patient required 9 weeks. **Discussions :** The pathogenesis of peripheral neuropathy is still partially understood. It seems as though there are multiple mechanisms involved, including increased production of IGF-1, activation of protein kinase Cβ, and the formation of Advanced Glycation End Products (AGE). PRP is a cost-effective and inexpensive method that can be immediately and easily made from the patient blood by simple centrifugation. It enhances wound healing through seven growth factors (such as platelet-derived growth factor, vascular endothelial growth factor, and epidermal growth factor) that stimulate chemotaxis, cell proliferation and differentiation, protein synthesis, and collagen synthesis, influencing the process of angiogenesis and tissue regeneration as well as modulating inflammation. **Conclusions:** Given the applicability and simplicity of this treatment, in addition to the high risk of amputation and long-term mortality of patients with diabetic foot ulcers, we recommend local PRP therapy along with medical therapy.

Keywords: platelet-rich plasma, diabetes mellitus, foot ulcers

DA VINCI XI ZERO ISCHEMIA NEPHRON SPARING SURGERY FOR HIGH PADUA RCC PRESENTATION

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Introduction: Nephron sparing treatment for renal cell carcinoma RCC is prefered to radical nephrectomy if the tumor characteristics allows it (technically), especially on solitary kidney cases to maximize the preservation of post operative renal function. Fortunatelly, the technologic advancements of robotic surgery make partial neprectomy approachable for technically complex cases. **Case Report:** The technique of robotic nephron sparing treatment for extremely complex tumor presentation is exemplified on 2 patients with incidental right renal tumors with PADUA scores of 8 and 10 that underwent right transperitoneal Da Vinci XI partial nephrectomy with zero ischemia. An intra-operatory photo collage for each case (complete endophytic/ vecinity to renal pedicle tumor presentation) showcases technical aspects: tumor excision and nephroraphy strategy. The following are reported for both cases: peri-, intra- and postoperative time, blood loss, hospitalisation day, histopathology report, 30 day Clavien-Dindo complications and tumor board management. **Discussions :** The precision of the robotic instruments with the 360 degrees wrist articulation allowed pR0 nephron sparing surgery to be performed with zero ischemia, a challenging technique especially for endophytic tumors. The more endophytic the tumor, the higher risk is for hemorrhagic events both during excision and nephroraphy. The closeness of the tumor to the pedicle requires gentle and precise movements during dissection. Nevertheless, oncologic safety is non-negotiable and the technique although feasible, is challenging and therefore, advisable for highly experienced teams. **Conclusions:** The robotic technology aids the surgeon to realize nephron sparing surgery in RCC with high PADUA presentation within oncologic safety and optimimal post operative functional results.

Keywords: Robotic partial nephrectomy, Zero ischemia, High PADUA tumor score

LAPAROSCOPIC ADRENALECTOMY IN A PATIENT WITH CUSHING'S SYNDROME

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Introduction: Cushing's syndrome is a disorder characterized by an abnormal secretion of the cortisol hormone over a long period of time. Adrenal adenoma, a benign tumor of the adrenal gland, is one of the main causes of Cushing's syndrome. **Case Report:** We present the case of a 63-year-old hypertensive and diabetic female patient who was diagnosed with Cushing's syndrome after presenting the following signs and symptoms: hirsutism (Ferriman Gallway score=23 points), hyperhidrosis, weight gain with androgenous representation, palpitations and asthenia. In the past she suffered hysterectomy with ovarian conservation for uterine neoplasm suspicion. Hormonal blood test results: 8 am serum cortisol=21.4ug/dl, 8 am serum cortisol after 1mg of Dexametazone=2.19 ug/dl, 24h urinary cortisol=128.22ug/24h, salivary cortisol=1.45 ug/dl, adrenocorticotropic hormone, ACTH=6.9 pg/ml and testosterone=99.04 ug/dl. The patient also underwent dual energy X-ray absorptiometry (DEXA) with the following results: L1-L4 score T=+2.3 and femoral neck score T= +1.1. Frax score with high risk of osteoporotic fractures: 2.9%. Abdominal computed tomography was performed and revealed a 51/40 mm right adrenal adenoma and a discrete adenomatous morphology of the left adrenal gland. The further therapeutic approach was surgical intervention consisting of laparoscopic right adrenalectomy, with favorable outcome. Histopathological examination describes an encapsulated nodular formation of 42 mm diameter; on section it is relative homogeneous, orange with few hemorrhagic areas. Microscopically, there is a proliferation of spongiocyte cell, arranged in groups and cordons, well delimitated by a thin capsule. Oncocyte cells are also present. **Discussions :** Adrenal cortical adenoma is the most frequent benign tumor of the adrenal gland, it accounts for approximately 52% of adrenal tumor cases. Adenomas are in most cases unilateral and the bilateral ones are encountered in 20% of cases. The hormonal secretion of adrenocortical adenoma consists of: glucocorticoids, aldosterone and sex hormones causing different clinical manifestations diseases. Majd S. at al reported the case of a 43-year-old female patient with Cushing's syndrome due to bilateral adrenal adenoma. They discussed the possibility of performing either unilateral or bilateral adrenalectomy. The advantage of bilateral adrenalectomy is rapid resolution of hypercortisolemia, but patients require life-long glucocorticoid and mineralocorticoid. In our case, it is uncertain

whether the Cushing's syndrome was caused by the right adrenal adenoma or the left adenomatous adrenal gland. **Conclusions:** Cushing's syndrome results from chronic exposure to increased glucocorticoid concentrations. Adrenal cortical adenoma is one of the most common causes and should be considered in mid-aged patients presenting with symptoms of hypercortisolemia.

Keywords: Cushing’s syndrome, laparoscopic adrenalectomy, serum cortisol, adenoma

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LAPAROSCOPIC GASTRIC BYPASS SURGERY IN OMEGA LOOP, REVISION AFTER GASTRIC SLEEVE SURGERY-CASE REPORT

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Introduction: Obesity is one of the most important global public health issues and is more and more common among young people. Obesity is often associated with high cardiovascular risk and metabolic disorder such as type 2 diabetes. **Case Report:** A 44 years old patient is admitted to SCJU Mures, 2nd Department of Surgery with a referral diagnosis of grade II hypertension, grade III obesity, hepatic steatosis and mixed dyslipidemia. After undergoing bariatric surgery in another university centre 7 years ago for the diagnosis of morbid obesity (BMI = 43.9 kg/m2), the patient presents for reevaluation. The initial procedure was a laparoscopic longitudinal gastrectomy, removing a large part of the stomach by sectioning the greater curvature. The procedure was successful, with 33% loss of initial weight (from 147 kg to 98 kg). In 2021 the patient started to gain weight again, at the time of the current presentation having 134 kg and height of 1.83 m (BMI = 40 kg/m2). The decision was made to have a surgical re-intervention, performing a laparoscopic gastric one loop gastric bypass. This intervention consists in disconnecting the proximal portion of the stomach, followed by anastomosis with a loop located 150-200 cm from the duodeno-jejunal angle to short-circuit the gastric chimeric pathway. The patient's postoperative outcome was favorable, with early mobilization at about 6 hours and resumption of bowel transit 24 hours postoperatively. Preoperative and postoperative contrast radiographs were performed. From the last radiological images, it appears that the gastric volume has been significantly reduced and the gastro-enteric anastomosis is functional, with no signs of extravasation of the contrast substance. **Discussions :** Longitudinal gastrectomy surgery is considered a restrictive operation only. In cases where the patient begins to gain weight after the first surgery, this can be converted to gastric bypass surgery. Gastric bypass surgery is a combination of restrictive and malabsorptive procedures and is more effective in terms of weight loss. **Conclusions:** Gastric bypass surgery is the most commonly used revision method for ineffective results after gastric sleeve. This surgical procedure leads to significant short and medium term weight loss and low morbidity rate. Obesity is often part of a metabolic syndrome, and surgical reintervention with the addition of this malabsorptive component to the first restrictive procedure can lead to improvement in the quality of life of bariatric patients.

Keywords: gastric sleeve, gastric bypass, obesity

SURGICAL APPROACHES TO MYELOMENINGOCELE. CASE REPORT

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Introduction: Myelomeningocele is a neural tube defect in which a part of the spinal contents, meninges and CSF (cerebrospinal fluid) may fill a protruding pouch of skin of variable sizes and which may be located at different points along the spine of a newborn. It has an incidence of 75% among dysraphic defects and it is the second most common malformation of the newborn, following cardiac defects. **Case Report:** We report the case of a female infant, born through cesarean section on 03/03/2017, at the gestational age of 39 weeks to a 22 year old mother. She presents with a lumbar myelomeningocele at L1-L2 level, without fistulization, and secondary hydrocephalus. No motor deficit or neurogenic bladder are reported at birth and normal function is maintained post operatively. Successful surgery is performed through Z-plasty repair, a single instance of infection is reported, followed by full recovery. Additionally, a retrospective study was performed between 2012 and 2022 with comparison of the outcomes following a surgery. **Discussions :** In the presented case, a very large defect of 5x4 cm2 needed to be repaired in such a way as not to escalate tension and damage in the skin, hence the use of Z-plasty with good results, the patient being discharged at the age of 25 days (28/03/2017) in stable condition. In those cases presenting already with hydrocephalus a V-Y advancement approach (named after the shape of the incision made

in proximity to the defect, V shape, which, through the approach and closure of the flap, leaves a Y shaped scar) showed less potential for developing CSF leaks, while defects smaller in size appear to benefit from the Limberg or direct approach. **Conclusions:** The surgical repair of the myelomeningocele is a surgical challenge and consistently presents with difficulties and setbacks. Devising faster and more efficient ways of treating the affected newborns is mandatory in order to improve the survival and quality of life of the affected patients.

Keywords: Myelomeningocele, Case, Neurosurgery

CEREBRAL VASOSPASM IN POST-ANEURYSMAL SUBARACHNOID HEMORRHAGE – A CASE PRESENTATION

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Introduction: Cerebral vasospasm is one of the leading causes of poorer outcome following aneurysmal subarachnoid haemorrhage (aSAH). Cerebral vasospasm is defined as narrowing of a cerebral blood vessel enough to cause reduction in distal blood flow. Seventy percent of aSAH patients develop angiographic vasospasm but only 30% progress to develop evident neurological deficits. The clinical syndrome occurring because of cerebral vasospasm is called delayed cerebral ischemia which is defined as the development of new focal neurological signs and/or as a deterioration in the level of consciousness, lasting for more than 1 h. **Case Report:** This paper presents a 55-year-old female known with cardiovascular antecedents and hypertension grade one, that accused sudden onset of intense headache, photophobia and nausea. At admission a CT scan showed diffuse subarachnoid bleeding and Angio CT highlighted irregular saccular aneurism of communicant segment of the right internal carotid artery. The neurological examination was positive for meningeal signs, GCS 15 points and no motor or sensibility deficit. Cerebral angiography was performed which confirmed the diagnostic. The clinical and imagistic findings are indications for neurosurgical intervention. **Discussions :** Neurosurgical intervention in general anaesthesia is performed with right pterional craniotomy, dissection of the sylvian fissure and clipping of the aneurysm. The vessel was irrigated with Drotaverine before durorraphy. Post surgery patient has a good evolution, GCS 15 points, hemodynamically stable with slight photophobia and headache. After two days the clinical state downgraded (GCS 8 points), a CT scan showed diffuse edema, median structure shift and subarachnoid haemorrhage. Regardless of administering prophylactic calcium-channel blockers (nimodipine), and ensuring vital support the patient still developed vasospasm. Right fronto-temporal-parietal craniectomy is the choice of treatment for decompression. Depletive treatment, vital support, sedation and antihypertensives are initiated in the intensive care unit where the patient was admitted. On repeated Ct scans it is noticed reabsorption of subarachnoid haemorrhage and integrity of the midline structures but in time a progressive hypodensity leading to ischemia in right MCA and PCA area is seen. The patient continues to benefit from supportive treatment with uncertain evolution. Neurological stable, GCS 7 points with mydriatic pupils, under sedation. **Conclusions:** Continuous monitoring is valuable for early detection of vasospasm following aSAH that saves precious time and allows for early therapeutic interventional intra-arterial vasodilators with or without balloon angioplasty before irreversible ischemic neurological deficits take place.

Keywords: Subarachnoid haemorrhage, vasospasm, nimodipine, middle cerebral arthery aneurysm

DA VINCI XI ROBOTIC SURGERY FOR COMPLEX RADICAL NEPHRECTOMY

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Introduction: Renal cell carcinoma RCC represents 90-95% of renal malignant tumors and although COVID pandemic boosted incidental CT findings of RCC that could be treated with nephron sparing surgery, advanced cases are still a reality. **Case Report:** A 52-year-old male patient acusing episodic hematuria was diagnosed with a left renal tumoral mass during ultrasound examination. CT imaging revealed a tumoral formation (10.31/8.67/8 cm) in the upper half of the left kidney with a 6 cm tumoral thrombus extension into the left renal vein and 4 cm para-aortic/ perihilar lymph node mass. Regarding medical history, arterial hypertension, unspecified cardiac arrhythmia and grade 3 obesity (37.7 BMI) is noted. The tumor board decided in favor of the surgical treatment for

the T3bN1M0 renal tumor. Da Vinci XI transperitoneal left radical nephrectomy and thrombectomy with para-aortic lymphadenectomy was performed. An intra-operatory photocollage is used for key operatory- technical aspects. The following data is reported: peri-, intra- and postoperative outcomes with operative time, blood loss, histopathology report, 30 days Clavien-Dindo complications and tumor board management. **Discussions :** The minimally invasive approach is optimal for obese patients and the Da Vinci XI robot aids on point dissection within oncologic safety for optimal peri and post operative results, especially needed in technically challenging cases. **Conclusions:** Although the robotic approach is not considered "gold standard" for radical nephrectomy, this paper highlights the advantages of robotics in complex RCC cases presenting tumoral venous thrombus and retroperitoneal lymph node masses

Keywords: renal cell carcinoma, robotic radical nephrectomy, tumoral venous thrombus, lymphadenectomy

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SOFT TISSUE TUMOR REMOVAL AND RECONSTRUCTION WITH A LOCAL FLAP

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Introduction: This paper presents a case of a 21-year-old male patient who was admitted to the plastic surgery department with a diagnosis of a soft tissue tumor in the scapula and left paraventricular region. The patient previously underwent surgery for the same condition, with an incomplete removal of the tumor. The aim of this report is to describe the surgical procedure and postoperative management of the patient. **Case Report:** At initial presentation, a CT-TAP was performed which revealed an expansive process in the left scapular region of 48/151/130 mm, with vascularization of an intercostal branch and a thoracoacromial branch. On admission for surgery 2 weeks later, the patient presented with an oval tumor formation measuring 20x23 cm in the left scapular region, imprecisely delimited, relatively mobile on the underlying planes and with necrosis on the surface. The surgical approach of the patient underwent extensive excision of the tumor with marking of the parts and referral to the laboratory. Result of extemporaneous examination were tumor free. Extensive lavage and hemostasis were performed. The remaining defect was covered with a local rhomboid transposition flap and the donor area was covered with a split-skin graft from the anterolateral aspect of the left thigh. Active drainage was used, and sutures were placed in anatomical planes. **Discussions :** Postoperatively the patient had a slow and favorable evolution with clean wounds and no signs of inflammation. The graft was integrated by 70%, viable with a capillary pulse and no signs of ischemia were present. The drains were removed and the first dressing change was performed 10 days postoperatively. Orders at discharge were to take functional rest, avoid local trauma, change dressings every 2-3 days, remove stitches 2 weeks postoperatively and treat pain as needed with paracetamol. For a good outcome the dressing and a regular follow-up of the graft are essential. No complications were reported for this patient. **Conclusions:** The optimal treatment of a soft tissue tumor, which can be malignant or benign, always depends on its size, location and the histopathological features. In this case, the patient had to undergo a wide excision followed by reconstruction with a rhomboid transposition flap to ensure the complete removal and success of the treatment The case presented, highlights the importance of appropriate surgical management and good postoperative care to achieve good outcomes for patients with soft tissue tumors.

Keywords: local rhomboid transposition flap, reconstruction, soft tissue tumor, plastic surgery

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GONARTHROSIS ASSOCIATED WITH MULTIPLE PATHOLOGIES - A CASE PRESENTATION

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Introduction: Gonarthrosis, one of the most frequent pathologies in the orthopaedics field, is a degenerative destruction of the knee joint caused by arthrosis of the articular cartilage, resulting in restricted mobility, reduced stability of the anatomical region and severe pain. Because of the result of a functional imbalance between the resistance of the joint structures and the tensions exerted on them, gonarthrosis may have an insidious onset. **Case Report:** We report a case of a 68 years old male patient, admitted to our department diagnosed with left knee gonarthrosis. During hospitalization, the patient had a medical history with multiple pathologies that were outside the orthopaedic sphere as: stage 5 chronic renal failure, hemodialysis, nephroangiosclerosis, stage 2

hypertension, reflux esophagitis, after-stroke sequelae, mixed hearing loss. In the Orthopaedic Department was performed the surgical total knee arthroplasty by replacing the diseased knee with an artificial joint. After the knee replacement, the patient successfully recovered and was sent to the other clinical departments in order to continue the treatment of the other pathologies. **Discussions :** Because of the interesting cluster of pathologies, this case, even tough with the fortunate operation of the knee arthrosis, unfortunately had the patient to continue long-lasting treatment of the other pathologies. For chronic renal failure he has to continue hemodialysis of a kidney transplant; for hypertension he has to use ACE inhibitors, ARBs, diuretics, and calcium channel blockers; for reflux esophagitis he has to use antacids. **Conclusions:** In the field of orthopaedics, it is crucial to view the patient as a whole, not just from an orthopaedic standpoint. Patients with orthopaedic conditions often require anaesthesia for surgical procedures, which can lead to decompensation of their overall health. Therefore, it is important to carefully consider the optimal timing of surgical interventions to minimize any potential negative impacts on the patient's well-being. In conclusion, a holistic approach to patient care is essential for optimal outcomes in orthopaedic surgery. Orthopaedic surgeons should view patients not just from an orthopaedic standpoint, but also from a broader perspective that considers the patient's overall health, comorbidities, psychological and social well-being. This approach will help ensure that surgical interventions are chosen carefully and that the patient's recovery and overall outcome are optimized.

Keywords: Gonarthrosis, articular cartilage, hemodialysis, total knee arthroplasty

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ADVANCED CERVICAL CANCER

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Introduction: Cervical Cancer derives from the squamous epithelium of the cervix. Predominantly affects younger women more than half of the diagnosed cases come from women under the age of 45. HPV 16 and 18 are the main predisposing risk factors for developing cervical cancer. Early-stage cervical cancer generally produces no signs or symptoms; In the more advanced stage: vaginal bleeding after intercourse, pain during intercourse, watery or bloody vaginal discharge that may be heavy and have a foul odor and pelvic pain, can occur. **Case Report:** The aim of this paper is to present a 50 years old patient with a cervical neoplasm stage IV with metastasis into the entire inferior abdominal area, giant fistulated pelvic abscess, nephrolithiasis, left hydronephrosis grade IV, anaemia, hypertension and hepatic steatosis. **Discussions :** The patient is aware of the diagnosis of hydronephrosis grade IV and fistulated small left inguinal abscess. She presented to the clinic in emergency complaining of generalized pain and specifically on the left lumbar region, fever and fatigue. She was consulted by an urologist, who remarked the diagnosis of hydronephrosis; Surgery was performed in the urology department where transcutaneous US-Guided nephrostomy visualization was executed. The patient was then transferred in the General Surgery ward where the left inguinal abscess was incised, evacuated and drained; a biopsy was conducted to rule out TB, resulting negative. Due to the histopathological result of squamous neoplastic cells, a subsequent gynaecological consult was made and resulting in a diagnosis of Stage IVB Cervical Squamous Cell Carcinoma. **Conclusions:** Cervical Squamous Cell Carcinoma tend to be highly aggressive and has a low survival rate. The choice of treatment will depend on the staging of cancer and the risk assessment. Our patient has just one option: palliative care, due to her stage IVB cervical cancer the 5-year relative survival rate is < 1%. Unfortunately, every specialist who saw her before coming to our clinic, has simply treated the symptoms without discovering the cause. More than 3 CT- scans were performed, and none of them revealed any suspicion of malignancy or other pathologies. If it was diagnosed at an early stage, when the first symptoms appeared, the 5-year relative survival rate would have been 92%. The key to preventing invasive cervical cancer is to detect cell changes early before they become cancerous. In this context: the HPV vaccine, Pap test, screening and diagnostic tests drastically reduced the frequency and mortality of this cancer.

Keywords: Cervical cancer, Squamous cell carcinoma stage IV, Inguinal abscess drainage, Palliative care

SUDDEN CARDIAC DEATH DUE TO MASSIVE CARDIAC LIPOMATOSIS OF THE RIGHT HEART – A RARE CASE REPORT

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Introduction: Cardiac lipomatosis is a degenerative process of unknown aetiology in which adipose tissue accumulates within the myocardium and replaces it, usually in the right ventricle. Up to 50% of the elderly have some degree of cardiac lipomatosis. However, it is extremely rare to find it to a massive extent. The condition is generally considered benign but in exceptional cases it can cause symptoms such as fatigue and chest pain and can also increase the risk of arrhythmias and heart failure. **Case Report:** We report the case of a 75-year-old obese woman, who was admitted to Policlinico Hospital of Bari for surgery of a locally advanced tongue carcinoma. Six days after the operation, the patient suddenly developed atrial fibrillation on ECG, hypertensive crisis with blood desaturation, and an elevated troponin test. The patient died of cardiovascular arrest, and, since no definite cause of death could be determined, an autopsy was performed. On cut section of the received specimen, an extensive lipomatous infiltration involved the anterior wall and infundibulum of the right ventricle, right atrium, and the atrioventricular junction. In particular, the lipomatous infiltration of the atrium exhibited a pseudotumoral shape protruding into the lumen between the septum and the coronary sinus orifice. Histologically, an extensive fatty infiltration of the right ventricle and atrium was observed with mild interstitial fibrosis, hypertrophy of residual cardiomyocytes, and scattered interstitial lymphocytes; a fibrotic degeneration of the atrioventricular node was also noted. The final diagnosis was sudden cardiac death due to massive cardiac lipomatosis of the right heart associated with fibrotic degeneration of the atrioventricular node. **Discussions :** Massive cardiac lipomatosis is usually an incidental finding and it is usually asymptomatic, as in our case. Moreover, such findings must arise the differential diagnosis with other pathologies, such as adipositas cordis and arrhythmogenic cardiomyopathy of the right ventricle. The absence of significant fibrosis and degenerative changes in the described case argued for fatty infiltration of the right heart. This infiltration and the fibrotic degeneration of the atrio-ventricular node could have caused sudden cardiac death by fatal arrhythmia or conduction block. **Conclusions:** When dealing with a case of sudden cardiac death, massive cardiac lipomatosis should always be considered as a plausible arrhythmogenic cause and definitely be diagnosed by histopathological examination. We conclude that the sudden cardiac death was caused by a fatal arrhythmia, which in turn was caused by fatty infiltration of the right atrium and fibrotic degeneration of the atrio-ventricular node.

Keywords: massive cardiac lipomatosis, atrioventricular node dysfunction, sudden cardiac death

FROM OSTEOSYNTHESIS TO REVERSE SHOULDER ARTHROPLASTY-CASE REPORT

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Introduction: Fractures of the proximal humerus are a common type of fractures in elderly female patients. Most of these fractures are often comminuted and surgical treatment is considered appropriate. **Case Report:** We present a 53-year-old female patient that sustained a four-part valgus impacted proximal humerus fracture. After X-ray examinations, an open reduction and internal fixation (O.R.I.F.) was perfomed followed by immobilization. At four month follow up, the patient presented shoulder pain, severe scapulothoracic dyskinesis and incapacity of shoulder active motion. Radiographs showed a secondary mobilization of the fractured segments. CT scans proved the collapse of humeral head, screws cutout, significant glenoid erosion and fatty degeneration of the supraspinatus and infraspinatus. Secondary surgery was required and a reverse shoulder arthroplasty was performed. **Discussions :** Locking-plate osteosynthesis has been the most commonly used procedure in the treatment of proximal humerus fracture. On account of multiple complications, the shoulder arthroplasty represents an alternative primary treatment with visible benefits. Several studies have indicated that the early shoulder arthroplasty are significantly better than the late procedure, performed as a second intervention after failed osteosynthesis. **Conclusions:** The four-part valgus impacted fractures are treated surgically by O.R.I.F., but the

many risk factors such osteoporosis, rotator cuff lesions and degenerative joint disease may influence the choice of shoulder arthroplasty instead of osteosyntesis.

Keywords: Proximal humerus fracture,, osteosynthesis,, O.R.I.F. ,, reverse shoulder arthroplasty

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CLOSED FRACTURE MANAGEMENT: A CASE REPORT

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Introduction: Tibial fractures are the most common musculoskeletal injury in adolescents. The optimal management of tibial fractures in adolescents is controversial. Closed tibial fracture research has traditionally focused on surgical techniques, however, despite technological advances, outcomes from these injuries remain poor, with patients facing a sustained reduced quality of life. **Case Report:** We present the case of a 16-year-old patient which presents at the ER acusing excruciating pain in the distal part of the left leg and shoulder, after a crash with an motorcycle. Medical investigation revealed ecchymotic teguments, swelling, range of motion in the ankle was restricted and a 5 cm incision in the left lower limb. Neurological examination was normal, pluse was present in the distal part of the leg. Intense pain and ecchymotic teguments, swelling and reduced range of motion in the right shoulder area. Clinical investigation revealed a left tibial shaft fracture, left fibula shaft fracture and a right clavicle fracture. After considering, surgical treatment was decided and the pacients was brought to the OR. The surgery began with an approximate 8 cm incision opened longitudinally from the proximal left tibia to the patella which was under traction. The skin and subcutaneus tissue were dragged, revealing the pattelar tendon, just below the tibial tuberosity. The medullaty canal was opened in the proximal end to the tibial tuberosity and a guide rod was placed into the tibial shaft. The rod was advanced into the distal fragments of the tibia and the cannaluted reamers were used over the rod. The trill was attached to the the nail and insertion of the nail over the guided rod, the nail was drived down the tibia, past the fracture site and the guided rod was removed. The inseriton of the distal screws was concluded and a bone graft was placed, because it was needed. **Discussions :** Whilst there is a general consens on the ultimate goal of a stable anatomic reduction in this subset of fractures, there continues to be a number of controversies surrounding issues including pre-operative imaging, initial assessment and definitive management of specific injury patterns. **Conclusions:** The majority of fractures are going to require operative management, and regardless of the management technique used, the soft tissue envelope must be respected. There are still few potential randomised controlled trials comparing the various operative techniques that are accessible.

Keywords: Fracture, Management, Ankle, Limb

TRANSPERITONEAL EXTRAVESICAL APPROACH IN ROBOT-ASSISTED BLADDER DIVERTICULECTOMY (RABD)

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Introduction: Indications for surgical treatment of baldder diverticula (BD) in male patients include lower urinary tract symptoms (LUTS) refractory to medical treatment and bladder outlet obstruction (BOO) due to benign prostatic hyperplasia (BPH), bladder calculi, and/or recurrent urinary tract infection. **Case Report:** We present the case of a 61-year-old male patient with a history of LUTS secondary to BPH for three years. The patient underwent TURP surgery twice and presented, after two years since the last intervention, with urinary retention and bladder diverticula. After the first TURP surgery, the patient's symptoms recurred. For managing the recurrence of BOO, bougie dilators were used. The treatment failed, and after six weeks, the patient underwent a second TURP surgery for residual prostatic adenoma. Due to multiple urologic procedures, such as two TURP interventions and urethral catheters, the patient developed urethral stricture disease (USD). The BD was discovered due to an CT examination. To evaluate the BD size, location, and relation to the pelvic ureter, an MRI was performed. The BD neck was 12mm long and situated very close to the right ureter. The BD was 70x50mm in size and 110ml in volume. The prostate's dimensions were within normal limits and had a symmetrical configuration; the median area of the prostate was not monitored due to previous operations. The peripheral areas of the residual gland were

normal. Cystoscopy was performed with a flexible device to rule out possible tumoral development inside the diverticulum and bladder. The procedure was performed under general anesthesia. RABD was performed using a four-arm Da Vinci Xl robotic system via a transperitoneal approach. The diverticulum was identified intraoperatively, mobilized, and transected at its neck. The bladder was closed in two layers. The fibrotic bladder neck was incised, and it was repaired with the YV flap reconstruction method. **Discussions :** Before performing a RABD, several technical surgical aspects should be considered. To aid BD identification, some suggest endoscopic placement of an additional catheter inside the BD through the urethra. Retrograde filling makes the BD more prominent than the rest of the bladder because the BD wall consists only of bladder mucosa, which offers less resistance to stretching than the rest of the bladder wall. **Conclusions:** For many years, the gold standard surgical treatment for BD was the open bladder diverticulectomy via an extravesical or transvesical approach. As a minimally invasive substitute for the open procedure, robot-assisted bladder diverticulectomy was established in the last few decades.

Keywords: RABD, TURP, BOO, USD

THE MANAGEMENT OF AN ANEURYSMAL ARTERIOVENOUS FISTULA FOR DIALYSIS

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Introduction: Arteriovenous fistula (AVF) is the first choice of vascular access for dialysis defined as an invasive procedure that connects an artery and a vein in the upper limb in patients with end-stage renal disease (ESRD). The most significant long-term complication of AVF is the focal dilatation of layers of the vessel wall, which can lead to ruptures and hemorrhages, or the development of thrombi and necrosis of dermal tissue. **Case Report:** We present 9 cases of patients with ESRD and type 2 diabetes who were admitted to the Vascular Surgery Clinic with aneurysmal dilatation of the AVF. Of the 9 cases, 4 had ulceration in the venous component and 2 had active bleeding from the necrotic site. The AVFs were brachiocephalic (5 cases), radiocephalic (2 cases), and brachiobasilic (2 cases), with an average age of 11.55 years. All patients underwent surgical intervention, which involved complete resection of the aneurysmal component, with interposition of a vascular graft in 3 cases, a proximal brachiocephalic AVF in 2 cases, and a new AVF in the contralateral upper limb in the remaining cases. All patients received central venous catheter dialysis until the new AVF matured and were discharged after 5 days post-surgery. During follow-up, one patient developed steal syndrome in the limb where the new AVF was performed, requiring ligation and permanent dialysis catheter placement, and another patient experienced thrombosis 5 months after dialysis initiation, which could not be salvaged, and a permanent dialysis catheter was implanted. **Discussions :** These aneurysms arise due to high flow velocities and shear forces during repeated dialysis treatments, resulting in thrombosis with vein wall inflammation and vascular stenosis. Studies show that an arteriovenous fistula can last 3 to 5 years. Most of our patients had the fistula created for more than 10 years. The aneurysm can be treated by surgical ligation and resection, perivascular metal meshes, and stent. It is preferred to do surgical resection and create another AVF, considering the hostile morphofunctional evolution of the tissue and the comorbidities related to ESRD. **Conclusions:** The occurrence of aneurysmal dilatation of the AVF is rare, but in old AVFs can be fatal if it is not treated promptly. Surgery is the only option, and in some cases, local resection can be performed while continuing the AVF. To identify AVFs at high risk of developing aneurysms, tracking the diameter of the venous component and flow at the AVF level are useful diagnostic tools.

Keywords: Arteriovenous fistula, Aneurysm, Dialysis, End-Stage Renal Disease

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NUTCRACKER PHENOMENA DUE TO AAA IN A LUNG CANCER TREATED PATIENT

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Introduction: Generally, Nutcracker phenomenon refers to the compression of the left renal vein, most commonly between the aorta and the superior mesenteric artery, whereas the Nutcracker syndrome is the clinical equivalent of the phenomenon, characterised by a complex of symptoms with substantial variations. The aim of the report is to present a patient with posterior nutcracker syndrome, which can be problematic in terms of diagnostic and

treatment criteria. **Case Report:** A 74 year old man with a history of inguinal hernia and lumbar hernial disc which were operated, and COPD; was also diagnosed with an AAA (6.2cm). He had a pulmonar and bronchial malignant tumor, which was treated with radiotherapy and chemotherapy (2020). During and after the period of oncological treatment for the condition, the patient's aneurysm doubled in size (12.1cm). He was admitted to the Vascular Surgery Clinic with a ruptured abdominal aortic aneurysm (rAAA), retroperitoneal hematoma and hypovolemic shock. The computed tomographic angiography revealed a posterior Nutcraker phenomenon (a retroaortic renal vein compressed between the aneurysm and the vertebral body), which was also observed during the surgical intervention along with avulsion of the left renal vein.An urgent laparotomy was performed to repair the ruptured AAA, by dissecting the neck of the aneurysm, clamping it and reconstructing the aorta with a Dacron (Polyethylene terephthalate) graft. During the procedure, because of the initial hypovolemic shock, the patient presented an extreme bradycardic episode, followed by asystole. Cardiopulmonary resuscitation was initially successful, regaining a sinusal rhythm. Post-operatively, the patient was in critical condition, which deteriorated progressively. The patient presented another episode of extreme bradycardia ending in asystole, this time being irreversible. The patient was unresponsive and declared dead. **Discussions :** It remains important to know all the anatomical variations, as they can generate major surgical technique difficulties. Besides the fact that Lung cancer/COPD and AAA share several common risk factors, such as smoking, it is also stipulated that predetermined causes associate these pathologies. **Conclusions:** Radiation induced vasculopathy is time and dose dependent, and normally appears after 10 years. Therefore, it is crucial to be aware of comorbidities when electing cancer therapy and performing multiple post therapy checkups.

Keywords: Abdominal Aortic Aneurysm (AAA), Posterior Nutcracker phenomena, Radiation vasculopathy

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THE MANAGEMENT OF A COMMINUTED OPEN TIBIA FRACTURE IN ASSOCIATION WITH AN IPSILATERAL CLOSED FIBULA FRACTURE: A CASE REPORT

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Introduction: A comminuted fracture refers to a bone that has broken or splintered into more than two fragments. This type of fracture typically occurs after a high-impact trauma, as considerable force and energy are required to cause the bone to fragment in this manner. Fractures of the tibial shaft are the most common type of long bone fracture and often involve an ipsilateral fibula fracture, which can occur in up to 80% of cases. **Case Report:** We present the case of a 63-year-old patient with no known hereditary predisposition to bone fragility. He was admitted to the Emergency Room following a fall from a 2-meter height, complaining of intense pain, an open wound, and an inability to move the left lower limb. After a physical exam and an X-ray, the patient was diagnosed with a comminuted open distal tibial fracture (Gustilo-Anderson type IIIB), associated with a comminuted closed distal fibula fracture. Type IIIB fracture means a large wound (usually greater than 10 cm), severe soft tissue damage and contamination, extensive periosteal stripping, and no neurovascular injuries. In the present case, following the administration of cephalosporin-based antibiotic therapy, as well as incision and drainage, prompt surgical intervention was undertaken, consisting of an open reduction and internal fixation (ORIF) of the fibula and osteosynthesis with a buttress plate and cortical screws. The next step was the ORIF of the distal tibia and osteosynthesis with an anterolateral L buttress plate and cortical screws. In order to minimize invasiveness, the procedure was conducted under radiologic guidance. The surgeon sutured the incision in the anatomical planes, and the lesion was then covered with sterile and antiseptic bandages. Post-operatively, the patient received cast immobilization to reduce the risk of complications. **Discussions :** When an open comminuted tibial fracture occurs, the bones and soft tissues absorb the imposed energy. The comminuted bone fragments are typically not attached to any anchoring structures, which can cause displacement and significant damage to the soft tissue and neurovascular structures. A particular feature of this case is the absence of neurovascular injuries. Furthermore, this type of fracture has a complex healing process, and the patient's age, which is a risk factor for malunion, may prolong the recovery period. **Conclusions:** Considering the patient's favorable post-operative progress, we emphasize the importance of prompt intervention in open fractures to mitigate potential complications, including infections, compartment syndrome, nerve injuries, and malunion.

Keywords: comminuted open fracture,, surgery,, osteosynthesis

FEMURAL HEAD PIPKIN IV LUXATION WITH TRAUMATIC METATARSAL V AMPUTATION - A MULTIDISCIPLINARY CASE REPORT

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Introduction: The femoral head is the most proximal portion of the femur and is supported by the femoral neck. The head has a medial depression known as the fovea capitis which is important duet to it's high risk associated with hip factures and dislocations. Femoral head fractures are uncommon injuries caused by high energy impacts. These type of fractures are classified according to the Pipkin classification. **Case Report:** Patient is brought to the emergency department after a motorbike accident. X-Ray imaging shows a superior coxo-femural luxation with a bone fragment projecting adjacently to the femoral head. The inferior part of the leg reveals: fracture in the mid third of metatarsal V, luxation of proximal phalanx (mid and distal of finger V) and damage of soft tissue in the lateral portion of the antefoot. Abdominal pelvine CT reveals left posterior femoral luxation with the interruption of the bony contour of the femoral head. The final diagnosis is left superior coxo-femural luxation associated with a femoral head fracture Pipkin IV and a amputation through avulsion at the level of metatarso-phalangeal 5 articulation. The luxation was reduced with the help of orthopedic maneuvers before surgery. The intervention consisted of excision of the devitalized tissues, abundant lavage, dissection of 1/3 mid of MT 5. Preparation and reapplying of the lambeau with fixation and waiting wires. Reduction of the segmentary defect and soft tissues using trimming and segmentary permanent suture. For the plastic intervention, the defect was covered with free skin plasty, graft harvested from the anterior external face of the ipsilateral thigh. The graft was fixated with separated wires and surgical clips. **Discussions :** Surgical treatment still represents a challenge due to the deep location, massive soft tissues in situ, and vulnerable femoral head vascularity. Under general anesthesia, patients are operated according to their fracture type. Screws and plates are used for type IV fractures. Either an anterior (Smith-Peterson technique) or posterior approach (Gibson technique) can be performed. These techniques are the best ones so far due to their decreased risk of major complications such as avascular necrosis and heterotopic ossification. Some studies showed that early treatment within 48 h has better outcomes because blood supply can be restored earlier. **Conclusions:** Femoral head fractures are uncommon high energy injuries which may cause severe complications such as bleeding and bone necrosis. Fracture healing can be attained in all femoral head fractures by using open reduction and screw fixation.

Keywords: X-Ray, Graft, Luxation, Amputation

INTESTINAL MALROTATION DISCOVERED INCIDENTALLY IN AN OPERATION FOR IRREDUCIBLE UMBILICAL HERNIA

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Introduction: Intestinal malrotation occurs due to a fetal bowel rotation disorder. Usually, this condition manifests in infancy, with patients presenting symptoms of intestinal obstruction when they come to the emergency department. **Case Report:** In this paper, we present the case of a 66 years old male patient who came to the emergency department with symptoms of bowel obstruction, with lack of bowel transit, nausea, vomiting, and abdominal meteorism. From the personal pathological history, we note the presence of toxic liver cirrhosis with vascular decompensation, and parenchymal decompensation. The objective examination revealed a distended abdomen with an irreducible umbilical hernial formation, approximately 4 cm in diameter, palpable liver approximately 4 cm below the right costal margin. Abdominal CT examination revealed multiple hydroaeric levels of the small bowel, umbilical hernia with a 2 cm fascial defect and perihernial edema, hepatosplenomegaly, perihepatic ascites, and rectovesical ascites. The surgical intervention began with kelotomy followed by the repair of the defect and placing the mesh for the abdominal wall plasty to treat the irreducible umbilical hernia. Due to evidence of intestinal malrotation and the cecum and vermiform appendix location in the left iliac fossa, a tactical appendectomy was also performed. The postoperative evolution was marked by the appearance of a punctiform lesion of necrosis of the ileum, for which a segmental resection of the ileum with termino-terminal anastomosis was performed. Due to intestinal malrotation, the duodenojejunal junction was located to the right of the midline. The cecum and vermiform appendix are in the left iliac fossa, and the ascending colon, after rising to the inferior splenic

pole, continues with the descending colon and then the sigmoid colon and rectum. **Discussions :** Intestinal malrotation is a defect that occurs in the 10th week of gestation because of an incomplete rotation that results in the intestine not settling in its normal position. Usually, the bowel herniates out of the abdominal cavity, where it undergoes a 270 counterclockwise rotation around the mesenteric vessels, then returns to the abdominal cavity, the duodenojejunal junction is located to the left of the midline, and the cecum in the right lower abdominal quadrant. **Conclusions:** Intestinal malrotation can be the cause of acute or chronic pain, frequently manifesting as symptoms of intestinal obstruction, usually during childhood. In the present case intestinal malrotation was not the cause of bowel obstruction but an irreducible umbilical hernia, which required emergency surgical treatment.

Keywords: malrotation, hernia, bowel, obstruction

THE SURGICAL MANAGEMENT OF A BIMALLEOLAR FRACTURE ASSOCIATED WITH TIBIO-ASTRAGALUS LUXATION:A CASE REPORT

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Introduction: Ankle injuries generally occur due to a twisting mechanism, eversion being the most common reason which can cause damage. Pilon fractures are relatively rare and happen at the distal end of the tibia as a consequence of high-impact events, in many cases being associated with severe bone comminution, soft tissue compromise, and with fibular fractures. Bimalleolar fractures are a type of ankle fracture that involves both the lateral and medial malleolus at the distal ends of the fibula and tibia. **Case Report:** This paper aims to present a case of bimalleolar fracture associated with tibio-astragalus luxation in a 60-year-old female as a result of a same-level fall. The patient has a known history of osteoporosis. The X-ray evaluation reveals the cleavage of the distal lateral and medial malleolus in both fibula and tibia, classified as Ruedi and Allgower Type III tibial plafond fracture. To restore the ankle's biomechanics a closed reduction and internal fixation has been performed, followed by an open reduction-internal fixation of the fibula and lateral plating using a distal fibula plate secured by seven cortical screws for malleolar osteosynthesis. A lag screw has been applied for the fixation of the tibial malleolus. In the end, the plague has been lavaged, drained, sutured, and bandaged. Post-surgery, the immobilization of the whole lower limb in a plaster cast has been effectuated, to facilitate adequate recovery and accelerate the healing process. **Discussions :** Fractures of the tibial malleolus account for approximately 1% to 10% of the lower leg or tibial fractures, being classified as rare. Typically, these fractures happen mostly after accidents with high-energy axial compression force of the tibia which acts as a pestle, driving vertically into the talus and causing medial and lateral malleolus fracture, and are often associated with severe bone comminution resulting in soft tissue compromise and neurovascular structure damage. The particularity of this case is represented by the production of this kind of fracture by a same-level fall. **Conclusions:** In our case the associated risk factors caused a less aggressive fall to produce this kind of cleavage. Depending on the severity of the fracture, surgical or nonsurgical intervention may be needed. These procedures are meant to prevent the formation of a malunion or a nonunion, which can significantly reduce the quality of life.

Keywords: surgery, bimalleolar fracture, osteosynthesis

SURGICAL TREATMENT OF PATHOLOGICAL HUMERUS FRACTURES IN CHILDREN WITH UNICAMERAL BONE CYSTS

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Introduction: The Unicameral Bone Cysts (UBCs) were first described by Virchow in 1891. They are fluid- filled cavities located in long bones in children, especially the femur and the humerus (over 90% of cases). Little is known about their pathology. Trauma may produce local pathological fractures. The treatment must heal the bone and prevent further recurrence. Recently, the percutaneous fixation with elastic titanium nails (TENs) has become the standard surgical approach. This technique offers the advantage of solid fixation combined with rapid recovery and excellent long-term results. This paper presents our recent experience with 3 (three) cases of fracture in adolescents with UBC of the humerus treated with TENs. **Case Report:** A retrospective review of children with

fractures of the UBCs located in the humerus treated in our department (Pediatric Surgery Department, Suceava, Romania) in the past 5 years was performed. Significant data included: age, sex, location, clinical symptoms, imagistic data, choice of treatment, follow-up results. All 3 patients presented with local pain and swelling following trauma. The diagnosis was obtained using plain X-Rays of the humerus in all 3 cases; in 1 case we also performed an MRI exam. Surgery used a minimal invasive approach on the lateral side of the distal arm, after which 2 TENs of 3.0 mm were advanced across the level of the fracture and cystic cavity under fluoroscopy control. Regular antibiotic prophylaxis and pain control medication were prescribed. A long arm sling was used for patient's comfort and pain relief. Follow- up X- Rays were taken on day 1 after surgery, then after 1, 3 and 6 months, respectively. Healing was assessed using clinical and radiological (Neer' s criteria) data. There were no complications. All 3 patients were able to resume normal range of motion (ROM) of the shoulder and elbow. **Discussions :** Treatment of UBCs must achieve local healing, prevent recurrence and re-fracture. Surgery is recommended for pathological fractures, enlarging cysts or specific locations (proximal femur). Intralesional steroid injection, cyst curettage and bone grafting, decompression/ combined techniques have all been suggested. The use of TENs has the advantage of decompressing the cysts and stable fracture fixation. It was proven to offer superior healing rates and lower recurrence incidence than other surgical options. **Conclusions:** Pathological humerus fractures developed on UBCs can be safely treated using TENs in order to stabilize the fracture and heal the cystic cavity. It requires appropriate technical conditions and an experienced operative team.

Keywords: Unicameral Bone Cysts (UBCs), Pathological Fracture, Titanium Elastic Nails (TENs), Children

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SURGICAL MANIPULATION OF THE ELBOW AREA TO RESTORE THE FUNCTION OF A LIMB FOLLOWING FRACTURES CAUSED BY FALLS

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Introduction: A fracture is a break in bone or hard cartilage. The humeral blade fracture is the fracture produced in any region of the distal portion (wider part, hence the name "blade") of the humerus. The mechanism of occurrence can be direct- e.g. a car accident trauma; or indirectly- falling on the hand with the forearm outstretched and the elbow remaining in extension. **Case Report:** We present the case of a 35-year-old patient who suffered trauma by falling from a height. The patient is brought urgently to the SMURD service Tg. Mureș, accusing pain, functional impotence, and vicious position at the level of the right arm respectively in the left radio-carpal region. Clinical and paraclinical consultation reveal: the supra-intercondylar fracture of the right humerus with displacement, classified in category 13C2 according to the AO/OTA classification, but also the comminuted fracture of the distal epiphysis of the left radius, left parietal epicranial hematoma, excoriate wounds. Surgical intervention is performed by practicing: a posterior approach at the level of the right elbow for open focus reduction of the humeral blade fracture and osteosynthesis with a postero-lateral plate and screws respectively a medial plate and screws, later osteosynthesis of the olecranon with a traction screw placed centromedullary, immobilizing the right upper limb in the brachial-forebrain-palmar plaster cast. The reduction of the radius fracture was done through orthopedic maneuvers and immobilized in a brachial-forebrain-palmar splint. As a postoperative result, the patient has a slight extension deficit at the level of the right phalanx and paresthesias at the level of the IV-V fingers of the right hand due to the elongation of the radial nerve. **Discussions :** The particularities of this case imply: the difficulty of approaching the fracture because of the presence of the neuro-vascular bundles that cross the region of the elbow to the forearm; installation of post-traumatic radial nerve paralysis with the appearance of extension deficit at the level of the hand and fingers. **Conclusions:** Despite the rare and difficult pathology due to the hard-to-access area and complications, the methods used led to the functional recovery of the lesion and the per primam healing of the surgical wound.

Keywords: humeral blade fracture, radial nerve elongation, fall from heights, trauma

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BILATERAL ELBOW PROSTHESIS IN CONTEXT OF RHEUMATOID ARTHRITIS

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Introduction: Rheumatoid arthritis is a chronic, autoimmune connective tissue disease. In addition to joint

involvement, extra-articular changes and organ complications are also possible. Joint damage is characterised by synovitis and pannus (invasive synovial tissue leading to the destruction of the cartilage and soft tissue of the affected joint), causing erosion of subchondral bone. It is important to recognise and begin treatment early, as the untreated disease leads to disability and premature death. **Case Report:** We present the case of a 67-year-old man that came in the emergency department in 2018 with severe pain, functional impotence and limited range of motion in the upper limbs. Clinical examination found: swolen elbow joints, Celsius's inflamation signs were observed in the elbow region. Radiographs of both elbow articulations revealed severe bone erosion and narrowing of articular space. He was previously diangosed with seronegative rheumatoid arthritis, at the moment being under corticosteroid treatment. Taking all, clinical, paraclinical informations into consideration, the patient was diagnosticated with severe arthrosis in both elbow joints. Due to severe destruction of the elbow's cartilage and motory deficit in the context of seronegative CCP, the orthopedic team proposed bilateral joint arthroplasty. The surgery was performed in the same sesion using cemented Coonrad/Morrey Total Elbow implants (ZimmerBiomed) as they are comprehensive patientmatching, intraoperative flexible. There were no post-operative complications the radiography showing a proper placement of the implant. The periferic blood flow, the sensorial and motor systems of the operated extremities were unaltereted. Mobilisation therapy was performed at an incipient stage with physiotherapeutical guidance. At the moment he shows low motor deficit in elbow joints but with severe radio-carpal arthrosis. **Discussions :** Women are three times more likely to develope rheumatoid arthritis, typically affecting the joints knee or hip joints. Men may have a late diagnosis because they tend to attribute their pain to other activities. Rheumatoid arthritis can also affect the elbows, which is a rare location and can result in functional impotence and severe pain. Arthroplasty is performed in order to improve patient's quality of life, increasing the range of motion and relieving the pain. **Conclusions:** Rheumatoid arthritis is a life changing disorder which can cause immense suffering and effect the quality of life. As the taken treatment for RA (corticosteroids) might produce important side effects such as arthrosis, careful monitoring is needed. In cases of severe articular damage, arthroplasty should be considered a good option for the pacient.

Keywords: Elbow, Prosthesis, Corticosteroids, Rheumatoid arthritis

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DESCENDING AORTA-INFERIOR ARTERY BYPASS FOR MESENTERIC REVASCULARIZATION

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Introduction: The condition known as peripheral arterial disease (PAD) affects the arteries of the lower extremities and it is most commonly caused by atherosclerosis. Bypass for mesenteric revascularization is required. **Case Report:** A middle aged patient visited Sibiu's surgery department often, complaining of inflammation, numbness and pain in the left foot. Through clinical examination and Peripheral Angiography, it was determined that the patient had stage IV chronic obliterating arteriopathy of the lower limbs. As the patient is not a candidate for surgical revascularization and his condition is not improving after receiving treatment with a peripheral vasodilator, surgery by practicing upper-third amputation of the left leg was decided. The patient returns to the Emergency department with wet gangrene of the right hallux and claudication in the right lower limb. Superficial femoral artery occlusion was determined and required amputation of the middle third of the right thigh. At one year follow-up, the patient presented with: generalized abdominal pain and bowel obstruction. An abdominal and pelvic CT scan with contrast was performed and the diagnosis of entero-mesenteric ischemia was established. The patient was transferred to Second Surgery Department of Targu Mures County Clinical Hospital, with a deteriorated general condition under heparin infusion therapy. An inverted autologous saphenous vein graft taken from the right femoral abutment is used to perform an aorto-mesenteric bypass during surgical intervention. The patient's postoperative recovery proceeded without complications and six months after surgery, no clinical symptoms of local recurrence had been found. **Discussions :** The indication for mesenteric revascularization is imposed by two elements: A) progressive clinical symptoms; B) CT shows intestinal impairment with subocclusive phenomena, such as hydro-aerial levels and mucosal edema. The aorto-mesenteric bypass is the elective operation in the case of a proximal obstruction of the superior mesenteric artery with a permeable periphery, while the ideal graft for aorto-mesenteric bypass is the inverted autologous saphenous vein. The patient's mesentery occlusive arteriopathy is a mixed type (atherosclerosis with obliterating thrombangitis). Peripheral arteries were operated for two reasons: A) symptoms and CT scan suggest an impending mesenteric infarction.; B) the patient had no history or current signs of cerebral or myocardial ischemia upon admission. **Conclusions:** The aorto-mesenteric bypass operation constitutes from the revascularization intervention of the superior mesenteric artery in the case of focal occlusive lesions from the

emergence of the artery. The graft of choice for aorto-mesenteric bypass is the autologous venous graft.

Keywords: revascularization, surgery, arteriopathy, ischemia

RARE CASE OF OPEN LATERAL SUBTALAR DISLOCATION

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Introduction: Subtalar dislocation represents a rare type of dislocation caused by high energy traumas. It consists in the displacement of the calcaneus and navicular bone together with the rest of the foot, in relation to the talus, being able to move in any direction. The dislocation occurs following the dissociation of 2 joints: talonavicular and talocalcaneal, the talus losing contact with the calcaneus and the navicular, the head of the talus pivoting on the anterior talar articulate surface of the calcaneus. **Case Report:** We present the case of a 49-year-old male patient with a crushing trauma of the left leg that produced an open lateral subtalar dislocation (Gustilo-Anderson type 3C), along with acute crushing ischemia of the inferior limb. At the inspection it is revealed complete damage to the posterior tibial neurovascular bundle. To solve the case, a multidisciplinary approach of orthopaedics, vascular and plastic surgery was necessary. In the orthopaedic department the dislocation was reduced openly, and a transcutaneous calcaneo-talo-tibial pin was applied temporarily to stabilize it. In the vascular surgery department, the severed ends of the veins were ligated. Mobilization of the posterior tibial artery was practiced, after which the ends of the artery were brought together, followed by the restoration of arterial integrity by vascular sutures with separate threads. In the plastic surgery department TCI(target controlled infusion) is performed, followed by excision of devitalized tissues, lavage and haemostasis. After the dissection and exploration of the region, a fasciotomy is performed followed by tenomioraphia of the flexor digitorum longus tendon with its respective muscle and the posterior tibial tendon as well with its muscle. In the end, passive drainage followed by suture of teguments, bandaging and immobilization of the joint are performed. **Discussions :** The particularity of this case is that lateral subtalar dislocations represent approximately 17-26%. Of the total number of dislocations, 20-25% are open, the lateral form often occurring in this variation. The lateral variation is the result of forced eversion with the plant in dorsiflexion, under the conditions of a strong kinetic impact and it presents a reserved diagnosis compared to the medial form, often resulting in functional dysfunction. **Conclusions:** The lateral subtalar dislocation represents a rare type of dislocations, representing 1-2% of them, frequently occurring in the case of road accidents, falls, sports and stretching. It is very important to have a multidisciplinary approach in order to obtain the best surgical results as well as recovery of the patient.

Keywords: lateral subtalar dislocation, talonavicular joint, talocalcaneal joint, open dislocation

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STOMACHAL VOLVULUS, A BARIATRIC SURGERY COMPLICATION – CASE REPORT

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Introduction: Obesity represents a rising health issue among developed countries, being one of this century's great diseases, by affecting over 650 million people around the world. A multiple treatment options approach is necessary, because obesity has a direct impact on the quality of life, as well as on general health by increasing the risk of developing diseases which affect multiple organs and systems. The basic principle is limitation of food intake and treatment of associated comorbidities, carried out through medication, surgery and diet. **Case Report:** The following case consists of a 47-year-old female patient, who underwent laparoscopic longitudinal gastrectomy to treat morbid obesity (BMI-40), 8 years ago. After an apparent favourable period, the patient developed an obstructive gastric syndrome which includes heartburns, gastroesophageal reflux and acid regurgitations. Following the investigations, the diagnosis of hiatal hernia of the cardia was made, for which in 2021 a fundoplication with anterior hemivalve type DOR was performed. After the 2nd intervention, the evolution was unfavourable at 6 months, the patient continuing to accuse the symptoms. As a result of the investigations, the marked narrowing of the gastric lumen was found, caused by the twisting of the stomach around its own axis at the mediogastric level, which lead to a volvulus, thus creating a stenosis. This finding determined a surgical approach which resolved with distal gastric resection and restoration of the continuity of the digestive tube through Roux-en-Y gastro-jejunal anastomosis on loop. Postoperatively, the symptomatology was improved. **Discussions :** LSG is an extremely effective method in terms for treating morbid obesity and associated comorbidities both in the long

and short term, offering significant weight loss. Despite the advantages, it presents various acute and late complications, such as haemorrhages, staple line leakages, intra-abdominal abscesses, respectively gastric stenosis, GERD and trocar hernias. Gastric stenosis occurs in approximately 1% of cases and it can be organic (tight gastric sleeve, mediastinal cardia herniation) or functional (gastric axial torsion, intestinal volvulus). Gastric burns can appear de novo as a result of developing GERD, and in pre-existent GERD cases the disease worsens.
Conclusions: Obesity has become a frequently encountered disease, raising the need to develop different treatment schemes. In this sense, LSG has gained popularity due to minimal, but not non-existent, risks. For this reason, it should not represent the first treatment option, but in necessary cases, postoperative monitoring is necessary to prevent complications or treat them.

Keywords: gastric sleeve, Roux-en-Y gastro-jejunal anastomosis, stenosis, hiatal hernia

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VASCULITIS AND PERIPHERAL ACUTE ISCHEMIA – A CASE REPORT

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Introduction: Acute limb ischemia represents a vascular emergency characterized by decreased arterial perfusion. The most common causes that determine acute ischemia are represented by arterial embolism and in situ thrombosis of an atherosclerotic artery, but sometimes it is due to the presence of other sources like vasculitis.
Case Report: We present the case of a 32 years old female, smoker, known with a history of Raynaud's syndrome, deep vein thrombosis in the left lower limb, multiple episodes of acute ischemia in the antecedents, bilateral renal microlithiasis, dorso-lumbar discopathy, and previous molar pregnancy. The patient presented to the emergency room experiencing aggressive pain at rest and a neurosensory deficit in the left lower limb, with no response to analgesic medication, and the CT angiography revealed the presence of a thrombosis at the level of the left femoral-popliteal axis. The patient was referred to the Vascular Surgery Clinic, where thrombectomy using the Fogarty catheter was performed. The postoperative evolution was favorable. The diagnosis of Raynaud's syndrome was made following the screening tests, which included a complete blood count, urea and electrolytes, urinalysis, ESR (erythrocyte sedimentation rate) and CRP (C-reactive protein), rheumatoid autoantibodies, and antinuclear antibodies (ANA). ANA were positive, and that's why we performed an anti-ENA screen to investigate specific CTDs (anti-topoisomerase, anti-centromere, anti-Ro, anti-La, dsDNA). Additionally, a thrombophilitic profile was performed; factor V Leiden and factor II within normal limits; homocysteine: 16.3. **Discussions :** There are multiple inflammatory and vasospastic conditions that can present the phenomenon of ischemia. In this way, they come to the attention of the vascular surgeon. One of them is represented by the Raynaud phenomenon. Raynaud's phenomenon usually appears in the second or third decade of life and is more common in females than males. Evidence suggests that genetic factors confer susceptibility to this condition. Raynaud's phenomenon can range from relatively benign but intrusive vasospasm to the progressive obliterative microangiopathy of systemic sclerosis, in which severe digital ischaemia can threaten tissue viability. **Conclusions:** An early marker for secondary Raynaud's phenomenon is represented by vasospastic attacks, which present a more aggressive manifestation. Early recognition of secondary Raynaud's phenomenon allows for early monitoring and management of the underlying disease, but this can be challenging as Raynaud's phenomenon can precede associated systemic disease by over 20 years.

Keywords: Raynaud syndrome, thrombosis, ischemia

DUNBAR SYNDROME. A CASE REPORT.

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Introduction: The Dunbar Syndrome refers to a medical condition in which the median arcuate ligament is inserted lower than normal, and this can cause excessive and continuous pressure on the celiac trunk. This additional pressure can lead to a range of symptoms, including abdominal pain, nausea, vomiting and wight loss. Treatment may involve physical therapy, dietary changes and in severe cases, surgical interventions to relieve

pressure in the affected area. **Case Report:** Our paper aims to present a 67-year-old patient who was by appointment on 04.08.2021, complaining of abdominal pain, nausea, vomiting and dyspepsia. The pain was located in the epigastrium and was continuous. Therefore, an abdominal-pelvic angio-CT examination was performed, which revealed a normal caliber abdominal aorta with calcified and non-calcified wall atheromas, a filiform celiac trunk at the emergence level (with a diameter of 2 mm), which was imprinted by the median arcuate ligament, a patent superior mesenteric artery and inferior mesenteric artery with normal caliber and a millimetric calcification in the proximal portion of the inferior mesenteric artery. Adequate preoperative preparation was performed, followed by surgical intervention under general anesthesia with orotracheal intubation and peridural catheter. The decompression of the celiac trunk was performed by sectioning the median arcuate ligament, adhesiolysis and exploration of the abdominal aorta at the supramesocolic level through exploratory laparotomy. The postoperative evolution was favorable, with a return to liquid diet 2 hours postoperatively without complications. At 6 months and at 1 year postoperatively, arterial flow remained preserved at the level of the celiac trunk, with no imaging signs of extrinsic compression. **Discussions :** There are two main causes that have been proposed to explain the symptoms. One is a vascular cause and the other is neurogenic. The vascular theory describes mesenteric vascular compression that produces mesenteric ischemia, creating abdominal angina and other related symptoms. On the other hand, the neurogenic theory states that splenic vasoconstriction is the result of stimulation of the celiac ganglion and celiac plexus. **Conclusions:** Dunbar Syndrome is a rare condition. Supporting imaging findings are necessary to confirm this diagnosis. Treatment involves correcting the defect through open surgery or laparoscopic surgery.

Keywords: Median arcuate ligament, Abdominal pain, Celiac trunk, Compression

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PULMONARY VALVE REPLACEMENT IN TETRALOGY OF FALLOT AFTER PRIMARY CORRECTION - CASE REPORT

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Introduction: Tetralogy of Fallot is a congenital heart defect characterized by four specific cardiac defects (ventricular septal defect which leads to overriding aorta and pulmonary stenosis which leads to right ventricular hypertrophy) that occur together and alter the flow of blood through the heart and lungs. As such an early surgical approach is needed, and even if successful, pulmonary valve replacement will be necessary. **Case Report:** A 16-year-old patient was born with Tetralogy of Fallot. At 6 months old he underwent an intervention with the purpose of right ventricular (RV) outflow tract (RVOT) and pulmonary artery reconstruction with a transannular patch, ventricular septal defect (VSD) patch repair, and left pulmonary arterioplasty. With the growth of the child, the residual pulmonary insufficiency after correction begins to impact the function of the right ventricle, resulting in its dilation and reduction in exercise capacity. To avoid complications such as right ventricular failure, low effort capacity, atrial or ventricular arrhythmias, and sudden death, surgical intervention was necessary. As ejection fraction and ventricular contractility decreased progressively, the main purpose was to implant the pulmonary valve. A biological valve was implanted in extracorporeal circulation. Moreover, the right ventricle's ejection tract and the pulmonary artery's trunk were reconstructed. **Discussions :** If a shunt was the initial procedure, the patient will need a full repair in the future. If a transannular pulmonary valve patch was used to increase the valve's diameter and treat valvular stenosis, the patient will probably require a replacement pulmonary valve in the future. Clinic follow-up is uneventful in patients who need RVOT reconstruction but still have a healthy native pulmonary valve. Patients with Tetralogy of Fallot who have residual pulmonary insufficiency or stenosis will develop progressive RV dysfunction. **Conclusions:** We must consider the patient's heart's development while planning congenital heart surgery in the setting of this pathology to ensure that we are not endangering him by delaying too long. The postoperative result was favorable, with no further complications and the patient being stable upon discharge.

Keywords: Tetralogy of Fallot, Pulmonary Valve, reintervention

SURGICAL MANAGEMENT OF LIVER METASTASES SECONDARY TO MODERATELY DIFFERENTIATED COLORECTAL ADENOCARCINOMA - CASE REPORT

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Introduction: Colorectal cancer is estimated to be the third most common cancer diagnosed in both men and women. Further to that, the liver is the most common site of metastasis for this type of adenocarcinoma and patients who develop them will be first treated with induction chemotherapy to reduce the number and size of metastases and enable subsequent surgical resection. **Case Report:** We present the case of a 67-year-old patient, who was diagnosed 3 years ago with sigmoid colon tumor. At that time, she underwent segmental resection of the descending colon with colo-colic anastomosis for stenotic descending colon tumor, with liver and diaphragm metastases and carcinomatosis. It was also noticed the presence of serous cystic images at the level of the caudate liver segments II and III with a maximum diameter of 20 mm. After the first surgery, an oncological treatment was started, which consisted of chemotherapy and biological treatment (Xelox, Panitumumab, Bevacizumab, Cetuximab). The oncological therapy was often changed due to the patient's drug polyallergy and low tolerance to chemotherapy. During the chemotherapy, the involution of liver metastases was observed, but when the oncological treatment stopped, they started to increase in size, with the increase in the level of tumor markers (CEA, CA19-9, CA125). After 3 years, a second surgery was performed: metastasectomy in the IV segment and an atypical hepatectomy of segment VII, with favorable outcome. **Discussions :** The surgical management of patients with colorectal cancer and simultaneously detected liver metastases has been a point of dispute, with an universal conclusion on resecting the cancer cells when all lesions are resectable. Colon cancer is still one of the most common malignant tumors worldwide, according to the WHO mortality database. The liver is the most widespread distal metastatic target organ of colon cancer. Unfortunately, despite oncological and surgical advances, only about a quarter of patients affected are amenable to resection, which is considered the only way to cure and prevent further complications. **Conclusions:** Given the likelihood of metastases occurring in the context of the patient's pathology, surgical management was almost inevitable. There are 3 surgical approaches in cases where both metastases and the primary tumor are present: all tumors can be resected per primam, only the primary tumor can be resected and reintervention for metastases, or metastases can be resected and then the primary tumor is surgically cured, the method chosen and the management chosen depend on each individual case.

Keywords: liver metastases, colorectal adenocarcinoma, atypical hepatectomy

RETROPERITONEAL PERIAORTIC MASS WITH INFERIOR MESENTERIC ARTERY METASTASIS

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Introduction: A type of cancer called retroperitoneal sarcoma can develop from any of the connective tissues, such as muscles, bones, cartilage, and fat. These sarcomas often become large by the time they are diagnosed and can cause pain, swelling, and other symptoms depending on their location and size. The retroperitoneum, which is the area behind the abdominal cavity that contains organs such as the kidneys, adrenal glands, and pancreas, is where this cancer typically develops. Treatment usually involves surgical removal of the tumor, and additional treatments such as chemotherapy and radiation therapy may be necessary depending on the type and stage of the cancer. **Case Report:** We present the case of a 65-year-old male patient, with fusiform aneurysm of the infrarenal abdominal aorta, adrenal adenoma, renal and hepatic cyst, hepatic hemangioma, benign prostatic hyperplasia who accuses lumbar pain with radiation to the lower limbs, symptoms that appeared 3 months ago. The CT examination revealed a 43mm dilatation of the ascending aorta, atheroma in both coronary and thoracic aorta. Cranial to the bifurcation of the aorta in the common iliac arteries, a formation with a thickness of 11mm is detected, in contact with the duodenal loop; the appearance advocates for a retroperitoneal structure. During the operation, the circumferential resection of the periaortic tumor formation was performed. **Discussions :** Surgery is the primary treatment for retroperitoneal sarcoma, and complete surgical resection with negative margins is associated with improved outcomes. The presence of metastasis in the inferior mesenteric artery is often a sign of

advanced disease and can be associated with a poorer prognosis. Several factors, including the cancer type and stage, the location and size of the metastasis in the inferior mesenteric artery, and the overall health of the patient, influence the treatment approach for inferior mesenteric artery metastasis. **Conclusions:** Retroperitoneal sarcoma has a poor prognosis and a high recurrence rate even after radical surgical resection. Mortality also results from distant metastases in patients with high rate of RPS. The aim of therapy is to achieve the best possible disease control with surgery.

Keywords: sarcoma, retroperitoneal, inferior mesenteric artery

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A RARE CASE OF KNEE SYNOVIAL CHONDROMATOSIS - CASE REPORT

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Introduction: Synovial chondromatosis (SC) is a rare metaplasia of the synovial tissues that produces small cartilaginous nodules. These proliferate from the internal surface of the synovium, become pediculated, and detach from it, developing free chondromas. **Case Report:** We report the case of a 44-year-old male patient, with no previous medical history, who was consulted for chronic and progressive non-traumatic right knee pain. The pain evolved for 16-18 months and was associated with functional impairment and stiffness. The physical exam revealed swelling on the anteromedial side of the right knee and difficulty squatting. Preoperatively, his International Knee Documentation Committee (IKDC) score was C. Anteroposterior and lateral X-rays showed several nodular calcifications. Magnetic resonance imaging (MRI) revealed the same nodular free calcifications with a size between 3-5 mm suggesting SC. Arthroscopic surgery was chosen for diagnoses and treatment. Arthroscopic debridement and lavage of the knee using an anterior approach and a mini arthrotomy due to larger nodules under spinal-epidural anesthesia were performed. More the 60 free loose partly ossified chondromas, with no synovitis were found which led to the diagnosis of Milgram stage 3 SC. Anatomopathological examination confirmed the diagnosis of primary SC. The patient did 5 weeks of physical therapy with a follow-up of 6 and 12 months and an intraarticular hyaluronic acid injection was performed with an A score on the IKDC scale at 12 months. **Discussions :** Primary synovial chondromatosis is a rare metaplasia transformation of the synovial cells into cartilage cells, classified by Milgram in 3 stages of severity, and ossifications of the nodules are very possible in the end stage. It has a prevalence of 1 in 100 000 people. There are two types, primary and secondary. Our case was primary with no previously known cause in a healthy patient. Secondary SC is usually caused by trauma, rheumatoid arthritis, osteonecrosis, or arthritis. The standard X-ray guide the diagnoses, but MRI scans clarify the topography, and the pathological examination is used for confirmation. The trend is to use arthroscopic approaches but arthrotomy is still sometimes used. **Conclusions:** Synovial chondromatosis is a rare condition, and few cases have been described in the literature. The present case was successfully treated using arthroscopy and a mini arthrotomy with excellent results.

Keywords: chondromatosis, synovial, arthroscopy, knee

LABIAPLASTY: A LIFE-IMPROVING PROCEDURE

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Introduction: Labiaplasty is a surgical procedure that is designed to change the size, shape, or appearance of the labia minora or labia majora. This procedure has become increasingly popular in recent years, with many women seeking it out to address concerns related to the appearance of their genitalia, which can negatively impact a woman's psychological state and sex life. **Case Report:** A 26-year-old woman presented at the clinic seeking labiaplasty. She reported feeling self-conscious about the appearance of her labia minora, which she described as protruding and asymmetrical, interfering with both her sex life and physical activities, which had led to a significant decline in her quality of life. Upon examination, the patient had hypertrophical and asymmetrical labia minora that were significantly larger than the labia majora. After discussing the potential risks and benefits of labiaplasty, the patient decided to proceed with the surgery. The surgery was performed under local anesthesia injected through a very fine 27-gauge needle. The labial height at the posterior commissure is about 2-3 mm, increasing progressively, reaching the optimal height of 8-10 mm below the clitoris, decreasing slightly after this point. The

incision starts at the posterior commissure and continues in a S-shaped line along the internal and external parts of the labia minora. Once the incisions were made, the excess tissue was removed, and the remaining tissue was carefully sculpted to achieve the desired shape and size. A clitoral hood reduction in conjunction with the labiaplasty was done in order to achieve a balanced and aesthetically pleasing result. After checking the symmetry and proportionality of the labia minora, the skin closure was performed with 5-0 Vycril resorbable sutures, a compressive dressing was applied to the area, and the patient returned home the same day. **Discussions :** There are several techniques that can be used to perform labiaplasty, each with its own advantages and disadvantages. The choice of technique should be individualized based on the patient's anatomy and desired outcomes, keeping in mind that the main goal of labiaplasty is to maintain sensation under all circumstances. The patient reported that the procedure improved her self-esteem and sex life, relieved her of psychological distress, and boosted her self-confidence. **Conclusions:** Labiaplasty is a safe and effective procedure for women who are looking to improve the appearance of their genitalia. In the case of this patient, the procedure resulted in improved symmetry and comfort, and she reported high satisfaction with the outcomes.

Keywords: labiaplasty, plastic surgery, aestethic surgery

THE UNEXPECTED TURNS OF ACUTE APENDICITIS

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Introduction: Acute appendicitis is a medical condition characterized by inflammation of the appendix, a small, finger-like projection located at the end of the cecum. The exact cause of acute appendicitis is not fully understood, but it is believed to occur due to a blockage of the appendix, which can be caused by various factors such as fecal matter, tumors, or infections. The symptoms of acute appendicitis typically include abdominal pain that begins near the navel and then moves to the lower right quadrant of the abdomen, fever, nausea, vomiting, loss of appetite, and difficulty passing gas. Acute appendicitis and cancer are two separate medical conditions that can affect the appendix, but they are not directly related. However, in some rare cases, a tumor or cancerous growth can develop in the appendix and cause symptoms similar to acute appendicitis. This is known as appendiceal cancer, which is a type of gastrointestinal cancer that can be difficult to diagnose due to its rarity and nonspecific symptoms. **Case Report:** The purpose of this report is to present the case of a 22 year-old female with no significant medical history who was presented to the emergency room of SCJU Sibiu for diffuse abdominal pain, acceleration of the intestinal transit for fecal matter, nausea, bilious-alimentary vomiting, sympthoms which began 4 days prior. After clinical evaluation accompanied by CT imaging examination, the diagnosis of acute surgical abdomen emerged. Emergency surgery is performed through exploratory laparoscopy. Intraoperatively, generalized purulent peritonitis, fetid, with false membranes is found. The peritoneal cavity inspection highlighted a perforated gangrenous appendix. Laparoscopic appendectomy is performed. **Discussions :** The appendix was histopathologically examined, the result revealing the following: a tumoral formation made up of small polygonal cells, forming nests and rows that invade the own mucosa, submucosa and muscle; with low cellular and nuclear pleomorphism; necrosis is absent. The histopathological diagnosis, according to the new histopathological classifications: well differentiated low grade neuro-endocrine neoplasm, G1 stage. **Conclusions:** This case report highlights the importance of prompt diagnosis and management of acute surgical abdomen to prevent further complications such as peritonitis. It also emphasizes the need for histopathological examination of surgical specimens to determine the underlying pathology accurately. Overall, this case report underscores the significance of close clinical monitoring and multidisciplinary management to ensure optimal patient outcomes.

Keywords: apendicitis, histopathological examination, neoplasm

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NUMERICAL CHROMOSOMAL ABERRATION IN MCDA TWIN PREGNANCY

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Introduction: Monochorionic diamniotic twin pregnancy is the type of twin pregnancy in which the two fetuses share one placenta, which has two yolk sacs and two amniotic sacs. Despite the fact that MCDA make up about

30% of twin pregnancies, we have found a case that can be called very rare. **Case Report:** We would like to present the case of a 26-year-old woman accusing a 13-week delayed period. With an ultrasound device, we found that she was pregnant with twins, and it is a MCDA twin pregnancy. On the 18th week ultrasound in the B fetus, we notice that the heart is pressed to the right side in the chest, and on the left side of the breast are depicted the stomach and intestinal ducks, so there is a hiatus hernia. Same as in the 20th week ultrasound where the dextroposis of the heart and the cavity hernia can be seen. There comes the amniocentesis finding, in which we notice in an interesting way that the two fetuses have different number of chromosomes, and in the fetus B we have detected the presence of an overnumber of meta-centric markers, which cannot be proved to be related to the differences so far. After another amniocentesis and genetic counseling, the mother decides to choose the selective abortion at the 22nd week, which is the ultrasound-controlled closure of the fetal umbilical cord. Regular ultrasound examination is done during pregnancy, where it is seen that the A fetus is developing very well and the B fetus is also present but the life phenomenon is no longer visible, indicating that the intervention was successful. In the 38th week of gestation, after amniotomy, a spontaneous birth occurred; the fetus B left as foetus papyraceus. **Discussions :** There is a very rare case before us: in a MCDA twin pregnancy, the number of chromosomes of the two fetuses are completely different. This cannot be fully compatible with the abnormalities in one fetus; however, performing a selective abortion intervention in order to save a healthy fetus may provide the best solution. **Conclusions:** In MCDA twin pregnancies, it is important to undergo a genetic examination of the amniotic fluid after the first appearance of abnormalities in order to rule out what has occurred in our situation, such as type difference so that we can find the most optimal solution in time to save both fetuses.

Keywords: Monochorionic diamniotic twin pregnancy, Chromosomal aberration, Selective abortion

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CHICKEN BONE PERFORATION OF THE COLON: AN UNUSUAL COMPLICATION OF DIVERTICULOSIS

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Introduction: Clinical manifestations of colonic diverticular disease range from asymptomatic diverticula to life-threatening complications. The present report describes an unusual case of sigmoid colon diverticulosis. **Case Report:** An obese, 61-year-old woman, presented at Emergency Department of Targu Mures Emergency County Hospital, Romania, with severe abdominal pain. Her medical history included hypertension, colonic diverticulosis and liver steatosis. Laboratory tests revealed elevated inflammatory markers with leukocytosis of 18.80 10^3/µl and C-reactive protein of 35.60 mg/l. Computer tomography showed colonic diverticulosis and a tubular-shaped, radiopaque foreign body, apparently with impaction and perforation of sigmoidian wall. Segmentary resection of the affected sigmoid colon with Hartmann's procedure was done. Postoperatively, her evolution was favorable and she was discharged in good general condition. Macroscopical examination of the resected specimen revealed whitish deposits on the serosal surface and multiple diverticula, one of which showed impaction of a 35x5x4 mm chicken bone, that caused the perforation of bowel wall. At the level of the perforation, the microscopic examination revealed extensive inflammatory infiltrate and fibrino-leukocytic deposits on the serosal surface. A diagnosis of sigmoid diverticulosis with diverticulitis, fistula and intestinal perforation was made, that was associated with acute peritonitis. **Discussions :** Ingestion of foreign bodies, like toothpicks, bones (chicken or fish) and dentures is frequent, especially in elderly people, alcoholics or people with psychiatric disorders. Majority of foreign bodies usually pass through gastrointestinal tract without complications. However, chronic inflammation associated with strictures and colonic diverticulosis can predispose to mechanical ileus or impaction and perforation. Preoperative diagnosis of perforation by a foreign body is difficult, because it can mimick other diseases. According to previously reported cases, abdominal imaging investigations are rarely helpful, and the diagnosis is usually established intraoperatively or at pathological examination. In the present case, the CT-scan was helpful to identify the foreign body, due to its calcium content. Pathological examination confirmed the presence of a chicken bone, causing the perforation of the sigmoid colon. **Conclusions:** Although perforation of bowel wall by an ingested foreign body is extremely rare, it should be taken into account as a possible cause of peritonitis, especially in elderly patients with diverticulosis.

Keywords: diverticulosis, foreign body, peritonitis

LOW-GRADE MYOFIBROBLASTIC SARCOMA: AN UNUSUAL TUMOR OF THE ABDOMINAL CAVITY

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Introduction: Low Grade Myofibroblastic Sarcoma (LGMS) is a rare soft tissue tumor, which develops mainly in the head and neck region and is slightly more frequent among males. Only 12 cases of intra-abdominal LGMSs were reported in the English literature. The aim of this paper is to present the particular features of another intra-abdominal LGMS in a young patient. **Case Report:** A 22-year-old male, known with type 1 neurofibromatosis, presented at the Clinical County Emergency Hospital of Targu-Mureș, Romania, with 3-months history of diffuse abdominal pain. Clinical examination revealed a huge, solid mass, that deformed the abdomen. CT-scan examinations confirmed the presence of a 26x14x12 cm, well defined, intra-abdominal tumor. Surgical removal was decided. The tumor was completely excised with partial resection of small intestine. Macroscopically, the resected specimen measured 250x160x130 mm. It was partially incapsulated but the resection margins were negative. On cut section it showed an inhomogeneous aspect. Microscopically, the tumor consisted of fusiform cells, arranged in fascicles, with storiform and herringbone pattern. The stroma was hyalinized and hypervascularised. Immunohistochemical staining revealed that the tumor cells were diffusely positive for Vimentin, focally positive for CD34 and CD99, and they were negative for smooth muscle actin (SMA), desmin, caldesmon, epithelial membrane antigen (EMA), beta-catenin, ALK, S100, glial fibrillary acidic protein (GFAP), neuron specific enolase (NSE), CD117 and DOG1. The above findings led to the diagnosis of LGMS and excluded a gastrointestinal stromal tumor (GIST) or other similar lesions. Postoperatively, the patient's evolution was favorable. No relapse was reported at three months after surgery. **Discussions :** The most frequent localization of LGMS is the head and neck region. It can also develop in extremities and trunk but is extremely rarely found in abdominal cavity. In the present case, the tumor architecture, along with the immunophenotype of the tumor cells and the stroma features were representative for LGMS. Differential diagnosis was made especially with those intra-abdominal tumors that appear in patients with neurofibromatosis type 1. Neurogenic neoplasms were excluded based on negativity for S100, NSE, GFAP, the suspicion for GIST was eliminated based on negativity for CD117 and DOG1. The most important treatment for LGMS is surgical excision with negative margins. However, local recurrence can occur, especially in cases with positive margins. **Conclusions:** This is the first reported case of intra-abdominal LGMS, in a patient with neurofibromatosis type 1. In such cases, a proper transdisciplinary approach is the key for post-operative management and long-time disease-free survival.

Keywords: myofibroblastic sarcoma, neurofibromatosis, CD34

SURGICAL TREATMENT IN RENAL TUMOR WITH CARDIAC EXTENSION

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Introduction: Renal cell carcinoma is a tumor that stands out for its ability to develop intravascularly and occasionally extend into the right cardiac chambers through the renal vein into the inferior vena cava. Because the tumor-thrombus clung firmly to the hepatic vein and the endocardium of the right atrium, surgical resection is the only realistic option for a cure. **Case Report:** We present the case of a 55-year-old who was admitted to the Hospital. Abdominal computer tomography and echocardiography revealed a right kidney tumor and an expansive abnormal mass who were showed filling defects in the distal segment of the inferior vena cava and intracardiac through the tricuspid valve into the right ventricle. The surgical procedure performed was a total right nephrectomy and through the right renal vein was dissected the mass that filled the caval vein until to the right atrial. At the same time through a sternotomy and cardiopulmonary bypass was removed the whole mass from the right atrial and inferior caval vein. Through surgery, it was determined that the intracardiac tumor originated from the inferior vena cava. A 5 cm diameter, ring-shaped mass was discovered upon macroscopical examination. **Discussions :** Renal cell carcinoma has a high proclivity to invade local vasculature, expanding as a solid mass to renal veins and inferior vena, with 1% of cases spreading to the right atrium level. Due to a wide spectrum of clinical behavior, it is challenging to predict the prognosis of renal cell carcinoma with inferior vena cava tumor thrombi. If aggressive surgery is combined with immunotherapy, these patients' chances of survival may improve. In the lack of nodal

and/or metastatic disease, tumor thrombus has a limited prognostic function, and only about half of cases can be cured with surgical extirpation. **Conclusions:** The patient received medical care to prevent pulmonary embolism, control his blood pressure, and maintain renal function before being discharged in good health. The case is suggestive for the very rare and unusual presentation of a life-threatening, kidney tumor associated with cardiac thrombus.

Keywords: Cardiac, Renal, Tumor

CONSTRICTIVE PERICARDITIS, AN EASILY MISSED CAUSE OF HEART FAILURE

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Introduction: Constrictive pericarditis is caused by chronic inflammation, which induces pericardial scarring and fibrous thickening. This disease is characterized by the equalization of end-diastolic pressures in all four chambers of the heart. Constrictive pericarditis is a rare but increasingly common cause of heart failure, and the diagnosis is frequently missed. **Case Report:** We present a case of a 44-year-old patient who presented to the hospital with dyspnea and fatigue at low or moderate exertion. A chest X-ray was performed, which showed a bilaterally accentuated diffuse lung pattern, without condensed pleuropulmonary foci and an echocardiogram showing a left ventricle with serpentine or jerky motion. In the rest, normal kinetics and a slightly thickened pericardium, mitral insufficiency grade 0 and tricuspid insufficiency grade 1. Based on these, the diagnosis of constrictive pericarditis was suspected, later confirmed by cardiac catheterization. A surgical intervention was performed in which it was performed through median longitudinal sternotomy a partial pericardectomy that involves the excision of the pericardium up to the insertion of the vagus nerve on both flanks. The surgical intervention is extremely difficult, due to adhesiolysis, a surgical maneuver that exposes the risk of laceration of the heart, which is only done in specialized services, requiring a pump of extracorporeal circulation to be prepared for the operation. **Discussions :** Constrictive pericarditis is a rare condition that often presents as right heart failure, but can also cause systemic hypotension and circulatory collapse in more extreme situations. Making the correct diagnosis can be challenging. Systemic venous distension and decreased ejection volume occur as a result of encapsulation of all four chambers of the heart, causing diastolic pressure to gravitate toward equalization between them. An example of constrictive pericarditis is as a side effect of previous heart surgery. The ejection volume and cardiac output can be dramatically reduced in response to relatively minor changes in circulating volume and central venous pressure. **Conclusions:** The result of the operation was extremely favorable, the patient was discharged in good conditions, neuropsychologically intact, afebrile, hemodynamically and respiratoryly stable, in sinus rhythm, without subjective complaints. Constrictive pericarditis is a relatively rare cause, and the diagnosis can be difficult to establish. This example serves as a reminder that constrictive pericarditis is a good indicator of potential heart failure and should be investigated and treated as soon as possible.

Keywords: heart failure, adhesiolysis, constrictive pericarditis

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METAMORPHOSIS - FROM TRAGEDY TO LIFE. BRAIN DEATH, A CASE REPORT.

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Introduction: Brain death is still a controversial topic in our society, branching out to ethical issues in healthcare. The definition has undergone multiple refinements throughout the years, transitioning from cardiorespiratory arrest with irreversible function loss to permanent function loss of the brainstem and consciousness. An important mechanism that leads to an indefinite brain function cessation is the Intracranial Blood Pressure (ICP). An increased ICP ultimately triggers brainstem compression, ischemia and interruption of the intracranial blood flow. Brain Death can essentially be induced by intra- end extracranial causes, the most common being traumatic brain injury and subarachnoid hemorrhage.After diagnosing the Brain Death, the process of organ donor identification and all its implications can occur. **Case Report:** We present the case of a fifteen year old female with a severe traumatic brain injury due to an automobile collision. The patient is taken to the emergency room with a profound coma, Glasgow Coma Scale 3 point, fixed mydriasis, areflexive. She is immediately taken to the intensive care unit, already being intubated and ventilated. Vasoactive supports (Noradrenaline and vasopressin) were being used. Head tomography shows left frontoparietal subdural haematoma and diffuse cerebral oedema. The patient

also has abdominal injury with right suprarenal gland hematoma and upper limbs injuries Volemic rebalancing, antibiotics, gastric protection, hemostatic, depletion therapy, pain management, and sedative treatments are initiated. **Discussions :** During hospitalization, brain death is suspected. Therefore, cranial nerves, apnea and EEG tests are performed at a six hour interval. Brain death diagnosis is set and organ harvesting requests are being initiated. A few days later the organ harvesting procedure takes place. A Covid19 test is performed at the hospital admission with positive results. The bronchoscopy shows no pulmonary or thrombotic lesions due to SarsCov2 virus, thus lungs harvesting is also decided. When discussing organ harvesting from Covid19 positive patients, there are no new regulations and the verdict is taken by the transplant commission. **Conclusions:** The organs were functionally maintained during the time between the brain death diagnosis and harvesting procedure. Brain death is still causing controversies among the society and the family members who can not tolerate it properly due to the psychological and ethical effects. Moreover, this suffering can also be metamorphosed into an altruistic action which is organ donation.

Keywords: Brain Death, Organ Harvesting, Covid19

DCS OSTEOSYNTHESIS FOR A WINQUIST TYPE IV FRACTURE OF THE FEMORAL SHAFT – A CASE REPORT

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Introduction: Femoral shaft fractures typically result from high-energy traumas and are the most frequent in young adults. They represent a large majority of lower limb fractures and vary widely, being classified according to their location and the conditions of their occurrence. **Case Report:** This case presents a 47 year old man being diagnosed with a comminuted shaft fracture of the left femur, classified as Winquist type IV. After being admitted urgently at the orthopedic department, he underwent a transtuberosity skeletal traction. The patient is also diagnosed with delirium tremens due to alcohol withdrawal, presenting episodes of psychomotor agitation and restlessness. After adequate preoperative preparation he underwent a surgical intervention consisting of reduction of the open fracture under X-ray control and osteosynthesis with dynamic condylar screw (DCS) system. Postoperative evolution was favorable, the surgical wound being in healing process without local inflammatory signs. The patient was discharged after being immobilized with a plaster cast, presenting improved postoperative condition. **Discussions :** The optimal management of femoral fractures is still debatable even today, despite significant medical advancements. There are a many different operating methods such as plate osteosynthesis, intra medullary nails or external fixation. All of them tend to achieve restoration of alignment and osseous healing. The choice between one method or another is made depending on the particularities of fracture, such as the pattern, degreed of comminution and the surgeons preference. In this particular case the surgical team decided to use a DCS System. The dynamic condylar screw is a special kind of angular stable fixation system used for distal femoral fractures. They allow for the ability to apply compression across the femoral condyles. **Conclusions:** Compared to other viable approaches, such as condylar buttres plate or fixed angle condylar blade, the bridge plating technique using DCS system has many advantages, being easier to apply, achieving better functional outcomes and also reducing the rate of postoperative complications

Keywords: femoral shaft, DCS, Winquist

MANAGEMENT OF BUTTON BATTERY INGESTION IN PEDIATRIC PATIENTS: A CASE REPORT

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Introduction: Button battery ingestion is a common occurrence in pediatric patients, and if not managed properly, it can cause serious harm. This case report aims to present a case of button battery ingestion in an 8-year-old patient and discuss the diagnosis, treatment, and management of this condition. **Case Report:** An 8-year-old girl presented with symptoms of nausea, vomiting, retrosternal pain, and dysphagia three hours after swallowing a button battery. Physical examination of the oral cavity and oropharynx was normal, and laboratory studies were

negative for any acute pathological value. Chest radiography revealed that the button battery was located at the cricoesophageal junction, but there was no evidence of pneumothorax or pneumomediastinum. The patient underwent esophagoscopy immediately, and the button battery was safely removed, although an esophageal burn was noted. The patient was started on feeding via nasogastric tube for 24 hours and was discharged seven days later without any complications. **Discussions :** Coins and batteries are comparable in size, and if a coin is accidentally swallowed, emergency surgery is typically not required. However, if a coin is swallowed, it is recommended that an endoscopy be performed within 24 hours. On the other hand, if the foreign object that has been swallowed is a button battery, it should be removed immediately. Therefore, it is important to distinguish whether the object swallowed is a button battery or a coin in the initial radiograph, in order to take appropriate action. **Conclusions:** Button battery ingestion is a serious condition that requires prompt diagnosis and early removal to prevent serious complications such as burn and perforation of the esophagus. Healthcare providers and parents should be aware of the potential dangers of button batteries and take appropriate measures to prevent ingestion. Prompt intervention can lead to a positive outcome and avoid long-term complications.

Keywords: Button battery, Foreign body ingestion, Esophagus

LOWER LIP RECONSTRUCTION USING WEBSTER TECHNIQUE

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Introduction: Squamous cell carcinoma (SCC) is the second most common type of skin cancer accounting for about 20% of all skin cancers. SCC typically occurs in areas of the body that have been exposed to the sun, such as the face, ears, hands, and arms. The most common risk factor for SCC is exposure to ultraviolet (UV) radiation from the sun or tanning beds. Other risk factors include fair skin, a history of sunburns and a weakened immune system. Excision and especially oral reconstruction of lower lip defects greater than 80%, are still challenging for plastic surgeons. Most commonly Webster technique is used which was firstly described 1975. **Case Report:** A 57-years old male patient presented to the clinic with a cutaneous tumor in his central lower lip. The lesion developed over several month from a small, scaly and red patch to a larger, thick and yellow crust. No swelling of lymph nodes in the neck area was observed. The cancerous mass was removed under general nasotracheal intubation and was sent to histopathological department, which revealed a well-differentiated keratinized SCC. It infiltrated the muscle layer with a maximum invasion thickness of 10.5 mm (stage pT3). Furthermore the lesion was completely surgically excised with free resection margins. **Discussions :** The reconstruction was carried out according to bilateral Webster. This implies the removal of skin and subcutaneous fat in a triangular fashion from the nasolabial folds (Bernard) to allow medial movement of cheek tissues. To accomplish this task, the line parallel to mental crease was roughly designed. Afterwards the tumor was excised in two elliptical pieces and the cheek flaps were advanced. The mucosal flap was moved outside to create a new lower lip vermilion where the center should be advanced wider than the lateral area. After the operation the wound was cleaned and steristrips were applied. The patient had a favorable postoperative evolution, a viable flap and no inflammatory signs. The sutures were removed after 14 days. **Conclusions:** For preventing SCC one should limit exposure to UV radiation, avoid tanning beds, protect lips with balm containing SPF protection and check your skin regularly for identifying any changes. Especially during peak hours (10 am to 4pm) one should be protected from both UVA and UVB rays with long-sleeved shirts and hats, and sunscreen.

Keywords: Squamous cell carcinoma, Webster technique, Flap surgery

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UNDIAGNOSED ATRIAL SEPTAL DEFECT CAUSING HYPOXIA AFTER CORONARY ARTERY BYPASS GRAFT SURGERY: A CASE REPORT

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Introduction: A variety of heart diseases that are present at birth but might not be diagnosed until later in life fall under the category of adult congenital heart disease (ACHD). Continuous monitoring and management are essential for this expanding population. **Case Report:** A 76-year-old male with stable angina for several years presented to the hospital with worsening angina pain over few months. Angiogram revealed severe coronary artery

disease involving multiple vessels, including the Left Main Stem, Left Anterior Descending, Circumflex, Right Coronary, and Posterior Descending arteries. The patient was referred to the local cardiothoracic unit for surgical management. Past medical history: hypertension, hyperlipidemia, non-smoker, unknown drug allergies. Patient with unremarkable preoperative investigations and normal kidney/liver function, clear lung fields on Chest X-ray(CXR) with normal cardiac shadow, normal echo. Underwent three coronary artery bypass graft surgeries (Left Internal Mammary Artery to Left Anterior Descending artery, Saphenous Vein Graft to Obtuse Marginal branch, Saphenous Vein Graft to Posterior Descending Artery) without complications. However, approximately 4 hours after surgery, Patient was found to be hypoxic pO2 of 7 kilopascals on 60% FiO2. CXR moderate-sized pleural effusion on left side with evidence of collapse consolidation and rising lactate levels were noted. The cause of hypoxia was not fully explained by these findings. Echocardiography performed to rule out cardiac tamponade or other causes of hypoxia showed large left-sided effusion with lung collapse, no pericardial collection or significant valvular disease, and 2-4mm atrial septal defect with clear evidence of right to left shunt and shunt fraction of 0.6 (previously unknown finding). Systolic pulmonary pressure was estimated at 34mmHg. These findings explained the main cause of hypoxia. Patient underwent resternotomy and evacuation of left pleural collection, resulting in disappearance of Left to Right shunt and improvement in hypoxia. The patient recovered well and no further intervention was advised by ACHD team. **Discussions :** The shunt was caused by marginally elevated Right Atrial Pressure due to ventilation/effusion in the left pleura, leading to a Right to Left shunt and exaggeration of hypoxia, Undiagnosed patent ductus arteriosus/foramen ovale can be a cause for hypoxia in clinical settings associated with elevated intrathoracic pressure and marginal rise in right atrial pressure. Using echocardiography was convenient in clarifying the diagnosis and guiding management. **Conclusions:** This case highlights the importance of using echocardiography to guide management in patients with hypoxia of unclear etiology, particularly in the context of elevated intrathoracic pressure and marginal rise in right atrial pressure.

Keywords: ASD, CABG, ACHD, Cardiovascular surgery

CHALLENGES IN TREATING MULTIPLE RECURRENT LIPOSARCOMAS AND GIANT INCISIONAL HERNIA- CASE REPORT

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Introduction: Retroperitoneal liposarcoma is a rare cancer, that represents about 50% of retroperitoneal sarcomas. Overall incidence is low, counting around 0.3% to 0.4% per 100,000 people. Early diagnose is difficult, and prognosis depends on tumor size, subtype, and metastases. Also, incisional hernia occurs in 11-23% of laparotomy patients, around 10% of repairs are for defects larger than 15cm. **Case Report:** A 58-year-old male with a medical background compelling for chronic kidney disease, mild obesity, and bilateral obstructed urethers was admitted on January 5th 2023 in the Surgical Department of the Military Hospital in Cluj-Napoca. Recurrent retroperitoneal liposarcoma surgeries were performed in 2016 and 2021 at a distinct surgical center. CT scan showed the presence of a retroperitoneal tumoral liposarcoma measuring 275/180/150 mm CC/AP/LL, a midline abdominal defect measuring 170/120 mm CC/AP, and an elevation of the right hemidiaphragm by 7 cm. **Discussions :** Surgery was performed on January 18th, 2023. Intraoperatively was found a lipomatous mass (450/350 CC/LL, 20kg) that covered the right kidney, terminal ileum, ascending colon, half of the transverse colon and the right antero-lateral peritoneum. The tumor was excised en bloc alongside with the right kidney and the right hemiabdomen parietal peritoneum. An extensive right hemicolectomy with T-L ileo-transvers-anastomosis was done. Additionally, the incisional hernia was treated with an on-lay technique using a light weight macroporous polypropylene prosthesis (30/25 cm CC/LL). **Conclusions:** The patient's intricate medical and surgical record accounted a challenge to treatment planning and called for a multidisciplinary approach for ideal management. The evolution was favourable, therefore the patient was discharged on the 7th postoperative day. The complete resection of a retroperitoneal liposarcoma is the golden standard treatment and it increases the 5-year survival rate (from 16.7 to 58%). However, the disease free survival rate of 34% is correlated with the risk of recurrence which is dictated by the grade of the tumor, the resection margins and by the vascular involvement.

Keywords: retroperitoneal liposarcoma, giant incisional hernia, multiple recurrences, treatment

CHEST WALL RECONSTRUCTION IN THORACIC ECTOPIA CORDIS FOR A PATIENT WITH NO FAMILY HISTORY RECORDED

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Introduction: Ectopia cordis (EC) is a rare congenital cardiac malformation defined as a defect in the anterior chest wall and abdominal wall with abnormal placement of the heart outside the thoracic cavity with associated defect in the parietal pericardium diaphragm, sternum, and in most cases cardiac malformations. Ectopia cordis is also defined as complete or partial displacement of heart outside the thoracic cavity. **Case Report:** We present the case of a 6 months male patient diagnosed with Ectopia Cordis during intrauterine life by using two-dimensional ultrasound around 18th week with no additional abnormalities. The pregnancy was under monitorization and uneventful. There is no family history recorded which may have genetic interest. For the delivery, it was performed a cesarean that was made without any complications. After delivery the neonate weighing 2.55 kg with an externally visible, beating heart over the chest wall had difficulty in respiration with peripheral cyanosis. The newborn was immediately operated in the 5th day of life for creating a space for heart in thorax, this procedure being very important. First step for surgery was to transport heart into thoracic cavity and closure the wall/sternal defect. Preferred closure were mashes instead of pectoral muscles closuring because pectoral muscle reunion makes the heart cavity smaller and there will be not available for body to grow in the future years. The patient presented 6 months after the surgery with no other complications. **Discussions :** Thoracic ectopia cordis treatment begins with emergency surgery after birth to place the heart inside the newborn's chest and close the thoracic cavity, which is the election method. Additional operations entail building a sternum to protect the heart and repairing any additional heart or abdominal wall defects. **Conclusions:** This case highlights the importance of early diagnosis to avoid mortal complications. Newborns with no additional cardiac problems have higher survival rates than the others.

Keywords: ectopia cordis, externally visible, mashes closure, congenital cardiac anomaly

HAND ISCHEMIA INDUCED BY ARTERIOVENOUS FISTULA (HIIAVF) ON A DIABETIC PATIENT

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Introduction: Hand ischemia is a rare, yet life-threatening condition found in dialysis patients with arteriovenous fistulas (AVF), 4% of them being affected by this condition. Ischemia can occur due to the reduced blood flow to the distal extremity caused by the blood shunting through the AVF. This is known in the medical literature as "steal syndrome". The diagnosis of hand ischemia is done through the physical examination (discoloration and ulcers), but imagistic examinations are useful in order to choose the right therapeutic strategy after identifying the actual cause of ischemia. **Case Report:** A 60-year-old patient known with type II diabetes and hypertension was admitted to the "Dr. Alexandru Augustin" Military Hospital in Sibiu for changes of the right hand's aspect. The patient has a functional AVF on the upper part of the right arm because he is doing a conventional dialysis. The tegument of the 2nd to 4th finger is cold, accompanied by paresthesias and cutaneous lesions. The radial and cubital artery pulse is absent, but becomes perceptible when the anastomosis is compressed. The oxygen saturation is low for the 2nd to the 4th finger (70-75%), but it rises to 90% after compressing the AVF. On ultrasound it was identified that the brachial artery has calcified, but compressible walls, whereas the radial artery has rigid walls, with multiple calcifications, not being compressible. **Discussions :** It was imperative that surgery is performed in order to restore the vascularization of the right hand. The main objective of the treatment is to stop the catastrophic effects of ischemia on hand's functionality. First step was to identify the initial brachio-cephalic anastomosis and the exact localisation of the brachial artery (upstream of AVF). The next step is to use the saphenous vein from the right thigh as a graft to create a new arteriovenous anastomosis, approximately 3 centimeters downstream of the initial FAV. This technique is called distal revascularization and interval ligation (DRIL) and is commonly used in treating

the "steal syndrome" caused by the AVF. **Conclusions:** Ischemia caused by the AVF is a serious condition that needs to be approached as soon as possible in order to preserve the hand's functionality. The DRIL technique is a reliable lifeline for saving an affected limb.

Keywords: arteriovenous fistula, DRIL, plastic surgery

TOTAL KNEE REPLACEMENT SURGERY WITH REVISION TIBIAL COMPONENT IN A 77-YEAR-OLD MAN WITH SEVERE GONARTHROSIS OF THE LEFT KNEE: A CASE REPORT

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Introduction: Gonarthrosis is a degenerative joint disease that affects the knee joint, leading to pain, stiffness, and loss of function. Total knee replacement surgery (TKR) is a commonly used treatment option for patients with severe gonarthrosis. In this case report, we present a case of TKR with revision tibial component in a 77-year-old man with severe gonarthrosis of the left knee. **Case Report:** The patient, a 77-year-old man, presented with complaints of severe pain and stiffness in the left knee, which had been gradually worsening over the past year, the patient had already been surgical treated with TKR of the right knee one year previously. Clinical examination revealed a deviation of the left knee in valg, with significant limitation of range of motion and poor walking ability. Radiological evaluation revealed severe degenerative changes in the knee joint, with near-complete loss of joint space. The patient was diagnosed with severe gonarthrosis of the left knee and was scheduled for TKR. During the surgery, a revision tibial component was used due to significant bone loss and poor bone quality .The surgery was performed without any major complications, the patient's post-operative recovery is progressing favorably and in a slow but steady manner. **Discussions :** TKR with revision tibial component is a challenging surgical procedure that requires careful preoperative planning and intraoperative decision-making. The decision to use a revision component in our patient was based on the extent of bone loss and poor bone quality observed during the surgery. Despite the complexity of the surgery, the outcome was successful, and the patient showed significant improvement in his symptoms. **Conclusions:** TKR with revision tibial component is a viable treatment option for patients with severe gonarthrosis of the knee who have failed conservative management. Careful patient selection and surgical planning, along with appropriate use of revision components, can lead to successful outcomes in these challenging cases. Physiotherapy after TKR surgery empowers patients to regain control of their lives, though challenging, the benefits of regaining independence and a better quality of life are immeasurable.

Keywords: Gonarthrosis, Total Knee Replacement Surgery, Revision Tibial Component, Bone Loss

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REVIVING A RIDER: MANAGING SEVERE LOWER LIMB FRACTURES FOLLOWING A MOTORCYCLE ACCIDENT

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Introduction: Lower limb fractures are a common outcome of traumatic injuries, and appropriate surgical management is necessary to achieve optimal outcomes for patients. This case report presents the management of a 24-year-old male patient who sustained lower limb fractures in a motorcycle accident. **Case Report:** The patient presented to the Emergency Room with lower limb fractures and absolute loss of leg function, involving the lateral and medial malleoli of the right lower limb, and a dislocated fracture at the neck of the talus in the left lower limb. At the level of the right lower limb, the fracture was reduced through orthopedic maneuvers and immobilized in a femoro-podalic plaster cast. At the level of the left lower limb, orthopedic maneuvers were performed to reduce the fracture-dislocation, and a below-knee plaster cast was applied for immobilization. After the plaster cast was applied in the ER, the patient was transferred to the operating room where open reduction and osteosynthesis were performed using an anatomical reconstruction plate and six screws for the lateral malleolus and a traction screw for the medial malleolus of the right lower limb. The dislocated fracture at the neck of the talus in the left lower limb was treated with two transcalcaneal pins, immobilizing the patient's ankle in a 90-degree dorsiflexion. The vascular surgery team was also involved in the reconstruction of the posterior tibial artery of the left lower limb

after an intraoperatory accident. **Discussions :** This case report highlights the multidisciplinary approach required for the successful management of lower limb fractures. The use of different types of implants and surgical approaches was based on the location and severity of the fractures, as well as the patient's age, comorbidities, and expected recovery time. Postoperative monitoring and physical therapy were also implemented to ensure optimal outcomes **Conclusions:** The management of lower limb fractures requires a team approach, involving orthopedic surgeons, anesthesiologists, nurses, physical therapists and other specialists as needed. This case report contributes to the growing body of knowledge on the management of lower limb fractures, and highlights the importance of careful consideration of all potential complications in the management of these injuries. The success of this case report emphasizes the need for a multidisciplinary approach to the management of lower limb fractures, with careful consideration of all potential complications, including vascular injury.

Keywords: Lower limb fractures, Orthopedic maneuvers, Transcalcaneal pins, absolute loss of leg function

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SUCCESSFUL REVISION TOTAL HIP ARTHROPLASTY WITH CEMENTED TARGOS ENDOPROSTHESIS IN A GERIATRIC PATIENT WITH MULTIPLE COMORBIDITIES: A CASE REPORT

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Introduction: Hip arthroplasty is a common surgical intervention for the management of hip fractures in the elderly population. However, complications such as sinking of the femoral component and periprosthetic fractures can occur, necessitating revision surgery. We present a case of a 74-year-old female with a history of previous left-sided bipolar hemiarthroplasty for a femoral neck fracture, followed by a periprosthetic diaphyseal femoral fracture, and subsequent revision to a total hip arthroplasty with a cemented Targos endoprosthesis. We describe the management of this complex case and discuss the challenges and considerations in the revision of hip arthroplasty in geriatric patients. **Case Report:** A 74-year-old female presented to our clinic with difficulty in walking and a leg length discrepancy of approximately 5 cm. She had a history of a left-sided femoral neck fracture in 2005, which was initially treated with bipolar hemiarthroplasty. However, she later sustained a periprosthetic diaphyseal femoral fracture, which was managed with open reduction and internal fixation using a plate and screws. Subsequently, it was noted that the femoral component had sunk, leading to revision surgery. The patient underwent successful revision surgery with removal of the bipolar prosthesis and implantation of a cemented Targos endoprosthesis to convert to a total hip arthroplasty. The previous plate and screws were also removed during the revision surgery. The patient had a favorable postoperative recovery with equal leg lengths and improved mobility. **Discussions :** Revision hip arthroplasty in geriatric patients can be challenging due to multiple factors, including poor bone quality, compromised soft tissues, and functional limitations. In this case, the decision to convert to a total hip arthroplasty with a cemented Targos endoprosthesis was made to address the femoral component sinking and provide stability based on her current symptoms and pathological history. **Conclusions:** The revision of hip arthroplasty in geriatric patients with complications related to the femoral component poses a significant challenge. In particular, patients with a history of periprosthetic diaphyseal femoral fracture may require conversion to a total hip arthroplasty with a cemented Targos endoprosthesis to address femoral component sinking and achieve favorable outcomes. Successful management of these complex cases requires meticulous preoperative planning, careful implant selection, and advanced surgical techniques. This case underscores the importance of addressing these considerations to optimize patient outcomes.

Keywords: Revision hip arthroplasty, periprosthetic diaphyseal femoral fracture, bipolar hemiarthroplasty, .

LONG-TERM SURVIVAL AFTER TOTAL GASTRECTOMY FOR ADVANCED GASTRIC CANCER

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Introduction: While the occurrence of gastric cancer has decreased globally, it continues to be a significant cause of cancer-related deaths due to delayed diagnosis and poor prognosis for patients with advanced stages of the disease. Adenocarcinomas account for over 90% of all gastric tumors, and while the etiology of gastric cancer is

complex, Helicobacter pylori infection is recognized as the leading factor among several contributing factors. **Case Report:** In 2012, a 45-year-old female patient presented to our clinic with a two-month history of nausea, vomiting, heartburn, epigastric pain, loss of appetite, weight loss, and melena. After a thoroughly examination, we have the following diagnoses: hemorrhagic gastric neoplasm, paraneoplastic anemia, upper gastrointestinal bleeding. It was decided to perform surgical treatment through total gastrectomy with mechanical esophago-jejunal anastomosis T-L with a Roux-en-Y loop transmesocolic. A tumor formation of approximately 6x8 cm with firm consistency was described at the level of the small curvature of the stomach. The histopathological result revealed an undifferentiated carcinoma penetrating the serosa without metastasis in the 12 perigastric lymph nodes that were removed. The TNM staging was T4N0M0, which represents stage IIB. In 2023, the patient returned with chronic calculous cholecystitis, adhesive syndrome, and midline postoperative incisional hernia. The patient was treated with classic anterograde cholecystectomy, adhesiolysis, and surgical repair of the hernia. **Discussions :** According to the statistics, the 5-year relative survival rate for stage IIB gastric cancer is approximately 35%. Although the prognosis was initially reserved, the patient has survived for 11 years without cancer recurrence, demonstrating the extraordinary capabilities of the human body. However, unfortunately, the alteration of local anatomy can lead to disturbances in the bile flow into the duodenum so our patient may have developed biliary lithiasis because of that. **Conclusions:** Although the particularities of the case carry a very poor prognosis, the patient is currently in favorable conditions postoperatively. Therefore, radical surgery in neoplastic pathology is essential for long-term survival.

Keywords: gastric cancer, total gastrectomy, lithiasis

MANAGEMENT OF BIFRONTAL SUBDURAL HEMATOMAS IN AN INFANT WITH SHAKEN BABY SYNDROME

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Introduction: Shaken baby syndrome (SBS) is a serious brain injury resulting from forcefully shaking an infant. The violent jerk of the head leads to an injury of the brain by a "whiplash" due to a frontal and occipital impact against the calvaria of the skull. The diagnostic clinical triad for SBS are: retinal bleeding, subdural, intracerebral and/or subarachnoid hemorrhage, next to skeletal fractures or hematomas of different ages at typical localizations. The brain trauma is a direct result of the caregiver's aggression; therefore, it is categorized as a form of child abuse. We report a case of SBS with diagnosis, therapy and pitfalls. **Case Report:** We present a 6-month-old male twin premature infant of 28 weeks' gestation who developed bilateral subdural hematomas and bifrontal concussions. The infant was lethargic, the fontanel was tense and above level, and there was a "sunset" phenomenon which is a direct indication of increased intracranial pressure in infants. Initially, the child was noted for a percentile volatile head circumference increase. After emergency relief of the hematoma via bifrontal burr hole trepanation and drainage for several days, there was a recurrence with clinical deterioration. Implantation of a subduroperitoneal shunt was necessary. After this, the clinical condition improved. Bulb motor function, fontanelle and drinking behavior normalized. Multiple bone fractures were detected. Since it was most likely SBS, the criminal police, forensic medicine, a special child protection group and the youth welfare office were involved and the two children were taken out of the family. **Discussions :** Therapy was performed according to the generally accepted standards and the clinical condition improved. The prognosis of SBS is poor, according to the literature, up to 20% die within days or weeks due to SBS. The surviving children often suffer from mental retardation, physical disabilities, hearing and vision disorders, epilepsy and cognitive deficits of varying severity, including apallic syndrome. Prevention and early detection are important **Conclusions:** SBS can severely damage children's health and even lead to death. At-risk groups such as, premature infants, young age of parents, low socioeconomic status should be identified early, counseled and given special assistance. Regular head circumference measurement is an important parameter. In case of percentile volatile growth, clarification should be always done. In addition to educating new parents, it is important to provide appropriate instruction to nurses, midwives and physicians. So remember, no matter how upset you feel, shaking your baby is not the deal!

Keywords: shakenbabysyndrome, dontshakeyourbaby, infantsubduralhematoma, subduroperitonealshunt

ORTHOPEDIC AND PLASTIC APPROACH FOR THE TREATMENT OF A DISTAL RADIUS FRACTURE

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Introduction: Distal Radius Fractures (DRFs) are the most common site of forearm fractures and acute events in traumatology. They generally occur as a result of a fall on an outstretched hand with the wrist extended. External Fixation is a valuable instrument for fracture reduction and stabilization. Limited open incisions, early range of motion, and treatment of complex wounds are a few of the benefits of external fixation. **Case Report:** The aim of our paper is to present the case of a 32 □□year- old patient with a distal, open (type II Gustilo-Anderson), contaminated epiphyseal fracture of the left radius. Partial lesion of the muscular and tendinous parts of the flexor pollicis longus (FPL) and of the pronator quadratus are present, apart of tegumentary defect of the volar left arch and of the radial rim. **Discussions :** The patient is admitted to the Orthopedics and Traumatology Clinic on: 12.06.2022 and undergoes an emergency surgery with a multidisciplinary team made by plastic and orthopedics-traumatologist's surgeons. After adequate preoperative and anesthesiologic preparation, the following procedures are performed: exploration, surgical cleansing of the wound, pulsatile lavage with antiseptic solutions, opening of the carpal tunnel, fasciotomy, temporary osteosynthesis of the fracture with a bridged type modular external fixator (EF) and reduction of the left ulnar dislocation. On: 16.06.2022 a surgical re-intervention made by a free flap and graft fixation with surgical staples was performed by plastic surgery followed by sterile dressing and immobilization by a long arm cast. **Results:** Postoperative favorable local and general evolution, with maintenance of a satisfactory reduction at the level of the fracture site. At discharge good general condition, patient afebrile, hemodynamically respiratory stable, and surgical wound healing per secundum without signs of Celsius. Clinical-radiological orthopedic re-evaluation after 4/6 weeks post-operatively. The dressing of the surgical sutures took place every three days both at the level of the left forearm and of the donor area, and the removal of sutures on the fourteenth post-operative day. **Conclusions:** Surgical treatment is necessary in cases of displaced or unstable DRFs. Since 2008, EF has become a popular technique with satisfactory functional results. Severe trauma to the extremities often includes the concept of an interdisciplinary approach. Several publications support that the patient outcome is better when skeletal stabilization is followed by early soft-tissue coverage.

Keywords: externalfixation, distalradialfracture, freeflap, interdisciplinarapproach

CYTOSORB: THE NEXT LIFE-SAVING DEVICE IN EMERGENCY CARDIAC SURGERY FOR PATIENTS ON LONG-TERM ANTIPLATELET THERAPY?

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Introduction: Ischemic cardiomyopathy refers to the heart's diminished ability to pump blood adequately as a result of myocardial damage caused by ischemia or a heart attack, which restricts blood supply to the heart, causing the muscle to be damaged. Acute ischemic mitral valve insufficiency is a common mechanical complication of myocardial infarction (MI). Complex mitral valve repair is a feasible option in such cases if the valvular morphology is acceptable. A crucial aspect of a durable repair is a large surface of coaptation, which can be achieved by pulling the leaflets together through neochordae implantation and restoring the annular dimensions through annuloplasty. CytoSorb (CS) is a recent device that uses hemoadsorption to remove cytokines from the blood. Using a mixture of hydrophobic interactions and size exclusion, it is capable of removing molecules with a medium molecular weight. The cardio-pulmonary bypass (CPB) circuit needed for cardiac surgery can easily be equipped with special cartridges like CS. **Case Report:** We discuss the case of a 55-year-old patient who presented to the emergency room with acute chest pain radiating to the epigastrium, ST elevation on the EKG, and echocardiography revealing severe mitral valve insufficiency due to rupture of the papillary muscle and tendinous chordae following posterolateral MI. Therefore, the patient needed an emergency mitral valve repair and left anterior descending artery revascularization. **Discussions :** Because of the patient's long-term antiplatelet therapy, which could not be halted, the patient was at high risk of bleeding during surgery. Incorporation of CS was required to reduce the risk of perioperative hemorrhage. Postoperative results have been favorable, without any

hemodynamic or hematological complications, and significant improvement in left ventricle ejection fraction postoperatively. **Conclusions:** We believe that the use of CS during surgery may reduce the risk of bleeding in long-term antiplatelet therapy patients undergoing emergency cardiac surgery.

Keywords: CytoSorb, antiplatelet, cardiomyopathy, neo-chordae

THROMBOSIS OF THE RIGHT ATRIUM AND INFERIOR VENA CAVA WITH PULMONARY THROMBOEMBOLISM IN A POSTPARTUM PATIENT

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Introduction: Thrombembolic events are one of the major causes of maternal death during the postpartum period. Inherited trombophilias and other risk factors like venous stasis by the enlarged uterus, vascular injury and hypercoagulable states associated with pregnancy (the Vicchow triad) are all responsible. The incidence of thrombi in the right atrium is not well defined, but based on studies, 10% of the cases of pulmonary thromboembolism are found there. **Case Report:** The aim of this paper is to present the case of an 18-year-old female, 27 days postpartum, with recent pulmonary thromboembolism and pulmonary infarction at the right lower lobe's level, admitted in emergency conditions to the cardiovascular surgery ward with the diagnosis of right atrial and inferior vena cava thrombosis and thrombophilia in observation. She complains of dyspnea that is accentuated by deep inspiration and chest pain located in the right hemithorax with irradiation in the interscapular region that occurs in the morning and lasts about 5 minutes. The preoperative echocardiography reveals nondilated, normal cardiac chambers and a right atrial thrombosis with extension into the right ventricle and inferior vena cava. Also, the preoperative transesophageal echocardiographic examination indicates a hypermobile hypoechoic structure in the right atrium, attached 10 mm from the inferior vena cava outflow and mobile in the right atrium. The thrombi from the right atrium and inferior vena cava were removed in extracorporeal membrane oxygenation with favorable postoperative evolution. **Discussions :** Therefore, a case like this requires a team of experts such as hematologists, obstetricians, and chest surgeons. An inherited thrombophilia might be considered according to a hematologist, and the recommendations are a genetic panel and specific thrombophilia testing. The patient has a certain indication for anticoagulation with acenocoumarol, which has proven safety during breastfeeding, for at least six months, then is adjusted based on prothrombin time. **Conclusions:** The necessity to take into account both the baby's and mother's well-being complicates the diagnosis, prevention, and treatment of pregnancy-associated pulmonary thromboembolism. According to studies, surgical embolectomy using extracorporeal membrane oxygenation is the most effective and safest method in cases such as those presented here, along with, of course, anticoagulation treatment.

Keywords: Postpartum, pulmonary thromboembolism, right atrium, anticoagulation

SURGICAL MANAGEMENT OF MIXED VOLUMINOUS HIATAL HERNIA

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Introduction: A hiatal hernia is a condition where a part of the stomach emerges through the diaphragm and into the chest cavity. A mixed hiatal hernia is a type of hiatal hernia that involves both a sliding and a paraesophageal hernia. In a sliding hiatal hernia, the gastroesophageal junction and a portion of the stomach slide up into the chest through the diaphragm. This is the most common type of hiatal hernia. In a paraesophageal hiatal hernia, a portion of the stomach protrudes through the diaphragm and into the chest cavity beside the esophagus. This type of hernia is less common but can be more serious as it can cause the stomach to become twisted or obstructed. **Case Report:** The purpose of this paper is to present the case of a 76-year-old female with 2 months of heartburn, nausea, vomiting, a slightly influenced general condition, and epigastric pains. The patient is hospitalized for investigations and specialized treatment. After adequate preoperative preparation, laparotomy exploration is performed, which reveals adherent syndrome, for which viscerolysis is made. In addition, voluminous, mixed hiatal hernia is found with the ascension of the upper half of the stomach to the chest cavity, for which it is decided and practiced suture of the crus muscles of the diaphragm, a posterior fundoplication type Nissen. Favorable postoperative evolution. The patient is afebrile, conscious, and hemodynamically and cardiorespiratory stable. The

abdomen is supple, mobile, and sensitive to palpation at the postoperative wound area. The wound is in the process of healing without any reactions. A permeable drainage tube is being used and has minimal drainage; to be suppressed the 5th day postoperatively. The intestinal transit is resumed, and the patient has good digestive tolerance. The patient is discharged after being surgically cured. **Discussions :** Approximately 55%-60% of individuals over the age of 50 have a hiatal hernia. However, mixed hiatal hernias account for approximately 5-10% of all hiatal hernias. Mixed voluminous hiatal hernias can be more challenging to manage than sliding or paraesophageal hiatal hernias alone, as they may have a greater risk of complications such as gastric volvulus, obstruction and perforation. **Conclusions:** Overall, Nissen fundoplication Nissen is a safe and effective treatment option for mixed hiatal hernias, but it should be carefully considered and discussed with a qualified healthcare professional to determine if it is the best option for an individual patient.

Keywords: mixed hiatal hernia, fundoplication Nissen, diaphragm, laparotomy

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BONE TUMOR IN A YOUNG PATIENT FOUND AFTER ANKLE SPRAIN - CASE REPORT

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Introduction: Aneurysmal bone cysts (ABCs) are benign osteolytic vascular lesions that are capable of aggressive local expansion and bone destruction. These tumors are most common in adolescent patients and constitute approximately 9% of benign tumors. ABCs can present a diagnostic challenge, as they share several histological and radiographic characteristics with more aggressive lesions, including giant cell tumors and malignant telangiectatic osteosarcomas. **Case Report:** We present the case of a 20-year-old patient, who presented to our service complaining of pain in the left ankle following a minimal sports trauma. During the clinical examination, we found the presence of a minor edema of the ankle with severe pain on palpation at the level of the left external malleolus. Performing an X-ray of the left ankle, highlights the presence of an osteolytic lesion of approx. 30x20 mm relatively well defined but which thins and pierces the internal cortex at the level of the distal 1/3 of the left fibula. Several imaging investigations are performed after :(CT with contrast substance, bone scintigraphy and MRI) which lead us towards a diagnosis of borderline tumor formation. It is decided on the surgical biopsy. The histopathological examination gives us the diagnosis of aneurysmal bone cyst. Surgery is performed in time 2 and excision, curettage and filling of the resulting defect with cancelous bone autograft from left iliac crest is practiced. The postoperative protocol involves non weight bearing for 6 weeks, active and passive mobilization of the operated limb. NSAIDs if needed Post operative control at 6 weeks, clinically the patient shows normal function without the presence of signs of osteoarticular damage or functional impotence, radiologically the bone graft shows signs of integration, the patient being able to resume full wheight bearing on the operated lower limb without pain. **Discussions :** ABCs are locally aggressive lesions of the bone characterized by blood-filled cavities lined by fibroblast and histiocytes. The incidence of pathologic fractures is about 8% The optimal treatment for ABCs is still debatable. The excision, curettage and filling of the resulting defect with cancelous bone autograft provided good result and outcome in our case , but still remains a relapse rate. Other treatment options include sclerosing substances and bone substitute, embolization. **Conclusions:** ABCs can present with pathological fractures and requires management of the cyst and stabilization of the bone.

Keywords: aneurysmal bone cyst, benign lesions, curettage, plombing

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RECURRENT PILONIDAL CYSTS AND HIDRADENITIS SUPPURATIVA IN A YOUNG ADULT: A CASE REPORT

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Introduction: Pilonidal disease (PD) and hidradenitis suppurative (HS) are common chronic inflammatory skin diseases that affect mostly young adults. HS and PD have similar underlying causes, but the mechanisms of pathophysiology are distinct. It is difficult to manage these types of patients due to the limited options for treatment and their frequent relapses. **Case Report:** This case presents a 26-year-old patient with a history of recurrent pilonidal cysts associated with HS, for which he presented 2 months earlier and was treated only with doxycycline. He presents to the emergency room with significant swelling in the left buttock and local pain of increased intensity.

Associated, the patient presents the following risk factors: heavy smoking, acne, age, obesity, sex, hypertrichosis, and prolonged sitting. He is hospitalized for clinical-biological investigations and specialized treatment. Ultrasound reveals a 25/21 mm inhomogeneous collection in the presacral region, located superficially and subcutaneously, with an irregular outline and oedema of the surrounding subcutaneous tissue. The clinical suspicion raised was a pilonidal cyst. An open-technique pilonidal cystectomy was performed under local anaesthesia. The biopsy was histopathologically analysed, and a probe with the fluid content was sent to the microbiology department. The surgical treatment consisted of drainage and the secondary intention type of healing. The histopathological result confirmed the clinical suspicion of PD. The bacterium implicated was Enterococcus faecalis, which is doxycycline-resistant. The postoperative evolution was favourable with the antibiotic ciprofloxacin and the analgesic ketoprofen. **Discussions :** The high rate of recurrence associated with the management of pilonidal disease poses challenges. The patient had undergone open pilonidal cystectomy twice before with primary wound closure. However, due to the risk of recurrence, postoperative healing by secondary intention was opted for, despite its drawbacks, such as a longer healing time and the need for local nursing care. Although primary wound closure is less restrictive, it was not considered appropriate in this case given the patient's history of recurrence. PD and HS often coexist but have distinct pathophysiological mechanisms. PD results from folliculitis and can cause a subcutaneous abscess, whereas HS primarily affects the apocrine glands and has genetic factors. Risk factors for both diseases include those mentioned above. **Conclusions:** Given the increased prevalence in the young population, prevention plays a decisive role in removing the risk of developing this pathology. Meanwhile, it must be determined which surgical solution is best for each case, weighing the possible complications of a certain type of surgical intervention.

Keywords: Recurrent pilonidal disease, Hidradenitis Suppurativa, Enterococcus faecalis, Risk Factors

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PRE-TRACHEOSTOMY AND POST-TRACHEOSTOMY CHANGES IN THE RESPIRATORY VALUES – WHAT IS THE NURSING MANAGEMENT IN A TRACHEOSTOMY?

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Introduction: Tracheostomy is one of the most common procedures undertaken in critically ill patients with acute respiratory failure who require prolonged mechanical ventilator support. Literature has proven that early tracheostomy improved survival and shortened duration of mechanical ventilation. The main objective is to assess the outcome, respiratory values pre-procedure and post-procedure, respectively the nursing care of critically ill patients that needed tracheostomy. **Case Report:** We followed 11 patients in the Intensive Care Unit of Târgu Mureș County Emergency Clinical Hospital who required prolonged mechanical ventilation and who were assigned to tracheostomy. Of them 9 were male, aged between 41 and 86 years old, characterized on day one in intensive care unit by high valuse of APACHE II score between 18 and 36 points and high values SOFA between 3 and 14 points. Imporved valuse regarding oxygenation were notice before and after the tracheostomy: pH levels increased, paO2 levels improved, paCO2 leveles decreased, respectively the ratio P/F increased statistically significant ($p<0.05$). Assessing the outcome, we monitored risk of complications. Of them, infections need to be paid attention. **Discussions :** When caring for a patient with a tracheostomy, nursing care includes the patient, cleaning the skin around the stoma, providing oral hygiene, and assessing for complications. The nurse follows the main target for normal functions of the upper airway include warming, filtering, and humidifying inspired air. Specific attention is needed to maintain patency of the tube and minimize the for infection. **Conclusions:** Aside the improvement regarding oxygenation parameters in critically ill patients, nursing care in patients having tracheostomies is extremely important. They can prevent life-threatening situations and advance to the best the comfort of the patients.

Keywords: respiratory failure, tracheostomy, nursing managemet, critical care

CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC) AS A TREATMENT OPTION FOR MUCINOUS PERITONEAL CARCINOMATOSIS OF APPENDICEAL ORIGIN - A CASE REPORT

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Introduction: Mucinous adenocarcinoma of the appendix (MAA) are tumors of varying malignant potential, typically low grade (LG). Although they are rare, accounting for less than 1% of all cancers, they pose a significant risk for transcoelomic spread and can lead to incurable peritoneal carcinomatosis (PC). The most effective treatment for PC is a combination of cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC). **Case Report:** In this report, we describe the case of a 44-year-old female patient, who presented to the clinic with appendicitis, for which she underwent a laparoscopic appendectomy for an appendiceal mucocele. The pathology report indicated a LG MAA with pseudomyxoma peritonei (PMP). Due to the peritoneal spread, she was scheduled for CRS. During laparotomy, 20-30 nodular neoplastic lesions between 0,5□□□cm were discovered, located on the greater omentum, right and left hemidiaphragmatic peritoneum, Glisson's capsule, and pouch of Douglas. Local recurrence on the cecum and bilateral ovarian cystic masses were also present. Peritoneal cancer index (PCI) was 13. Cytoreductive surgery was performed, including right hemicolectomy, total hysterectomy with bilateral salpingo-oophorectomy, total omentectomy, partial resection of the right hemidiaphragm and Glisson's capsule, and total peritonectomy. Completeness of cytoreduction (CC) score was CC-0. HIPEC was performed with Oxaplatin 300mg and Irinotecan 200mg at 43°C for 90 minutes. The intervention lasted 6h, with no incidents. The patient had a favorable postoperative evolution and was discharged 10 days later. The pathology report revealed peritoneal and ovarian metastases of LG MAA. The patient was scheduled for immunotherapy. **Discussions :** Because of their asymptomatic nature, mucinous adenocarcinomas of the appendix are usually discovered coincidentally, or while suspecting appendicitis. Without early intervention, the natural evolution of this tumor is its transcoelomic spread into the peritoneal cavity, with PMP. If PMP is left untreated, the patient will die of restrictive respiratory insufficiency. Systemic chemotherapy has an efficacy of around 6% for PMP, due to the neoplasm's low grade. A combination of HIPEC and CRS, however, is associated with a 35% reduced risk of mortality compared to CRS alone, with no increase in postoperative complications. **Conclusions:** The use of CRS in combination with HIPEC greatly increases survival rates among patients with PMP. We present an example where a patient with PMP, with PCI = 13, successfully underwent CRS and HIPEC, with a CC score of 0 and favorable postoperative evolution.

Keywords: Hyperthermic intraperitoneal chemotherapy HIPEC, Cytoreductive surgery CRS, Peritoneal Carcinomatosis, Appendiceal mucinous adenocarcinoma

A POLIFRACTURE CASE DUE TO HETERO-AGGRESSION

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Introduction: Proximal tibial shaft fractures are relatively common fractures that are associated with high rates of malunion (valgus and procurvatum). High-energy injuries can lead to comminuted fractures with significant osseous, soft-tissue and neurovascular injuries. Pellegrini-Stieda lesions are ossified post-traumatic lesions at (or near) the medial femoral collateral ligament adjacent to the margin of the medial femoral condyle. One presumed mechanism of injury is a Stieda fracture (avulsion injury of the medial collateral ligament at the medial femoral condyle). **Case Report:** A 66 years old patient was transported to the SMURD emergency department with bilateral periorbital hematoma, proximal tibial epi-meta-diaphyseal comminuted fracture with trophic skin disorders in the right leg, Pellegrini-Stieda lesion with external tibial plateau fracture operated, consolidated and with intact osteosynthesis material present in the left leg, subcapital metacarpal fracture II in the right hand and ribs fractures V-VIII left hemitorax. **Discussions :** The patient was transported to the emergency room of the SMURD following a traumatic injury sustained through heteroaggression. Following paraclinical examinations ,radiographic evaluation and orthopaedic ,surgical, neurosurgical and cardiac preoperative consultation, he receives the above diagnosis. In the orthopedic ward room: immobilization of the right lower limb, immobilization of the left lower limb, immobilization of the right upper limb. 07.01.2022 After a proper preoperative and anaesthesiological preparation,

surgery was performed: closed reduction of right external tibial plateau and internal osteosynthesis with 1 cancellous screw; temporary fixation of proximal right tibial epi-meta-diaphyseal fracture with external fixator, lavage, suturing in stratigraphic planes, sterile dressing, immobilization in a cast. Considering the skin trophic changes in the right leg, it was decided to delay definitive osteosynthesis until the improvement of the patient condition. 09.02.2022 Removal of external fixation device under intravenous analgesia, wound dressing, sterile dressings, immobilization in a long cast. 11.02.2022 Extraction of the osteosynthesis material of the right external tibial plateau, open reduction of the proximal right tibial epi-meta-diaphyseal fracture by antero-lateral approach and internal osteosynthesis with dedicated 'L' plate, lavage, stratigraphic suture, sterile dressings,post-operative immobilization in a long cast. **Conclusions:** The post-operative evolution is favourable, the patient is not febrile, hemodynamically and respiratory stable,with pain reduction and clean surgical wounds,healing without inflammatory signs, with good cast tolerance.12.02.2022 - removal of lower left limb cast .At discharge good general condition, patient afebrile, haemodynamically and respiratory stable, with spontaneous, physiological urination, intestinal transit present and without pain complaints and local celsian signs.

Keywords: Polifracture, Proximal tibia comminuted fracture, immobilization

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HYPOTERMIA AS A RISK FACTOR FOR CARDIAC ARRHYTHMIA AND BLEEDING DURING PCNL

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Introduction: Percutaneous nephrolithotomy is the standard procedure for the management of large and complex kidney stones. The most common intraoperative complications of PCNL include bleeding, renal collecting system injury, adjacent organ injury, hypothermia. Hypothermia may occur during PCNL as a result of exposed body surface, low ambient room temperature or use of low temperature irrigation solution and can lead to sever cardiovascular complications and bleeding. **Case Report:** We report the case of a 44 year old male, without known cardiovascular pathologies, who was admitted for one-stage PCNL for a left pelvic stone. The CT scan revealed an 21/16/19 mm obstructive kidney pelvic stone, with grade II hydronephrosis. **Discussions :** PCNL was performed under peridural anesthesia, initial ureteric catheterization and retrograde pyelogram was performed. The procedure was carried out with the patient in prone position, percutaneous access was obtained through lower pole puncture using a fluoroscopy-guided approach. The stone was fragmented using a pneumatic lithotripter. Rigid nephroscopy was used to remove all fragments and a 20 Ch nephrostomy catheter was placed. During the procedure, the patient developed moderate hypothermia (T:34 degrees Celsius), even if was used room temperature irrigation solution and room temperature was 22 degrees Celsius. After the nephrostomy catheter was placed, he became hemodynamic unstable with an increase of heart rate, and a drop in blood pressure and oxygen saturation, cardiac monitoring showed "de novo" atrial fibrillation. Secondary to this, severe bleeding appeared on the nephrostomy catheter. Nephrostomy catheter was repositioned and nephrostomy balloon volume was increased without controlling the bleeding, reason why the nephrostomy catheter was clamped. In the immediate postoperative period, the patient was closely monitored in ICU, cardiological evaluation was performed and emergency drug cardioversion was began. After 2 hours nephrostomy catheter was unclamped. Both, bleeding and atrial fibrillation was successfully treated conservatively. After 12 hours the sinus rhythm was restored, and urine on the nephrostomy catheter was clear. The nephrostomy catheter was removed on the 4th postoperative day and the patient was discharged on the 6th postoperative day. **Conclusions:** Hypothermia during PCNL can lead to cardiac arrhythmia, with severe intraoperative bleeding, even in young patients.

Keywords: PCNL, Hypotermia, Cardiac arrhythmia

SURGICAL APPROACH OF TRANSVERSE COLON CANCER WITH ABDOMINAL WALL PENETRATION- CASE REPORT

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Introduction: Treating locally advanced transverse colon cancer is challenging, mainly when the abdominal wall is invaded. The prognosis for colon cancer with abdominal penetration depends on the cancer stage and whether it

has spread to the other body parts. However, early detection and treatment can significantly improve the chances of survival, and treatment may include surgery, chemotherapy, and radiation therapy. **Case Report:** Our paper aims to present the surgical management of a 72-year-old female patient diagnosed with advanced transverse colon cancer with abdominal wall penetration.Clinical examination of the patient revealed diffuse abdominal pain with an immobile mass formation in the epigastric region. Computer tomography scans revealed an abdominal(61/94/55 mm) formation. Intraoperative laparotomy revealed a tumor mass with penetration of the posterior abdominal wall, greater omentum, and transverse mesocolon. The surgical procedure performed in elective settings was a segmental resection of the transverse colon. Intestinal continuity was restored with a latero-lateral colo-colic mechanical anastomosis. **Discussions :** Postoperative monitoring was performed with no general or local early complications, with intestinal transit restored on postoperative day 4. The patient was discarded on postoperative day 8. Histopathological examination revealed a moderately differentiated adenocarcinoma with 3/18 invaded lymph nodes and negative resection margins. **Conclusions:** Locally advanced transverse colon cancer may require a prompt intraoperative decision for en-bloc resectioning surrounding organs or structures to achieve optimal oncological resection margins. Long-term survival with a low complication rate becomes achievable with all efforts being made to reach complete resection.

Keywords: transverse colon, colon carcinoma, multi-visceral penetration

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SURGICAL RESOLUTION OF BALLOON ANGIOPLASTY COMPLICATIONS

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Introduction: Percutaneous transluminal balloon angioplasty is a minimally invasive endovascular procedure that utilizes a catheter equipped with a small balloon to dilate stenotic or occluded arteries. The main indications for this intervention include peripheral arterial disease and coronary artery disease. Although PTA is known to be an effective treatment, the procedure still has some risks. Thus, we present a case of a 64-year-old male who underwent percutaneous transluminal balloon angioplasty for severe stenosis in the right superficial femoral artery and experienced procedural complications. **Case Report:** We are discussing the case of a 64-year-old male with peripheral vascular disease, who presented with disabling claudication of less than 100 meters, leading to admission to the vascular surgery department. The CT Angiography revealed stenosis greater than 90% in the midpart of the right superficial femoral artery. As a result, the patient was hospitalized for percutaneous transluminal balloon angioplasty in the region of the severe stenosis. However, during the procedure, the balloon snapped in the proximal portion, while inflated at 4 atmospheres, making it impossible to extract and leaving the stenosis unresolved. The vascular surgeon performed a surgical resolution of the complication by preparing the superficial femoral artery at the site of the injury under local anesthesia. Silicon ties were used for handling the artery and a small transversal incision was made to retrieve the balloon. Succeeding the extraction, a new sheath was reinserted, the balloon angioplasty was repeated, leading to improved blood vessel permeability. Primary arteriography was performed at a different spots with Prolene wire, size 5-0. Post-surgery, the patient made a good clinical recovery, with symptomatic improvement and mobilization after 12 hours. The patient returned asymptomatic for the 2-week follow-up appointment for sutures removal. **Discussions :** Balloon rupture during percutaneous transluminal angioplasty is a potentially harmful complication, that can cause vascular trauma, including perforation, intramural hematoma, and local dissection. The technique used in our case to retrieve the balloon was vascular incision, as other options were not feasible. **Conclusions:** While endovascular treatment remains the preferred approach for addressing short occlusive lesions or severe superficial femoral artery stenosis, it is imperative to ensure that vascular surgeons are readily available to provide backup in the event of intraprocedural complications. Moreover, a multidisciplinary approach has been shown to greatly improve the outcome of the patients suffering from a vascular disease.

Keywords: balloon angioplasty, vascular disease, surgical resolution, endovascular treatment

MANAGEMENT OF A FREE RIGHT TRAM FLAP RECONSTRUCTION SURGERY AFTER UNILATERAL MASTECTOMY

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Introduction: The free transverse rectus abdominis myocutaneous (TRAM) flap is an advanced breast reconstruction technique that uses the patient's autologous abdominal tissue with a part of the rectus abdominis muscle and its vessels to rebuild the breast. It is most commonly used as a surgical method in cases of patients presenting inadequate perforating vessels anatomical distribution. **Case Report:** We are presenting the case of a 53-year-old female who decided to have a right breast reconstruction surgery after unilateral mastectomy and radiation therapy (50 Gy/25 fr) as a curative treatment for invasive breast carcinoma NST. Preoperatively, it was decided to use a deep inferior epigastric perforator (DIEP) flap from the inferior abdominal region for the reconstruction. The angio-CT showed unsatisfactory perforating branches of the interested artery, thus limiting the blood supply of the donor site. The patient underwent a free TRAM flap reconstruction instead. The procedure was successful, but she required a longer period of hospitalization and continued Letrozole hormone therapy. **Discussions :** It is important to consider the difference between TRAM and DIEP flaps. The latest research shows that the gold standard remains the DIEP flap because of its cost-effectiveness and reduced postoperative morbidity, although not all patients can benefit from it as the best results were seen in patients with proper superficial abdominal vascularization. A TRAM flap reconstruction is recommended in cases of patients that underwent radiotherapy and have a deficient blood supply at the abdominal donor site. Although the recovery period is longer, one of the main advantages concerns the aesthetic of the reconstructed breast which conferred natural plasticity and consistency. **Conclusions:** Even if it involves a complex procedure, the TRAM flap was proven to have the best postoperative results in this case, as the patient was pleased by the aesthetic appearance and recovered without any serious complications.

Keywords: breast carcinoma, free TRAM flap, reconstruction surgery, microsurgical anastomosis

APPLICATION OF VENO-ARTERIAL-VENOUS EXTRACORPOREAL MEMBRANE OXYGENATION IN HARLEQUIN SYNDROME: CASE RAPORT

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Introduction: Extracorporeal Membrane Oxygenation (ECMO) is a life support system used to treat cardiac and pulmonary dysfunction. Although the most commonly used configurations are veno-arterial (VA) and veno-venous (VV), in some cases triple cannulation may be required. VA ECMO can cause "Harlequin" or "two-circulation" syndrome, which involves lower oxygen saturation in the upper body than in the lower body due to pulmonary dysfunction. In such situations, a VA-venous (VAV) ECMO configuration is a solution that can prevent cerebral and cardiac hypoxia by adding a venous supplying cannula to a running VA-ECMO. **Case Report:** A 77-year-old patient with NYHA II heart failure, essential hypertension grade II, coronary artery disease, severe aortic stenosis and insufficiency, and moderate mitral insufficiency underwent surgical treatment with bioprosthetic aortic valve replacement, "Alfieri" mitral valve repair, and aortocoronary bypass for left anterior descending artery revascularization. Postoperatively, immediately after extubation, the patient became hemodynamically unstable, presenting with ventricular tachycardia with a pulse. After several attempts of electrical cardioversion, he went into cardiac arrest due to asystole, at which point it was decided to urgently install VA ECMO through the femoral artery and vein. On the third postoperative day, he presented with right hemothorax, for which pleural drainage was performed. Gas analysis of the blood from the right radial artery showed severe hypoxemia, indicating the presence of Harlequin syndrome. Based on these findings, it was decided to convert to VAV ECMO by inserting the third cannula in the left internal jugular vein using a Y-shaped derivation from the femoral artery cannula, after which oxygen saturations returned to normal parameters. **Discussions :** During VA ECMO, the oxygenated blood provided by ECMO, through the peripheral cannula, mixes with the blood ejected from the ventricle. The location of this mixing zone depends on the degree of cardiac dysfunction and the support provided by ECMO and is critical for oxygenation. Although the urgent establishment of VA ECMO is the best decision for treatment of postoperative

refractory cardiac arrest, pulmonary dysfunction and other possible complications due to poor oxygenation of vital organs make VAV ECMO a better alternative in this case. **Conclusions:** The purpose of VAV ECMO is to introduce oxygenated blood into the right atrium through an internal jugular vein cannula and thus into the pulmonary circulation, bypassing the non-functional lung and improving respiratory parameters.

Keywords: ECMO, Harlequin syndrome, cardiac arrest, pulmonary dysfunction

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CASE REPORT: SURGICAL MANAGEMENT OF A MASSIVE PYOTHORAX WITH CORYNEBACTERIUM STRIATUM INFECTION

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Introduction: Corynebacterium infections are caused by bacteria belonging to the genus Corynebacterium. These infections can range from mild skin infections to more serious systemic infections that affect multiple organs in the body. The severity and type of infection depend on the Corynebacterium species involved, the infection site, and the host's immune status. In rare cases, pleural effusion due to respiratory pathology can evolve into a pyothorax leading to multiple complications. **Case Report:** Our paper aims to present the case of a 44 years old male patient, known with right lower lobe pneumonia and a history of multi-drug resistant tuberculosis, admitted at the emergency room with acute respiratory insufficiency. Thoracic computer tomography revealed a massive pleural effusion on the right side with mediastinal balance. Right pleural drainage was performed with the evacuation of 1500 ml of serous-purulent liquid. Bacteriological examination indicated the presence of Corynebacterium striatum. **Discussions :** Corynebacterium striatum is resistant to many commonly used antibiotics, including penicillin, erythromycin, and clindamycin. However, it is usually susceptible to vancomycin which was indicated with drainage monitorization. After three days, the thoracic tube was placed on active aspiration. On day fifteen, the pleural drain was removed, with the patient was discharged with no other pulmonary or systemic complications. **Conclusions:** Corynebacterium striatum is an emerging opportunistic pathogen that can cause various infections, particularly in immunocompromised patients. Its antibiotic resistance profile makes treatment challenging, and further research is needed to understand its pathogenicity better and develop effective treatment strategies.

Keywords: pyothorax, Corynebacterium Striatum, pleural drainage

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3D LAPAROSCOPIC RETROPERITONEAL LYMPH NODE DISSECTION FOR POST-CHEMOTHERAPY RESIDUAL LYMPH NODES IN A CASE OF METACHRONOUS BILATERAL MIXED NON-SEMINOMATOUS GERM CELL TESTIS (NSGCT) CANCER

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Introduction: Testicular germ-cell carcinoma is a common cancer among males between the ages of 15 and 35, constituting 1% of all cancer diagnoses in men. However, it is also one of the types of cancer that has the highest likelihood of being cured. **Case Report:** During oncological follow-up care for a 23-year-old patient who had previously undergone bilateral radical orchiectomy for a mixed NSGCT cancer (left orchiectomy in 2019 followed by three courses of systemic chemotherapy with cisplatin, etoposide, and bleomycin (BEP), and right orchiectomy in 2021 associated with one course of BEP and two courses of cisplatin, etoposide(EP)), a retroperitoneal lymphadenopathic mass was discovered. A computed tomography (CT) urography was performed and identified a voluminous, necrotic retroperitoneal right lymphadenopathic block measuring 75/40/130 mm, located interaortocaval and precaval, which was causing compression of the left renal vein and inferior vena cava. Aiming to reduce the tumor volume, salvage chemotherapy based on vinblastine, ifosfamide, and cisplatinum was initiated. However, the post-chemotherapy CT urography scan revealed no reduction in the size of the lymphadenopathic mass (75/44/130 mm) compared to the previous scan, prompting the decision to proceed with laparoscopic retroperitoneal lymph node dissection. The patient was positioned in left lateral decubitus and the transperitoneal approach was employed. After the medialization of the ascending colon, the dissection started from the inferior and medial side of the adenopathy. Fortunately, there were no significant adhesions to the surrounding organs. After mobilization, the tumor was tractioned inferiorly, so its upper pole was easily accessible. The operative time was 180 minutes. The blood loss was minimal. There were no intraoperative or postoperative

complications, and the patient was discharged on the 3rd postoperative day. Histopathology of the specimen showed features consistent with teratoma. **Discussions :** Although complete surgical removal of teratomas usually leads to a positive outcome, it's important to consider the possibility of complications arising from the tumor mass compressing nearby organs or undergoing malignant transformation. Additionally, dealing with a retroperitoneal mass that occurs after chemotherapy for testicular cancer can present a surgical challenge, especially when it involves adjacent organs or major vascular structures. **Conclusions:** The presented case demonstrates the feasibility of a minimally-invasive approach for the most complex procedures, such as retroperitoneal lymph node dissection for voluminous masses.

Keywords: laparoscopic retroperitoneal lymph node dissection, NSGCT cancer, teratoma

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BREAST RECONSTRUCTION USING DEEP INFERIOR EPIGASTRIC ARTERY PERFORATOR FLAP

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Introduction: The breast reconstruction method using the DIEP (deep inferior epigastric artery perforator) flap is the gold standard in breast reconstruction due to the characteristics of the abdominal wall, gaining more and more popularity in recent years. **Case Report:** Is presented a case of a 52-year-old patient, BMI=36, with a history of invasive breast carcinoma operated in 2019 by Madden-type right radical mastectomy with axillary lymphadenectomy and post-mastectomy radio-chemotherapy. In 2020, breast reconstruction was performed (expander 550cc gradually filled with up to 700ml saline, inserted retro-pectoral) and in November 2022, it was re-intervened to continue the reconstruction and to obtain an improved result from an aesthetic point of view. During the clinical examination on admission in November 2022, a scar was observed on the right breast, starting from the armpit to the parasternal level, 30 cm (post-mastectomy), violet, supple and mobile with deep planes, painless, elastic, without signs of hypotrophy, hypertrophy, perilesional inflammatory signs or detectable locoregional adenopathies. The absence of the mammary gland and the subcutaneous presence of the expander with 700 ml of saline are noted. 3 weeks after the reconstruction procedure was done, a drainage intervention is performed under sterile conditions for an abdominal seroma, with the result that the patient's evolution will be favorable under the treatment. The patient also presented brachial plexus neurapraxia as a complication, most likely due to an extended procedure time (approximately 10 hours). **Discussions :** Certainly, the analysis of complication rates in literature provides us with interesting insights. Complications as hematoma, infection, abdominal/umbilical necrosis or wound dehiscence/delayed healing can occur. Abdominal bulge and hernia rates amond DIEP patients were 4.9% and 2.3%. A study by Kim and Stevenson emphasizes that patients who are overweight or obese present a significant higher risk for developing seroma postoperatively than patients with a normal BMI, this can be one of the reasons why seroma was reported in 8 studies (748 patients) on DIEP flap with a 3.7% rate (30 patients). Other known treatment methods are autologous flaps with pedicled tissue, latissimus dorsi flaps with breast implants, expanders with implant exchange, and immediate implant placement, but the golden standard remains the DIEP flap. **Conclusions:** Following the patient's evolution from December until now, we concluded that the aesthetic result is excellent despite the presence of obesity and complications. A successful reconstruction using the DIEP flap also involves, besides a well-trained team, monitoring the patient's progress in order to successfully avoid complications.

Keywords: breast reconstruction, DIEP flap, neurapraxia, obesity

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THE MANAGEMENT OF RIB FRACTURES

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Introduction: Rib fractures are a common injury in trauma patients and can result in significant morbidity and mortality. The management of rib fractures can be challenging, and a comprehensive approach is required to achieve optimal outcomes. **Case Report:** The objective of this study is to analyze the management of patients with rib fractures and to identify best practices in the diagnosis, evaluation, and treatment of these injuries. Specifically, we aim to determine which patients required surgical management, which patients were managed

conservatively, and which patients may benefit from early mobilization and respiratory support. We also aim to identify factors that may influence the decision to pursue surgical versus conservative management, such as age, comorbidities, and the severity of the rib fracture. **Discussions :** We conducted a retrospective study of 79 patients hospitalized with rib fractures in 2022. The study was conducted at Surgery Clinic 1 from Târgu Mureș Emergency Clinical Hospital. The study included patients of both sexes and all ages who were admitted to the hospital with rib fractures during the study period. The study found that almost half of the patients with rib fractures required surgical management, while the other half were managed conservatively. Factors such as multiple rib fractures, flail chest, and associated injuries like hemothorax or pneumothorax were more likely to result in surgical intervention. These findings suggest that the decision to pursue surgical versus conservative management should be based on a thorough evaluation of the patient's clinical status and injury severity. **Conclusions:** The management of rib fractures should be personalized based on the individual patient's circumstances. Clinicians should carefully evaluate each patient to determine the appropriate course of management, which may involve a combination of pain control, respiratory support, and surgical intervention.

Keywords: Rib fractures, Surgical treatment, Flail chest, Pneumothorax

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ENDOVASCULAR AND SURGICAL RESOLUTION OF ARTERIOVENOUS FISTULAS DYSFUNCTION-CASE REPORT

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Introduction: Arteriovenous fistulas are surgically created connections between arteries and veins. For patients who are undergoing hemodialysis, FAV is the optimal vascular access. The causes of the dysfunction of arteriovenous fistulas are represented, for the most part, either by the lack of maturation or by intimal hyperplasia. In patients with severe stenosis based on intimal hyperplasia at the level of AVF, intraluminal balloon or stent angioplasty can be performed. **Case Report:** We present the case of a 45-year-old patient, diagnosed with stage V chronic kidney disease on chronic dialysis for 3 years at the level of a left radio-cephalic arterio-venous fistula. In the evolution, the patient shows a gradual decrease in the flow at the level of the AVF with its occlusion. Therefore, in the absence of a vascular access approach, the chronic dialysis center sends the patient to the ER to be taken over in the Nephrology Department to perfom a dyalisis implant followed by the CVC. In the Vascular Surgery service, a left brachio-cephalic AVF was performed during hospitalization with the interposition of a Gore-tex type prosthesis. At 4 weeks postoperatory, the patient meets the maturation criteria and dialysis is initiated at this level. 12 months after the initiation of dialysis, a decrease in AVF flow was observed, which is why the patient is re-evaluated and, together with colleagues from the interventional radiology department, it is decided to perform an angioplasty with stent implantation immediately after the anastomosis to maintain the AVF patency. The patient comes back for regular check-ups every 3 months, with the maintenance of the patency of the stent and the AVF without detecting the presence of intra-stent restenosis. **Discussions :** The stenosis of arteriovenous fistulas is a common complication that can have a severe impact on the management of chronic kidney disease. Based on the lack of possibility to use superficial veins for creating an AVF, it is essential to maintain the AVF optimal flow. The solution in this case was stent angioplasty which improved the hemodynamics and the optimal vascular acces. **Conclusions:** Both endovascular and surgical resolution of AVF dysfunction is feasible with great benefits for the patient's evolution. However, stent angioplasty plays an important role in maintaining the integrity of old arteriovenous fistulas, making it one of the most important procedures used in these circumstances.

Keywords: arteriovenous fistula dialysis, stent angioplasty, balloon angioplasty

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PERIOPERATIVE MANAGEMENT OF MISDIAGNOSED ACUTE AORTIC DISSECTION AS ACUTE CORONARY SYNDROME: A POTENTIALLY CATASTROPHIC CHALLENGE

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Introduction: Studies have shown that 1/3 cases of Acute Stanford type A aortic dissection are misdiagnosed as acute coronary syndrome, both diseases presenting common clinical features and cardiac enzymes abnormalities. **Case Report:** We present the case of a 60-years-old male with a history of uncontrolled arterial hypertension, who was admitted to a regional emergency department with acute chest pain, shortness of breath and sweating. The

initial blood tests showed elevated levels of troponin and CK-MB, and the electrocardiogram revealed ST-elevation in V1 and aVR leads and ST-depression in V2-V6 leads. Based on these findings, the case was hastily diagnosed as STEMI and emergency antithrombotic therapy (Aspirin and Clopidogrel in loading doses) was initiated. In the absence of the possibility to perform a percutaneous coronary intervention (PCI), the patient was transferred to our clinic, where thoraco-abdominal CT-scan identified an acute Stanford type A aortic dissection with additional right internal carotid and left renal artery occlusion, and acute pulmonary edema. Consequently, the patient was subjected to complex cardiac surgery procedure combining ascending aorta replacement, aortic valve repair and aorto-carotid by-pass. Shortly after the surgery, the patient's hemodynamic status deteriorated abruptly due to developing cardiac tamponade. Hemostasis, surgical lavage and drainage were performed immediately. On the next postoperative days, the patient presented progressive multiorgan failure : anuria paroxysmal atrial fibrillation episodes, ischemic stroke in the middle cerebral artery territory,, severe lactic acidosis and coagulation disorder. Haemodynamic instability progressed despite of the increasing inotropic and vasoactive therapy, until the 9th postoperative day, leading to cardiopulmonary arrest unresponsive to CPR. **Discussions :** This case illustrates the devastating consequences of misdiagnosing a critical condition such as Acute Stanford type A aortic dissection, which presents high mortality even when it is correctly recognized and promptly treated. Acute coronary syndromes resemble precisely this disease as predisposing factors and clinical features, emphasizing the crucial impact that early imaging tests have in differential diagnosis. **Conclusions:** The major complication of misdiagnosing an acute aortic dissection as an acute coronary syndrome is initiating the early antithrombotic therapy with subsequent increased bleeding risk, representing both an intraoperative and postoperative negative prognostic factor. Studies showed that patients with preoperative antiplatelet therapy presented a higher mean 24h-postoperative drainage, along with receiving more volume of blood transfusion.

Keywords: misdiagnosis, acute aortic dissection, antithrombotic therapy, bleeding

POSTER - NON - SURGICAL

IS THE RECANALIZATION OF DEEP VENOUS THROMBOSIS POSSIBLE IN PATIENTS WITH MALIGNANT DISORDERS?

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Introduction: Deep vein thrombosis(DVT) occurs when a thrombus forms in one or more of the deep veins in the body, usually in the legs. It is well-known that cancer patients have an increased risk of venous thrombosis due to several factors. The mechanisms of thrombogenesis in cancer are complex and incompletely known. Tumor cells can activate the blood coagulation cascade through multiple mechanisms like the production of procoagulant, fibrinolytic and pro-aggregatory molecules, the release of proinflammatory cytokines and proangiogenic factors. Also tumors can compress the veins causing stasis, furthermore cancer patients are exposed to hospitalization, surgical interventions, and chemotherapy, all of which increase the risk of thrombosis. **Case Report:** We present the case of a 53-year-old male patient with deep vein thrombosis known in his anamnesis to have stage IV B malignant non-Hodgkin's mantle cell lymphoma. Oncological treatment was instituted followed by autologous stem cell transplantation through a central venous catheter for the haematological pathology. 40 days post-transplantation, the patient presents a proximal deep venous thrombosis on the right femoral-popliteal-tibial axis and the greater right external saphenous vein thrombosis. The diagnosis had been confirmed by venous color Doppler ultrasonography, for which anticoagulant drug treatment with Low Molecular Weight Heparine was administered and continued at home with Rivaroxaban. **Discussions :** For nearly two centuries, numerous studies have provided consistent evidence regarding the occurrence of venous thromboembolic disease in patients treated for cancer. Deep vein thrombosis after central venous catheter is common. On the 13th day after discharge, the patient was re-evaluated for the DVT and a favourable evolution was noticed with the right femoral-popliteal-tibial axis with discrete signs of recanalization. **Conclusions:** Although the central venous catheter-related DVT is common a few days post-transplantation, the presented case confirms the occurrence of DVT over a longer period, beyond 40 days, which according to studies in the specialised literature can be quite frequent in oncological patients . Therefore these type of patients should be thoroughly evaluated for a longer period of time (at least 30 days) after the venous catheter implantation.

Keywords: DVT, malignant non-Hodgkin’s lymphoma, stem cells transplantation, central venous catheter

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CLINICAL CASE OF RESPIRATORY FAILURE SECONDARY TO AN EXPANSIVE INDOLENT MATURE B-CELL LYMPHOMA

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Introduction: Indolent lymphoma is a type of cancer that affects the lymphatic system, and it is distinguished by the gradual proliferation of malignant cells. The symptoms of this condition are frequently ambiguous, which makes the diagnostic procedure difficult and protracted. Because of the vagueness of the symptoms and the gradual rate of progression, there are instances where the proper diagnosis is neglected, and the disease is discovered incidentally during routine assessments. **Case Report:** We report the case of a 77-year-old female patient who has had a history of respiratory tract diseases since 2012 when she was diagnosed with bronchopneumonia and parapneumonic pleurisy. During the following 9 years, the patient was frequently hospitalized and diagnosed with conditions such as acute respiratory failure, atypical extensive right pneumonia, and right pleurisy. In May 2021, the patient's symptoms worsened, and she presented to medical services with moderate hemoptysis, dyspnea on moderate exertion, fatigue, and a SaO2 of 91%. A native chest CT scan revealed a large tumor formation located in the right infrahilar region, which was causing mediastinal compression and secondary atelectasis of the middle and lower right lobes. A pulmonary biopsy was conducted via bronchoscopy, and it indicated the possibility of a lymphoproliferative disorder based on the microscopic characteristics of the tissue sample. Immunohistochemical analysis revealed positive staining for LCA and CD20 in tumor cells, but no expression of Bcl6, and a low Ki67 proliferation index (less than 10%). **Discussions :** The gradual progression of the condition, along with its vague symptoms, complicated and prolonged the diagnostic process. After thorough paraclinical investigations, the presence of an indolent mature B-cell lymphoma was ultimately confirmed. With the establishment of an etiological diagnosis, the patient received treatment consisting of six cycles of 600 mg Mabthera and CHOP, which resulted in a favorable clinical outcome. **Conclusions:** This case stands out due to several unique aspects. Firstly, indolent

non-Hodgkin's lymphoma usually affects structures other than the bronchi, and the diagnosis through bronchoscopic biopsy is considered rare in the medical literature. Additionally, the importance of establishing an etiological diagnosis and administering targeted treatment represents two other distinctive features of this case, which resulted in the patient's near-complete recovery and a significant improvement in her quality of life.

Keywords: Indolent non-Hodgkin lymphoma, respiratory failure, mediastinal compression

CROSS-CHECKING THE QUALITY OF ONLINE INFORMATION USING THE BRIEF DISCERN INSTRUMENT ON A SAMPLE OF ENGLISH LANGUAGE WEBSITES ABOUT ALZHEIMER'S DISEASE

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Introduction: Given that the internet is increasingly used nowadays for health-related information, it is necessary to have tools that establish the quality of medical-related sites. Brief DISCERN is one of the instruments used to evaluate the characteristics of written information from internet sources. **Case Report:** The main purpose of the study was to verify if there are correlations between different assesements tools applied to patient-targeted websites.. The study included 25 English websites focused on Alzheimer's disease. Web searches using this specific term were performed on Google and the first 25 relevant websites were included based on pre-established inclusion and exclusion criteria. Each website was rated for credibility, completeness and accuracy in the first place, followed by an evaluation using the Brief DISCERN instrument. Descriptive statistics and correlation tests were performed in GraphPad Instat Demo. The Pearson or Spearman correlation tests were applied in order to check the correlation between the Brief DISCERN on the one hand and Google ranks, credibility, completeness, and accuracy scores on the other hand. The cut-off value for statistical significance was set at 0.05. **Discussions :** Correlations were found between the Brief DISCERN scores and the credibility scores (Spearman r=0.4662, p=0.0188), the completeness scores (Pearson r=0.5051, p=0.01), and the accuracy scores (Pearson r=0.5225, p=0.0074). In contrast, the Brief DISCERN scores were not significantly correlated with the Google Ranks (Pearson r=-0.3173, p=0.1222). **Conclusions:** This study has shown a moderate correlation between the Brief DISCERN scores and credibility and content quality indicators on the Alzheimer's disease websites in the English language. The Brief DISCERN may be a helpful health information quality tool, but further studies are needed to check its broader applicability. Finally, the websites' Google ranking was not related to the quality of informational content.

Keywords: quality of medical websites, e-health, misinformations, Alzheimer's disease

VARIATION OF MACULAR PIGMENT OPTICAL DENSITY IN RELATION WITH IRIS COLOUR. STUDY CONDUCTED ON UMFST STUDENTS

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Introduction: Macula, the posterior part of the retina, has three different pigments: zeaxanthin (Z), meso-zeaxanthin (MZ) and lutein (L), known generical as macular pigments (MP), which have an important role for the eyes, by having the ability to block a major portion of the ultraviolet (UV) radiation from reaching the retina. They are also known for being very effective antioxidants. **Case Report:** The aim of this study was to investigate if the iris colour has an impact on the concentration of the Macular Pigments. We performed a prospective study on a group of 24 students (N=24) from University of Medicine, Pharmacy, Science and Technology "George Emil Palade" in Târgu Mureș. The inclusion criteria were: participants who had blue or brown eyes. The exclusion criteria were: participants with vision disorders, with abnormal refractions causing ametropic eyes. For this study, we performed a visual acuity test which assesses spatial resolution at high contrast by using an eye chart, and a contrast sensitivity test which measures spatial resolution when contrast fluctuate, by using a protoype of Pelli-Robson chart. For the last part of the study we used MPS II (Macular Pigment Screener), a portable device that measures macular pigment optical density , conventionally abbreviated as MPOD. **Discussions :** The mean age of the patients included in the study was 24,2917 ± 2,73, DS : 1,6545. From the group of participants, 12 of them were women (50 %), and 12 of them were men. (50%). After applying Unpaired T Test using GraphPad, the result

for Macular Pigment Density in the right eyes for blue and brown eyes was statistically insignificant (p=0,71), while in the left eye the same T test for both type of iris colours also shows a statistically insignificant correlation (p=0,64), considering it significant when p <0.05. **Conclusions:** Results from our research show no significant differences regarding the macular pigment density in patiens with different iris colour, but further studies should provide more informations on this specific topic.

Keywords: Macular Pigments, Retina, Ophtalmology, Iris Colour

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REPEATED RECURRENCE OF EPITHELIOID SARCOMA – A CASE REPORT

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Introduction: Epithelioid sarcoma(ES) is one of the rarest high-grade types of sarcoma and was first identified by Enzinger in 1970.This aggressive malignancy, primarily affects the hands and wrists of young males and it is known to be prone to locoregional recurrence and distant metastases. **Case Report:** A series of 6 fragments of tumoral tissue were extracted and processed from the forearm and the left hand of a 36-year-old female patient. She had two diagnoses of epithelioid sarcoma in the past, the first being given 2 years ago, affecting exactly the same spot. Tumor size ranged from a few millimetres to 4cm with an average of 2cm. The histopathological changes found on the microscopic investigation confirmed the diagnosis of reccurence of epithelioid sarcoma(ES). At the level of the dermis, both papillary and reticular layers, reveal the tumoral process presenting fusiform and epitheloid cells, which were disposed in bundles and perivascular sheaths. The tumor center showed palisading necrosis, abundant eosinophilic cytoplasm with marked nuclear atypia and multiple mitosis, particularly atypical ones. The tumor was infiltrating the deep resection margins. The immunohistochemical profile supported the diagnosis and was positive for S100, EMA, CTK AE1/AE3, and negative for CTK8-18. **Discussions :** Epithelioid sarcoma(ES) is a relatively uncommon malignant soft tissue tumor characterized by cytokeratin(CK) and epithelial membrane antigen immunoreactivity(EMA). The distal extremities (especially the forearm, wrist, and hand) of young adults are most commonly affected by epithelioid sarcoma, the male gender being predisposed (male-to-female ratio, 2 : 1). Epithelioid sarcoma appears in the skin as nodular aggregates of epithelioid cells, or a plaque-like lesion and spreads along fascial planes, tendons, and nerve sheaths. Mitotic activity is typically low, but in our case, numerous mitotic activities were observed. Local recurrence, which is primarily determined by the efficacy of the initial surgical excision, metastasis, which typically occur after repeated local recurrences, primarily to the lungs, but also to regional lymph nodes, and death can occur 20 years or more after the initial diagnosis; therefore, long-term follow-up is required. **Conclusions:** ES is a remarkable type of soft tissue sarcoma that appears harmless and progresses slowly over time, but with a high rate of metastases and recurrence. ES creates a diagnostic barrier, delaying a proper diagnosis and course of treatment. Immediate surgical excision with adjuvant radiotherapy if locoregional metastases are present is the most crucial step in the treatment of ES.

Keywords: Ephitelioid sarcoma, Recurrence, Malignancy

INVASIVE UROTHELIAL CARCINOMA: ITS REMARKABLE DIVERSITY OF MORPHOLOGICAL APPEARANCES – A CASE REPORT.

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Introduction: Urothelial carcinoma (UC) is the most common type of bladder cancer; it typically occurs in individuals of 50 to 80 years old. From a histological point of view, UC can present as pure conventional UC, UC with squamous or glandular differentiation, or UC subtypes, including small cell, micropapillary, sarcomatoid, and plasmacytoid. **Case Report:** We present the case of 69-year-old patient who underwent a total cystoprostatectomy for a bladder tumor. The specimen was sent to the Department of Pathology, sampled, and further processed. At microscopy, an infiltrative UC in the urinary bladder, infiltrating the perivesical adipose tissue was observed. The tumor showed a heterogeneous appearance, with different histological morphology, including squamous, glandular, and micropapillary differentiations. The tumor also infiltrated the intramural course of the left ureter. The final diagnosis was infiltrative UC, with extensive squamous and glandular differentiation, with a micropapillary urothelial carcinoma component, infiltrating the bladder wall into the perivesical adipose tissue, stage pT3bN0MxR1. **Discussions :** The particularity of this case resides in the presence of three distinct histological

aspects of UC: squamous, glandular, and micropapillary. The histological subtype of UC can impact the prognosis and treatment of the disease. Tumors with squamous differentiation and micropapillary subtype tend to be more aggressive, with a higher risk of recurrence and metastasis. Micropapillary subtype may also be less responsive to certain treatments, such as immunotherapy, compared to tumors without squamous differentiation. **Conclusions:** Thus, recognition and correct pathological diagnosis of these rare variants is out most important for a correct management of the patient.

Keywords: urothelial carcinoma, glandular differentiaton, squamous differentiation, micropapillary subtype

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JUVENILE COLONIC POLYPOSIS SYNDROME: FIERCE GENOTYPE, GENTLE PHENOTYPE

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Introduction: Juvenile colonic polyposis syndrome (JPS) is a rare condition (1:20,000-100,000) characterized by the appearance of hamartomatous polyps in the digestive tract, especially in the colon. The term "juvenile" reflects the histological type of the polyps and not necessarily the age at which they appear. **Case Report:** 29-year-old patient has been presenting with minimal terminal rectal bleeding for 5 years. The previous rectosigmoidoscopic examination reveals normal relations of the left colon, with small hemorrhoidal dilatations, on account of which the rectal bleeding is attributed. Upon re-evaluation, we perform a total colonoscopy, which reveals two polyps at the sigmoid colon level, one sessile 4 mm in diameter, when examined with an NBI PARIS Is, NICE 2 filter, another pedunculated 3 cm in diameter PARIS Ip, NICE 2, apically ulcerated. Endoscopic polypectomy and endoscopic hemostasis are practiced. Favorable post-procedural evolution, and disappearance of rectal bleeding. The histopathological examination indicates hamartomatous polyps with predominantly epithelial phenotype, lobulated appearance, high density of glandular crypts, villous surface, mucinous columnar epithelium, Ki67 activity 10%. The genetic profile for hereditary polyposis is determined, the patient being homozygous for the SMAD4 gene mutation (c1565delC, p.Pro522fs). There were no cases of polyposis or colorectal cancer in the patient's first and second degree relatives, but the small number of family members was a major limiting factor in the investigation. The mother's genetic profile for hereditary polyposis was normal. The detection of juvenile polyps requires the investigation of the entire digestive tract, the upper digestive endoscopy and the videocapsule examination of the small intestine being normal. The risk of developing hereditary hemorrhagic telangiectasia (HHT) and the risk of pulmonary arteriovenous malformations (AVMs) required brain MRI and echocardiography. **Discussions :** Rectal bleeding, even if it occurs at a young age, is an indication for endoscopic exploration; colonoscopy remains the gold standard. The SMAD4 mutation (c1565delC, p.Pro522fs) is a rarer mutation of this gene, explaining its absence in the mother and being most likely a spontaneous mutation. As an important particularity, this mutation is associated with profuse diarrhea, enteropathy with protein loss, multiple hamartomatous polyps - aspects that are not found in the patient. Other particularities of this case include the small number of polyps diagnosed and the age at which the diagnosis is made. **Conclusions:** Familial juvenile polyposis is a condition with a wide pathological spectrum, which requires treatment and personalized monitoring of the patient due to the multisystemic damage and the evolutionary potential towards cancer.

Keywords: juvenile colonic polyposis syndrome, hereditary polyposis, hamartomatous polyp, SMAD4 gene mutation

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AN UNCOMMON VISIT AT THE BARBERSHOP - SUDDEN RUPTURE OF AN INTRACEREBRAL SACCULAR ANEURYSM

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Introduction: The etiology of subarachnoid hemorrhage (SAH) can be either non traumatic or traumatic, most of the non traumatic SAH are caused by a rupture of an intracranial aneurysm. Symptoms of rupture are typically sudden with severe headache, frequently associated with vomiting and nausea. **Case Report:** We present a case of a 70 years-old patient who presented an abrupt, sudden headache while he was getting an haircut at the barbershop. Subsequently when the ambulance arrived, the patient started to develop mixed aphasia,

psychomotor agitation, two episodes of vomiting, bradycardia and became gradually unresponsive. As soon as he arrived at the hospital, he developed coma with a Glasgow Coma Scale of 3 points, he presented flaccid tetraplegia and two episodes of prolonged apnea, for which orotracheal intubation and mechanical ventilation were performed. A native and contrast enhanced cerebral computed tomography (CT) scan was performed which revealed a hyperdense lesion of 21 mm in the frontal parasagittal region with pan-ventricular hemorrhagic effusion. The cerebral angio-CT scan showed a saccular aneurysm of 11 mm in the Anterior communicating artery (ACoA). A cerebral angiography was performed showing the following results: irregular saccular aneurysms at the level of the communicating segment of right internal carotid artery (ICA), in the ACoA, two at the level of communicating segment of the left ICA and a vasospasm of anterior cerebral artery (ACA). Endovascular coiling of the ruptured and unruptured aneurysms was performed, to stop the hemorrhage and prevent rebleeding. During the ICU stay, the patient presented gradual hemodynamic and neurological deterioration, subsequently presenting a cardiac arrest, which was unresponsive to resuscitation procedures, the end result being death. **Discussions :** Subarachnoid hemorrhage has a high death rate and permanent disability. Timely treatment of intracerebral aneurysm rupture is important to prevent complications and increase favorable outcome. Prognosis depends on the volume of the initial hemorrhage, rebleeding, and the degree of cerebral ischemia. **Conclusions:** Endovascular treatment of ruptured intracranial aneurysm is usually accompanied by good long-term outcomes and lower morbidity and mortality, compared to classic surgical treatment. Based on the sudden onset of severe symptoms following the rupture, the prognosis was not favorable and despite the attempt of treatment the result was exitus. Worldwide, 1 out of 4 patients with ruptured cerebral aneurysms dies.

Keywords: Endovascular treatment, Intracranial aneurysm, Subarachnoid hemorrhage., Sudden rupture

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ALOPECIA ASSOCIATED WITH HYPERSENSITIVITY TYPE 1 REACTION

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Introduction: Alopecia is a chronic, immune-mediated skin disorder characterized by sudden hair loss on the scalp, eyebrows, eyelashes and body hair. This hair loss is very unpredictable, as its growth can return to normal at any time, and then suddenly fall out again. The causes can be hereditary, hormonal changes, medical conditions, even due to some allergies or physiologically by aging. **Case Report:** The aim of this paper is to present a particular atopic patient case, with allergic rhinitis and alopecia of unknow etiology under the suspicion of a link between them. The patient is a 6 years old male child, who was referred to the allergology office for repeated episodes of nasal congestion and coughing and, in addition, a persistent history of alopecia areata. According to mother's reports, the child has recurrent ears and nasal infections associated with nasal congestion since the year of 3, and from April 2022 the patient developed cervical alopecia areata of unspecified etiology. The child has been treated several times with antiH1 antihistamines and he is under topical treatment with minoxidil 2% after dermatological diagnosis of alopecia. The family history of the patient mentions a grangrandfather with colon cancer and his mother underwent surgery for colonic polyposis at the age of 26. **Discussions :** Our patient described superior airways symptoms consisting of allergic rhinitis; the diagnosis being sustained by positive skin prick test to grass pollens. Due to this atopic characteristics, blood tests for gluten intolerance and food allergy raised the suspicion of his sudden alopecia episode also being linked to an allergic/intolerance etiology. From the examinations results gluten intolerance came out negative since anti transglutaminase antibodies screen test was negative, but the patient tested positive to specific IgE to cow milk proteins. IgE for potatos and carrots were elevated, but cross-reactive carbohydrate determinants (CCDs)-as markers- were also increased. **Conclusions:** The positive diagnosis of allergic rhinitis with intermittent form is well sustained by hypersensitivity to grass pollens. Something to keep in mind is that cow's milk, bovine serum albumin, potatoes and carrots specific IgE are present as well, even without symptoms. In this young patient we are still supposing a connection between allergy ,especially cow milk and beef proteins, and his alopecia areata. In addition to classical treatment , we adviced him to follow for a period of at least 6 weeks, a diet avoiding cow's milk and derivates, raw potatos and carrots.

Keywords: allergy, atopy, allergic rhinitis, alopecia

OVARIAN ECTOPIC PREGNANCY: A RARE CASE REPORT

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Introduction: A primary ovarian ectopic (OP) is an infrequent type of extrauterine pregnancy that is found in less than 2% of all ectopic pregnancies. It can occur in people who use ovulatory drugs, have an intrauterine device, or have undergone in vitro fertilisation or embryo transfer. Other known risk factors include being younger and having had multiple pregnancies. Identifying an OP pregnancy can be difficult, as it may be mistaken for a bleeding luteal cyst, a haemorrhagic ovarian cyst, or a tubal pregnancy during an ultrasound scan. Typically, a definite diagnosis can only be made through laparoscopy and subsequent histopathological examination. **Case Report:** A 20-year-old patient presents herself in the Emergency Department of the Gynecology Service of SCJU Mures, complaining of pelvic-abdominal pain. Following the anamnesis and the general clinical examination of organs and systems, the gynaecological examination, the ultrasound examination, and the clinical diagnosis of the right adnexal tumour and hemoperitoneum were established. Later, a right partial ovariectomy and drainage of the Douglas were performed. **Discussions :** Although the exact mechanism of the disease in ovarian pregnancy is unknown, fertilization of the egg may occur before it is released from the follicle. Other possibilities would be the reflux of the fertilized oocyte, the thickening of the tunica albuginea, and tubal dysfunction. In our case, the most essential diagnosis will be issued in the pathology service, more precisely under the microscope: Elements from both the ovarian and pregnancy structures are highlighted, namely ovarian follicles in different stages of development and a yellow body cyst wall. Adjacent to this cyst, trophoblastic elements are represented by oval-shaped chorionic villi, delimited by the syncytiotrophoblast and cytotrophoblast, which denotes the characteristics of an ectopic ovarian pregnancy. Other factors incriminated in an ectopic pregnancy are given by Artificial Reproductive Technologies (ART) and the use of Intrauterine Contraceptive Devices (IUCDs). Diagnosis is difficult because up to a certain point, it can meme a normal pregnancy. **Conclusions:** Since ovarian ectopic pregnancies can have life-threatening complications, we can say that our patient is one of the lucky cases. She was detected early and treated in the shortest time and in the best conditions at the hospital of Targu Mures. The patient had a favourable evolution recovering in a short period, and without remaining with significant deficiencies.

Keywords: ART, IUCDs, hemoperitoneum, chorionic villi

SOCIOECONOMIC STATUS IMPACT ON A PATIENT'S HEALTH CONDITION WITH SECONDARY DIABETES

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Introduction: Secondary diabetes is a clinical condition that arises because of pre-existing pathologies such as pancreatic diseases, endocrine diseases, infectious diseases, or genetic defects. The development of the condition is linked to relative insulin deficiency, insulin resistance or both, resulting in an increase in the hyperglycemic state. The aim of this paper is to highlight the impact of Socioeconomic status (SES) on the management of a patient diagnosed with secondary diabetes. **Case Report:** A 61-year-old male patient was admitted to the Diabetology Department with symptoms of asthenia, fatigue, polydipsia, polyuria, pain in the back-lumbar spine with radiculopathy radiating to the right lower limb, emetic syndrome, toothache, and unbalanced glycemic values. Objective examination points out symptoms such as nausea, vomiting, and abdominal pain, characteristic signs of diabetic ketoacidosis. He complains of toothache, a hallmark of diabetic disease, marked by increased weakness of teeth and gums, which can provoke infections which can in turn raise blood sugar. He is known to have secondary diabetes, insulin-dependent since November 2014. **Discussions :** The patient suffers from chronic pancreatitis because of alcohol consumption for long periods of time. Due to the progression of the disease, he developed secondary diabetes. The high glycemic values at the time of admission, linked to diabetic ketoacidosis, show an incorrect intake of drug treatment consisting of basal and rapid insulin, even though he claims to do so. The patient's history shows up that he is unemployed and no fixed abode. Although the Romanian State provides free medications without any distinction of individual, social and economic conditions, the patient's unhealthy lifestyle negatively alters the pharmacological intake, essential requirement to treat any kind of pathology. He is a well-known patient of the Targu Mures diabetology department, as he is often hospitalized due to unbalanced

glycemic levels. The diagnosis of his health condition that emerges from the anamnesis is associated with failure of pharmacological treatment due to the absence of a suitable place in which correctly store and take insulin. Equally important is the followed unbalanced diet which negatively affects the progression of the disease. **Conclusions:** Our goal is not only to focus on the medical management of the disease, but also on the education of a correct lifestyle in a suitable fixed abode. The aim is to make him understand how much better is to live in a more comfortable environment to be able to properly treat the disease from which he is suffering from.

Keywords: secondary diabetes, chronic pancreatitis, socioeconomic status, no fixed abode

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ACUTE MYOCARDIAL INFARCTION IN A PATIENT WITH CORONARY ARTERY ANOMALY – A CASE REPORT

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Introduction: Acute myocardial infarction is one of the most common cause of death in the world. More than 80% of acute myocardial infarcts are the result of coronary atherosclerosis with superimposed luminal thrombus. Coronary artery anomalies (CAA) are defined as variations in coronary anatomy, and are present in less than 1% of the population. Most CAA do not result in signs, symptoms and usually are discovered incidentally at the time of catheterization, therefore the majority being described as benign. **Case Report:** We present the case of a 47 years old male patient, heavy smoker, with hypertension, non-compliant to the treatment, admitted to Cardiology Clinic, presenting typical angina, that started 2 hours before. The ECG show a sinus rhythm with ventricular bigeminal extra systoles, heart rate of 81bpm, left axis deviation, ST segment elevation in V2-V6 and right bundle branch block, with a high-sensitive Troponin-I of 7797 and the Creatine-Kinase MB of 109.6 ng/ml and a diagnosis of acute myocardial infarction with ST segment elevation was made. An emergency coronary angiography was performed, which detected a dilated Left Main Coronary Artery (LMCA) with a caliber >5mm, a ulcerated plaque with thrombotic content and significant stenosis on the Left Anterior Descending Artery (LAD), the Left Circumflex Artery (LCX) with 70% stenosis, and a Right Coronary Artery (RCA) with aberrant emergence from the LMCA. Direct stenting with Drug Eluted Stent (DES) was performed on the LAD with restoration of the vascular lumen. Aortography of the ascending aorta was performed and the origin of the RCA could not be highlighted. Treatment with double antiplatelet therapy, statins, betablockers, ACE inhibitors and diuretics were started and a favorable evolution was achieved. **Discussions :** Considering the two-vessel coronary artery disease (CAD) in context of a single main coronary artery in a young patient, we should place him in the high risk group for further cardiovascular events and SCD. Therefore we should reinforce the importance of continuing secondary prevention measures, optimizing risk factor control and therapeutic goal achievements, adopting a healthy lifestyle, and appropriate disease education. **Conclusions:** CAA is a condition that is often not discovered due to its lack of symptoms but should not be ignored, as in some cases it can lead to life threatening events and SCD, especially in the context of CAD and AMI. A screening in patients that have a family history of vascular anomalies will help reveal undiagnosed cases and prevent further complications.

Keywords: Acute Myocardial Infarction, Coronary Artery Anomaly, Sudden Cardiac Death

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PUSHING THE LIMITS OF CARDIAC CARE: CLINICAL INSIGHTS FROM A PATIENT DEFIBRILLATED 120 TIMES FOR CARDIAC ARREST DUE TO ARRHYTMIC STORM.

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Introduction: Arrhythmic storm is a condition in which multiple ventricular arrythmias occur within a short period of time. It usually appears in patiens with underlying structural heart disease after certain trigger events. **Case Report:** We present the case of a 68-years-old patient, known with grade II hypertension, Heart Failure with Reduced Ejection Fraction (HFrEF), paroxysmal atrial fibrillation with rapid ventricular rate, second-degree obesity and diabetes mellitus, who was urgently transferred from Miercurea Ciuc Hospital to Emergency Clincal County Hospital Targu Mures after multiple episodes of cardiac arrest (CA) with Ventricular Fibrillation (VF). Based on examinations, such as symptoms of typical angina, ECG, echocardiography with anterior wall hypokinesia, cardiac biomarkers with an intense reaction, with a peak of high-sensitive Troponin I to 38056 ng/L , the case was interpreted as late presentation of an acute myocardial infarction that was complicated with repeated 121 episodes

of cardiorespiratory arrest due to malignant ventricular arrhythmias, all successfully resuscitated. Coronarography was delayed due to exceeding the therapeutic revascularization window. Antiarrhythmic medication was initiated, starting with beta-blockers and Amiodarone, but Amiodarone was ceased shortly because of the association with prolonged QT interval and replaced with Lidocaine and Magnesium sulphate. During hospitalization, the patient presents multiple episodes of CA through VF and torsades de pointes, and it is decided to perform a coronary angiography that shows a subocclusive stenosis in the Left Anterior Descending artery (LAD), and a drug-eluting stent is implanted at this level. Intraprocedurally, one more external cardioversion was performed for another cardiac arrest throug VF. Postprocedurally, over the course of three days, the patient continues to have multiple episodes of CA via VT/VF successfully resuscitated, subsequently with maintenance of sinus rhythm. Also, phenytoin was introduced as antiarrythmic treatment and no other malignant arrhythmia were detected. During hospitalization, for the secondary prevention of sudden cardiac death, an intracardiac defibrillator is implanted. **Discussions :** The acute management of arrhythmic storm involves the recognition of risk factors, the reversal of potential triggers, and the restoration of hemodynamic stability. Ventricular tachyarrythmias occur early in ischemia and patients presenting with AMI and in this patient arrhythmias were aggravated by QT interval prolongation and electrolite imbalance. Before patient discharge an implantable cardiocardioverter defibrillator is implanted. **Conclusions:** Arrythmic storm carry increased mortality and the treatment represents a big challenge for physicians. The risks are substantial and require careful management and continuous monitoring of the patient.

Keywords: Arrythmic storm, Ventricular Fibrillation, Cardiac arrest, Intracardiac defibrillator

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DIAGNOSTIC DIFFICULTIES IN A CASE OF SEZARY SYNDROME

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Introduction: Sezary Syndrome (SS) represents the leukemic variant of the cutanaeus T-cell lymphoma (CTCL). The onset of the disease often occurs with erythemato-squamous plaques that mimic eczema, psoriasis or drug skin reactions. **Case Report:** We present the case of a 65-year-old patient that was admitted in our clinic for a cutaneous eruption composed of large erythematous plaques with fine scale, highly pruritic that involved the head, the trunk and the root of the limbs. The patient also associated fissured plaques of the palms and soles, onycholysis, axillar and inguinal polyadenopathy, physical asthenia and inappetence. Repeated previous biopsies reported nonspecific histopathological changes. Under systemic corticotherapy with prednisone 0.5 mg / kg / day, topical corticotherapy with methylprednisolone and NB-UVB phototherapy, the patient had a partial response and rapid relapses when corticotherapy and phototherapy were tapered. **Discussions :** A new cutaneous biopsy revealed an inflammatory lymphohistiocytic infiltrate in the papillary and the reticular dermis disposed in dense perivascular aggregations with ascending solitary lymphocytes in the basal layer and the formation of rare intraepidermic nests. Lymphocytes observed at the interstitial level were small and medium in size, with enlarged, polyhedral and irregularly contoured nuclei. The immunophenotypic dermal and epidermal lymphoid infiltrate had a mature T helper cell profile with CD3 +, CD5 +, CD4 +, CD8- and CD20-. CD8 stains small dermal lymphocytes and few epidermal lymphocytes with the CD4 / CD8 ratio being net in favour of CD4. CD4 and CD5 reveal the lymphocyte group as dense aggregations around the superficial vascular plexus as well as the predominant interstitial cells among the collagen fibers, as aggregations in the dermal papillae and as numerous epidermal ascended lymphocytes. Thus, the histopathological aspect was highly suggestive for the SS motivation for which a peripheral blood flow cytometry was performed which detected the presence of a lymphocyte clone with identical phenotype to that found in the cutaneous biopsies. **Conclusions:** SS may evolve for a period of time with uncharacteristic clinical and histopathological changes. A clinical suspicion of SS may require multiple cutaneous biopsies as well as confirmation of the leukemic determination by peripheral blood flow cytometry.

Keywords: Sezary syndrome, palmo-plantar fissures, flow cytometry, histopathological examination

LEFT PLEURAL EFFUSION: PULMONARY DAMAGE IN PANCREATIC PATHOLOGY

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Introduction: Acute pancreatitis causes a significant systemic inflammatory response that affects multiple organs. Pulmonary complications include pleural effusions, hypoxia, atelectasis, and acute respiratory distress syndrome. Pancreatic ascites and pleural effusion are rare complications of chronic and acute pancreatitis and have a mortality rate of 20% to 30%. Pleural effusion is an indicator of poor prognosis in pancreatitis. **Case Report:** A 44 years male patient, with chronic alcohol consumption and without significant medical history, complains of the following symptomatology progression: abdominal left upper pain, left flank pain, loss of appetite and important, unintentional weight loss in the last year (7kg). Clinical examination excluded the suspicion of chirurgical acute abdomen and revealed left hypochondriac pain at palpation. Four days later, the pacient's pain started to iradiate posteriorly, associated with the abscence of intestinal tranzit. An abdominal ecography was performed and described an inomogen pancreas with cephalic calcifications (disorganisation), in contact with a duodenal divertickle. Retroperiotneal ecography showed splenomegaly with a lame of perisplenic fluid, left basal pleuresia and ascites fluid in Douglas space. Abdomino-pelvic CT performance was mandatory in this situation and it highlighted changes of acute pancreatitis with peripancreatic firings, clazonated collections, cephalic pseudocysts and bilateral pleural effusion. At the pulmonological examination, an echoguided thoracentesis was performed and 400 ml of xanthochrome fluid with exudate characteristics and the increase of amylases in the pleural fluid were evacuated. As treatment, the pacient received analgesic, antisecretor, antibiotic tratment with parenteral alimentation. His prognostic is reserved. **Discussions :** The particuliarity of this case is the development of a pleural effusion in a patient with an episode of acute pancreatitis developed on the background of a suspicion of pancreatic neoplasm. Pancreatic cancer is one of the most challenging malignangies and the treatment options are limited because usually it's diagnosed at an advanced stage. The management of this condition is multidisciplinary, involving a pulmonologist, gastroenterologist and a radiologist. **Conclusions:** The pancreatic pathology is responsible for the simptomatology of our pacient. Complete investigation of extradigestive complications is part of the management of these cases. The presence of ascites and pleural effusion gives an additional gravity factor. Establishing the pancreatic cause for pleurisy guides the treatment, since the treatment of pancreatitis will lead to remission of pleural effusion.

Keywords: pleural effusion, cephalic pancreatic cancer, thoracocentesis, acute pancreatitis

ABDOMINAL PAIN SYNDROME: ATYPICAL PRESENTATION OF A SQUAMOUS LUNG CARCINOMA

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Introduction: Bronchopulmonary neoplasm ranks 2nd in frequency, in men, but represents neoplasia with the highest mortality. Squamous carcinoma belongs to the non-small cell category, occupying the 2nd place in frequency, after adenocarcinoma. **Case Report:** We present the case of a 67-year-old male, smoker, without significant medical history, complains of important abdominal pain syndrome, lumbar irradiated, generalized physical asthenia. Examination of the abdomen excluded the presence of an acute abdomen. The thoracic radiography described oval opacities of medium intensity of up to 10 mm, projected at the level of the right posterior costal arch and left VI, and the thoracic tomography computer revealed the presence of a homogeneous infrahilar right mass, with the incorporation of the LID bronchi and mediastinal adenopathies with the diameter of 20 mm. Abdomino-pelvic CT highlights peritoneal/retroperitoneal adenopathies with axial diameter of 18mm, and abdominal ultrasound revealed intrahepatic hypodense masses, with the appearance of secondary determinations, one of them of increased size. These investigations led to the performance of bronchoscopy, which revealed a vegetative proliferative process, which occupies entirely the right lower bronchi. The histopathological examination confirmed a non-small cell bronchopulmonary carcinoma, in favor of a squamous carcinoma with a positive reaction p40(BC28). The painful syndrome was not responsive to the usual pain medication, and treatment with

major pain relievers - injectable morphine was initiated, with symptomatology relief and pain control. The case was transferred to the Oncology for chemotherapeutic treatment. **Discussions :** The particularity of the case is given by the symptomatology of the patient who is not of respiratory type and also by the presence of secondary liver and bone determinations from the diagnosis. The initial suspicion was of carcinoma with small cells, but it was refuted by the histopathological diagnosis. Liver determination of increased size raised suspicion of hepatocarcinoma, but this was refuted by humoral determinations. The patient refused puncture liver biopsy. Advanced non-small cell carcinoma is treated with a multimodality approach that may include radiotherapy, chemotherapy and palliative care. The prognosis of this patient is unfavorable, being a stage IV from the moment of diagnosis, with the presence of remote pulmonary metastases. Treatment of pain should be initiated in neoplastic patients, since this affects the quality of life. **Conclusions:** The way of presenting patients with lung cancer is non-specific, but the investigations must be carried out in order to obtain an accurate and correct diagnosis, so that the patient can benefit from a correct treatment.

Keywords: NSCLC, fibronoscopy, liver metastases, p40

NEGATIVE CAVITARY SYNDROME, EARLIEST OCCURRENCE OF HUMAN IMMUNODEFICIENCY SYNDROME

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Introduction: HIV, or human immunodeficiency virus, is a virus that targets cells in the immune system and presents itself in 2 forms, HIV-1, more commonly found in America and worldwide and HIV-2, commonly found in Western Africa and Southern Asia. Over time, the immune system begins to fail because of the virus, which is called immunodeficiency, thus increasing the risk of infections and cancer. If not treated, leads to AIDS, or acquired immunodeficiency syndrome. **Case Report:** We would like to present the case of a 30-year old female patient who presented to the pulmonologist with the following symptoms: fatigue, muscle weakness and weight loss. The patient was previously treated with antibiotics by the general practioner. A chest radiography was performed, showing a cavitary lesion in the upper lobe of the left lung. The suspicion of pulmonary tuberculosis was risen. The following investigations for this diagnostic (spontaneous sputum, bronchial aspirate) were negative for Mycobacterium Tuberculosis. However, the general condition gradually deteriorated and the patient was asked for consent for HIV testing, considering the patient's age and her social background. HIV testing had a positive result, followed by the progressive deterioration of the patient's status. The symptomatology was aggravated by the sudden appearance of a hemiplegic syndrome on the right side, although initially the cerebral computer tomographic examination did not reveal an ischemic lesion. After neurological evaluation, the patient was transferred to Infectious Diseases for initiation of antiretroviral treatment. Unfortunately, during the hospitalization, the patient repeated a hemiparetic episode and a cerebral hypodense ischemic lesion was revealed, evaluated in the context of an HIV arteritis. **Discussions :** Often the diagnosis of immunodeficiency syndrome is difficult, and the symptomatology is nonspecific. Although imaging suspicion of pulmonary tuberculosis was significant, bacteriological examinations did not confirm the diagnosis. The continuation of the investigations and the multidisciplinary approach of the case led to an early diagnosis and the initiation of specific treatment, as well as to the testing of the direct contacts of this patient. The peculiarity of the case lies in the neurological impairment that complicated the evolution of this case. **Conclusions:** In HIV positive patients a variety of imagistic patterns can occur. Etiological diagnosis of cavitary imagistic lesions is often challenging and implies a list of differential diagnosis. The holistic approach of the patient, taking into account the social, psychological and somatic status, can provide clues for diagnosis.

Keywords: pulmonary tuberculosis, HIV infection, stroke

TAKOTSUBO CARDIOMYOPATHY-A CASE REPORT

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Introduction: Takotsubo cardiomyopathy represents one of the causes of acute coronary syndrome manifested as a myocardial contractile dysfunction along with myocardial necrosis caused by a major stress .That results in a

coronary flow deficit which manifests as a major apical predominant contractility disorder, in the absence of coronary stenoses. The aim of this case report is to highlight the particularities of diagnosis and evolution of this type of cardiomyopathy and the importance of establishing the correct diagnosis in order to reduce the risk of supplementary complications. **Case Report:** A 62-year-old female patient, with a history of stage 1 hypertension and mixed dyslipidemia affirmative under treatment ,was admitted to Emergency Department due to exibiting symptomes of an acute coronary syndrome manifested by chest pain that occured at rest, dyspnea and anxiety 3 hours after a major stress (a car crash).Vital parameters were stable. Electrocardiogram showed transmural myocardial ischemia in anterior leads without associated arrhythmias. Blood analysis revealed high cardiac cytolysis enzymes (hscTnI=1945 ng/L). Transthoracic echocardiogram was remarkable for severe hypokinesia with apical LV balloonig accompanied by systolic dysfunction (Ejection fraction 40%) along with heart failure signs-(elevated NT-pro BNP levels). The suspicion of an non-STEMI myocardial infarction was raised, therefore immediate coronary angiography was performed, which excluded obstructive coronary disease. Ventriculography advocated a marked apical hypokinesia with dilation of the apex. **Discussions :** The clinical features of Takotsubo cardiomyopathy that form the Mayo Clinic diagnostic criteria include: myocardial infarction with absence of obstructive coronary artery disease(MINOCA), transient dyskinesis of the apical left ventricle , ST segment or T wave abnormalities on electrocardiogram or troponin elevation and absence of myocarditis. Taking into consideration the mentioned aspects, the established diagnosis was Takotsubo cardiomyopathy, reason why double antiplatelet treatment, statins and vasodilators were instituted. The evolution was typical without futher complications and the echocardiography highlighted improvement of apical ballooning after one week. The patient came to the 1-month follow-up in the context of performing an MRI, which showed the absence of myocardial fibrosis and confirmed the recovery of ventricular kinetics, suggesting reversible transient ventricular ischemia and hypokinesis produced by excessive sympathetic stimulation caused by prolonged psychological stress. **Conclusions:** Acute stress is a provoking factor for acute coronary syndromes even in the absence of atherosclerotic lesions, leading to severe consequences regarding high risk of arrhythmogenic events or heart failure. Recognition of this pathology is mandatory for reducing the risk of these patients.

Keywords: Acute stress, Takotsubso cardiomyopathy, acute myocardial infarction, apical ballooning

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A “TONIC SEIZURE” ANNOUNCING A MASSIVE PULMONARY EMBOLISM IN A YOUNG PREGNANT WOMAN – A CASE REPORT

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Introduction: Pulmonary thromboembolism (PTE) is considered to be the third most frequent cause of cardiovascular death worldwide. During pregnancy, PTE is a leading cause of maternal mortality and poses challenges for clinicians and radiologists when it comes to establishing the certainty diagnosis. **Case Report:** We present the case of a 23-year-old woman, 20 weeks in her sixth pregnancy, who was transferred to the emergency department of Târgu-Mureș from a hospital with lower capacity after a tonic seizure episode, followed by tachycardia and dyspnoea that occurred at her residence. The blood tests showed decreased hemoglobin, hematocrit, and thrombocyte levels and increased levels of leucocytes, neutrophils, hs-CRP, D-dimer(>5 mcg/mL) and blood glucose. After various examinations, it was determined that the diagnosis of PTE is unlikely, with a Wells score of 1.5. As the patient's condition progressively deteriorated, with persistent dyspnea and chest pain, a chest X-ray was done but nothing pathological was found. After 4 hours, at a reassessment, the patient was hypotensive (85/40mmHg) and tachycardic (135bpm), with a SpO2 of 92% on room air and having an episode of unsustained ventricular tachycardia. The patient underwent peripheral vessels echography which did not reveal any superficial or deep vein thrombosis. The diagnosis of PTE could not be ruled out, and after the cardiological and gynecological consults, a computed tomography pulmonary angiography (CTPA) was ordered, which showed a massive PTE on the right pulmonary artery and a small filling defect in the left pulmonary artery. The patient was then started on unfractionated heparin, the fibrinolytic treatment having a teratogenic effect on the fetus and transferred to the cardiology department, which she left after 10 days of hospitalization. **Discussions :** Despite popular belief about radiation exposure in pregnancy, recent studies showed that the risk for the fetus is low to nonexistent, especially when the examined areas are not the pelvis or abdomen. The physician should not avoid the CT scan for the fear of radiation in a life-threatening situation, as the radiation dose can be lowered. **Conclusions:** The particularly of this case consists in the difficulties in diagnosis and treatment due to the pregnancy, accompanied by the clinical presentation: syncope misdiagnosed as tonic seizure. Moreover due to the

relatively high risks during pregnency, related to fibrinolysis, non-fibrinolytic options may be selected as a first line treatment, if available. However, published cases of thrombolytics in massive PE during pregnancy show a high rate of mother and fetus survival.

Keywords: CTPA, pregnancy, pulmonary thromboembolism, unfractionated heparin

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LANADELUMAB - THE KEY OF PROPHYLACTIC TREATMENT IN HEREDITARY ANGIOEDEMA. A CASE REPORT

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Introduction: Hereditary angioedema is a disorder in which patients develope recurrent attacks of swelling involving almost every portion of the body. It is a rare genetical disease affecting 1 in 50.000 people worldwide and it is inherited in an autosomal dominant pattern, but there are 25% chances of a "de novo" mutation. The affected gene encodes a protease known as C1 inhibitor which plays an important role in the coagulation, complement cascade and contact system. There are 3 types of HAE: type I resulting from a quantitative deficiency of C1 inhibitor, type II resulting from a dysfunctional C1 inhibitor and type III in whom both quantitative levels and functional studies of C1 inhibitor are normal. **Case Report:** We present the case of a 32 year old female with type II HAE whose father and grandfather were diagnosed with HAE. Her first attack of swelling has been reported at the age of 2, followed by approximately 1-2 annual attacks during her childhood. As the puberty started and the levels of estrogen rose she began to suffer 1 attack every 2 months. At the age of 16, for the first time, she has had the quantity and function of C1 inhibitor measured and she was officially diagnosed with HAE. As the attacks began to be more frequently -1 attack per month- in 2017 she started her first specific treatment for HAE- Icatibant. Icatibant is a bradykinin receptor antagonist, only used in acute attacks. Before the specific treatment, during attacks, the patient had received: hydroelectrolytic rebalancing treatment, pain killers, fresh frozen plasma. In 2020, the patient became nonresponsive to Icatibant and the treatment has been changed to plasma derived purified C1 inhibitor (Berinert) which is only used during acute attacks. The patient responded well to Berinert, but in 2022 the attacks began to intensify: 1 attack per week. Thus, in November 2022 the patient received Lanadelumab. **Discussions :** Lanadelumab is a human monoclonal antibody that binds to kallikrein preventing the formation of bradykinin and is used only as a prophylactic treatment. The patient receives 300 mg injectable solution of Lanadelumab twice a month. From November 2022 until now she has not experienced any further attacks. **Conclusions:** HAE is a life-threatening condition and the main purpose in treating these patients should be the prophylactic treatment because it is their only chance to live a normal life.

Keywords: hereditary angioedema, prophylactic, Lanadelumab, life-threatening

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CHOROIDAL MELANOMA – THE BLIND ENEMY

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Introduction: Choroidal melanoma is the most common type of non-cutaneous melanoma, representing the main primary intraocular form. The malignant character is represented by a proliferation of melanocytes at the level of the uveal tract, especially on the choroid. **Case Report:** The case of a 68-year-old patient is being presented, clinically diagnosed with choroidal melanoma in the left eye along with retinal detachment. The ablation of the eyeball was performed by sectioning the optic nerve and the eye was sent to the Pathology Department for establishing the histopathological diagnostic. Grossing revealed an intact eyeball with the size of 20x20x20 mm and a cornea of 10x10 mm, marked with sutures at the upper pole. In the posterior compartment, at the level of the sclero-corneal angle the optic nerve is present with a size of 16x4 mm. Intraocular haemorrhage is observed in the lower compartment, with possible detachment of the retina. The tumour extends to the posterior pole near the optic nerve. Microscopically, a proliferation of tumour cells was observed, composed of round-oval or fusiform shaped cells with a strong eosinophilic cytoplasm and large round nuclei, with an increased number of mitoses. The immunohistochemical profile reviled that the tumour cells were positive for anti - S100, anti - SOX10, anti - MELAN A and anti-HMB45 antibodies. Anti-CD31 and anti-CD34 antibodies marked an increased micro vascular density at the level of tumour proliferation but also a minimal macrophage tumour infiltration (CD68+) was observed. No optic nerve tumour extinction and no extraocular extension was observed, but the phenomenon of retinal detachment.
Discussions :

: Based on the histopathological aspect and the immunohistochemical profile, the diagnosis of choroidal melanoma stage pT3aNxMx L0V0R0, which leads to secondary retinal detachment, was established. **Conclusions:** In conclusion, the histopathological diagnosis and the immunohistochemical profile represent the main tool in establishing the therapeutical approach, which may increase the quality of life and the satisfaction of the patient.

Keywords: melanoma, retinal detachment, optic nerve, immunohistochemistry

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ENDOSCOPIC CLOSURE OF CHRONIC IATROGENIC DUODENAL FISTULA IN PATIENT WITH INFECTED WALLED ON NECROSIS

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Introduction: Afistula is an abnormal opening or passage between two organs or between an organ and the surface of the body.Different organ fistulas can complicate acute pancreatitis or be complicated by iatrogenic fistulas. Herein, we present the case of endoscopic closure of the iatrogenic duodenal fistula as a consequence of inserting a peripancreatic drainage catheter. **Case Report:** Our aim is to present a case of a 20-year-old male patient was transferred to the clinic after five months of hospitalization with the diagnosis of infected acute necrotising pancreatitis. **Discussions :** When the patient was admitted he had six drainage tubes. While inserting one of the peripancreatic drainage catheters, an iatrogenic perforation of the duodenum was suspected, and the fistulogram revealed a duodenal fistula. The methylene blue injection through the drainage catheters affirmed the fistula tract under the gastroduodenoscopic examination. The fistula mouth was located between the pylorus and superior duodenal flexure and was about 5 mm in diameter. Over the scope clip (OTSC) (Ovesco Endoscopy, Tübingen, Germany) was used to close the fistula, and there was no extraluminal flow in the fluoroscopic examination. Methylene blue digestion showed no leakage in the drainage bags; therefore, the immediate pancreatic diet was started for enteral feeding. Even though the chronic nature of the fistula which occurred 47 days prior to endoscopic intervention and anatomical difficulties, OTSC was successfully used. **Conclusions:** Duodenal complications in necrotising pancreatitis are an understudied clinical entity. Duodenal fistulas increase the infection and organ failure risks, but also the mortality of the patient Even though there are surgical management modalities for those complications due to the patient's deteriorated clinical condition and morbidities, the mortality rate is still high. OTSC usage is safe and effective in this dismal clinical condition.

Keywords: Acute Necrotising Pancreatitis, OTSC, Duodenal Fistula, perforation

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MENINGOENCEPHALITIS CAUSED BY ATYPICAL INFECTION WITH SERRATIA MARCESCENS IN AN ADULT PATIENT

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Introduction: Serratia marcescens is a rare pathogen of CNS infections and is linked with a history of head trauma, ventriculoperitoneal shunts or other surgeries in adults. Nosocomial bacteremia with Serratia species rarely leads to meningoencephalitis which can cause permanent damage or even death. **Case Report:** A 60 years old institutionalized patient was addmited to the Emergency Unit for headache, altered mental status and fever with prior onset of one week. The patient was undergoing treatment for diarrhea and urinary tract infection. The emergency management of the patient consisted in monitoring of her vitals, clinical examination, blood work-up including collecting blood cultures, paraclinical investigations, treatment and a multidisciplinary approach. Her vitals were: oxygen saturation 95%, RR 22/min, BP 123/77mmHg, HR 120b/min, GCS 12p, glycemia 86 mg/dl, temperature 36□Clinical examination revealed neck stiffness, positive Kernig and Brudzinski`s signs on the left side, abolished reflexes of lower limbs. Her blood results revealed leukocytosis (22.840/µl) with neutrophilia, elevated serum lactate (3mmol/L), dehydration and anemia.We performed a native head CT scan and lumbar puncture. The CT scan revealed right mastoiditis. Cerebral spinal fluid was cloudy, unclear with 244 leucocytes/µL and proteinorachia (777mg/L). We initiated broad spectrum antibiotherapy with Ceftriaxone and Vancomycin and fluid repletion. The patient was transffered to the Intensive Care Unit of a territorial hospital for further treatment. During her stay there, vasopressor treatment was associated but 2 days later the patient presented cardiac arrest without responding to advanced life support measures. The blood cultures results and the antibiogram were

available only 78h after prelevation and were positive for Extended Spectrum Beta-Lactamase Serratia marcescens, the patient being dead by that time. **Discussions :** The key-role of the emergency physician consists in rapid differential diagnosis, prompt positive diagnosis, proper treatment and a multidisciplinary approach. Bacterial meningoencephalitis must be differentiated from viral meningitis, other causes of infective meningitis, autoimmune meningitis, malignancy, subarachnoid hemorrage in order to prevent delayed antibiotic treatment. S. marcescens can lead to nosocomial infections with fulminant evolution to meningoencephalitis and death when associated with predisposing conditions. The chances of recovery decrease with the delay in presentation to the Emergency Department and the risk of septic shock and death increase significantly. **Conclusions:** Acute meningoencephalitis is a time-sensitive infectious and neurological emergency with poor prognosis, especially when the responsible pathogen is a MDR bacteria such as ESBL - S. Marcescens. Early presentation and initiation of treatment can be life-saving when dealing with strong nosocomial pathogens.

Keywords: Serratia species, meningoencephalitis, atypical

MULTIDISCIPLINARY MANAGEMENT OF A MEDULLARY THYROID CARCINOMA

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Introduction: Medullary thyroid carcinoma is a rare form of thyroid cancer originating in the thyroid gland's parafollicular cells, called C cells. These cells produce the hormone calcitonin, which helps regulate calcium levels in the body. Medullary thyroid cancer is responsible for about 5% of all thyroid cancers and can occur sporadically or be inherited as part of a genetic syndrome. It is usually diagnosed through a thyroid gland biopsy or by measuring elevated calcitonin levels in the blood. Treatment typically involves surgery to remove the thyroid gland and surrounding lymph nodes and targeted therapy with drugs inhibiting the activity of the mutated gene responsible for cancer. **Case Report:** A 39-year-old patient comes to the ER for later cervical tumoral formation, which is erythematous, fluctuating, and painless at palpation. Because of that, he is redirected from the infectious diseases department to the surgical department. The patient is confirmed after having a biopsy in 2021 with stage IV medullary thyroid cancer with secondary determinations on all thorax bones and pathological fractures on the T11-T12 vertebral bodies. Secondary determinations were found on both adrenal glands, in the right pulmonary field, liver lobes, and some lymph nodes. Treatment with a kinase inhibitor was initiated, which caused the patient rash. In September 2022, he faced a total thyroidectomy, and the calcitonin values rose afterward. Current clinical investigations show cholestasis, hepatocytolisis, anemia, and thrombocytosis. An incision and drainage of the containment were practiced for the lymph node abscess. A bacteriological examination of secretion has revealed infection with staphylococcus aureus. **Discussions :** Western studies have shown that secondary determinations can appear in the lymph nodes after a total thyroidectomy for up to a year. After their detection, the disease can lead to new secondary determinations after up to 10 years. Our patient already had liver, bones, lungs, and adrenal glands metastases when the thyroid cancer was unveiled, which shows that thyroid cancer screening is critical to prolonging a patient's life. In Romania and other eastern countries, thyroid cancer screening is not popularized, so when one discovers he has the disease, it is in its final stages. It was assessed that calcitonin levels over 150 pg/ml after total thyroidectomy indicate distant metastases.Three months after the thyroidectomy, our patient had calcitonin levels of 199 pg/ml. **Conclusions:** Screening is crucial to early thyroid carcinoma detection and initiating surgical treatment, but it also takes longer to deal with metastases that will form over time.

Keywords: Medullary thyroid carcinoma, later cervical tumoral formation, secondary determination, calcitonin

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NOVEL SKIN ULTRASOUND DEVICE AS POTENTIAL INVESTIGATION FOR IDENTIFYING DERMATOLOGICAL DRUG SIDE EFFECTS – A CASE BASED EVALUATION

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Introduction: Drug induced skin reactions are very common, accounting for 30% of reported adverse reactions. Due to the pestering nature of these reactions, non-compliance towards their medication regimen is common in these patients, exposing them to worsening of the original symptoms for which the patient took medication. Early recognition and intervention are therefore critical. Unfortunately, this is often difficult for reasons including the mostly subjective assessment of the lesion. A new device, Dermus SkinScanner-U, which provides optical and

ultrasound images simultaneously is supposed to improve the objectivity in clinical investigations. To evaluate the effectiveness of this novel device, we looked at the correlation between the obtained images, the subjective patient complaints and the Dermatology Life Quality Index (DLQI) score based on a patient experiencing drug induced skin reactions. **Case Report:** The 72-year old male patient complained of "pins and needles"- like feeling, redness and itching of the skin associated with hyperpigmentation. Past medical history shows diagnosis of depressive disorder, hypertension, GERD and sleep disorder. For these the patient was taking venlafaxine (SNRI), perindopril (ACE inhibitor), amlodipine (Calcium Channel Blocker), a thiazide diuretic, a PPI as well as gabapentin (anticonvulsant). Due to the new onset skin symptoms the patient stopped complying with his medication plan. The DLQI score at the time of examination was 8, optical and ultrasound images were taken with the Dermus SkinScanner-U device and a pharmacological assessment was done. Taking into consideration all the aforementioned, the gabapentin was tapered down with eventual removal from the therapeutic regimen due to no clinical indication for its use and the suspected skin side effects. **Discussions :** Pharmacological assessment showed multiple drugs as possible causes for the skin reactions and 4 moderate and 2 mild drug-drug interactions. The observations from the objective evaluation using the Dermus SkinScanner-U device were in correspondence with the establishment of the severity of the complaint and with eliminating differential diagnoses in the direction of non-drug related causes, which can be challenging when relying only on the subjective description of the patient or even the DLQI. While the final medication causing the dermatological side effects cannot be identified solely with Dermus SkinScanner-U, the objective assessment is much easier. **Conclusions:** The novel Dermus SkinScanner-U correlates well with dermatological patient complaints and DLQI, making it a promising investigation for identifying drug side effects on the skin.

Keywords: Dermatological drug side-effects, Dermus SkinScanner-U, Polypragmasy

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CHALLENGES IN CHRONIC ANTIBIOTIC-REFRACTORY POUCHITIS (CARP) - A CASE BASED VIEW

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Introduction: Ulcerative colitis is an inflammatory bowel disease that is characterized by chronic inflammation in the rectum, colon and possibly cecum. For ultimate symptomatic relief, once medical therapy has failed, a proctocolectomy is possible with ileal pouch construction. This pouch gives the patient the ability to store and pass stool normally, eliminating the need for an ileostoma. Unfortunately, the incidence of acute pouchitis is quite high at 20% after 1 year and 40% after 5 years. On top of that, 10% of patients will develop CARP, drastically increasing treatment difficulty. **Case Report:** Our 59-year-old, female patient was admitted to the gastroenterology ward with 8-10 semisolid stools a day, intermittent rectorrhagia and fatigue. The patient had been diagnosed with ulcerative colitis at 25 years old and previously underwent subtotal colectomy with ileo-rectal pouch anastomosis as treatment for her developed toxic megacolon.The patient underwent rectoscopies with the intubation of the ileal pouch in November 2022 and January 2023, which both identified pouchitis subsequently treated with antibiotics and corticosteroids. Due to the persistence in symptomatology and the severe iron deficiency anemia associated, the treatment needed to be intensified and the patient was now admitted to our ward. She was put on Ceftriaxon and IV corticosteroids initially, and then Rifaximin together with Ciprinol (ciprofloxacin) and oral prednisone. After this course of treatment, the endoscopy showed a decrease of the fibrin-covered pouch ulcerations and decrease of perilesional edema at the level of the rectal stump. The patient was discharged on further antibiotic and corticosteroid regimen and scheduled for a check-up in a month. Starting from November 2022 the patient was on repeated bouts of corticotherapy and antibiotic treatment. **Discussions :** This patient shows signs of chronic antibiotic-refractory pouchitis which gets increasingly hard to manage. Current guidelines recommend initial cephalosporins and for non-responders, such as our patient, ciprofloxacin plus rifaximin. Problems arise if these antibiotics fail as well. Immunomodulators and biologic agents (especially vedolizumab, ustekinumab and infliximab) are under current investigation and some small studies show promising results for patients with CARP. **Conclusions:** Considering that pouch complications in post colectomy patients are quite common it is urgently required to encourage proper studies regarding biologic and immunomodulator treatment in CARP patients, ultimately offering effective guidelines for the gastroenterologist on the ward.

Keywords: Ulcerative colitis, Biologic therapy, Pouchitis

THE DARK SIDE OF MEDICAL PRESCRIBING

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Introduction: Polypragmasy is the umbrella term used to describe simultaneous use of 5 or more medications and is considered "one of the greatest prescribing challenges". It's a common finding among the elder population, because of multimorbidity and complex medical needs. While the definition is numerical, an emphasis should be on the suitability of the pharmaceutical therapy, as only the inappropriate polypharmacy is the concerning factor. **Case Report:** We present the case of a 71-years-old male, with a relevant medical history of: recurrent depressive disorder (since 1994), hypertension (since 1995), sleep disorders (since 2008), gastro-esophageal reflux disease (since 2018), ischemic heart disease, moderate shoulder pain (for the past 5 months), and obesity stage 2 (BMI 35,2). The latest medication profile included daily use of: perindopril (ACE inhibitor); indapamide (thiazide-like diuretic); combination of perindopril, indapamide and amlodipine (calcium channel blocker); venlafaxine (SNRI); gabapentin (antiepileptic); clonazepam (long-acting benzodiazepine); indomethacin (NSAID); ibuprofen (NSAID); pantoprazole (PPI); antacids and furosemide (loop diuretic) twice weekly. The patient stopped complying to the therapy once side effects of drug interactions became severe. A major drug-drug interaction was an inferior myocardial infarction, treated with triple angioplasty (22nd of February 2023). **Discussions :** This case perfectly illustrates the insidious nature of polypragmasy. There are two main understandings of polypragmasy; one focused exclusively on number of drugs, the other on drug necessity. Polypragmasy and inappropriate prescribing are not synonyms but frequently associated. An issue of concern about inappropriate prescribing are harmful drug-drug interactions. 13 drug interactions were found in our case: 1 major, 10 moderate and 2 minor. Worth mentioning is the interaction between indapamide and venlafaxine, leading to severe arrythmias. Moreover, polypragmasy increases the possibility of a "prescribing cascade", where new drugs are prescribed to treat already existing drugs' side effects, as happened here. It creates massive psychological burden for both patients and families, decreasing the treatment compliance. A more responsible use of medication can also be economically beneficial. An estimated that 0.3% of all global health expenses could be spared by appropriate polypragmasy management. **Conclusions:** It is important that physicians recognise and manage polypragmasy aggressively. Medication misuse is increasingly more common in clinical practice and there is a need for interdisciplinary communication.

Keywords: Polypragmasy, Adverse Drug Effects, Drug-drug Interactions

AN INSIGHT INTO THE NEUROGENIC BLADDER DYSFUNCTION DUE TO MYELOMENINGOCELE IN CHILDREN

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Introduction: Neurogenic Bladder Dysfunction (NBD), also termed Neurogenic Lower Urinary tract dysfunction, is a medical condition observed in people who lack bladder control due to brain, spinal cord, or nerve problems. Myelomeningocele is the most frequent cause of NBD in children. Myelomeningocele (MMC), a type of neural tube defect and a severe form of spina bifida, may affect 1 out of every 4,000 infants, and represent a main cause of chronic kidney disease. **Case Report:** We present a case of a 2-year-old child admitted for the first time in our clinic for persistent high fever, spastic paraplegia, slight psycho-motor retardation, and macrocephaly. Based on medical history (shunted hydrocephalus, operated myelomeningocele, and an otitis media) and physical exam a febrile urinary tract infection (UTI) or meningitis were suspected. Routine analysis and Imagistics were necessary to determine the definitive diagnosis and appropriate treatment. **Discussions :** Arnold-Chiari Syndrome was discovered in the patient. Bilateral hydronephrosis was found on ultrasound scan. Based on the anamnesis, clinical and paraclinical investigations a diagnosis of Neurogenic bladder dysfunction (NBD) due to MMC was established. Furthermore, UTI was found, and antibiotic therapy was started with favourable evolution. Clean intermittent catheterizations were started. **Conclusions:** Myelomeningocele is considered as the most frequent and severe root cause of Neurogenic bladder in pediatric patients. In addition, Chiari type II malformation is constantly linked to MMC. A multidisciplinary team plays a pivotal role in the better and improved management of patients with NBD due to MMC. In conclusion, early intervention with intermittent bladder catheterization +/- prophylactic treatment in children with NBD may prevent further complications (recurrent UTIs and kidney failure). If patients stop

responding to first-line medications, second-line therapies, including Botulinum toxin-A and Beta-agonists, can improve urinary incontinence and maintain normal intravesical pressures.

Keywords: Myelomeningocele, Neurogenic Bladder, Spina Bifida, Arnold-Chiari syndrome

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CHALLENGES IN THE MANAGEMENT OF THE PAEDIATRIC PATIENT WITH CONGENITAL HEART DISEASE ASSOCIATED WITH GENETIC SYNDROME

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Introduction: Congenital heart disease is a well-known cause of birth anomalies causing death during infancy and childhood. It is usually accompanied by genetic conditions exhibiting cardiac and extra cardiac aberrations. Patients with genetic syndromes are at high risk of death and notable complications linked with surgical interventions. The genetic syndrome Smith-Magenis is characterized by heart defects and renal abnormalities, intellectual disability, facial dysmorphism, behavioural and sleep issues. **Case Report:** We present the case of a 1 month - female infant, known from the intrauterine period with tetralogy of Fallot and a genetic condition: Smith-Magenis syndrome confirmed by genetic analysis □□□from amniotic liqui d. The diagnosis was confirmed after birth: double outlet right ventricle (DORV) □□□Fallot type, pulmona ry stenosis and patent ductus arteriosus. A few hours after birth, the newborn presented generalized cyanosis, respiratory distress, costal retractions and desaturations. The treatment with Prostaglandin E1 for improving the pulmonary blood flow was initiated and, non-invasive ventilatory support was provided. The patient's clinical evolution was complicated with sepsis with blood cultures positive for Staphylococcus epidermitis, during the third week of life. Considering the associated genetic syndrome and the need for ventilatory support additional investigations including chest radiography, bronchoscopy, CT angiography were undertaken. **Discussions :** A systemic to pulmonary shunt procedure was performed to improve the pulmonary blood flow and consequently the patient's symptoms. The second surgical procedure was necessary on the same day, for acute thrombosis of the shunt. Perioperative evolution was burdened by massive pneumothorax, resolved with pleural drainage and tonic-clonic seizures after sedation administration. Also, there was bacteriological evidence of inferior respiratory tract colonization with Acinetobacter Baumanii and Stenotrophomonas. **Conclusions:** A systematic and interdisciplinary approach along with accurate medical care for the extra cardiac malformations may help to scale down the morbidity and mortality associated with congenital heart diseases. A detailed and correct genetic diagnosis is crucial to adequately plan the medical, surgical management and follow-up for patients.

Keywords: Congenital, Genetic syndrome, Smith-Magenis syndrome, Tetralogy of Fallot, DORV

ANOMALOUS ORIGIN OF THE RIGHT CORONARY ARTERY – A CASE REPORT

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Introduction: An abnormal aortic origin of the right coronary artery from the left sinus with an interarterial course represents a rare congenital heart defect. In addition, it is associated with a narrowing of the right coronary artery between the aorta and the pulmonary artery outflow tract. This can be related to coronary ischemia and subsequent sudden death. Such anomalies are either associated with asymptomatic patients whose diagnosis was made by coincidence or with symptomatic patients who complained about chest pain, syncope, and palpitations. **Case Report:** A 59-year-old male patient complaining of angina was referred to the adult cardiology clinical department in Tirgu Mures. For further evaluation, the patient was referred for a coronary CT angiogram. The assessment of the coronary calcium store revealed 167 Agatston units, corresponding to the 82nd percentile, corrected for age, sex, and race. Only in the anterior descending artery were mixed atheromatous plaques present, but without producing significant stenosis. However, the right coronary artery (RCA) was found to arise from the right anterior aspect of the left coronary sinus and presented an interarterial pathway with a proximal filiform diameter of 0,5 mm and a 3 mm diameter posterior to the origin of the valve. No significant plaques were observed. A coronary angiogram was performed for further flow assessment; however, the decision was taken to treat conservatively. **Discussions :** The anomalous origin of the right coronary artery from the opposite sinus is a rare congenital heart defect that occurs when the artery originates from the wrong sinus of Valsalva. The prevalence of this condition varies depending on the method of detection, as it can be asymptomatic and remain

undiagnosed without the use of advanced imaging techniques. Especially during or right after strenuous physical exercise it is often associated with sudden death. This could be since during systole, the expansion of the aorta and pulmonary artery causes the coronary artery to constrict. For this reason, the correct procedure for rapid assessment of the anomaly is of great importance. **Conclusions:** Coronary computed tomography (CT) is a precise and well-established imaging technique that accurately diagnoses anomalous origin of the coronary vasculature, while also ruling out other coronary abnormalities, and is particularly valuable for identifying patients at higher risk of negative outcomes.

Keywords: right coronary artery, anomalous aortic origin, interatrial course, computed tomography

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HIGH-RISK HUMAN PAPILLOMAVIRUS- ASSOCIATED SQUAMOUS CELL CARCINOMA OF THE LIP

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Introduction: Squamous cell carcinoma (SCC) of the lip is a neoplasm that interests any of its anatomical components: the skin, vermilion, and mucosa. The oral cavity (including the lips) represents the most frequent cancer location of the head and neck areas. Besides UV light exposure of the skin-lined part of the lips and tobacco use, SCC of the lips mucosa and oral cavity has also been associated with High-Risk human papillomavirus (HR-HPV). **Case Report:** The aim of this report is to present the case of an 87-year-old female patient admitted in the Oral and Maxillofacial Surgery Clinic for hemorrhage from a tumoral mass located at the left oral commissure, for which surgical removal was performed. Macroscopic examination of the surgical specimen revealed an irregular whitish surface, focally ulcerated, occupying an area of 26x11 mm at the level of the lip fragment. Microscopically, at the muco-cutaneous junction, in situ SCC with multiple micro-invasive foci (with less than 1 mm depth of invasion) was observed, away from the surgical excision margins. The presence of mixed inflammatory infiltrate (predominantly lymphoplasmacytic, with granulocytes adjacent to the ulcerated area) and extravasated erythrocytes was also noted. Immunohistochemically, the tumoral cells showed inconclusive p16 staining, thus requiring molecular biology testing from the paraffin block, which highlighted the presence of an HR-HPV strain. **Discussions :** HR-HPV represents a risk factor for head and neck SCC, with a proven prognostic significance for the oropharyngeal ones. The probability of malignant transformation related to infection with HR-HPV is proportional to the expression of the viral oncogene products E6 and E7, which inactivate p53 and retinoblastoma (Rb) tumor suppressor functions. Immunohistochemical antibody p16 is a surrogate marker for transcriptionally active HR-HPV in head and neck SCC and its expression in more than 75% of tumor cells is diagnostic. Immunohistochemical antibody p16 is a surrogate marker of HPV-associated head and neck SCC and expression in more than 75% of tumor cells is diagnostic. **Conclusions:** SCC of the lip should be not only properly managed through complete surgical excision but also immunohistochemically and molecularly evaluated for determination of potential association with HR-HPV, for proper case management and future SCC risk evaluation.

Keywords: Human Papilloma Virus, squamous cell carcinoma, oral cancer

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A RARE CASE OF MORPHINE-INDUCED ACUTE ACALCULOUS CHOLECYSTITIS IN A PATIENT WITH THROMBOANGIITIS OBLITERANS

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Introduction: Acute acalculous cholecystitis (AAC) is an uncommon inflammatory disease of the gallbladder, without the presence of gallstones, that may result from a critical illness, history of major surgeries, and chronic use of medication. Thromboangiitis obliterans (TAO), also known as Buerger's disease is a nonatherosclerotic, progressive, segmental inflammatory disease affecting the small and medium-sized arteries of upper and lower limbs, common in young males with a history of smoking. **Case Report:** A 36-year-old, ex-smoker, male patient is hospitalized with diffuse and continuous abdominal pain, anorexia, and fatigue. A comprehensive medical history discloses cholestatic syndrome, chronic hepatopathy, chronic gastritis, left ventricle insufficiency, ischemic dilated cardiomyopathy, myocardial infarction, and a thrombosed left ventricular apical aneurysm. The patient has had

Buerger's illness for 20 years, which resulted in bilateral lower limb amputations at the thigh level, right forearm, left-hand digital amputation, and phantom limb syndrome. The paraclinical examinations, abdominal ultrasound, and contrast MRI reveal a partially distended gallbladder, with reflective walls up to 6 mm, apparently stratified with intraluminal sludge-like content, with a thin layer of pericholecystic fluid, a transverse diameter of 30 mm, a hyperdense image of 3-4 mm, most certainly a cholesterol polyp. **Discussions :** Positive outcomes of thromboangiitis obliterans and avoidance of complications depend solely on whether absolute avoidance of tobacco is achieved. In this case, cessation of smoking did not occur until later after the initial TAO diagnosis. Therefore, complications arose, and narcotic analgesics were administered to palliate the ischemic pain. Tramadol, used initially, was later substituted by morphine, due to substance allergy. Morphine, an opioid agonist, seems to have been the causative factor of acute acalculous cholecystitis. Chronic administration of morphine increases intraluminal biliary tract pressure due to spasms of the sphincter of Oddi. Given the increased risk of sphincter spasms with oral morphine, it was decided to switch the main analgesics to fentanyl, since it is 100x times more potent with fewer adverse effects. During hospitalization, morphine was prescribed as an injectable regimen (30mg/6h). Upon discharge the regimen was changed to oral tablets: Sevredol 20mg (max 4 tablets/day) and Vendal retard 30 mg (max 2/day). Nevertheless, the patient abused the prescribed doses due to persisting pain, leading to AAC. **Conclusions:** The prognosis of the presented patient is unfavorable, given the history of pre-existing conditions. In order to treat Acute Acalculous Cholecystitis (AAC) and to control the other chronic pathologies of the patient, an interdisciplinary approach is required.

Keywords: Acute acalculous cholecystitis (AAC), Thromboangiitis obliterans (TAO), Buerger syndrome, Morphine

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THE ROLE OF DIFFERENCIAL DIAGNOSIS IN RECOGNIZING NODULAR FASCIITIS- A CASE REPORT.

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Introduction: Nodular fasciitis (NF) is a benign, fibroblastic or myofibroblastic proliferation that is difficult to diagnose because of its fast clinical progression, high cellularity, mitotic activity, and variable cytomorphologic features. In children, nodular fasciitis is most commonly situated in the head and neck area and is presented as a solitary, no more than 5 cm mass, with a texture varying from soft to firm. Even though this condition is usually self-limited, it can sometimes mimic a malignant neoplasm, namely, fibrosarcoma. **Case Report:** We present the case of an 8-year-old patient, who was admitted after sustaining an injury to the back of his head, and displaying a round, initially soft mass in the occipital region. The initial clinical presumptive diagnosis indicated an epidural hematoma, however, after the MRI investigation, this was clearly not the case. Imaging presented a round, superficial, 4,4 cm lesion with both parenchymal and cystic components, located in the plane of the nuchal fascia, with no radiological involvement of the skull. In order to completely rule out the diagnosis of a fibrosarcoma and confirm the diagnosis of NF, a biopsy was sampled. Contrasting to a sarcoma, the microscopical examination revealed a vascularised fibro-conjunctive tissue with scattered mononuclear inflammatory infiltrate, with numerous lymphatic vessels. Furthermore, the sample did not present neither cellular pleomorphism, nor atypical mitotic figures, which would have been expected in case of a fibrosarcoma. At immunohistochemical assessment, the cells were negative for CD34, contrasting to the diffuse expression of this transmembrane protein in the case of NF. Regarding the treatment of this pathology, the simple excision of the mass is generally curative. **Discussions :** When it comes to the differential diagnosis between NF and fibrosarcoma, MRI imaging are not specific and require further histopathological testing to confirm the diagnosis of nodular fasciitis, in order to provide a correct trajectory of the patient's treatment scheme. **Conclusions:** Nodular fasciitis, however uncommon it may be, manifests as a distinct solid or cystic mass in the cranio-cervical region of the body. In the case of an MRI spotting of a superficial mass with the presented aspect, nodular fasciitis should be considered when discussing the differential diagnosis, especially in cases where recent trauma may have been involved.

Keywords: Nodular fasciitis, MRI, Epidural, Differencial diagnosis

A STUDY OF THE COMPLEXITY OF BLADDER ENDOMETRIOSIS- A CASE REPORT.

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Introduction: Endometriosis is defined by the presence of endometrial tissue, namely endometrial stromal and glandular tissue, outside of the uterine cavity. Although the exact etiology is not completely established, retrograde menstruation is believed to play a major role in the pathogenesis of this disease, with modified endometrial cells being known to react to the hormone cycle, specifically being able to proliferate under estrogenic influence. **Case Report:** We present the case of a 24-year-old patient, accusing dysuria, dysmenorrhea, pre- and postmenstrual bleeding, irregular menstrual cycles as well as chronic pelvic pain for the past year. In the beginning, due to a suspicion of cystitis, an urinalysis was performed, however, this theory was quickly ruled out after the tests came back negative. Multiple abdominal ultrasounds, as well as monthly gynaecological consults, which consisted of transvaginal ultrasounds, were conducted, but with no apparent success in diagnosing the main issue causing the patient all presented symptoms. After a negative CT scan 5 months ago, the patient's pain was accused of being a psychosomatic one by the family members, who were intending of confining the patient to a psychiatric ward. Finally, a pelvic MRI scan in T2 sequence was conducted, which showed a 29/14/22 mm inhomogeneous spheric mass located on the left superior posterior wall of the urinary bladder, which rose the suspicion of an endometrial lesion at this level and ultimately confirmed the diagnosis. **Discussions :** It is challenging to treat this particular form of endometriosis. Due to its placement on the higher, posterior wall of the urinary bladder, a laparoscopic excision is regarded as a high-risk alternative due to the danger of developing an overactive bladder, and pharmacological hormonal therapy poses a significant risk of recurrence. **Conclusions:** Due to the rarity of this disease, bladder endometriosis can be quite often misdiagnosed, patients presenting symptoms similar to several other conditions such as acute appendicitis, cystitis, IBD or even other locations of endometriotic lesions. A pelvic MRI scan can thus be considered to be one of the most relevant steps that needs to be conducted in order to point the medical team in the right direction of treating a patient with bladder endometriosis efficiently and accordingly.

Keywords: Endometriosis, MRI, Dysmenorrhea, Pelvic pain

PSEUDOMONAS AERUGINOSA- CAUSE OF SUPPURATIVE EAR INFECTION IN INFANTS

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Introduction: Pseudomonas aeruginosa is a gram-negative rod-shaped bacterium found in the environment contaminating water and soil. Considered an opportunist pathogen, it is frequently the cause of healthcare-related infections and nosocomial outbreaks affecting especially neonatal intensive care units. Immunocompromised patients are at elevated risk of getting the infection. **Case Report:** We report the case of a 2-month-old pre-term born infant, admitted via the emergency unit with a productive cough, right ear discharge lasting for about 3 weeks, as told by his mother, and low-grade fever. An otorhinolaryngology consult was performed, which revealed an abundant purulent discharge in the right auricular cavity with intact tympanic membrane and mucous secretions. Laboratory findings at the emergency unit showed mild leukocytosis. On admission at the pediatric ward, he presented in a good general state, right purulent auricular discharge, and post-bronchiolitis symptoms (bilateral pulmonary rales, productive cough, serous rhinorrhea). A culture with antibiogram from the ear discharge were performed, empiric treatment with cefuroxime was initiated. After performing the anamnesis with his mother, we reviewed his medical file which stated that on the day of birth a bacteriological examination from an already present otorrhea was performed, which resulted negative for both Pseudomonas aeruginosa and Staphylococcus, he received Ampicillin and Gentamicin treatment. Laboratory findings showed slightly elevated CRP. The infant previously suffered from an acute bronchiolitis as stated by a discharge letter from another hospital which also confirmed the presence of a right otorrhea. An iron deficiency anemia was found, related to prematurity. 3 days after admission the culture revealed a current infection with Pseudomonas aeruginosa and methicillin-sensitive Staphylococcus aureus. The treatment was completed with Amikacin (according to the antibiogram), ear lavage, antibiotic ear drops and ibuprofen. The patient was discharged in a good general state, without any purulent ear discharge. **Discussions :** Pseudomonas aeruginosa causes diseases in vulnerable patients particularly affecting

newborns and infants due to their not yet developed immune system and in whom the infection might be fatal causing pneumonia and sepsis. It is associated with suppurative ear infections. Often encountered in healthcare-settings, it can be transmitted through direct contact, contaminated water systems and equipment. In our patient the cause of the infection is either a previous hospitalization in which he encountered the pathogen or vertical transmission during delivery if vaginal colonization of pseudomonas aeruginosa. **Conclusions:** The case evidences the importance of respecting hygienic measures in healthcare-settings which are essential to prevent Pseudomonas aeruginosa infections and outbreaks.

Keywords: Pseudomonas aeruginosa, otorrhea, prematurity

DERMOSCOPY: A USEFUL TOOL IN DIFFERENTIATING ACUTE GENERALIZED EXANTHEMATOUS PUSTULOSIS AND PITYRIASIS RUBRA PILARIS

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Introduction: Cutaneous adverse drug reactions are common and show a wide spectrum. Acute generalized exanthematous pustulosis (AGEP) represents a severe, usually drug-related skin reaction characterized by diffuse erythema, generalized pustules, and later by scaling. Pityriasis rubra pilaris (PRP) is a papulosquamous skin disorder of unknown etiology, defined by orange-colored erythema, and scaly follicular papules. Even though dermoscopy is a noninvasive method that is mainly used to evaluate pigmented lesions, it can also be helpful in the diagnosis of various inflammatory skin disorders, as well as in hair, scalp, and nail diseases. This paper aims to highlight the use of dermoscopy in differentiating between atypical PRP and AGEP. **Case Report:** We report the case of a 76-year-old female patient who presented to the Dermatology Clinic in an altered general state, with fever and malaise, and an accompanying generalized erythematous skin rash consisting of bright-red erythema, on top of which multiple pin-sized pustules were noticed. Polarized dermoscopy identified multiple milky globules, that sparred the hair follicles and were disposed of on a uniformly reddish background. The lesions started to appear 2 days after the administration of penicillin. Laboratory investigations revealed an inflammatory syndrome and leukocytosis. Treatment with clobetasol propionate cream b.i.d, moisturizers, and desloratadine was started, with consequent fading of the lesions 15 days after. The second case refers to a 78-year-old female patient who was admitted with a generalized erythematous rash covered with fine scales, follicular papules, and pustules. The lesions had a craniocaudal progression and appeared 3 days prior to admission, after self-administered NSAIDs. Dermoscopy revealed orange erythema, follicular keratotic plugs, dilated dotted and reticular vessels, and white scales. The laboratory revealed an inflammatory syndrome with leukocytosis. A punch biopsy was performed and atypical PRP was confirmed. Treatment consisting of oral retinoids was started, and the patient was discharged 10 days later in a good state. **Discussions :** Both patients show a similar history, clinical picture, and laboratory results. Important clues towards diagnosis were provided by polarized dermoscopy, where AGEP mainly showed milky globules, while PRP showed whitish keratotic plugs and linear vessels on orange erythema. This helped to orientate the positive diagnosis early on and allowed a precocious correct therapeutical approach. **Conclusions:** Polarized dermoscopy appears to be a useful tool in the diagnosis of both AGEP and PRP, especially in atypical forms.

Keywords: AGEP, PRP, dermoscopy, erythema

A CASE OF INTERSTITIAL PNEUMONIA ASSOCIATED WITH ACUTE MYOCARDITIS LEADS TO THE DISCOVERY OF A MALIGNANT LESION

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Introduction: Medical imaging is highly important as a form of diagnosis and control, even after the resolution of the inflammatory syndrome. **Case Report:** We present the case of a 60-year-old male patient, with a known history of coronary heart disease, angina pectoris, cognitive deficit, and chronic alcoholism, brought to the ER in a state of altered mental status, presenting a high fever (39°C), chills and shivering but no loss of consciousness, dry cough, dyspnea and wheezing, admitted right away to the Internal Medicine ward. The physical examination revealed an oxygen saturation of 90% while on oxygen therapy (2l/min), a blood pressure of 120/50mmHg, a heart

rate of 120 b.p.m., rhythmic heart sounds, and no pathological murmurs. The ECG taken in the ER showed diffuse tachycardia, with notched R waves in DII, DIII and aVF. However, an ECG taken 24h later, after admission, showed bradycardia of 53 BPM, with negative T waves in aVL, V1-V5. Moreover, lab results showed troponin levels were doubled, raising the suspicion of an acute coronary syndrome. Yet, he presented no chest pains, while leukocytes, CRP and NT proBNP levels were also found highly elevated (CRP of 191). Accordingly, myocarditis was brought into the discussion. The cardiology consult advised repeating the troponin measurements after 6h, by which time it had normalised, whereas the ECG remained unchanged. Echocardiography was performed, and found no segmental kinetic alterations, with a fraction of ejection of 60%. Cardiology opted against coronarography at first, given the septic status of the patient, yet could be performed 4 days later, showing results within normal limits, excluding an acute ischemic event. **Discussions :** In regards to the infective syndrome, the patient was put on antibiotic therapy, as well as corticotherapy, and oxygen therapy. Chest X-ray revealed a dense mass filling the upper zone of the right lung, therefore a chest CT scan was advised. An excavated pulmonary lesion, 6 cm from the apex, suspect of malignancy was observed on the chest CT scan, as well as hilar adenopathies. The pneumology consult advised TB blood test and a sample of sputum for exclusion, which came back negative, raising the suspicion of pulmonary neoplasm. Following, the patient was referred for bronchoscopy, the results of which supported the diagnosis. **Conclusions:** The successful treatment of inflammatory syndrome and misleading ischemic ECG changes in a patient with cardiovascular risk factors could stray the diagnostic process from further investigations, posing the risk of altering the therapeutic approach.

Keywords: inflammatory syndrome, pulmonary neoplasm, medical imaging

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ANAPHYLAXIS AT MINIMAL SENSITIZATION

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Introduction: An allergic reaction can be defined as an exaggerated reaction of the immune system to a foreign substance which, in most people, is harmless, causing the production of antibodies of the IgE immunoglobulin type. The ALEX (Allergy Explorer) test assesses IgE allergic sensitization to a large number of possible allergens, 295 in this case. **Case Report:** A 23 years old female patient went to an allergist in 2021, where she was diagnosed with severe persistent rhinitis, atopy under observation due to some symptoms after being stung by bees and consuming nuts alongside an oral allergy syndrome to eggplant and nuts. An ALEX MADx test was recommended, which revealed a minimal sensitization to Russian thistle, Black Tiger shrimp, mussel, hen, paper wasp, common wasp and latex. The allergist declared these minimal sensitizations to be clinically insignificant seeing as the test interpreted the results as detectable (atopic patient), but overall negative. However, after eating a meal containing seafood, the patient suffered an episode of anaphylaxis. The patient had a previous neurological consultation because she suffered for several years of a postural tremor in the upper limbs, more accentuated in the upper left limb, initially intermittent, later with worsening symptoms in the last year before the consultation, the tremor becoming permanent when adopting a position. She was diagnosed with extrapyramidal syndrome, Wilson's disease under observation, dorsal dextroscoliosis and polypectomy in the antecedents. A multiplex MLPA analysis was performed. The suspicion of Wilson's disease was refuted. The extrapyramidal syndrome has since been treated with Propranolol. **Discussions :** Propranolol, being a non-selective beta-blocker, interferes with the action of adrenaline at the level of adrenergic receptors and, implicitly, with the action of the pen used in an episode of anaphylaxis, blocking the life-saving vasoconstrictor and bronchodilator effects of adrenaline. Consequently, a patient that consumes chronically a non-selective beta-blocker such as Propranolol may be in grave danger if they are at risk from suffering an episode of anaphylaxis. **Conclusions:** The patient suffered an episode of anaphylaxis after ingesting a single meal containing seafood, food to which the ALEX test showed a minimal sensitization, normally considered insignificant in a clinical context. While, at the same time, the test showed a similar level of sensitization to hen meat, but the patient didn't suffer an episode of anaphylaxis on any of the occasions in which she consumed hen meat.

Keywords: Anaphylaxis, Minimal sensitization, Extrapyramidal syndrome

CT FINDINGS IN CONGENITAL CORRECTED TRANSPOSITION OF THE GREAT ARTERIES ASSOCIATED WITH SITUS INVERSUS TOTALIS

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Introduction: Congenitally Corrected Transposition of the Great Arteries (CCTGA) is a congenital abnormality which represents 0.5-1% of all heart defects. It is characterized by two concurrent discordances: atrioventricular and ventriculoarterial (TGA). The two ventricles and their attached valves are mirrored and linked to the opposite great vessel. Thus, the right atrium is connected to the morphological left ventricle (LV), which is then connected to the main pulmonary trunk. The left atrium is connected to the morphological right ventricle(RV), which is then connected to the ascending aorta. If not accompanied by any other cardiac malformations, this pattern allows for a physiological systemic circulation, but with significant mechanical impairment due to the weaker morphology of the right ventricle, which must withstand systemic pressure. Furthermore, situs inversus totalis is a congenital condition in which the thoracoabdominal organs are mirrored from their normal positions. The concomitance of both diseases presents a challenging diagnosis and management. **Case Report:** A 21-year-old male was referred for a cardiothoracic angio CT examination. There is mesocardiac and thoracic and abdominal situs inversus. Normal venous return. A hypertrophied (5 mm) morphologically RV is found between the morphologically left atrium and the aortic root, while the morphologically LV is found between the morphologically right atrium and the pulmonary trunk. A small ventricular septal defect is noted. **Discussions :** The RV must overcome systemic pressure, leading to its hypertrophy. This hypertrophy produces a myocardial oxygen supply/demand mismatch, which can lead to ischemia, fibrosis, and right heart failure. The presence of a VSD produces a shunt between the both ventricles, resulting in inefficient circulation, both pulmonary and systemic. Although CCTGA may have mild or non-existent symptoms during the first few decades of life, early diagnosis is crucial. High-performance imaging investigations such as CT and MRI bring value in both the diagnosis and ongoing monitoring of the condition. **Conclusions:** This case describes the most important features of concomitance of CCTGA and situs inversus in a young patient. We aim to emphasize the importance of healthcare professionals' awareness of this pathology and the key role of detailed imaging investigations. An early diagnosis and proper management of this disease and its

Keywords: CCTGA, CARDIOVASCULAR, CONGENITAL, SITUS INVERSUS TOTALIS

INFLAMMATORY POLYPS IN CLINICAL AND ENDOSCOPIC REMISSION OF ULCERATIVE COLITIS

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Introduction: Ulcerative colitis is a chronic inflammatory bowel disease characterised by inflammation of the intestinal tract caused mainly by an abnormal immune response to intestinal microflora. Ulcerative colitis cause diffuse inflammation of the colonic mucosa mainly in rectum and sigmoid and extends proximally in a continuos pattern, leading to the possible involvement of the entire colon (pancolitis). Ulcerative colitis can lead to numerous intestinal and extraintestinal complications, the main concern is the increase risk of development colorectal cancer, but another important complication is the predisposition for inflammatory polyps. These type of polyps are non-neoplastic intraluminal projection of mucosa consisting in inflammatory, stromal and epithelial cells. **Case Report:** A 28-year-old patient, known to have ulcerohemorrhagic pancolitis, with remission after treatment with 5ASA, Azathioprine, and monoclonal antibodies presents himself for periodic colonoscopic investigation. Large, extensive polypoid formations are detected in endoscopic investigation with both white light endoscopy and NBI, then biopsy and histopathology show the diagnosis of inflammatory polyps. **Discussions :** In patients with ulcerative colitis a common complication is the presence of inflammatory polyps,, they can be find incidentally during colonoscopy or they can be notice due to different symptoms, commonly abdominal pain, bleeding or obstruction in case of giant polyps. Inflammatory polyps are the result of prolonged inflammation and may originate from regenerative mucosa in the remission stage after an acute episode of recurrence. After identification with endoscopic investigation, the diagnosis of inflammatory polyps is perform with biopsy and histopathology. They are composed of dense, non-epithelialized granulation tissue that is primarily composed of lymphocytes, plasma cells, and mast cells but may also contain neutrophils and eosinophils. These cells have been seen to infiltrate the appropriate lamina of the

epithelium. Treatment of inflammatory polyps can be categorised as medical, endoscopic and surgical. Medical therapy has been used to induce regression, studies reported regression of inflammatory polyps with administration of mesalazine and azathiopine. The endoscopic procedures have been reported for control bleeding second to ulceration or obstructive complications and in case of failure of it the surgical intervention is performed. **Conclusions:** Inflammatory polyps are frequent in patients with IBD in clinical and endoscopic remission, as consequence of severe inflammatory activity. Nowadays are not consider to be premalignant lesions but it must be emphasised that is very difficult to perform colorectal cancer screening among these polyps, for these reasons recent studies suggest close endoscopic and histopathologic follow-up.

Keywords: Inflammatory polyps, Ulcerative colitis, IBD complications

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THE UNPREDICTABILITY OF AN 8 YEARS FOLLOWING CASE OF MEN2A SYNDROME

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Introduction: Multiple Endocrine Neoplasia (MEN) 2A is an autosomal dominant hereditary syndrome caused by germline mutations in the RET proto-oncogene. MEN 2A is characterized by medullary thyroid cancer (MTC), pheochromocytoma (PHEO), and primary parathyroid hyperplasia. Unlike MEN 2B, no mucosal neuromas, intestinal ganglioneuromas or skeletal abnormalities are found. **Case Report:** We present a case of a 44-year-old woman diagnosed with MEN2A syndrome 8 years ago. Complete adrenalectomy was performed for bilateral PHEO, and a total thyroidectomy with bilateral dissection of the central lymphoid node compartments for MTC. PTH levels were normal, as was calcium. Hormone replacement therapy was initiated (Euthyrox 75µg/day, Hydrocortisone 20 mg/day and Astonin 0,5mg/day). Plasma fractionated metanephrines remained low postoperatively. Calcium values were within normal limits, while calcitonin values decreased after thyroidectomy (1747 pg/ml to 767 pg/ml) and kept a constantly high value. Laboratory tests revealed high levels of carcinoembryonic antigen (5.94 ng/ml, normal range <3 ng/dl). The doubling time of plasma calcitonin levels was 1.2 years, suggesting a high chance of recurrence or extension of MTC. Recently, neck ultrasound revealed a mass in the anterior-inferior cervical compartment, with the significance of a residual or recurrent disease after primary surgery and several cervical lymphoid nodes, which may represent MTC metastases, in the context of rising calcitonin. Abdominal CT scan revealed liver nodules representing secondary determinations probably from MTC (even if initially a contrast-enhanced ultrasound showed a focal nodular hyperplasia). **Discussions :** Primary hyperparathyroidism was not reported. In fact, hyperparathyroidism occurs in 10-25% of MEN2A, depending on the specific RET mutation. Transarterial embolization, initially recommended as a means of treating liver metastases from MTC, was not possible during the pandemic. Considering the local and distant extension of the disease, Vandetanib therapy was implemented. A CT scan showed stagnation in size for secondary liver determinations. Because she has a sister with MTC and PHEO, and a brother with PHEO, an assessment of the direct relatives was performed. Her daughter was diagnosed with multifocal MTC at the age of 13. The identification of the specific mutation of the RET gene is necessary in the index case, to facilitate family screening. **Conclusions:** This case of MEN2A must be followed carefully over time due to the severity and aggressiveness of the associated diseases. Once a germline RET mutation is identified, RET mutation analysis should also be performed in first- and second-degree family members.

Keywords: MEN2A, RET gene, hepatic metastasis, COVID-19

AN UNCOMMON OCCURRENCE: PANNICULITIS IN A PATIENT WITH DERMATOMYOSITIS

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Introduction: Dermatomyositis is an idiopathic inflammatory myopathy that causes muscle weakness and gives cutaneous and systemic manifestations. Panniculitis represents the inflammation of the subcutaneous fat caused by an underlying rheumatic disease. **Case Report:** A 40-year-old female patient presented with erythematous papules (on her elbows, hands and knees), facial erythema, fatigability and dyspnea on exertion with an insidious onset one month prior. The physical exam revealed swelling and stiffness of the radiocarpal and proximal interphalangeal joints. The dermatological exam showed alopecia, erythema and telangiectasia at the level of the face and chest. An erythemato-squamous plaque on her arms, elbows and knees as well as plaques and papules

at the level of the metacarpophalangeal and proximal interphalangeal joints were found. Biologically, the patient had leucopenia, lymphopenia, elevated levels of ASAT, ALAT, LDH, circulating immune complexes and positive speckled pattern antinuclear antibodies in the blood. The histopathological exam revealed irregular acanthosis, vacuolar degeneration, telangiectasia, mucin deposition, thickening of the basal membrane, lymphocytic infiltration and dermal edema. The patient was diagnosed with dermatomyositis. Differential diagnosis had to be done with systemic lupus erythematous. The patient followed a treatment with Methylprednisolone and Prednisone. One year after her first symptoms, the patient developed multiple subcutaneous nodules with tendency to ulceration. The clinical exam revealed muscle fatigue at the level of the pectoral and pelvic girdle. The muscular biopsy showed inflammatory and adipose infiltrates. The histopathological exam exposed the appearance of a lymphocytic lobular panniculitis with plasma cells. The diagnosis at this stage was dermatomyositis with panniculitis. Prednisone and Methotrexate were prescribed. After three months the evolution was favorable, treatment with Methotrexate was ended. The patient is currently on Hydroxychloroquine without any signs of relapse. **Discussions :** Although dermatomyositis is a multisystem disease, the specific cutaneous lesions and progressive muscle weakness are the main distinctive characteristics for it. The cutaneous manifestations are often nonspecific and difficult to be differentiated from the ones that occur in systemic lupus erythematous. Typical manifestations of dermatomyositis include papules and Gottron's sign, facial rash, eyelid edema and erythema. Panniculitis is a rare manifestation in dermatomyositis and can indicate a less aggressive form of the disease, with good response to treatment. **Conclusions:** We presented the case of a female patient with a rare manifestation in dermatomyiositis: panniculitis. The tendency to ulceration of the nodules also sets this case apart.

Keywords: Dermatomyositis, Panniculitis, Systemic lupus erythematous

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INTESTINAL ANGIODYSPLASIA IN ASSOCIATION WITH AORTIC STENOSIS

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Introduction: Angiodysplasia is the most common acquired vascular malformation that occurs in the gut, it is characterized by abnormal, ectatic, tortuous, dilated small blood vessel in the mucosal and submucosal layers of the GI tract. Histologically the abnormal vessels are characterized by endothelium with scant or no smooth muscle, that are prone to episode of bleeding. Lesions are often multiple, can occur anywhere along the GI tract, but most frequently involve the cecum or the ascending colon. Anemia is the predominant symptom (weakness, fatigue), the blood loss can be subtle, although some patient present with clear sign of GI bleeding like melena. **Case Report:** 57 years old male patient with known cardiac valvulopathies (moderate aortic stenosis, mild mitral insufficiency), episode of ischemic heart disease and congestive heart failure with reduced EF. He presents at the cardiology clinic for investigation due to symptoms of cardiac decompensation. Laboratory examinations show microcytic hypochromic anemia (Hb=7,9 g/dl). After correcting the decompensation he is sent to the GI department for endoscopic investigations. Gastroscopy without any lesion and colonoscopy reveals star shaped lesions characteristic for Angiodysplasia. **Discussions :** Gastroscopy and colonoscopy are common diagnostic tool, they allow the direct visualization of lesions along the GI tract. In this case it was difficult to prepare the patient for colonoscopy because of the congestive heart failure, even though with the use of colonoscopy it has been possible the visualization of the characteristic lesion of angiodysplasia, 5 to 10 mm flat cherry-red fern-like projecting vessels originating from a central artery (star shaped). The patient received as treatment coagulation with argon plasma. The etiology and the pathophisiology that lead to Angiodysplasia have not been completely understood. Most probably they are the result of a degenerative process associated with aging. It has been reported their occurrence with higher frequency in patients with aortic stenosis, Von Willebrand's disease, cirrhosis, renal failure and pulmonary disease. In this case we have the association of angiodysplasia with Aortic stenosis, a condition that is known as "Heyde's syndrome". Heyde and Schwartz were the first to describe a possible association between the two conditions. Nowadays there seems to be sufficient evidence to support an association between Aortic stenosis and bleeding from angiodysplasia but whether the association is causal remains uncertain. **Conclusions:** The cooperation between the gastroenterology and cardiology teams and the correct risk/benefit assessment lead to the appropriate diagnosis and resolution of the case.

Keywords: Angiodysplasia, GI bleeding, Heyde’s syndrome

CASE REPORT: AMOROLFINE-INDUCED ALLERGIC CONTACT DERMATITIS

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Introduction: Amorolfine is an antifungal agent with topical administration. It works by stopping the production of a chemical called ergosterol in fungi that causes nail infections. Many people use amorolfine to empirically treat onychomycosis with once or twice application per week, usually without any major adverse reactions. **Case Report:** We bring forward the case of a 45-year-old female patient, who presented with purulent blisters and itchy vesicles on her right first toe. The woman had no history of atopy, but she reported the application of a nail lacquer containing 5.0% amorolfine for the last couple weeks prior to the symptoms, in order to treat a suspected fungal nail infection. Following cessation of this product, the treatment regimen was consequently initiated with topical clobetasol dipropionate twice a day and oral amoxicillin/clavulanic acid (875/125□ □□□□□twice daily for 7 days). Afterwards, the patient had a favorable evolution, resulting in resolution within 2 weeks. Patch tests were performed six weeks later, using SIDAPA (Società Italiana di Dermatologia Allergologica Professionale e Ambientale) baseline series and the nail lacquer used by the patient. The patches were applied on the back in occlusion for 48 hours with Al Test on Scanpor Tape. Readings done at day (D)2, (D)4 and (D)7 listed a positive reaction to the nail lacquer. Consequently, patch tests with ingredients listed on the nail lacquer were performed with positive reaction to amorolfine 1.0% pet. After performing patch tests on ten healthy subjects, the results were negative to amorolfine 1.0% pet. **Discussions :** Following the tests performed, we report a case of allergic contact dermatitis to amorolfine contained in nail lacquer, as a result of empirical treatment of a suspected onychomycosis. Contact allergy to this active ingredient has been sporadically reported since 1996, but its frequency cannot be estimated due to lack of data available. Amorolfine is an antifungal drug with a low allergenic potential. However, excipients found in nail polish such as anhydrous ethanol, butyl acetate, ethyl acetate evaporate after the application of the product and therefore might increase the concentration of amorolfine in the nail bed and perionychium. **Conclusions:** Allergic contact dermatitis attributable to exposure to amorolfine as a topical agent might be under-diagnosed, especially in Italy, Romania and other European countries where the products are sold OTC (over-the-counter). In addition, it is not unusual that self-acquired topical antifungal products are used for the treatment of nail disorders (onychomycosis, onychodystrophy) without a proper dermatological or medical diagnosis.

Keywords: amorolfine, nail polish, allergic contact dermatitis, dermatology

SECOND PRIMARY CLEAR CELL CARCINOMA IN A FEMALE PATIENT: RARITY OR REALITY?

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Introduction: Renal cell carcinoma (RCC) is the 14th most frequent cancer worldwide. Clear renal cell carcinoma (cRCC) is the most common type of RCC, with a higher incidence in male population. There are sporadic and genetic types, with a variety of genes incriminated. The lung, liver, bone, adrenal gland, lymph nodes and brain are the primary sites of metastasis for RCC. The curative treatment includes surgical options, but in metastatic setting systemic therapy, with tyrosine-kinase inhibitors targeting VEGF pathway or immunotherapy, represents standard treatment. The goal of our presentation is to highlight the rarity of the case and therapeutic options implied. **Case Report:** We want to present the case of a 66-year-old woman diagnosed with cRCC in 2011. She underwent total left nephrectomy. Bone metastasis appeared after 4 years, when the patient presented with lumbar pain. A CT scan confirmed the appearance of osteolytic right sacral tumor which was surgically removed (the disease being considered as oligometastatic), but no 'adjuvant' treatment followed. In evolution, after 3 years, other (multiple) bone metastasis appeared, therefore the decision of initiating systemic therapy was made. The best treatment option at that moment was Sunitinib and bisphosphonates. Additional history revealed several side effects of the treatment (proteinuria, hypertension, neutropenia) and the therapy was intermittent ceased. During maintenance phase of the treatment, periodical evaluation by MRI scan revealed four tumors in the remnant kidney. The

pathology exam showed cRCC histology and a new treatment decision should be taken. **Discussions :** The particularity of this case consists in several important issues:1- The second malignancy represents a second primary or a metastatic site 2- For clinical practice purpose: a. Surgery for second primary tumor b. Surgery for metastatic disease c. Which is the standard systemic treatment in this particular situation? d. Systemic treatment action is only on metastatic site or also on primary tumor? 3- Which are the genetic recommendations for the relatives of this patient? **Conclusions:** Incidence of cRCC is low, particularly the appearance of the same histologic type in the contralateral kidney of a female patient. While metastatic disease was kept under control with systemic treatment for many years, the optimal medical decision for further management is a challenge.

Keywords: Clear Renal Cell Carcinoma, Second Renal Primary Tumor, Immunotherapy, Nephrectomy

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ONE IN A MILLION DISEASE

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Introduction: 6-pyruvoyltetrahydropterin synthase deficiency (PTPSD) is a rare (1:1 000 000 000), autosomal recessive, neurometabolic disorder and one of the six tetrahydrobiopterin deficiencies (BH4Ds). All monoamine transmitters get depleted in the absence of the BH4 cofactor. Therefore patients can experience various symptoms, the most common being neurological ones. Treatment requires phenilalanine reduced diet, Sapropterin dihydrochloride, L-Dopa/Decarboxylase inhibitor, and 5-HTP (5-Hydroxytryptophan) . **Case Report:** We present the cases of two patients: a one-year-old boy and a two-year-old girl. The suspicion of PTPSD was raised when newborn screening revealed hyperphenylalaninemia (HPA). They come from an unfavourable social environment, and their parents are relatives (cousins). At the age of two months, the girl was suspected of PTPSD. However, her parents did not bring her to the hospital until she was nine months old when she presented with severe generalized hypotonia and mild mental retardation. Biochemical tests were performed and PTPSD was diagnosed. For confirmation, we used molecular testing. Unfortunately, therapy was initiated six months after the diagnosis. In comparison, the boy received early diagnosis and treatment and his neurological outcome was normal. **Discussions :** We want to emphasize the rarity of these two cases and discuss the pathway of correctly diagnosing this disease. 6-PTPSD can be suspected when HPA is found in newborn national screening and the patient presents with neurological impairment signs. Then, multiple biochemical tests are performed using blood, urine and cerebrospinal fluid. To confirm the biochemical diagnosis, a genetic analysis should be performed. **Conclusions:** Children with PTPSD can lead a normal life if diagnosed and treated early. The longer the treatment delay, the more neurological damage they will suffer and they will need more kinesiotherapy to recover some milestones. The environment from which patients come is essential and can be a barrier when the parents delay presenting to the doctor and disagree with the investigations necessary for the diagnosis.

Keywords: 6-PTPS, Hyperphenylalaninemia, BH4 deficiencies, Neurometabolical Disorders

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CASE REPORT: TREATMENT OF CLOSTRIDIUM DIFFICILE COLITIS THROUGH FECAL MICROBIOTA TRANSPLANT

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Introduction: The gut microbiota is closely linked to the immune system and metabolic homeostasis. The balance of the microbiota is often damaged by Clostridium difficile, an anaerob bacteria that produces toxins. This bacteria is responsible for the etiopathology of several conditions, such as pseudomembranous colitis, that manifests as watery diarrhea, often with mucus and blood, dehydratation and abdominal cramps. Although there are a few treatment plans for this diseas, the reccurence of the symptoms is often present. **Case Report:** Our paper aims to present the case of a 29 years old female who acquired an infection with Clostridium Difficile in the hospital, while she was hospitalized due to a premature birth. During her hospitalization, she had an urinary tract infection treated with cephalosporis. A few weeks after discharge she returned presenting more than 10 diarrhea stools, most of them containing mucus and blood. Even thought she was given a specific treatment with Vancomycine the infection continued to occur. After 3 reccurences of the infection, she decided to receive a fecal microbiota transplant. The procedure consisted of collecting faecal samples from a healthy family membre, mixing them with

saline solution and followed by a special filtration method called centrifugation. The result of this process is supernatant(=liquid suspention) wich is administred along the digestive tract by using the endoscope, which leaded to the repopulation of the colon. **Discussions :** In 70% of cases after fecal microbiota transplantation was performed the recurrence infection of Clostridium Difficile dissapeared. Moreover, an increase of the time period between recurrences was observe. In order to achieve better results there are certain conditions that must be followed by the donors: they must be a first degree relative; any medical history of chronic patologies/chronic drugs should be avoided, the use of antibiotic should not be present in the last 6 months, also the presence of any pathogens and parasites must be infirmed by specific stool and blood tests (HIV, Clostridium Difficile etc). In our case, the patient was evaluated at 6 □□□12 months after tra nsplation and any symptome of relapse was rejected. **Conclusions:** Fecal microbiota transplant is an easy and beneficial way to treat colitis associated with antibiotherapy. Our patient's evolution after fecal transplant was favorable, without any side effects and without requiring further investigations.

Keywords: diarrhea, microbiota transplant, Clostridium difficile

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ADOPTED CHILDREN AND PRECOCIOUS PUBERTY – AN ODD CORRELATION?

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Introduction: Post-institutionalized (PI) children have been the subject of many studies regarding their anthropometric and psychiatric development, all of them concluding that poor orphanage care could be a risk factor for disorders of linear growth and puberty development with girls being at higher risk. **Case Report:** We present the case of a PI girl, with no perinatal data available, who was diagnosed with idiopathic central precocious puberty (CPP) at 6.5 years old □□□based on stage II Tanner breast development □□□discovered during auxological evaluation, and a positive GnRH agonist test (4 hours later LH was 11.1 U/L and E2: 286 pg/ml) along with a normal hypothalamic-pituitary MRI. Treatment with monthly GnRH agonist was instituted with arrested pubertal development. Treatment was stopped at 11.5 years old. Menarche occurred at the age of 12 years and 7 months, with a final height of 164 cm (+0.31 SD Ro) and a BMI of 26.4 kg/m2 (+1.65 DS WHO) being within the normal range for the reference population. **Discussions :** Scholarly articles have clearly linked that PI youth are at higher risk than non-PI youth to develop CPP, albeit opinions could be rather controversial. The proposed mechanisms in this case could be a mix of a change in environmental status that could lead to a positive trend in a PI child's development; excess weight which has also been linked to a premature onset of puberty, maybe due to higher leptin levels; finally, genetics could also play a role along with the secular trend which leads to earlier onset of puberty. Precocious puberty could result in compromised adult height by the premature closing of the growth plates, emotional and behavioral issues and even malignancy **Conclusions:** This case emphasizes the importance of anthropometric monitoring and special circumstances which can occur in adopted children. **References**:*Central Precocious Puberty in Children Living in Spain: Incidence, Prevalence, and Influence of Adoption and Immigration* by Leandro Soriano-Guille´ n, Raquel Corripio, Jose´ Ignacio Labarta, Ramo´ n Can˜ ete, Lidia Castro-Feijo´ o, Rafael Espino, Jesu´ s Argente, June 2010*Early growth faltering in post-institutionalized youth and later anthropometric and pubertal development* by Brie M. Reid, Bradley S. Miller, Lorah D. Dorn, Christopher Desjardins, Bonny Donzella and Megan Gunnar, August 2017

Keywords: CPP, anthropometrics, adopted

DEEP VEIN THROMBOSIS COMPLICATED WITH MASSIVE PULMONARY EMBOLISM AFTER AIR TRAVEL

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Introduction: Virchow's triad describes the three etiologies that can contribute to thrombosis: hypercoagulability, hemodynamic changes, endothelial injury/dysfunction, respectively. Venous thromboembolic events (deep vein thrombosis□□□□□□pulmonary embolism□□□□□have an annual inciden ce of about 1/1000 case**Case Report:** A 65-year-old female patient known with hypertension, previous DVT, significant familial background (2 sisters-DVT, 1 brother-DVT and PE, 1 sister with 3 episodes of ischemic strokes, daughter-thrombophilia heterozygous factor II

and V gene mutation), presents with a unique episode of syncope (1-2 minutes, without prodrome, trauma or urine output) accompanied by dyspnoea, fatigue, stabbing thoracic pain. Extensive anamnesis identified two flights 2 weeks prior presentation. Clinical exam revealed no specific signs. 12-lead rest electrocardiogram ascertained left axis deviation, left anterior fascicular block, type I atrioventricular block and negative T waves in leads DIII, V1-V4. Venous Doppler ultrasonography at admission detected right lower limb femoral-popliteal DVT and after 2 weeks signs of incomplete repermeabilization. Chest X-ray emphasized Hampton's hump sign (2.5 cm diameter) in the left superior pulmonary lobe (dome-shaped, pleural-based opacification). CT pulmonary angiography identified partial and complete intraluminal filling defects, with suggestive signs of acute onset in the main pulmonary arteries, lobar, bilateral segmental and sub-segmental branches, more conspicuous on the left side. Laboratory tests were positive for heterozygous factor II and V gene mutation. Assessments score were calculated: Wells score of 2 points, Geneva score of 6 points, and PESI 65 points□□□0-1.6% mortality at 30 days**Discussions :** PE can be a life-threatening medical condition. In particular cases, emboli remain in the lungs and scarring develops in the pulmonary arteries over time. This restricts blood flow and results in chronic thromboembolic pulmonary disease or chronic thromboembolic pulmonary hypertension. In our case, considering the massive pulmonary involvement of PE and recurrent DVT, the patient was strictly monitored for 3 weeks and an anticoagulant regimen (VKA, INR dose-adjusted) was prescribed life-long. The evolution of PE is generally favourable with progressive remission of symptoms. **Conclusions:** Despite stable hemodynamic and respiratory status, without subjective complaints during hospitalization, the presence of intraluminal significant thrombi, the short-term prognosis of PE is reserved. Extensive assessment after 1 month is a turning point regarding medium and long-term prognosis. Repeated pulmonary angio-CT scans with signs of thrombus resorption, asymptomatic clinical status, are indicators of a relatively favourable prognosis. Case particularity was considered the onset after 2 travels by flight in an adult patient without a known personal history of thrombophilia.

Keywords: deep vein thrombosis, pulmonary embolism, thrombophilia, medical management

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COVID-19 PANDEMIC EFFECT AND ULCERATED MELANOMA-IS THERE A CONNECTION? A CASE REPORT

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Introduction: Melanoma is part of the malignant melanocytic tumours, being an aggressive skin cancer. The COVID-19 pandemic has produced some serious changes regarding the possibilities for which the general population could undergo specialized medical treatment. For this particular reason, we present a case of an ulcerated nodular melanoma, diagnosed in an advanced stage, analysed from a histopathological point of view. **Case Report:** We report the case of an 86 year old male patient who has been admitted in the General Surgery Department of the Mureș Clinical County Hospital for an excision of a cutaneous tumour, located in the dorsal region. The tissue sample was then sent to the Pathological Department for the histopathological diagnostic. Grossing revelled a nodular brown tumour located on the skin graft, with a size of 30x38x16 mm. The microscopic examination revealed a proliferation of epithelioid tumoral cells with polygonal and round shape, with abundant eosinophilic nuclei, vesicular nuclei with large nucleoli. The Breslow index was 12 mm and the Clark level V, being ulcerated. The lymphovascular, perineural invasions and the satellitosis were absent, but the mitotic index was 69 mitosis/10HPF and a Brisk inflammatory infiltrate was observed. The growth phase has been described as horizontal and vertical, with pagetoid migration. The immunohistochemical profile showed that the tumour cells were positive for anti-S100, anti-SOX10, anti-MELAN A and anti-HMB45 antibodies with a Ki67 proliferation index of 60-70 % in the tumoral cells. **Discussions :** Based on the histopathological aspects and the immunohistochemically profile, the diagnostic of ulcerated nodular melanoma, stage pT4bNxMx was established. In the European medical world these advanced stages of melanoma are not common. The gap between our country's screening programs and the European medical practice, summed with the repercussions of the COVID-19 pandemic have resulted into the unfortunate opportunity to observe such aggressive nodular melanoma cases. **Conclusions:** Melanoma remains one of the most important skin cancers in terms of diagnostic and treatment, with a reserved prognostic. Because the stage of the tumour has a direct impact on the prognostic of the patient, the diagnostic in early stages, the histopathological diagnostic and the immunohistochemically profile of the lesion are important for the patient's outcome. COVID-19 pandemic adaptations of the health systems have represented one of the reasons for which melanomas are being diagnosed now in such advanced stages.

Keywords: Melanoma, COVID-19 Pandemic, Immunohistochemistry, Skin Cancer

TUMOR RECURRENCE OF MUCINOUS CARCINOMA OF THE BREAST- A CASE REPORT

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Introduction: Mucinous carcinoma of the breast is a rare malignant neoplasm, and is responsible for approximately 4% of all breast cancer cases, being included in the category of special types of breast carcinomas. This type of neoplasm is characterized by the high production of mucin and its extracellular presence **Case Report:** We present the case of a 44-year-old female patient with a clinical diagnosis of breast carcinoma recurrence, who underwent a reexcision and the sample was sent for histological analysis at the Pathology Department. In the antecedents, the patient presents a diagnosis received a year ago of invasive mucinous breast carcinoma, for which both chemotherapy and hormone therapy were performed as treatment. Gross examination revealed an irregular, white-yellow colored tumoral formation measuring 15x30 mm with a maximum thickness of 18 mm, which appeared to infiltrate the deep, superior, and inferior resection margins. Microscopic examination revealed residual tumor proliferation of mucinous infiltrative carcinoma consisting of uniform, round cells with reduced cytoplasm, eosinophilic and nucleus, arranged in nests with minimal pleomorphism. The cells were located in mucin lakes that infiltrated the stroma and were separated by thin fibrous septa. The cellularity was approximately 35%, with a Tumor-Infiltrating Lymphocyte Score (TILS) of 20%. During the same surgical intervention at the axillary level, 11 lymph nodes were removed, where metastases were observed in 3 of them. **Discussions :** In breast invasive mucinous carcinoma, luminal A molecular subtype, hormone therapy followed by surgical treatment is preferable. The same treatment was performed in our case, but the response to the treatment was not favorable. Usually the prognosis for these types of tumors is a good one, there are rarely metastases, but in our case due to the presence of lymphatic metastases, the stage in which we classified this case was ypT2N1aMx, also with RCB III, and extensive residual tumor. **Conclusions:** Mucinous carcinoma is a rare entity with an indolent course. Further, patients must understand the diagnosis, the nature of the tumour and the importance of regular follow-up to exclude local tumour recurrence or the development of regional metastatic lymphadenopathy.

Keywords: mucinous carcinoma, histopathological diagnosis, mastectomy

"RESUSCITATION OF THE HYPOTHERMIC PATIENT" – A CASE REPORT

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Introduction: The imbalance between heat production and its loss can also result in hypothermia. The normal body temperature is 36°C and any drop below 35°C characterizes hypothermia. When the body is immersed in water, large amounts of heat can be changed very quickly due to a much more remarkable water conductivity than that of air. **Case Report:** In the winter of 2021, the crew of the SMURD Helicopter from Târgu Mureș Aeromedical Base, is requested for a primary intervention in the case of a 14-year-old child who while on the surface of a seemingly frozen river, the ice broke and the child sank. 13 minutes after alert,the crew arrives at the scene of the incident. After about 25 minutes the victim is extracted from the water, unconsciously and is taken over by the medical crew who also finds the absence of breathing which is why the resuscitation maneuvers are started, the patient being hypothermic. The resuscitation continues according to the pediatric ALS protocol, with the particularity of hypothermia for which external heating methods are initiated and it is decided to transport the patient to UPU-SMURD Târgu Mureș under resuscitation maneuvers. **Discussions :** The external thoracic compressions are performed in ratio of 15:2 until the moment when the patient is intubated and ventilation becomes continuous. At the time of monitoring, the evaluation of heart rate, it was noted asystole which is an unshockable rhythm and the peripheral venous approach is achieved through which 0.5 mg adrenaline is administered. Orotracheal intubation and ventilation were practiced, the airway being permeable and protected against aspiration of an additional amount of secretions. For external heating, isothermal film and blankets were used, and the patient was transported to UPU-SMURD Târgu Mureș under resuscitation maneuvers. (3:33 p.m.).In the ER, the resuscitation maneuvers continued, internal heating maneuvers were performed , which involved lavage with hot liquids per nasogastric and vesical survey and at 5:15 p.m patient presents sinus rhythm and

pulse. **Conclusions:** The heating of hypothermic patients in cardio-respiratory arrest is a long procedure that involves a prolonged and efficient resuscitation until either the patient presents sinus rhythm and pulse, or until death is found, with the mention that in order to ascertain the death, the patient's temperature must be normal. In the case presented, resuscitation and heating had a favorable end for patient who continues his recovery in intensive care unit who subsequently is discharged and currently leads a normal life.

Keywords: Child, Hypothermia, Cardiac arrest, Resuscitation

MELANOMA METASTASES – STILL A CHALLENGE

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Introduction: Melanomas are one of the most aggressive skin cancers arising from melanocytes. It is known for its ability to spread quickly and form metastases. The main aim of this paper was to emphasize the importance of a periodic evaluation both from a clinical and paraclinical point of view of patients with a previous diagnosis of melanoma. **Case Report:** The study was conducted on 8 cases of metastatic melanoma from 2020 to 2022, diagnosed in the Pathology Department. The cases were selected from the database of the hospital. Regarding the time of appearance, in most cases, the metastases were diagnosed after 10-14 months after the initial diagnosis. Outside this range was one case where the metastasis appeared in 7 years after the complete surgical resection of the tumor. The tumoral cells had an epithelioid appearance, abundant cytoplasm, large nuclei, and prominent eosinophilic nucleoli, with marked pleomorphism The immunohistochemical markers used for the confirmation of the diagnosis were S100, Melan A, SOX-10 și HMB45. Apart from this, the highly proliferative nature of the melanocytic tumors was confirmed by the Ki-67 factor. **Discussions :** Studies show that between 45-75% of melanomas present metastases, with the most common organs being the lymph nodes, lungs, liver, brain, and bones. In 4 of the 8 cases, lymphonodular metastases were detected in the proximal stations of the initial tumor. In one case, metastasis was found in the lung, and it spread to the cerebral parenchyma after only two months. In the other three cases, they were diagnosed directly as metastases of melanoma in the bladder, liver, and pleural nodules. **Conclusions:** The rapid metastatic nature of the melanomas found in the 8 cases leads us to conclude that it is very important to have a thorough examination of melanomas so that no metastases are left unfound.

Keywords: Melanoma, Metastases, SOX-10, Ki-67

FOCUS ECHOCARDIOGRAPHY FOCUSED ON RIGHT VENTRICLE: AN IMAGING TRAP

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Introduction: Two-dimensional transthoracic echocardiography (2D-TTE) is a widely used investigation in medical practice because it is non-invasive, quick to perform, relatively cheap and efficient diagnostic method. In the specialized literature we find multiple reports where the physicians confronts ultrasound image artifacts or situations of misleading images which leads to wrong diagnosis. The experience of the cardiologist is very important for recognizing these cases. **Case Report:** A 59 year-old man with recent history of chest trauma presented at emergency room with chest pain and progressive dyspnea. Initially an ECG was performed where could be observed sinus tachycardia and a minor right bundle branch block. Chest X-ray revealed lateral thoracic pachypleuritis and pleural effusion. It was required a FOCUS two-dimensional transthoracic echocardiography (2D-TTE). Investigation of right cavities indicates the potentially presence of a pedunculated, slightly isoechoic mass (77mm/11mm) with implantation on the right ventricle (RV) free wall, crossing the tricuspid valve and pushing against the interventricular septum (IVS). Additionally it was identified pleural, pericardial effusion and dilated inferior vena cava without collapsing. Chest computed tomography revealed pericardial effusion of up to 50 mm exerting pressure on the right heart cavities with a thickened pericardium of up to 5 mm with constrictive pericarditis. **Discussions :** The mass identified in the right ventricle was a false image caused by an oblique section through the RV free wall due to the mass effect of the pericardial effusion. The position of the false mass against the normal blood flow, the same echogenicity as the myocardium and the synchronous movements with the IVS pointed to the correct diagnosis. **Conclusions:** Standard transthoracic echocardiography is pivotal for

establishing a correct diagnosis in an emergency setting. For avoiding an imaging "trap" in FOCUS examination, a standardized and sequential exam made by well trained physicians is mandatory.

Keywords: ultrasound, echocardiography, FOCUS, pericarditis

CEREBRAL ASPERGILLOSIS IN ACUTE MYELOBLASTIC LEUKEMIA: DIAGNOSIS AND MANAGEMENT STRATEGIES

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Introduction: Acute myeloblastic leukemia (AML) belongs to a group of heterogeneous malignant hemopathies characterized by the clonal proliferation of immature cells that are blocked in the differentiation process. The paucity of hematopoietic cells leads to the appearance of anemia, hemorrhagic syndrome, and despite therapeutic progress, infectious complications remain an important cause of mortality and a challenge in the management of these patients. **Case Report:** A 65-year-old patient presented to the emergency department with asthenic-adynamic syndrome, hemorrhagic syndrome, and acute onset of fever. Laboratory investigations revealed marked leukocytosis accompanied by bicytopenia (severe anemia and thrombocytopenia). Peripheral blood smear showed immature blastoid cells, which led to referral to the Hematology Clinic. Based on bone marrow examination, immunophenotyping, and cytogenetic examination, the diagnosis of AML was established, which was associated with a complex tumor karyotype FLT3-ITD and AML1-ETO mutations. Biological cultures and imaging investigations ruled out the presence of an active infection, and induction chemotherapy was initiated in association with a specific FLT3 inhibitor. The post-therapeutic evolution of the disease was marked by medullary aplasia with febrile neutropenia, with an unsatisfactory response to broad-spectrum antibiotic therapy. Thoracic CT examination revealed pulmonary nodules and "ground-glass" areas, raising the suspicion of invasive fungal infection. PCR examination for Aspergillus was positive, and Voriconazole was added to the treatment regimen with apparently favorable evolution. On day 26 of medullary aplasia, the patient suddenly developed aphasia and motor deficit. Emergency brain imaging (CT+MRI) identified lesions with infiltrative appearance, which, together with Aspergillus PCR performed from the cerebrospinal fluid, established the diagnosis of cerebral aspergillosis. Treatment with intravenous Voriconazole 400mg x2/day was initiated, with slow and favorable evolution, later switched to Isavuconazole per os, at maintenance doses of 200mg/day. Subsequent follow-up examinations showed neurological recovery and complete remission of leukemia. **Discussions :** Fungal infections are a significant and potentially lethal complication in neutropenic patients undergoing post-therapeutic bone marrow recovery. Aspergillus pulmonary infection with extension to the central nervous system is an extremely rare pathological entity in the literature, with a poor prognosis and early mortality. The particularity of this case is represented by the favorable response to antifungal therapy with adjusted doses and neurological recovery. **Conclusions:** AML are complex hematological pathologies that are characterized by a significant infectious risk, which increases the difficulty of managing these cases. Early identification of invasive fungal infections and initiation of specific therapy can make the difference between life and death for these patients.

Keywords: Aspergillus, leukemia, infection

CT - DIAGNOSTIC METHOD IN AORTIC COARCTATION

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Introduction: Aortic coarctation is a congenital cardiovascular birth defect in which the aorta is narrower in one part of it. If this is very severe or misdiagnosed, it can worsen the situation and surgery or other procedures are required. This narrowing interrupts or slows down normal blood flow to the body, this can cause blood flow to flow back into the left ventricle of the heart, making myocytes stressing to get blood out of the heart. In this way, the heart can weaken enough to lead to heart failure. Aortic coarctation can occur with other congenital heart defects. **Case Report:** Female patient, P.B. 18 y.o. presenting with hypertension, nausea, dizziness, shortness of breath. Cooperative patient, excellent collaboration. GE Revolution HD machine. The pink bead mounted on the left upper limb. Administer 65 ml of Iomeron 350 at 4.5 ml/s, followed by 30 ml of saline. A cardiothoracic angio-CT examination is performed with prospective sequential acquisitions at an average heart rate of 88/min. Good opacification of the vascular bed and cardiac cavities. Thoracic and abdominal situs solitus. Normal venous

returns. Atrio-ventricular and ventriculo-arterial concordant. Atrio-ventricular valves normally positioned. LVOT without obstruction. Dilated aorta on the ascending segment up to 32 mm. Severe miscalibration of the sub-isthmic aortic lumen, immediately underlying the insertion of the ductus arteriosus over a length of 2.1 mm, the aortic lumen measures 1.8/1.6 mm. No signs of patent ductus arteriosus. Significantly dilated trajectories of the bronchial, intercostal arterial branches, internal mammary arteries, thoracic and diaphragmatic muscle branches (6-7 mm internal mammary arteries). No fluid or pericardial thickening. **Discussions :** We want to point the importance of CT in aortic coarctation but also as detecting for patients at high risk for cardiovascular diseases. CT in this patient helped on better focusing on the diagnosis and finding solutions. Apart of surveillance and further details it's also used to guide transcatheter interventions improving the safety and efficiency of angioplasty and stent deployment. The main limitation is the presence of radiation exposure. **Conclusions:** It's important for morphological evaluation of congenital heart disease in general due to its main advantages including fast acquisition time, large anatomical coverage, high speed, and great spatial resolution. Current guidelines say that every patient with a coarctation must undergo a CT or MRI scan for more accurate details.

Keywords: Computed Tomography, Aortic Coarctation, Diagnostic method, Imaging

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CHALLENGING DIFFERENTIAL DIAGNOSIS IN A CASE OF SEVERE PULMONARY HYPERTENSION

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Introduction: Pulmonary hypertension (PH), defined as an invasively measured mean pulmonary artery pressure (mPAP) > 20 mmHg, represents a heterogenous disorder that affects approximately 1% of the entire global population, regardless of age. Five groups of PH can be identified in relation to the underlying condition, clinical significance and indication of treatment. Targeted medical therapy is recommended for pulmonary arterial hypertension (group 1) and PH associated with chronic pulmonary artery obstruction (group 4). **Case Report:** We report the case of a 73 y.o. Caucasian male patient presenting with fatigue and dyspnoea at minimal exertion, progressively aggravated in the last two years. From his medical history, we mention a massive acute pulmonary embolism (PE) in February 2021 involving the right pulmonary artery and complete distal obstruction, a moderately symptomatic SARS-CoV-2 infection confirmed one month later, and a diagnosis of prostate adenocarcinoma without evidence of metastasis on magnetic resonance imaging and computed tomography (CT), for which he underwent hormonal and radiotherapy in May 2021. In October 2022, the patient was referred to Targu Mures PH centre after a high probability of PH was determined. Echocardiography revealed enlarged right cardiac chambers, severe tricuspid regurgitation, indirect signs of pulmonary hypertension. Peripheral Venous Doppler offered suggestive evidence of previous bilateral deep vein thrombosis. Contrast-enhanced pulmonary CT was performed and described chronic PE with obstruction of the right pulmonary artery and distal branches, associated with diffuse fibrotic lesions. In November 2022, precapillary pulmonary arterial hypertension (mPAP = 40 mmHg, PAWP =□□□mmHg, PVR = 12 WU) was confirmed by right heart catheterization. Pneumological evaluation and pulmonary function testing (spirometry without bronchodilator in normal ranges and diffusing capacity for carbon monoxide - DLCO with moderate diffusion impairment) ruled out severe parenchymal lung disease. **Discussions :** After ruling out the possible hemodynamic and functional impact of the pulmonary fibrosis exacerbated by SARS-CoV-2 infection, chronic PE was confirmed as the foremost cause of PH in this patient and medical treatment with soluble guanylate cyclase stimulators was initiated. The perspective of pulmonary endarterectomy as an intention to reduce the thrombotic load can be considered in this case. **Conclusions:** This case highlights the importance of a multidisciplinary approach in order to establish the main factor that led to the development of PH. Differential diagnosis regarding different aetiologies in front of a newly diagnosed case is mandatory for further medical therapy recommendations.

Keywords: pulmonary hypertension, chronic pulmonary embolism, SARS-CoV-2 infection

CYTOMEGALOVIRUS GASTRITIS RESEMBLES LYMPHOMA. IS THAT POSSIBLE?

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Introduction: A beta herpesvirus known as human cytomegalovirus (HCMV) 5 poses a serious health risk to people with impaired immune systems. In the population with a functioning immune system, infection is usually asymptomatic. Moreover, the development of several malignancies and chronic inflammatory illnesses has been linked to HCMV infection. **Case Report:** A 80-year-old immobilized woman with a history of surgically repaired gastric arterial fistula and a gastric tumor (without documented histological study, July 2022) presents to emergency room with altered general status, significant weight loss and fatigability. At the time of admission she presents pale, dehydrated skin and mucosae, malleolar and plantar edema, a sacral erythematous lesion, and generalized muscle atrophy. Abdominal exam reveals a 5 cm palpable epigastric tumor and ascites. Preliminary tests showed a severe hypochromic microcytic anemia (Hemoglobin=5.40 g/dl) with no signs of hemorrhage (corrected with administration of 1 RBCs infusion), severe hyposideremia (0.9 µmol/l), mild lymphopenia, significant reactive thrombocythemia (527.000/microliter) and severe hypoalbuminemia. During the ultrasound examination an hypoechoic image (51x40 mm) without separation plane between thickened gastric wall (up to 15 mm) associated with adenopathy and significant ascites was revealed. Unlike the previous gastrointestinal endoscopy from 2022 which displayed the presence of circumferential antral ulcer with arterial fistula, the follow-up gastroscopy from the current admission revealed a proliferative infiltrative tumor located 53 cm away from dental arcade with necrotic and bleeding area involving the distal half of the stomach, pylorus and duodenal bulb with gastric outlet obstructive effect (presence of food more than 12 hours after ingestion). Based on the first result of the performed procedures, an advanced distal gastric cancer was suspected. A biopsy was conducted which highlighted gastric mucosa with ulcerated area associated with atypical lymphoid infiltrate and presence of HCMV. The patient started a valganciclovir course for 28 days. **Discussions :** Being a rare etiology of gastritis with unspecific endoscopic appearance, HCMV should be investigated in case of gastric lesions in immunocompromised patients, being a potentially cured condition. Despite the unfavourable prognosis after surgery for bleeding and non unresectable gastric cancer, the patient state is currently steady. **Conclusions:** Histological study is mandatory to be performed in all bleeding lesions of the gastric mucosa irrespective of the patient age or endoscopic appearance.

Keywords: Cytomegalovirus;, Gastritis;, Lymphoma;, Proliferative tumor;

FLYING AFTER DIVING: CASE PRESENTATION AND MILITARY IMPLICATIONS

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Introduction: Decompression sickness (DCS) is a medical condition characterized by bubble formation and elimination damage inside the body tissues, caused by a reduction in ambient pressure that results in inert gasses mobilization. DCS is a syndrome that frequently occurs during high-risk military activities, such as: high-altitude flights, deep-sea diving, extravehicular activity from spacecraft, emerging from a pressurized environment like a submarine or diving bell. DCS can produce many symptoms, and its effects may vary from joint pain and rashes to paralysis and sudden death. Considering this, DCS is classified as: Type I and Type II. **Case Report:** A 35-year-old female patient BE, BMI=37.78 presented in the emergency department of the National Institute of Aeronautical and Space Medicine, with the following signs and symptoms: bruising in the upper and lower limbs, strong pain in the joints and calves, otherwise all vital parameters within limits. From her anamnestic data, we considered relevant that she dived to a depth of 18 meters for 40 minutes, with an unknown ascent rate-probably 10 m/min. The time interval between diving to flight was more than 20 hours. It is unclear whether she had a safety stop or not. Presentation was two days after the flight. Based on the signs and symptoms presented and her anamnestic data, our patient received the following diagnosis: DCS type I, which lead to administration of hyperbaric oxygen therapy recompression at 2,4 ATA (5 sessions, 2 hours) with total recovery and no side effects at 3 months follow-

up. **Discussions :** The regulations in the army for the prevention of DCS vary. However, there are some general guidelines that are followed. For example, military personnel who engage in activities that involve rapid changes in pressure are required to follow strict decompression protocols to reduce the risk of DCS. These protocols may include: pre-dive or pre-flight medical examinations, using specialized equipment such as decompression chambers or hyperbaric oxygen therapy, adhering to strict dive tables or flight schedules. The military also provides extensive training to personnel involved in these types of activities to ensure that they are aware of the risks of DCS and know how to prevent it.Topics covered by these trainings may refer to:proper breathing techniques, equalization methods, emergency response procedures. **Conclusions:** As a conclusion, the prevention of DCS should be taken very seriously in the military, and strict protocols and regulations must be in place to ensure the safety of military personnel engaged in high-risk activities.

Keywords: decompression sickness, military personnel, high-risk activities

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THE ROLE OF NAFLD IN THE METABOLIC SYNDROME

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Introduction: Given the increasing prevalence of diabetes and obesity worldwide, the deleterious effects of non-alcoholic fatty liver disease (NAFLD) are becoming a growing challenge for public health. NAFLD is the most common chronic liver disease in the Western world. NAFLD is closely associated with metabolic disorders, including central obesity, dyslipidaemia, hypertension, hyperglycaemia and persistent abnormalities of liver function tests. In general NAFLD is a common denominer for a broad spectrum of damage to the liver, which can be due to hepatocyte injury, inflammatory processes and fibrosis. **Case Report:** The aim of our presentation is to underline the connection between the NAFLD and the metabolic syndrom , defined based on the presence of diabetes, hypertension and obesity. We carried out a retrospective study of approximately 4 years, from January 2018 to November 2021, all patients being diagnosed with fatty degeneration of the liver in which we followed the role of NAFLD in the metabolic syndrome, hospitalized in the Gastroenterology Clinic of the Tîrgu-Mureș County Clinic Hospital.Data were collected from existing documentation in observation sheets and discharge notes. **Discussions :** NAFLD studied and quantified by ultrasound characteristics (echostructure, echogenicity, diameter of the portal vein, atheromatosis of the abdominal aorta and the presence of gallstones) is not necessarily a defining factor for the metabolic syndrome, but it can contribute to its occurrence through changes in arterial pressure, the appearance of obesity and diabetes. **Conclusions:** Dietary recommendations and lifestyle interventions, weight loss, and the treatment of underlying metabolic syndrome remain the mainstays of therapy once the diagnosis is established with promising results but are difficult to maintain.

Keywords: NAFLD, Metabolic syndrom, Diet, Obesity

USING DNA SEQUENCING TECHNOLOGIES TO IMPROVE ACUTE MYELOID LEUKAEMIA DIAGNOSIS AND TREATMENT

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Introduction: Acute myeloid leukaemia (AML) is a neoplasm of immature myeloid cells associated with a wide variety of clinical presentations, morphological features and genetic aberrations. AML is responsible for 1% of all cancer cases, mainly presenting in elderly patients (>70). It has a mortality rate that accounts for up to 2% of cancer related deaths. Next-generation sequencing (NGS) provides a better understanding of existing genetic mutations responsible for AML and enables the discovery of novel ones. Newer sequencing methods such as long-read sequencing platforms promise cheaper and faster detection of AML-related mutations. **Case Report:** This paper will discuss the current role of genomic analysis in the diagnosis, risk stratification and treatment of AML. The potential impact of new sequencing technologies is also presented, highlighting the role of long-read sequencing in the field of haematological oncology. **Discussions :** AML can contain up to 13 pathogenic driver mutations per tumour. Many of these have been shown to have a direct impact on long-term AML prognosis, with the clinical course of the disease often having a different outcome based on their presence. NGS has the ability to detect clinically significant mutations at a low cost and a fast turnaround time. Their detection is used to confirm

diagnosis and identify the subtype of AML. Certain variants can also influence treatment choices (DNMT3A mutated AML responds well to high dose daunorubicin). NGS can be used to screen for minimal residual disease following treatment, when leukemic cells may still be present in the patient's blood but under the detection methods of morphologic methods. Long-read sequencing devices are a new development in the genomic analysis field and promise more accurate, cheaper and faster sequencing when compared to NGS devices. MiniION devices are relatively cheap and require minimal preparation of DNA samples, enabling their use in managing AML in developing countries where other genetic techniques may not be available. **Conclusions:** NGS plays a crucial role in diagnosing, managing and screening of AML patients. Long-read sequencing methods promise increasingly accurate and more widely available genomic analysis for AML.

Keywords: DNA sequencing, Next-generation sequencing, Acute myeloid leukaemia, MiniION

USING DNA METHYLATION SEQUENCING TO IMPROVE THE DIAGNOSTIC AND PROGNOSTIC CAPABILITIES IN PROSTATE CANCER

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Introduction: Worldwide, prostate cancer is the most frequently diagnosed malignancy in males. It has a favourable prognosis when discovered at an early stage. However, it is the sixth leading cause of cancer death in men. This is attributable to the asymptomatic character of the disease in its early stages as well as to the lack of appropriate screening and diagnostic methods currently available. PSA is a controversial subject among urologists around the world, with many medical professionals doubting its usefulness as a screening tool. DNA methylation modifications are being increasingly recognised to play a major role in prostate cancer screening, diagnosis and prognosis. Cell-free DNA is easily accessible in peripheral blood and can be used as a biomarker for the diagnosis of prostate cancer. **Case Report:** The aim is to discuss the role of DNA methylation in the development of prostate cancer. Whole-genome bisulfite sequencing (WGBS) is proposed as the main sequencing technique to be used when investigating the DNA methylation profile of prostate cancer. Exciting developments in the field of cell-free DNA analysis are presented, highlighting the potential of DNA methylation biomarkers and their use as a diagnostic and prognostic tool in prostate cancer. **Discussions :** Several studies have used WGBS to investigate the epigenetic profile of prostate tumour samples. Several DNA methylation modifications are clearly linked to the development of prostate cancer, providing an insight into the mechanisms of tumour development. Hypermethylation of tumour suppressor genes (RXRG, FH, RARA, etc.) and hypomethylation of oncogenes (NCOA4, BIRC2, etc.) are characteristic in prostate tumour samples. Upregulation of RAS and MAPK pathways as a consequence of the hypomethylation of their regulatory regions was also identified in tumour-adjacent samples, suggesting that these are alterations that precede oncogenesis. Other studies identified panels of characteristic DNA methylation profiles that can be combined with known oncogenic gene mutations to develop diagnostic and prognostic biomarkers. These cell-free DNA biomarkers can provide a reliable and non-invasive screening method for prostate cancer. **Conclusions:** DNA methylation modifications play an important role in prostate cancer. Further research in this field can provide us with valuable information which can be used to develop more accurate and non-invasive diagnostic and prognostic tools.

Keywords: DNA methylation, Cell-free DNA, Prostate cancer, Biomarker

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TRANSARTERIAL CHEMOEMBOLIZATION (TACE) FOR LIVER METASTASES

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Introduction: The liver is an organ with a high metabolic activity and a significant supply of blood. This makes it one of the main points where metastases appear, especially from cancers of the gastrointestinal tract. The therapeutical options are mainly between surgical resection and chemotherapy. The last one can be performed in different ways such as systemic, local, or transarterial, targeted exactly where the substance is needed. Transarterial chemoembolization can use cytotoxic agents such as Cisplatin, Doxorubicin, Mitomycin or Epirubicin, released in the tumour supplying arteries, assuring a prolonged local infusion due to the embolization of the artery with the help of embolization particles or microspheres. **Case Report:** We report the case of a 54-year-old patient

suffering from colorectal cancer, with hepatic metastasis. After the surgical intervention for the primary tumor, the oncologist referred the patient to the Interventional Radiology Department of our hospital for embolization of the metastasis. The operating team performed a diagnosis angiography, identified the feeding vessels of the hepatic tumor, catheterized the feeders using 2.4F ProgreatTM Micro Catheter System, and injected Tandem Microspheres loaded with Irinotecan, until all feeders were occluded and reflux of contrast substance was noticed. **Discussions :** The option of endovascular approach in patients suffering from metastasis from colorectal adenocarcinoma opens new possibilities of treatment. The major advantages are the local administration of chemo-active drugs, with no systemic side effects, and the complete devascularisation of the tumor. In our patient, post-procedural administration of contrast substance showed cvasi-complete devascularization of the tumoral masses. Close to complete distruction of the tumours is achieved in 6 to 12 months, due to the prolonged release of the chemotherapeutic agents from the embolic particles. **Conclusions:** Transarterial chemoembolization is an optimal approach for liver metastasis, with a low complication rate, and a high efficiency. This is the best option for malignant lesions that are to big to be surgically excised, while also trying not to expose the whole body to chemotherapeutic agents. Even though it is an option suitable for many patients, with good results and easy monitoring of the success of the procedure with just some contrast substance, it is not yet widely enough used in our country and does not offer the benefits at its full potential.

Keywords: TACE, Chemoembolization, Metastases

ENDOVASCULAR APPROACH IN TANDEM STROKE. A CASE REPORT

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Introduction: Tandem occlusion is defined as a high-grade stenosis or occlusion affecting the internal carotid artery's cervical segment and its intracranial distal part or its branches. The incidence is 15-20% of all ischemic strokes and there can be seen a worse outcome than in patients with an isolated lesion, considered to have high mortality and morbidity rates, with more severe neurological deficits. Even if endovascular treatment in tandem cerebral occlusions seems to be the most effective strategy, it still has to be considered management variations according to anatomical, clinical, and technical aspects to optimize patient care **Case Report:** We report the case of a 46- year-old patient who presented to the Emergency room of our hospital with neurological signs and symptoms of acute ischemic stroke. The CT scan revealed acute occlusion of the left internal carotid artery. The patient was referred to the Interventional Radiology Department for endovascular treatment. During the procedure, a dissection of the left internal carotid artery was discovered. After surpassing the dissection, the control injection revealed a simultaneous occlusion of the left middle cerebral artery. The operating team decided to use an aspiration catheter for the distal occlusion, with favorable results (eTICI 3). Afterward, a stent was placed at the level of the carotid dissection, with the re-establishment of the flow. **Discussions :** Tandem stroke is a fairly frequent pathology, with a difficult initial diagnosis on CT scans, and problematic endovascular management. The decision upon which lesion to approach first relies on the anatomy and user experience. **Conclusions:** Endovascular treatment of tandem stroke is an optimal approach with favorable outcomes and fast recovery of the patients.

Keywords: Tandem stroke, Endovascular treatment, Interventional Radiology

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SIMULTANEOUS DEVELOPMENT OF BORDERLINE MUCINOUS CYSTADENOMA AND MALIGNANT BRENNER TUMOR IN AN OVARIAN MASS: A DIAGNOSTIC CHALLENGE

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Introduction: Borderline mucinous cystadenomas and malignant Brenner tumors are two relatively uncommon subtypes of ovarian neoplasms that are characterized by distinct histologic features. Malignant Brenner tumors arise from the surface epithelium, being composed of nests of transitional cells, accounting for less than 5% of the group. Borderline mucinous cystadenomas are characterized by the presence of atypical epithelial proliferation lacking stromal invasion. **Case Report:** We present you the case of a 71-year-old woman with a right-sided adnexal mass. The cut surface of the lesion shows the multilocular cystic composition of the mass, with turbid

mucinous content and focal hemorrhagic areas. Multiple yellowish vegetations are found within the cystic cavities with a finely granular surface, extending up to 3 cm. The mass also contains a whitish-colored, smooth-surfaced solid nodular portion. Microscopically, it is primarily composed of cystic formations, with papillary and solid components. The cystic formations are mostly lined by mucinous intestinal-like epithelium having low-grade nuclear atypia. The transitional-type epithelium shows nearly uniform features with some focal moderate/severe atypia and squamous metaplasia. Areas of extensive necrosis are present with significant mitotic activity (Ki67: 30%). There is a large fibrous area with the features of a benign Brenner tumor, confirming low differentiation of the transitional cell neoplasm. The immunohistochemical study, which, however, is not essential for diagnosis, shows positivity for CK7, EMA, and p63 in both. **Discussions :** Concomitant malignant Brenner tumor and borderline mucinous cystadenoma is an exceedingly rare combination that presents unique challenges in diagnosis and management, as these two distinct tumor types have different histopathologic features, molecular profiles, and clinical behaviors, and their coexistence can complicate treatment decisions and prognostic assessment. **Conclusions:** The connection between an ovarian mucinous cystadenoma and a Brenner tumor is well known, but this is one of the few cases of the Brenner tumor being malignant to the best of our knowledge. The simultaneous development of the two distinct types of neoplasms mentioned above represents the particularity of this case, requiring a careful and multidisciplinary approach that considers the clinical, radiologic, pathologic, and molecular features of each one.

Keywords: Histopathology, Brenner Tumour, Cystadenoma

SPONTANEOUS CORONARY ARTERY DISSECTION IN A PATIENT WITH SEVERE HYPOKALEMIA

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Introduction: Primary hyperaldosteronism (PA) is characterized by hypertension, suppressed renin, and increased aldosterone secretion. Primary hyperaldosteronism is more commonly found in females, ages 30's-50's, and has a prevalence of 5-12% of the hypertensive population. **Case Report:** A 41-years-old female presented to the Emergency Department (later transferred to the Cardiology Department) with constrictive retrosternal pain, radiating to the left arm, lasting for approximately 30 minutes, and an arterial blood pressure of 210/100 mmHg. The patient's history revealed IIIrd degree hypertension with no other significative personal or familial cardiovascular pathology. The EKG revealed poor R wave progression (PRWP) in DII, DIII, aVF, ST-segment elevation of 1-2 mm in V2-V3, negative T wave in DIII, aVF, supporting the diagnosis of STEMI Myocardial Infarction. Relevant serum levels were: Potassium 1,4 mmol/L, Sodium 148 mmol/L, and elevated myocardial cytolysis enzymes. Echocardiography confirmed an ejection fraction of 40-45% with severe hypokinesia of the left ventricular anterior wall and apex. Emergency coronarography was performed on the left anterior descending artery, showing a spontaneous acute coronary dissection, so percutaneous coronary intervention (PCI) was not possible. Due to hypokalemia and hypertension the patient presented, an abdominal CT was performed, revealing a right adrenal lesion of 16/20/65 mm. Further investigations were performed to verify the possibility of adrenal adenoma. The aldosterone-renin report was elevated (Aldosterone 19,6 ng/dl, Renin <0,50 mUI/ml), which further confirmed the diagnosis. Adrenalectomy is performed, to lower the aldosterone levels, the arterial blood pressure and to avoid the possible long-term complications of adrenal adenoma. **Discussions :** The case was interpreted as a Type II ST-elevated myocardial infarction caused by spontaneous acute coronary dissection in a young patient, in whom was found at further investigations, a primary hyperaldosteronism, which even though has multiple etiologies, the most common is solitary aldosterone-producing adrenal adenoma (35% of PA cases), also known as Conn's Syndrome. From a physiopathology perspective, hyperaldosteronism will lead to Sodium retention, consecutive hypertension, hypokalemia, metabolic alkalosis, increased Magnesium excretion, and most importantly, the suppression of the renin-angiotensin system. **Conclusions:** Hypertension in young patients can always hide a deeper issue, which must be discovered as soon as possible due to the high risk of possible life-threatening complications. Currently, our patient is following treatment, is experiencing alleviated symptoms, normal arterial pressure, and is waiting for the histopathological results after the adrenalectomy.

Keywords: primary hyperaldosteronism, coronary dissection, hypokalemia, secondary hypertension

SEVERE PERIPHERAL ARTERIAL DISEASE: A CASE OF DELAYED DIAGNOSIS

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Introduction: Although Peripheral Arterial Disease (PAD) is common, the majority of patients affected by the disease are considered to be undertreated, or even undiagnosed. The treatment of PDA presents challenges in accurately diagnosing the symptoms and in determining treatment for each patient. **Case Report:** A 70-year-old female patient reported lower limb pain, and paresthesia, which was initially interpreted as lumbar sciatic pain. After two weeks of physiotherapy, the worsening of the lower limb pain, causes the patient to be referred to the Cardiology Department. A detailed anamnesis reveals lower limb pain with onset at effort (<100 meters) and decreased limb temperature, suggestive of PAD stage IIB Fontaine. The patient's history revealed that she is a current smoker, who suffered from type 2 diabetes (for 5-6 years), dyslipidemia, IIIrd degree hypertension and monovascular coronary disease. The arterial blood pressure at presentation was 155/90 mmHg, and serum levels revealed hyperglycemia (166 mg/dl) and elevated triglycerides (238 mg%). An EKG was performed, which showed sinus rhythm, ventricular rate of 85 beats/minute and negative T waves in aVL derivation. The Ankle Brachial Index (ABI) was 0.45 for the right leg and 0.47 for the left leg. Doppler ultrasound was performed, which showed severe stenosis in the common iliac arteries, followed by peripheral arteriography, which confirmed 90% stenosis in the common iliac arteries. Percutaneous transluminal angioplasty (PTA) was then performed, placing two stents at the aortoiliac bifurcation (kissing stent), to reduce the symptoms and minimize the long-term complications of aortoiliac stenosis. After the intervention, the patient's evolution was favorable, the claudication has reduced drastically. The antihypertensive therapy is maintained, dual antiplatelet therapy and statin therapy were initiated. **Discussions :** Most patients with PAD will also present Coronary Artery Disease (up to 71% of the patients). Consequently, the differential diagnosis between sciatic lumbar pain and claudication is extremely important, because Sciatica, while being a debilitating condition, presents no risk to the cardiovascular system. Therefore, correct diagnosis of the disease plays a crucial role, especially when PAD tends to go undiagnosed due to the common nonspecific or pauci symptomatology. Comprehensive management is needed, which includes managing glucose levels, arterial blood pressure, and advice against smoking. **Conclusions:** Superficial anamnesis and clinical examination of the patient can lead to delayed diagnosis, even if the patient presents specific symptomatology. Severe PAD can lead to serious complications, such as limb ischemia, gangrene, heart failure, and myocardial infarction, when misdiagnosed or not treated properly.

Keywords: Peripheral Arterial Disease, Severe common iliac artery stenosis, Percutaneous transluminal angioplasty, Ankle Brachial Index

MANAGEMENT OF BORDERLINE LEFT VENTRICULAR HYPOPLASIA IN PRETERM INFANTS

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Introduction: In premature infants, it is usual to have complications due to organ underdevelopment. One possible outcome of premature delivery, although uncommon, includes borderline left ventricular hypoplasia in which there is an underdevelopment of the left heart. This congenital condition causes abnormalities in circulation such as pulmonary hypertension and systemic flow disturbances. **Case Report:** A female patient born by cesarian section prematurely at a gestational age of 26 weeks, weighing 860g was admitted to the neonatal ICU due to insufficient respiration and was ventilated with nasal CPAP. An echocardiography was conducted and revealed a patent ductus arteriosus, left peripheral pulmonary artery stenosis, and mild tricuspid insufficiency. Due to the ventilation of the patient, she developed bronchopulmonary dysplasia (BPD). At 11-months-old, the echocardiography was repeated and revealed an increase in tricuspid insufficiency, a wide secondum atrial septal defect, left ventricular hypoplasia, right ventricular enlargement, and an ejection fraction of 65%. An angiography revealed pulmonary hypertension with a mean pulmonary arterial pressure of 42mmHg. The patient was diagnosed with borderline left ventricular hypoplasia, BPD, and pulmonary hypertension. She was prescribed furosemide and enalapril for tricuspid insufficiency, and bosentan and sildenafil to manage her pulmonary hypertension. It was also discovered

that her atrial septal defect reduces her risk of a pulmonary hypertensive crisis by decreasing the pulmonary pressure gradient in case of exacerbation of the pulmonary hypertension. A palivizumab injection was also administered to the patient to prevent RSV due to the increased infection susceptibility caused by her BPD. The patient appears to be stable and will be monitored periodically throughout her treatment. **Discussions :** Cardiac underdevelopment is common in infants delivered prematurely. In such cases, treatment must be planned carefully and accurately to be able to manage possible complications. With increased understanding of the pathologies and treatment strategies, we can achieve higher survival incidences among premature infants. **Conclusions:**

Keywords: Left Ventricular Hypoplasia, Preterm Infant, Bronchopulmonary Dysplasia

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AN UNUSUAL CASE OF AN EMPYEMA CAUSED BY STENOTROPHOMONAS MALTOPHILIA

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Introduction: Stenotrophomonas maltophilia is an opportunistic gram-negative bacillus that is known to cause nosocomial infections of various types; however, it is rare to find pleural infections due to this pathogen. In this case, we discuss an unusual finding in which a patient admitted for severe pneumonia, developed an empyema caused by S. maltophilia. **Case Report:** A 68-year-old male with a history of COPD, chronic heart failure, and hyperlipidemia was admitted to the hospital presenting with a purulent cough and fever. A chest X-Ray revealed bilateral infiltrates and bilateral pleural effusion. His procalcitonin, CRP, and leukocyte count were all elevated with significant neutrophilia. The patient was diagnosed with pneumonia and started on broad spectrum antibiotics. His condition continued to deteriorate, and he eventually required intubation. Treatment with meropenem was initiated but was still ineffective. An endotracheal aspiration culture revealed growth of Acinetobacter baumannii, for which the patient was given colistin treatment. On a subsequent chest X-ray, fluid was discovered in the left costodiaphragmatic recess, and a thoracic ultrasound confirmed that this fluid was loculated. Thoracocentesis of this fluid established that it was exudative in nature, and a culture of the exudate revealed the growth of Stenotrophomonas maltophilia. The patient was diagnosed with an empyema caused by the agent S. maltophilia, and levofloxacin treatment was initiated. Despite initial improvement with this new treatment, days later, the patient went into septic shock and died. **Discussions :** In patients hospitalized for extended periods of time, S. maltophilia is an important factor to consider in morbidity and mortality. In patients showing signs of an infection that is unresponsive to several different antibiotics, it is important to consider this pathogen as a causative agent. Due to its multidrug-resistant nature, it must be identified early in order to administer targeted treatment in a timely manner. **Conclusions:** S. maltophilia is usually not initially considered as a causative agent in cases of persistent infections. Coupled with its unusual clinical presentation, it is normally not regarded in the differential diagnosis; however, in patients with a prolonged stay in the ICU, presenting with a refractory infection, a S. maltophilia infection must be considered.

Keywords: Stenotrophomonas Maltophilia, Empyema, Pneumonia

IMPACT OF SARS-COV-2 INFECTION ON CLINICAL OUTCOME AND DISEASE COURSE IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE (IBD)

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Introduction: The outbreak of the Covid 19 pandemic caused by the severe acute respiratory syndrome coronavirus type 2 (SARS-CoV-2) led to a total number of 682 million confirmed infections as of March 20st, 2023, and a total number of deaths related to SARS-CoV-2 infection of 6,8 million. Patients with inflammatory bowel disease (IBD) and coinfection with of SARS-CoV-2 might be predisposed to a more severe clinical course and outcome. **Case Report:** In our retrospective study we included 55 hospitalized patients admitted in the period of one year from a single IBD center in Targu Mures, Romania with an established diagnosis of IBD. One group of IBD patients was comprised of patients without SARS-CoV-2 Infection (30 patients), while the other group had a diagnosis of SARS-COV-2 (22 patients), confirmed by real time reverse transcriptase polymerase chain reaction (RT-PCR) obtained by nasopharyngeal swap samples. The severity of the Infection was assessed, and patients

were grouped in a category of mild, moderate, and severe disease. The severity of IBD in both groups was evaluated at the time of admission and discharge of the patient. We evaluated the extent of the disease for Ulcerative colitis and for Crohns Disease. We compared the occurrence of IBD flares in both groups. A flare was defined as an increase in the severity of IBD, objectively measured by the return or worsening of IBD symptoms (e.g., Diarrhea, abdominal pain, weight loss) We furthermore investigated key laboratory parameters and the used treatment in both patient groups. **Discussions :** A total of 19 patients (33,9 %) had a flare during admission. Of those patients 9 (47,37%) had a SARS-CoV-2 Infection. In our sample we found no significant (p=0,494) correlation between the severity of of SARS-CoV-2 Infection and a more severe clinical course and outcome in patients with IBD. Furthermore, we established a significant (p= 0,034) negative correlation between the severity of SARS-CoV-2 Infection and a decreased Iron level. We discovered a significant (p= 0,001) positive correlation between Corticotherapy and flares. **Conclusions:** We found no evidence of a more severe clinical course and outcome in IBD patients with SARS-CoV-2 infection. We had matching results with previous studies that established the significant impact of corticotherapy on more severe clinical courses and outcomes in IBD patients.

Keywords: Inflammatory Bowel disease, Coronavirus, Flare

GASTRIC ANTRAL VASCULAR ECTASIA: A HIDDEN AND OFTEN FORGOTTEN SOURCE OF GASTROINTESTINAL BLEEDING IN THE SENIORS

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Introduction: Gastric antral vascular ectasia (GAVE syndrome) is a rare but important cause of upper gastrointestinal bleeding mainly in the elderly. In non-cirrhotic patients, it is more common in females. Although it is associated with a range of chronic medical conditions such as cardiac, hepatic or renal diseases, pathogenesis remains uncertain. There are two types of GAVE: the classic type which consists of linear arrays of angiomas and the diffuse type. **Case Report:** A 74-year-old female presents in our clinic with fatigue, chest pain and heartburn. The medical history reveals severe chronic iron deficiency anemia, and various cardiac diseases, including hypertensive cardiopathy, mitral and aortic regurgitation, paroxysmal atrial fibrillation, and atrial flutter. Physical examination showed pale teguments. CT scan showed a intraparietal gastric formation. A gastroendoscopy was performed and showed antral vascular ectasia all over the gastric wall. The upper gastrointestinal tract was examined with endoscopic ultrasonography (EUS) and revelead this intraparietal gastric formation. This might suggest a gastric wall leiomyoma. The use of EUS was mandatory to evaluate the lesions. Biopsies of the suspect intraparietal gastric wall lesion were collected during the EUS procedure and are still being processed. **Discussions :** The GAVE syndrome is likely to develop in patients with chronic conditions, especially gastrointestinal diseases such as liver cirrhosis or cardiovascular diseases. Among the investigations that our patient has been through, one of the most relevant was the endoscopy, where we could underline the characteristic pattern of the GAVE syndrome: the watermelon stomach. The watermelon stomach is characterized by red striations with marked hypertrophic mucosal changes causing gastrointestinal bleeding. The progressive mucosal changes can be related to the severe iron deficiency anemia. The chronic gastrointestinal bleeding seen in this syndrome remains a rare, extraordinary cause of iron deficiency anemia. **Conclusions:** Gastric Antral Vascular Ectasia is an important diagnosis to consider in older patients with severe anemia or profound GI blood loss, especially in the setting of heart, liver or kidney diseases. Given this, we present a challenging case of a patient that was diagnosed with a rare syndrome where EUS examination was chosen as a diagnosis method. Also argon plasma therapy is recommended for the vascular dilatation, which is going to be done in multiple successive sessions. The first therapy was already done under recommendation. Our patient remains under chronic treatment with apixaban. To sum up, the biopsies' results are essential for our case's prognosis.

Keywords: Gastric Antral Vascular Ectasia (GAVE), gastrointestinal bleeding, watermelon stomach, endoscopic ultrasonography (EUS)

MANAGEMENT OF THE DIALYSIS PATIENT WITH CORONARY HEART DISEASE: RISKS AND BENEFITS

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Introduction: In patients with chronic kidney disease (CKD), the main cause of mortality and morbidity is represented by cardiovascular diseases. These patients present numerous risk factors such as albuminuria, inflammation and oxidative stress. **Case Report:** A 63-year-old patient with CKD in hemodialysis program with a recent history of atrial fibrillation, multistenting coronary angioplasty on the right coronary artery and circumflex artery, cardiac pacemaker and colonic polyp, presented to the Emergency Department for chest pains. No changes in the ST segment on the ECG nor elevated cardiac enzymes were identified. Echocardiography revealed mitral and aortic ring calcifications with a slightly hypertrophied concentric left ventricle. A new coronary angiography was performed and complex tricoronary lesions were objectified: left anterior descending artery with intrastent restenosis in segment I and 80% restenosis in segment II, circumflex artery with permeable stent and with 80% stenosis of postero-lateral branch. Due to the complexity of the coronary lesions, the Heart Team decided that interventional revascularization was the best treatment option. After coronary angioplasty with drug-eluting stents, double antiplatelet medication with Aspirin 75 mg and Clopidogrel 75 mg was started. Four days later the patient had massive rectal bleeding requiring blood transfusion. Considering the high thrombotic risk and the need to perform endoscopic polypectomy, intervention under double antiplatelet treatment was preferred. **Discussions :** Percutaneous coronary intervention in patients with chronic kidney disease is associated with greater complications, such as restenosis and future cardiac events. The bleeding risk is sometimes as important as ischemia, especially when associated with other comorbidities. **Conclusions:** Chronic kidney disease affects approximately 10% of population and is considered a public health problem due to its association with cardiovascular diseases.

Keywords: revascularization, polypectomy, dialysis

THE CHALLENGES OF MIXED PHENOTYPE ACUTE LEUKEMIA: FROM DIAGNOSIS TO TREATMENT

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Introduction: Mixed phenotype acute leukemia (MPAL) is a rare and aggressive type of acute leukemia characterized by the concurrent presence of two leukemic clones, which may originate from distinct hematopoietic lineages. The prognosis is generally unfavorable and depends on patient factors (age, comorbidities) as well as the cytogenetic characteristics of the tumor clones, infiltration of other organs, and response to induction treatment. In the literature, the 5-year survival rate is estimated to be less than 40%. **Case Report:** A 20-year-old male patient with no previous medical history presented to the Emergency Department in Iasi in January 2022 for significant physical asthenia and fever syndrome. The clinical examination revealed hepatosplenomegaly and supra- and subdiaphragmatic lymphadenopathy. The hemogram showed leukocytosis accompanied by moderate pancytopenia (anemia and thrombocytopenia), and the peripheral blood smear identified 69% blast cells, requiring transfer to the Hematology Department at IRO Iasi. The phenotypic examination of the peripheral blood described a mixture of myeloid precursors and mixed myeloid/lymphoid T precursors, with a predominance of the first category, and cytogenetic and molecular biology tests revealed a complex tumor karyotype associated with the FLT3-D835 mutation. The examination of cerebrospinal fluid (CSF) identified central nervous system (CNS) infiltration with leukemic blasts. Induction therapy with Cytarabine and Idarubicin, associated with Midostaurin (a specific FLT3 inhibitor), along with intrathecal administrations of Methotrexate and Cytarabine were initiated to eradicate the disease from the CNS. Post-therapeutic evolution was marked by medullary aplasia complicated by septic shock, originating from the lungs, requiring antibiotic therapy and vasopressor support in the Intensive Care Unit. Post-therapeutic evaluations of the bone marrow and CNS indicated complete remission, which prompted the option for consolidating the response through hematopoietic stem cell transplantation from the HLA-compatible sister. The post-transplant evolution was favorable, with the patient maintaining a complete response at 9 months after the procedure. **Discussions :** Allogeneic hematopoietic stem cell transplantation (HSCT) is considered the

best therapeutic option for patients with MPAL who are eligible for this procedure. Literature data suggest that HSCT, performed early, is associated with a higher survival rate compared to consolidation chemotherapy. **Conclusions:** Management of patients with MPAL is challenging and requires a multidisciplinary approach. The prognosis of these patients can be radically improved by consolidating the post-induction response through hematopoietic stem cell transplantation, and early identification of a compatible donor can offer these patients a chance of cure.

Keywords: leukemia, transplant, MPAL

TREATMENT CHALLENGES IN A YOUNG PATIENT WITH ACTIVE ULCERATIVE COLITIS AND RECURRENT CLOSTRIDIUM DIFFICILE INFECTIONS

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Introduction: Ulcerative colitis (UC) is a potentially severe autoimmune disease that typically causes therapeutic difficulties due to the lack of a curative therapy, hence the need of individualised treatment. It is well known that the discovery of Biologic Therapy (BT) represents an important step in treating various chronic conditions, thus improving patient's quality of life. **Case Report:** We report the case of a 26-year-old woman diagnosed with left-sided colitis in 2020, treated with 5-ASA ever since, who presented herself to the Gastroenterology Clinic in Târgu Mureș, with the following: hematochezia, proctalgia, pain in the lower abdomen, a significant weight loss, articular pain and skin lesions that were previously diagnosed as erythema nodosum. The patient is known to have had multiple hospitalisations due to Clostridium Difficile (CD) infections, the latter being in October 2022 for which she was prescribed Vancomycin. She is being admitted and her lab results show: reactive thrombocytosis, severe iron defficiency, an elevated fecal calprotectin: 731 mcg/g, while the abdominal ultrasound described characteristic left UC lesions. The MAYO score is appreciated to be 7 points. Considering her history of recurrent CD infections, she was tested once again and stool analysis was negative. Therefore, it is recommended to initiate BT and according to the national CNAS protocol, an infectious screening was completed without any pathological findings. Consequently, treatment with Infliximab 225 mg iv. is initiated, right after Hydrocortisone Hemisuccinate 100 mg iv. was given, both without any side effects. The patient was discharged in a generally good health condition, with recommendations. **Discussions :** The key point is that although the patient was accurately following her treatment plan with 5-ASA, she relapsed multiple times in a relatively short period (2 years). As a consequence of her recurrent CD infections, BT could not be initiated even though it was essential in her case, considering she also displayed extraintestinal manifestations: erythema nodosum. Upon recent assessment, her MAYO score of 7 indicated a moderately active state of UC and since the CD test was negative, BT could finally be initiated. **Conclusions:** Our main focus is to highlight the significance of early initiation of BT in patients that are unresponsive to first-lines of treatment. Frequently, BT prescription is delayed because of CD infections that often occur in immunodeficient patients with UC.

Keywords: Ulcerative Colitis, Biologic Therapy, Clostridium Difficile, Erythema Nodosum

A MEDICAL JOURNEY: FROM A CHAMELEON SKIN TO AN AUTO-IMMUNE DISEASE

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Introduction: Introduction: The mortality rate and the diagnosis challenges of mixed connective tissue disease (MCTD) have urged scientists to clearly define this condition from the early stages. The aim of this case report is to emphasize the importance of clinical examination in highlighting the Raynaud phenomenon as an indicator of auto-immune diseases. **Case Report:** A 29-year-old woman presented to the hospital for an endocrine evaluation, with psoriasis vulgaris in the elbow area and a change of color generated by cold in her fingers. She has a family history of Basedow Disease on the maternal side and is diagnosed with Sjogren's Syndrome since puberty (as revealed by the ultrasound aspect - cystic images of 2-3 mm and intraparenchymal lymph nodes present in her parotid glands). Based on the typical appearance of the fingers' color change accompanied by pain, she was diagnosed with Raynaud phenomenon and sent to the rheumatologist for a full panel of antibodies. Subsequently, her thyroid and ovarian functions were tested, due to the genetic tendency of auto-immune disease association. The hormonal laboratory results were optimal and the thyroid ultrasonography was also normal. Considering the

presence of Raynaud phenomenon, the rheumatologist investigated systemic autoimmune diseases and the diagnosis of MCDT was confirmed by the tests, which came positive for the Antinuclear Antibody Test (value: 1/1280) and for the anti U1-nRNP Test (RiboNucleoProreins) (value: >200). As an outcome, the patient was put under observation and was prescribed Hydroxychloroquine-Plaquenil (200mg/day). MCDT can lead to serious complications, some of which can be fatal. Complications include Interstitial lung disease, kidney damage and heart disease. **Discussions :** The importance of clinical examination is critical in establishing the real cause of a disease. Sometimes, pertinent signs are ignored in favor of laboratory tests which have better accuracy. Although, isn't the clinical examination the parameter which sets the path to follow? **Conclusions:** It is clear that the Raynaud phenomenon is linked to auto-immune diseases. MCTD is a rare condition, being a combination of multiple disorders: systemic lupus erythematosus, scleroderma, and polymyositis. For this reason, MCTD is sometimes called an overlap of auto-immune diseases. Nevertheless, we highlight that observing a simple cutaneous sign can lead to comprehensive investigation and diagnosis, ultimately improving health outcomes.

Keywords: overlap syndrome, clinical examination, auto-immune disease

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SEVERE AUTOIMMUNE HEMOLYTIC DISEASE OF THE INFANT

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Introduction: Autoimmune hemolytic anemia (AIHA) is a condition characterized by the presence of autoantibodies that bind to the patient's own erythrocytes, leading to premature red cell destruction (hemolysis). This leads to a drop in the number of red blood cells causing hemolytic anemia. The further management of the disease depends on the result of the direct Coombs test and the type of AIHA identified. **Case Report:** A 5 months old infant, without personal pathological antecedents, presented at the hospital with fever, fatigue, altered appetite, somnolence and hypotonia. The pathologic clinical findings were jaundice and hepatosplenomegaly. The blood tests have shown low level of Hb=3,2 g/dl, reticulocytosis, erythroblasts, hyperbilirubinemia, leukocytosis and elevated inflammatory markers. The diagnosis of severe anemia and sepsis with unknown origin was reached. Initially, he received blood transfusions and antibiotics. Due to the ineffectiveness of the treatment a direct Coombs test was performed which indicated a severe autoimmune hemolytic anemia. The first approach was blood transfusion, then he received combined immunoglobulins iv and corticotherapy with significant improvement in the clinical and paraclinical findings. The antibiotherapy was uninterrupted. **Discussions :** In childhood, autoimmune hemolytic anemias are rare and are usually of the idiopathic type. Blood transfusions are usually required in the acute stage. Corticosteroids remain the mainstay of management. However, corticotherapy alone is not effective in severe hemolytic anemia (from Hb=6.3 g/dl slightly increasing to Hb=7.5g/dl in 3 days).Combined corticotherapy and immunogobulins iv shows a major improvement in the laboratory findings: Hb=7.5 g/dl to Hb=10.2 g/dl in 3 days . **Conclusions:** Combined therapy such as immunoglobuins iv with corticotherapy iv is the most efficient in severe autoimmune hemolytic anemia in infants. Ultimately, the patient was discharged 10 days later with normal laboratory values. Reevaluation after 3 months show a total remission of the disease with a negative Coombs test.

Keywords: autoimmune, hemolytic, anemia, infant

LONG-TERM SURVIVAL IN HER2 POSITIVE BREAST CANCER- NO LONGER A FAIRY TALE: A CASE REPORT

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Introduction: Breast cancer is the most diagnosed type of neoplasia and the main cause of cancer-related mortality among women. HER2 is involved in normal cell growth, but when overexpressed it is associated with a high proliferation rate, worse prognosis, and greater chance of brain metastases. An uncommon and debilitating complication, which occurs in the final stages of the disease, is leptomeningeal carcinomatosis. **Case Report:** A 75-year-old woman, with surgically removed right breast cancer cT2N1M0, stage IIB, HER2 positive, presented for routine investigation, in 2009, after 4 years of being cancer free, when a hepatic metastasis was found. At that moment, HER2 antagonists were not settled in Romania, so the patient started a Docetaxel and Capecitabine treatment, until 2011. Imaging techniques showed disease progression through bone metastasis. As a result, we

started a new treatment with Trastuzumab and Paclitaxel every week in association with endocrine therapy and bisphosphonates. After 3.5 years, Paclitaxel and Letrozole were removed due to important neuromuscular toxicity. As the cancer evolved, in 2017, a left cerebral metastasis was discovered by a CT scan, after the patient complained of an important headache. Cerebral radiotherapy and anti-HER2 systemic treatment succeeded surgical removal of the tumour with a great outcome: complete hepatic response and stationary bone and brain lesions. Between 2019 and 2020, multiple MRI scans present left brain relapses (<1 cm) with leptomeningeal carcinomatosis (L2-L4), for which the patient received again surgical and radiotherapy treatment. The patient's clinical picture is highly worsened: tonic-clonic seizures, lower limb paraparesis, and right brachial hemiparesis. Intrathecal administration of Trastuzumab, antiepileptic and analgesic drugs are indicated. The therapy had good results with improvement of symptoms and mobility. The patient dies in the same year, at the age of 86. **Discussions :** This case brings out the survival-enhancing contribution of the targeted antiHER2 therapy of more than 5,5 years without disease progression and 15 years of overall survival. Taking into consideration that the survival rate after finding cerebral metastasis is 2□□□□months and our patient lived 37 months, the multimodal treatment yielded spectacular results. **Conclusions:** The distinctiveness of the case is illustrated by the high survival rate and by the unusual, but extremely serious cancer-related complication: leptomeningeal carcinomatosis. This report aims to prove the necessity of a multidisciplinary commission that can decide the best treatment option, taking into account each patient's particularities.

Keywords: HER2 positive breast cancer, anti-HER2 systemic treatment, leptomeningeal carcinomatosis, intrathecal administration of Trastuzumab

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3 FOR 1: CO-OCCURENCE OF 3 BENIGN PROLIFERATIONS IN ONE CUTANEOUS TUMOR

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Introduction: Benign cutaneous tumors are a frequently found pathology, and can take on many forms, such as squamous papilloma, hemangiomas, or nevi. However, the rarity of these tumors increases as they become associated within one single tumoral process. **Case Report:** This presentation showcases a 58-year-old female patient who sought treatment from the plastic surgery department for a cutaneous tumor located in the occipital region. Macroscopically, the tumor was soft, with a cauliflower aspect and a gray-violet hue, its dimensions being 28x25x20 millimeters. A skin flap resection was performed, and the tumor was examined microscopically using Hematoxylin-Eosin (H&E) staining. Microscopically, a papillomatous formation composed of squamous cells with well-defined cell margins, eosinophilic cytoplasm, and single central nuclei, accompanied by orthokeratotic hyperkeratosis was observed. At the level of the dermis, a proliferation of nevi cells arranged in nests was described, arranged linearly and diffusely within the depth of the specimen. The cells were small and medium in size, with eosinophilic cytoplasm, basophilic monomorphic nuclei, presenting no atypical features or mitoses. Also, at the level of the dermis, another proliferation was observed, consisting of small, medium, and large caliber vessels, some of them appearing dilated, with erythrocytes present in the lumen. Immunohistochemistry (IHC) was performed. CD31 and CD34 markers were positive in the endothelial cells, SOX-10 marker was positive in nevi cells, and SMA was positive in the media of the vessels. **Discussions :** The microscopic evaluation, together with immunohistochemistry led to the diagnosis of three types of benign tumors within the excised lesion: a hyperkeratotic squamous papilloma, an intradermal melanocytic nevus without atypical cells, and an arterio-venous hemangioma with capillary components. The tumor was excised within safe resection limits. **Conclusions:** It is rare to have a combination squamous cell papilloma, a nevus and vessel proliferation, all of which are benign, in one single tumor. Thus, careful microscopic and immunohistochemical investigations are important to rule out potential malignancy in any one of the tumoral components.

Keywords: Hyperkeratotic squamous papilloma, Intradermal melanocytic nevus, Arterio-venous hemangioma, Immunohistochemistry

DIAGNOSTIC CHARACTERISTICS OF SMALL CELL LUNG CARCINOMA IN LUNG BIOPSIES – A CASE REPORT

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Introduction: Small Cell Lung Carcinoma (SCLC) manifests swift growth, fast reproduction, aggressive behavior and early dissemination to distant sites. These highly malign tumors are thought to develop from neuroendocrine cells in the bronchus called Feyrter cells and are strongly related to tobacco smoking. It arises in the hilum of the patient, and it has a poor prognosis. **Case Report:** We present the case of a 51-year-old female patient who was admitted in the Pneumology Clinic for coughing, dyspnea and weight loss. The patient underwent abronchoscopy and the biotic fragments were sent to the Pathology Department. Microscopically, bronchial mucosa lined with normal ciliated cylindrical pseudostratified epithelium was seen. Underlying, at the level of the chorion, there was a tumor proliferation composed of small cells arranged either in groups or diffusely. The tumoral cells had irregular, hyperchromic nuclei some of which are spindle-shaped and the cytoplasm was quantitatively reduced to absent. The "crush artifact" phenomenon was also present. The immunohistochemical profile for the tumoral cells provided the following results: CTK AE1/AE3 positive, with the characteristic drop-like aspect, confirming a carcinoma The TTF1 was positive and p40 was negative. The neuroendocrine marker CD56 was positive in the tumoral cells, and Ki-67 cell proliferation index was about 60-70%. **Discussions :** Based on the histopathological appearance and the immunohistochemically profile of the tumoral cells, the histopathological diagnostic of small cell carcinoma of the lung was established. The positiveness of the tumoral cells for CTK AE1/AE3 confirmed the epithelial origin of the cells. The immunohistochemistry profile of TTF1 positive and p40 negative confirmed the pulmonary origin of the tumoral cells and infirmed a squamous cell carcinoma. The neuroendocrine origin of the cells was confirmed by the CD56 marker which was positive. The Ki-67 expression in the tumoral cells confirmed the high proliferation rate. **Conclusions:** The histopathological diagnosis remains crucial for establishing the SCLC. Even though the histopathological diagnostic is limited on lung biopsies, the immunohistochemistry remains an important tool to set the type of cancer, and then a personalized treatment for the patient.

Keywords: lung, biopsy, immunohistochemistry, carcinoma

PROSTATIC ADENOCARCINOMA UNDER ANTIANDROGENIC TREATMENT - THE DIFFERENT FACES OF ANEMIA

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Introduction: Anemia is a common adverse effect of androgenic suppression therapy in patients with prostate adenocarcinoma. While moderate anemia is the usual presentation, severe forms should raise suspicion. **Case Report:** In this report, we present the case of an 86 year-old male diagnosed with prostate adenocarcinoma in 2022 following an episode of urinary retention and hematuria. At diagnosis, he had bilateral ureteral hydronephrosis and possible metastases in local ganglia and the skeleton. He commenced antiandrogenic therapy with Casodex, which was initially well-tolerated. One year later, the patient presented with fatigue, dyspnea, and hematuria, leading to admission to the internal medicine ward. He underwent urinary catheterization and continuous bladder irrigation. Further paraclinical investigations revealed moderate to severe anemia, for which he received several erythrocyte transfusions. The post-transfusion state was satisfactory and the patient's hemoglobin levels increased slowly. When things seemed to be going well, subsequently, the patient experienced melenic stools, and his hemoglobin levels dropped more than 1 g/dL after 24 hours. An upper gastrointestinal endoscopy revealed a 10 mm ulcer in the duodenum, for which proper hemostasis was achieved. Over the next few days, the patient's stool normalized, and his hemoglobin levels improved. **Discussions :** In patients with prostate adenocarcinoma undergoing hormonal therapy, moderate anemia and at least one episode of hematuria are common. However, the underlying cause may not always be straightforward. Poor recovery after RBC transfusion, low hemoglobin levels and various signs pointing towards different souses of hemorrhages should prompt clinicians to consider further investigations. **Conclusions:** Proper diagnosis and treatment of anemia require

identifying the underlying cause and addressing it accordingly. Timely intervention can prevent complications and improve outcomes. Therefore, clinicians should remain vigilant for signs of severe anemia in patients with prostate adenocarcinoma receiving antiandrogenic therapy, and undertake prompt and thorough investigation of such cases.

Keywords: prostate adenocarcinoma, anemia, upper digestive tract hemorrhage, antiandrogenic therapy

UPPER URINARY TRACT UROTHELIAL CARCINOMA - HOW SHOULD WE MANAGE THE THUNDERSTORM?

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Introduction: UTUC is a rare type of carcinoma, found in only 5% of patients with urothelial cancers. Usually at the time of diagnosis, patients present themselves with urinary symptoms (hematuria, flanck pain) and with a high-stage tumor (>pT3). Usually this diagnosis is made based on the exclusion of other tumoral entities, as the molecular and genetic profile are extremely limited and non-characteristic. **Case Report:** We present to you the case of a 79 old man, diagnosed with right upper tract urothelial cell carcinoma G3, pT3NxMxL1V0R0 in july 2022, who underwent right nephroureterectomy and adjuvant chemotherapy (Cisplatin+ Gemcitabine) with no relapse and no developed local adenopathy. In november the same year, he showed up in the emergency ward, reporting back pain, persistent hematuria,fever and high inflammatory syndrome. The CT scan performed in the ER showed a retroperitoneal tumoral mass which invaded the inferior vena cava, the pancreas and which encompassed the aorta, together with lumbar adenopathy. He was admitted to the Internal Medicine ward, where the analysis performed showed a urinary tract infection, for which he underwent antibiotic treatment. The fever and high inflammatory syndrome persisted at all times during his stay in the hospital, the cause of which remained unknown after a long series of microbiologic investigations. Together with that, coagulation tests begun to deteriorate although he was under proper treatment, leading to a deep vein thrombosis, which altogether with the compressive effect of the tumor caused a huge scrotal edema and edema of the inferior limbs with trophic degradation. The tumor grew up 20 mm diameter in only one month, causing a compressive syndrome in the abdomen which manifested itself with nausea, vomiting and gastric evacuation insufficiency syndrome, for which he underwent surgery (posterior transmezocolic gastro-entero anastomosis). The patient died short after the surgery, leaving many questions behind. **Discussions :** The dilemma all along was represented by the ambiguous septic syndrome with no obvious origin and the pro-coagulant state, very hard to hold tight. We came to the conclusion that these thunderstorm manifestations could have been part of a paraneoplastic syndrome that the patient developed, that led to his rapid degradation. **Conclusions:** Oncologic patients are usually a big challenge for the clinician. Their state of illness can change from day to day and symptoms may not have the obvious cause. Aggressive tumors are very hard to handle and there is still a long way to go regarding their management.

Keywords: UTUC, Septic syndrome, Oncology

THERAPEUTICAL CHALLENGE IN AN AGGRESSIVE FORM OF EWING SARCOMA. A CASE REPORT

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Introduction: Ewing Sarcoma is a rare malignancy that forms in bones and, less commonly, in the soft tissue, affecting mainly children or young adults. Due to high aggressivity and late relapse, effective treatment must combine extensive systemic and local therapy coordinated by a multidisciplinary committee. **Case Report:** A 20-years-old female patient presented with a 2-month-history of localized pain and swelling in the right hip. Initial imaging included a pelvic MRI that revealed a malignant-appearing-mass within the gluteus medius muscle invading the right illium up until the acetabular roof as well as an adenopathy near the iliopsoas muscle. A biopsy of the right gluteal mass was taken, IHC identifying groups of small round blue cells along with the cytogenetic study of the specimen that distinguished EWSR1 gene rearrangements in more than 83% of the examined cells. All of these investigations led to the diagnosis of a locally advanced, inoperable, cT3N1M0, poorly differentiated Ewing Sarcoma of the right gluteal region, stage IV. Subsequently, the medical team immediately implemented the

induction chemotherapy consisting of 3 cycles of interval-compressed VDC/IE (vincristine, doxorubicin, cyclophosphamide/ ifosfamide, etoposide) every 2 weeks. After the first administrations of the cytotoxic agents, the following imaging tests detected minimal tumor growth, but, by the end of the last cycle, a significant size reduction finally occurred, and radiotherapy was consented to be added to the regimen. Moreover, the innovation consisted in performing an internal hemipelvectomy together with right supra-acetabular arthrodesis reconstruction, which, in association with the consolidation chemotherapy (4 cycles of VC/IE) led to no tumoral masses inside the body. Therefore, the patient was declared disease-free and was followed for long-term check-ups. **Discussions :** Despite the initial SEER score that estimated a 5-year relative survival rate lower than 20%, the complete remission was achieved owing to the complex multimodality treatment including high-dose, alternating chemotherapy consolidated by local radiotherapy. Furthermore, the addition of the surgery may have brought superior local control of the tumor suggesting that new alternatives of treatment can be taken into consideration for better response. A future challenge would be to approach a strategy for a possible recurrence or distant metastasis as one in four patients has relapses, especially in the lungs within the 2-5 years after treatment completion. **Conclusions:** A multidisciplinary management in treating advanced, non-metastatic Ewing Sarcoma proves to impressively extend the long-term survival with 70-80% even in patients with poor prognosis.

Keywords: Ewing Sarcoma, Chemotherapy, Radiotherapy, Surgery

ENDOSCOPIC FINDINGS ON SIMILAR CLINICAL MANIFESTATION PATIENTS

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Introduction: In patients with digestive complaints, endoscopy is the gold standard and is often the primary exploration. Positive findings in upper gastrointestinal endoscopy occur in 30 to 40% in relation to a benign or malignant structural disease. Negative findings occur therefore in 60 to 70% of cases: dyspepsia and/or reflux are functional diseases. Colonoscopy aims essentially at screening of colorectal cancer. **Case Report:** This paper presents two cases of young female patients (<50 years old) that accused medium intensity abdominal pain starting 8 and 3 months ago. Patient A presented transient problems with increased mucosal bowel movement; associated pathology is right ovary endometrium and family history shows first degree relative with gastric cancer. The paraclinical investigations highlight decreased haemoglobin level, highly increased erythrocyte sedimentation rate but normal mean corpuscular volume. Patient B presented with nocturnal abdominal pain, weight loss in the last month, insomnia, and loss of appetite. Medical history shows continuous use of antidepressants and first degree relative with bronchopulmonary tumour. Paraclinical investigations of haemoglobin and erythrocyte sedimentation rate are in normal limits. **Discussions :** Both patients had endoscopies performed based on the individual manifestations. Patient A's upper endoscopy indications are family predisposition, dyspepsia, and normocytic anaemia. Lower endoscopy indications are sex, age (43 years old), period of onset and clinical manifestations. Patient B's indications of endoscopy are the age (47 years old), clinical manifestation and presence of warning signs such as weight loss and anaemia in addition to the family history. After the exploratory investigations Patient A was clear of pathological findings. A stenotic tumour was found on the transversal colon of Patient B that was resected. The histopathological result was nondifferentiated adenocarcinoma. **Conclusions:** Based on the warning signs and clinical manifestations the patients were viable for gastro-endoscopic testing having different outcomes. Positive findings are seen in Patient B that presented weight loss and slight anaemia as warning signs. Negative results seen in Patient A regardless of significant anaemia and genetic predisposition. A reliable negative endoscopy is beneficial for the quality of life when it relieves anxiousness of the patient.

Keywords: Endoscopy, warning signs, anaemia, family history

CHAIN OF UNFORTUNATE EVENTS: UNTREATED DIABETES LEADS TO TREATMENT REFRACTORY ANEMIA

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Introduction: Diabetic Kidney Disease (DKD) is the primary reason for end-stage renal disease (ESRD) globally, and the number of ESRD cases caused by DKD is escalating at a swift pace. Typically, DKD advances gradually, causing a decline in kidney function that spans several decades. In individuals with Chronic Kidney Disease, the

gravity of anemia predicts mortality independently, while the presence of anemia markedly raises the risk of cardiovascular ailments, including stroke. **Case Report:** An 81-year-old male patient, known with poorly controlled insulin-dependant diabetes, leading to severe renal dysfunction, and NYHA 4 cardiac failure, presents himself in the ER with dyspnea, palpebral and lower limb oedema. Blood tests revealed low hemoglobin, hypoproteinemia and high levels of creatinine (2,44 mg/dl) accompanied by a low glomerular filtration rate (23 ml/min/1,73 m2), which indicates a stage 4 chronic kidney disease. Other examinations have detected a nephrotic syndrome, defined by a 4g/24h proteinurie and hypoalbuminemia. An upper gastrointestinal endoscopy and a bone marrow biopsy were performed to rule out other causes of anemia, besides the kidney disease, with negative results. Despite starting therapy during the first admission with antidiuretics, antihypertensors, statins, iron (after which hemoglobin levels slightly improved) and rapid acting insulin, the nephrotic syndrome remained uncontrolled, thus starting the treatment with human recombined erythropoietin, but still the pacient had to be readmitted for hydropic decompensation and moderate anemia. During the second admission, hemoglobin levels raised and stabilized around 11,3 g/dl, with the anemia only responding to erythropoietin. **Discussions :** The risk of anemia is higher especially in patients with chronic kidney disease and represents a factor for its development and progression. In the case of this pacient, we can observe the further deterioration of kidney function, which is proportional to the low levels of hemoglobin and the poor management of the diabetes, and the deterioration of the patient's overall condition, in spite of multiple attempts of treatment. **Conclusions:** The cardio-renal anemia syndrome is a vicious cycle that results from the interplay between chronic heart failure, chronic kidney insufficiency, and anemia. This interaction leads to a decline in the function of both the heart and kidneys, as well as an increase in anemia. It is important to note that each of these three conditions can either cause or be caused by the others.

Keywords: chronic kidney disease, diabetic kidney disease, cardio-renal anemia syndrome

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PROTEINURIA IN A PROGRESSIVE MEMBRANOUS GLOMERULONEPHRITIS: A CASE REPORT

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Introduction: Membranous glomerulonephritis is an autoimmune disease associated with nephrotic syndrome that can lead to End-Stage Renal Disease in the long term. The cause of the disease is often unknown, idiopathic, although a secondary cause may be identified in some cases. In idiopathic GN, the primary cause of glomerular lesions is autoantibodies targeting a podocyte membrane protein, the M-type of phospholipase A2 receptor1. This results in disorganization of the podocyte cytoskeleton, increased basement membrane production, radical-mediated damage to the filtration barrier, and oxidative stress from growth factors. Because these events happen in the urinary space, they do not proliferate. Nephrocyte injury occurs due to intense proteinuria and complement activation. **Case Report:** The patient presents with facial and lower limb edema and physical asthenia. Blood tests reveal proteinuria of 3.6g/24h with hypoproteinemia (total proteins-5.4g/dl and albumin-2.5g/dl), slight dyslipidemia, an inflammatory syndrome, and mild normocytic normochromic anemia. Renal function is normal. We exclude paraneoplastic syndrome as AFP, CEA, CA125, CA19.9 are negative, and viral infection as HCV Ab and HBs antigen are negative. Urinalysis shows no bacterial infection. PLA2R is positive (1>320), therefore we conclude that the nephrotic syndrome is idiopathic, and consequently a renal biopsy is unnecessary. Treatment consisting of an antidiuretic, hypolipidemic, and an ACE inhibitor is issued with positive response from the patient whom we recommend monthly check-ups under the Ponticelli Regimen. The patient relapses post-treatment with proteinuria of 4.2g/24h and important edema. Thus the initial course of medication is restarted with good results (patient's proteinuria stabilizes under 1g/24h). **Discussions :** The aim of this case report was to analyze and observe the progression of membranous glomerulonephritis and the fluctuations of proteinuria in the case of a 38-year-old woman. Even though the pacient's proteinuria levels can be classified as low considering The Toronto Risk Score, her condition kept aggravating: proteinuria persisted even under Ponticelli Regimen, antidiuretic, hypolipidemic, and ACE inhibitors. **Conclusions:** Approximately 35% of primary GN patients experience spontaneous remission, which is more likely in females with non-nephrotic proteinuria. Around 50% of patients with persistent high-grade proteinuria eventually develop ESRD. Idiopathic GN can have a variable natural course, with relapses possible even under strict treatment and observation.

Keywords: membranous glomerulonephritis, Ponticelli regimen, nephrotic syndrome, proteinuria

ANEMIA, PREDICTOR OF RARE TYPE GASTRIC CARCINOMA: A CASE REPORT

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Introduction: Gastric carcinoma is the fourth most common malignancy worldwide, but its incidence has been declining due to increased standards of hygiene, conscious nutrition, and Helicobacter pylori eradication. The clinicopathological features of gastric cancer differ depending on Helicobacter pylori (HP) infection status. Differentiated-type gastric cancer undergoes morphological changes upon eradication of HP. Meanwhile, the degree of malignancy of undifferentiated-type gastric cancer, is higher in patients with Helicobacter pylori infection (both post-eradication and current infection cases) than in those without HP infection. **Case Report:** We present the case of a 65-year-old woman without family history of cancer who presented at the hospital complaining of: abdominal pain, slow intestinal transit and extreme fatigue. The laboratory tests showed: low levels of hemoglobin 6,6g/dl, hematocrit 25,6%, mean corpuscular volume(MCV) 65,3 fl and ferritin 1,98 ng/ml. The tests also showed thrombocytosis and normal tumor markers such as: CEA and CA 19-9. The findings of gastroscopy were: gastric mucosal edema and a large infiltrative gastric-body tumor from where multiple biopsies were taken and a H.pylori test was performed which came out positive. The CT findings include circumferential prepyloric gastric wall thickening with inhomogeneous iodophilia. In the light of these results the pacient received treatment for H.pylori with: Amoxicilin, Levofloxacin, Esomeprazole and Bismuth Oxide with the recommendation of an oncological and surgical consultation. **Discussions :** After the histopathological examination that indicated an undifferentiated gastric carcinoma, the patient underwent total gastrectomy with extensive lymphadenectomy and splenectomy with a positive outcome at the MRI. Considering the prevalence of metastasis in this type of carcinoma the choice of radical surgery with lymph node dissection has proven to be the right one. **Conclusions:** Undifferentiated gastric carcinoma is one of the rarest epithelial malignancies of the stomach being described as highly aggressive when discovered at an advanced stage. Although many cases of gastric cancer can be associated with Helicobacter pylori infection that cannot be said for the undifferentiated type, that has a largely unknown etiology. The particularity of this case is the connection of the two and the good outcome the patient had, considering the fact that proliferative ability and progression rate is reported to pe higher in infection with H.pylori.

Keywords: gastric carcinoma, helicobacter pylori, malignancy

THE ROLE OF CONCURRENT INFECTION IN DIAGNOSING TYPE 1 DIABETES IN A PEDIATRIC PATIENT

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Introduction: It is well known that diabetes mellitus type 1 occurs in young people. Small children often present with the most relevant symptoms, and diagnosis is usually established following an episode of sever inaugural ketoacidosis. Concurrent infection or hormonal changes during puberty can make detection of the endocrine pancreatic insufficiency difficult due to counter-regulatory hormones. **Case Report:** A male patient, aged 1 year and 8 months, presented with fever (39,7°C), diarrhea, asthenia, drowsiness and an episode of vomiting that did not improve with symptomatic medications. The patient's medical history included the following pathological elements: maternal great-grandfather had type 2 DM and the patient had an APGAR score of 7 at birth (due to asphyxiation by aspiration of amniotic fluid). A quick SARS-Cov-2 antigenic test was performed at the family doctor's office, which yielded positive result, and the patient was admitted to the Infectious Disease Clinic 1. During hospitalization, laboratory analyses were performed which shows negative inflammatory tests and high blood sugar levels up to 405 mg%. The doctor recommended monitoring the glycemic profile. As the glycemic values fluctuated between 200-300 mg%, the patient was transferred to Pediatric Clinic 1 for further investigations and treatment. Upon admission, the patient's condition was slightly affected, and he was afebrile and dehydrated. Repeated ASTRUP analyses revealed metabolic acidosis, the specific laboratory tests showed a HbA1c of 7,1 % C-peptide level of 0,097 nmol/L. During hospitalization, the patient followed basal-bolus insulin therapy with Insulinum Aspart and Insulinum Glargine , and the dietary regimen was adjusted according to the patient's daily activity. After 6 months, he came for a reevaluation of his clinical-biological status. At that moment, his HbA1c level was 6,8%. This means that the DM is well-controlled without any adverse effects of insulin treatment. **Discussions :**

The particularity of this case refers to the very young age of the patient, which would lead us to believe that the symptoms of the disease are severe, taking into account the SARS-CoV2 infection. This was a fortunate case of COVID-19 without sever acute respiratory syndrome, which in addition brings the benefits of early diagnosis of a chronic disease. The patient was speared from the initial ketoacidosis coma. **Conclusions:** The aim of presentation is to underline the important of the early diagnosis of type 1 DM, which can have a sever impact on mortality, especially associated whit an infection.

Keywords: type 1 Diabetes Mellitus, child, COVID infection

DIAGNOSIS AND TREATMENT CHALLENGES IN MICROSCOPIC POLYANGIITIS IN A YOUNG MAN

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Introduction: Microscopic polyangiitis is a rare type of systemic vasculitis that affects the small and medium blood vessels, with perinuclear anti-neutrophil cytoplasmic antibody (pANCA) present in 60% of cases. The severity varies, with the lungs and kidneys being the most often damaged organs. This condition has a 20/million yearly incidence in Europe, is more frequent in males, and typically develops around the sixth decade of life. **Case Report:** A 37-year-old man is admitted for progressive dyspnea on exertion, cough, hemoptysis, subfebrility, and fatigue. Pulmonary crackles were found during the clinical examination in both basal pulmonary regions. An inflammatory syndrome, an azotate retention, and nephrotic range proteinuria (5.1g/24h) were discovered according to biological blood samples. A urinalysis revealed hematuria (300ery/ml) and proteinuria (100mg/ml). A native thoracic computed tomography (CT) scan revealed several regions of alveolitis in both inferior lobes, as well as alveolar consolidation and nodular lesions. Based on the observed changes, the patient was given antibiotics due to the suspected presence of an infectious process. Because of the involvement of both the lungs and the kidneys, an immunology test was conducted which revealed pANCA positivity (>200 RU/ml), leading to a final diagnosis of microscopic polyangiitis, with 9 out of 12 criteria matched. The treatment consists of induction therapy with six cycles of cyclophosphamide (1g) and methyl-prednisolone pulse therapy. During the third cycle of cyclophosphamide, the severity of the proteinuria increased to 8.5g/24h, but in subsequent presentations, the proteinuria gradually decreased. The patient needs to undergo one more cycle. **Discussions :** Microscopic polyangiitis is a rare disease that can be difficult to diagnose, particularly in young patients. In this case, the nephrotic syndrome was asymptomatic, and the patient presented with respiratory-related symptoms, leading to the initial misdiagnosis of pneumonia. A renal biopsy is essential in differential diagnosis with another vasculitis (granulomatosis with polyangiitis, Churg-Strauss syndrome), but it would not have impacted the treatment. The most common complication is permanent organ damage, with kidney failure being the most frequent. The induction therapy was started promptly enough to prevent irreversible renal damage, but the initial response of cyclophosphamide was unfavorable, raising the possibility of switching the treatment to Rituximab. Periodic evaluation will be conducted to assess complete remission. **Conclusions:** This case underscores the significance of considering auto-immune diseases, like vasculitis, in patients with multi-organ damage. The detection of ANCA is an important diagnostic criterion that can be used. Promptly initiation of induction therapy with aggressive immunosuppressants is mandatory.

Keywords: small-vessel vasculitis;, young man;, nephrotic syndrome;

DIAGNOSIS AND MANAGEMENT OF IMMUNE THROMBOCYTOPENIA IN ALCOHOLIC LIVER CIRRHOSIS - A CASE REPORT

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Introduction: Thrombocytopenia is the most common haematological complication seen in liver cirrhosis and can negatively influence the treatment of the disease. Because of an increased risk of bleeding, thrombocytopenia frequently prevents the patient from receiving the adequate therapy and delays planned procedures such as Transjugular Intrahepatic Portosystemic Shunt (TIPS) . When thrombocytopenia seems disproportionate to the degree of liver disease and other etiologies of thrombocytopenia have been excluded, immune thrombocytopenia (ITP) should be taken into consideration. **Case Report:** We present the case of a 53-year-old man with a past

medical history of alcoholic liver cirrhosis who presents to the hospital reporting weakness, fatigue and an increased abdominal circumference. At admission the patient was conscious, time and place oriented, hemodynamically and respiratory stable. Abdominal ultrasonography revealed a cirrhotic liver and free intraperitoneal fluid in high quantity, characteristic for ascites. Evacuatory and diagnostic paracentesis were performed. During his stay, the patient presented multiple episodes of refractory ascites and was programmed for a TIPS procedure, but after 10 days after his admission the patient's condition started to worsen, presenting with hematemesis, haematochezia and melena, sever anaemic syndrome (Hb=5.4 g/dl) and severe thrombocytopenia (Plt=4000). Peripheral blood smear revealed very rare platelets and megathrombocytes and the pacient had no history of serious underlying illness or high inflammatory markers, excluding disseminated intravascular coagulation or infection. Haematology consult was performed and the suspicion of ITP was raised, after which the patient received platelet transfusions and was started on a 4-day Dexamethasone course of treatment. The patient recovered and successfully underwent TIPS procedure 1 month after the ITP episode. **Discussions :** The absence of specific diagnostic tests for ITP and the various other potential causes of thrombocytopenia in liver disease contribute to the difficulty in diagnosing ITP. Although ITP is usually characteristic for autoimmune liver diseases and chronic hepatitis C, when severe thrombocytopenia is present that is inconsistent with the degree of liver disease, ITP should be part of the differential diagnosis. There is limited data demonstrating a correlation between alcoholic liver disease and ITP and the correspondence deems future research. There is no consensus target platelet count before a patient is undergoing TIPS, and the absence of randomized studies available in this particular context contributes to the clinical challenge of periprocedural management in these patients. **Conclusions:** Diagnosing and managing ITP in patients with liver disease requires a multidisciplinary and personalized approach and is crucial in preventing bleeding and the delay of therapeutic procedures.

Keywords: Alcoholic liver cirrhosis, Immune thrombocytopenia, Transjugular Intrahepatic Portosystemic Shunt

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THE ATRIAL FIBRILLATION RESPONSE TO ELECTRICAL CARDIOVERSION AFTER REPETITIVE RECURRENCES FOLLOWING CATHETER ABLATION

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Introduction: Atrial fibrillation (AFib) is a cardiac rhythm disorder, characterized by a rapid and irregular heartbeat which can be symptomatic or asymptomatic. Afib can be associated with serious complications as blood clots or strokes. Catheter ablation is a procedure used to correct atrial fibrillation based on the destruction of triggers by pulmonary vein isolation. **Case Report:** We report a case of 59 year old male patient, former smoker, known with history of arterial hypertension (maximum value : 160/100 mmHg), CHA2DS2 VASc score = 1 (Congestive heart failure, hypertension, age2 ≥75, diabetes mellitus, stroke, vascular disease, age = 65-74, sex category), known with three radiofrequency ablations for atrial fibrillation due to the multiple recurrences of AFib. The patient presented again a new episode of symptomatic AFib therefore electrical cardioversion was the next therapeutic approach. The last ablation was performed one year ago and the outpatient treatment was Bisoprolulum, Lercanidipinum and Apixabanum. Echocardiography interpretation presented an efficient left ventricle with preserved systolic function and mildly dilated left atrium (left atrial volume index, LAVI= 36 ml/m2). Given the hyperthyroidism with thyrotoxicosis in his past history induced by Amiodarone, suggested preconversion treatment was Flecainide. After analgosedation with Fentanyl and Propofol, electrical cardioversion was performed at 300J biphasic. The electrical procedure was successful, the ECG detected sinus rhythm with cardiac rate: 80 beats per minute and he continued the treatment with Flecainide at home. He was discharged in good general condition, in sinus rhythm and hemodynamically stable. This medical status remained at follow up examination one month later, also. **Discussions :** Catheter ablation for AFib is a safe and effective rhythm-control strategy for symptomatic patients, however, supraventricular arrhythmia could come back within a few years, according to our patient who had recurrences of AFib after 3 ablations. Electrical cardioversion is a common procedure for restoring sinus rhythm in patients with persistent atrial fibrillation. **Conclusions:** Considering the patient condition, we emphasize the importance of maintaining the sinus rhythm in order to avoid the embolic events and arrhythmia recurrences. We also discussed the importance of multiple strategies: catheter ablation, antiarrhythmic drugs and electrical cardioversion when is needed, in order to keep the sinus rhythm to improve ablation outcomes.

Keywords: Atrial fibrillation ablation, electrical cardioversion, catheter ablation

WHAT'S HIDING BEHIND ASCITES AND GENERALIZED EDEMA- CASE REPORT

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Introduction: Ascites is a pathological condition characterized by the accumulation of fluid in the peritoneal cavity. The common causes of ascites include portal hypertension, heart failure, and malignancies. Finding whether the fluid is a transudate or an exudate is essential in determining the underlying etiology. In this case report, we present an unusual case of ascites to encourage physicians to consider less common etiologies. **Case Report:** A 50-year-old vegan woman was admitted to the emergency department with large ascites and generalized edema. The patient had been experiencing asthenia, loss of weight, and an increased abdominal and lower limbs volume. Her medical history revealed an imbalanced diet and alcohol consumption. Upon examination, the patient was cachectic, dyspnoeic, pale and had generalized edema, bilateral pleural effusion and large ascites. The patient's CA 125 antigen levels were elevated, which initially raised suspicion for carcinomatous ascites of ovarian origin. Laboratory tests revealed severe hypoproteinaemia with extreme hypoalbuminemia (1.71 g/dl), macrocytic anemia, and neutropenia. Ultrasound imaging revealed large ascites and bilateral basal pleurisy. However, the uterus and ovaries appeared normal (an MRI confirmed that). Paracentesis revealed a clear liquid that corresponded to a transudate, with SAAG <1.1 g/dL. Cytological examination of the liquid showed no evidence of malignancy. This led to the reconsideration of the etiology of the patient's ascites and generalized edema as being indicative of severe protein-calorie malnutrition, specifically Kwashiorkor syndrome. Treatment included parenteral and oral nutrition, diuretic therapy, hydroelectrolyte rebalancing, anemia correction, and vitamin and mineral supplementation. The patient's condition improved, with normalization of proteinemia, partial anemia correction, electrolyte balance, reduced edema and ascites, and improved mobility and quality of life. **Discussions :** Kwashiorkor syndrome is a severe form of malnutrition that typically affects infants and children around the age of 5 years old. The syndrome is characterized by severe protein deficiency, which leads to bilateral pitting edema, hepatomegaly, and muscle atrophy. However, Kwashiorkor syndrome is a rare cause of ascites in adults and is usually associated with liver disease or protein-losing enteropathy. **Conclusions:** The identification of the etiology of ascites is crucial in establishing appropriate treatment, but it can be challenging. Physicians often consider the obvious causes and overlook rare pathologies or those with lower prevalence in their country. In this case, the presentation of an unusual cause of ascites, Kwashiorkor syndrome, emphasizes the importance of considering atypical etiologies to ensure that patients receive the most appropriate treatment.

Keywords: Ascites, Kwashiorkor Syndrome, Severe Hypoalbuminemia

SALMONELLA AND THE LUNGS: EXPLORING RARE INFECTIONS

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Introduction: Bacteria from genus Salmonella are motile Gram negative rods, part of the Enterobacteriaceae family, that can cause a variety of infections ranging from enterocolitis (gastroenteritis), enteric fever, bacteriemia and localized infections to asymptomatic chronic carrier state. Symptoms related to this microorganism are usually mild, as the bacteria mostly causes gastroenteritis, but in severe cases, once bacteriemia occurs, localized infections can appear at any site. Salmonella infections outside of the gastrointestinal tract still remain uncommon, pulmonary involvement being extremely rare. **Case Report:** We present the case of a 61 year old patient with myeloproliferative syndrome who was admitted to the pneumology outpatient department, Clinical County Hospital of Târgu Mureș with mucopurulent nocturnal cough. After further investigations, the thoracic ultrasound revealed a jelly-like pleural effusion on the left side. Thoracentesys was performed under local anesthesia in order to drain the purulent discharge which was then sent to the microbiology department for bacteriological and mycological examinations. The laboratory tests returned negative for Mycobacterium tuberculosis and fungi, but Salmonella spp. was identified. **Discussions :** This is still an ongoing case, but the patient was treated according to the antibiotic susceptibility testing and his condition has improved. **Conclusions:** Our presentation shows the importance of Salmonella spp. in causing infections in immunocompromised patients. Even though the exact source of infection cannot always be traced, a proper antibiotic treatment has a maximum importance which can decrease the mortality rates in these patients.

Keywords: Salmonella spp., extraintestinal salmonellosis, opportunistic infections, laboratory diagnosis

THE METABOLIC FACE OF PCOS

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Introduction: PCOS is characterized by a clinically heterogeneous presentation, comprising typical features of clinical and/or biochemical hyper/hypo-androgenism. The clinical context could also be characterized by significant metabolic impairment. As of now, despite the unclear etiopathogenetic mechanisms involved, the medical treatment should be tailored and personalized to each individual patient. **Case Report:** Our female patient accused of being overweight (since the age of 9) and further endocrine symptoms (since the age of 17) including: oligomenorrhea, acne, dermatological treatment-resistant hirsutism, and further weight gain of ~10 kg despite a low-calorie diet. Biochemical evaluation displayed increased serum levels of free testosterone, cortisol, DHEAS, urinary free cortisol, LH/FSH ratio, PRL and decreased SHBG. Hypercortisolism, pituitary and adrenal gland dysfunction had previously been excluded via hormonal tests and imaging. The results of oral glucose tolerance test demonstrated a condition of hyperinsulinemia. Furthermore, ultrasound exam concluded ovaries with normal volume and bilateral microfollicular formations. Initially, estrogen-progesterone therapy was prescribed for a time span of 12 months to restore normal menorrhea. Contraceptives were halted to allow for further biochemical examination, notably, after which previous clinical signs recurred promptly. As a result of an unsuccessful treatment, the hyperinsulinemia was targeted, and the patient was started on Metforal for a minimum of 6 months. Repeat biochemical evaluation presented the following results: normal free testosterone, cortisol, DHEAS, urinary free cortisol; IRI and SHBG showing slight increase, albeit, the LH/FSH ratio remained greater than 1. **Discussions :** Previous studies have shown the direct detrimental effects of abnormal insulin levels with respect to the endocrine system, and vice versa. Our patient's positive response to the insulin-sensitizer therapy further supports this theory. Given that the contraceptives were temporarily masking her symptoms, once waned off, she responded positively to the insulin therapy. This is highlighted by the marked normalization of most of the androgen, insulin, and other hormone levels. Although, the LH/FSH ratio remained unchanged and the SHBG began to increase, all the above parameters indicate a significant improvement in the overall condition. Promising results were observed in battling a pre-diabetic state and there is a positive outcome of her hormone levels subsequently leading to an amelioration of the associated symptoms. **Conclusions:** All in all, we can state that the patient's endocrine impairment was influenced by her hyperinsulinemic condition. With the proper medical attitude and treatment, her healthy insulin and glycemic values will result in a turnover of her hormonal changes.

Keywords: PCOS, Metformin, Hyperinsulinemia

A CASE REPORT OF PERI-ORAL MONKEYPOX VIRUS INFECTION WITH POLYMERASE CHAIN REACTION FINDINGS

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Introduction: The monkeypox virus is the infection that causes the monkeypox disease. It can spread from animals to humans since it is a viral zoonotic infection. Additionally, it is transferable between people and the environment, as well as between humans. **Case Report:** A 39-year-old Italian man previously treated by another dermatologist for a herpetic infection, presented in our clinic, complaining of headache, fever, and malaise for two days after the appearance of an erythematous plaque on the chin with vesicles, an oval ulcer with white border and central erosive area, and also three pustules on the arms and trunk. Cervical lymphadenopathy was discovered during the physical examination. The patient described unprotected intercourse 10 days prior to the onset of the first symptoms. A skin swab of the exudative area of the chin was performed due to the suspicion of Monkeypox viral infection and the clinical presentation of the patient's lesions, followed by a prescription of topical fusidic acid to prevent bacterial superinfection. Syphilis, HIV, hepatitis B, C, and other sexually transmitted

infections were not detected using serologic and molecular testing. Real-time PCR assay was performed to detect the presence of MPXV in the clinical specimens. (skin lesions, blood, and nasopharyngeal swab). We utilized the Qiagen EZ1 robot technology for extracting viral DNA. **Discussions :** All clinical samples tested positive for MPXV, and real-time PCR on skin swabs confirmed the viral infection. It was decided not to treat them because the clinical risk-benefit analysis did not recommend antiviral medications, although we suggested supportive therapy. Our patient reported healing in the area of the original lesions after one month. Studies show that 1 in 4 patients with Monkeypox presents mouth ulcers. Interestingly, the primary lesions presented by our patient have not been described before. In a study carried out by Thornhill et al. in 2022, 26 people demonstrated oropharyngeal symptoms such as oral or tonsillar lesions, odynophagia, epiglottitis, and pharyngitis as the first symptoms. **Conclusions:** According to the current research, it is possible for Monkeypox to be transmitted through multiple types of sexual intercourse. The epidemiology of the Monkeypox virus must therefore be better understood in order to prepare doctors and public health professionals for the potential spread of this illness in non-endemic areas.

Keywords: Monkeypox Virus, skin lesions, infectious disease, sexually transmitted

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IDIOPATHIC GIANT-CELL MYOCARDITIS – CASE REPORT

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Introduction: Idiopathic giant-cell myocarditis (GCM) is a rare T-cell lymphocyte-mediated inflammatory reaction of the myocardial wall with a rapid and potentially fatal course that occurs in previously healthy individuals of young and middle age. Because of its acute and highly variable clinical presentation, endomyocardial biopsy (EMB) represents the gold standard diagnostic method to help initiate accurate and prompt treatment. **Case Report:** We present the case of a 49-year-old man who was admitted to our hospital with suspected acute myocarditis after suddenly developing progressive heart failure requiring cardiopulmonary support. The patient underwent EMB and the histological examination confirmed the presence of numerous multinucleated giant cells within the diffuse inflammatory infiltrate, in association with myocyte necrosis and focal fibrosis, resulting in the morphological picture of GCM. The patient was immediately placed on immunosuppressive therapy and following 20 days, he was considered for heart transplantation after developing biventricular heart failure due to GCM unresponsive to medication. The posttransplant specimen was further examined and the macroscopic evaluation revealed irregular brown-red areas on the postero-septal wall of the right ventricle with extension to the the left ventricle and pale-white areas on the septal myocardium and free wall. Microscopically, the heart was characterized by a diffuse inflammatory lymphoplasmacytic and eosinophilic infiltrate with numerous multinucleated giant cells, associated with areas of myocyte necrosis and diffuse fibrosis, extending from the subendocardial layer to the myocardium, with the immunohistochemical staining strongly positive for CD68 and CD8+. During the posttransplant follow-up period, the subsequent EMB were negative for rejection. **Discussions :** GCM is a rare and rapidly progressive inflammatory process directed against myocytes. The etiopathogenesis is unknown but strongly associated with a number of autoimmune diseases such as myasthenia gravis, inflammatory bowel disease, or systemic lupus erythematosus. With variable clinical manifestations ranging from cardiac arrhythmias to congestive heart failure, the progressive course of the disease often leads to a fulminant state of cardiogenic shock. Gross histological examination is nonspecific, but the myocardium is usually enlarged and may appear pale or slightly yellowish, with geographic white and reddish-brown foci. Microscopically, GCM is characterized by diffuse and heterogeneous infiltration of the myocardium accompanied by areas of necrosis. In GCM, CD68, CD8+, and CD3+ markers are strongly detectable by immunohistochemistry, suggesting the presence of macrophages and T lymphocytes. **Conclusions:** Considering the fatal course of the disease, early accurate diagnosis of GCM is essential to initiate appropriate immunosuppressive treatment to increase the life expectancy of these patients.

Keywords: Giant-Cell Myocarditis, Cardiac Transplantation, Endomyocardial Biopsy

TRANSPOSITION OF GREAT ARTERIES, POSTOPERATIVE COMPLICATIONS

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Introduction: TGA is a congenital cyanotic heart malformation defined by a ventriculo-arterial discordance. Thus, the origin of the aorta is from the RV, while the origin of the pulmonary artery is from the LV. Associated with this condition is a discontinuity at the level of the interatrial septum in the form of a patent foramen ovale or atrial septal defect. The incidence is estimated at 20-30 per 100,000 live births, with a male-to-female sex ratio of 3.2:1. **Case Report:** I realised a retrospective study over a period of 4 years (January2019-December2022) on a total of 50 newborns aged 6-51days. All patients included in the study were diagnosed with D-TGA, and postoperative complications were monitored following arterial switch surgery (mean age of 11days). They were hospitalized at the Pediatric Cardiology Clinic III of the Targu-Mures IUBCVT. All data were collected from existing documentation in observation sheets and discharge notes. **Discussions :** In the postoperative course of newborns with MCC, secondary anemia due to blood loss, rhythm disturbances, pleuro-pericardial collections, global or segmental contractile dysfunction, significant residual lesions, thrombosis, infections, etc. are described. Examining the postoperative laboratory results of patients in our batch, we noted that a significant number(62%) of patients developed postoperative anemia, requiring blood transfusions. One of the most frequent complications after arterial switch is neo-aortic stenosis/insufficiency. In our study, 74% of patients presented with neo-aortic insufficiency as a postoperative lesion, therefore requiring long-term follow-up and presenting a risk factor for neo-aortic root dilation. Another common postoperative complication is pulmonary branch stenosis. The study conducted highlights the presence of this lesion at the level of LPB in 56% of patients, and 66% of patients have RPB stenosis. Results regarding postoperative infections showed that 21(42%) patients had postoperative infections: respiratory tract infection-12(24%), sepsis-4(8%), CVC-related infections-3(6%), gastrointestinal infections-1(2%) and surgical wound infections-1(2%). The association between perinatal hypoxic distress (Apgar<8) and the frequency of postoperative infections was not statistically significant. Other postoperative complications observed were thrombosis(38% of cases), pleural collections(18% of cases), pericardial collections(2% of cases) and 44% of cases had postoperative rhythm-disorders. **Conclusions:** Our study demonstrated an overall favorable outcome following the ASO, with successfully managed complications, as there was no immediate postoperative mortality. The study was conducted retrospectively at a single center, with a small batch size and insufficient follow-up duration. Therefore, further studies will be needed to assess the long-term complications of D-TGA.

Keywords: Transposition of great arteries, Anemia, Neo-aortic stenosis/insufficiency, Pulmonary branch stenosis

THE IMPORTANCE OF CYTOGENETICS FOR A FAMILY WITH A PARENT SUFFERING OF ROBERTSONIAN TRANSLOCATION 13/22

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Introduction: Robertsonian translocation (ROB) is a chromosomal abnormality wherein a certain type of a chromosome becomes attached to another, with a frequency of 1/1000 babies born. The mechanism of this chromosomal abnormality is based on the possible fusing of the long arms of the two chromosomes, resulting in a karyotype of 45, while the short arms are lost. This genetic impairment may happen between two homologous/ non-homologous chromosomes, that are part of the acrocentric groups (group D: 13, 14, 15; group G: 21, 22; chromosome Y). Usually, these individuals present a normal phenotype, but may be at increased risk for having children with abnormalities because of malsegregation of the translocation chromosome. **Case Report:** A couple is sent for genetic testing after the gynecologist has identified a baby with intrauterine growth restriction and nuchal edema. The woman undergoes a non-invasive prenatal test (NIPT), which shows an increased risk for Patau syndrome. A QF PCR is made showing an increased genetic material of the 13th chromosome. The woman opts for an abortion. The amniocentesis confirms the Patau syndrome. Ulterior karyotyping of both parents shows the male, 40, to have a karyotype 45 XY rob(13;22). **Discussions :** A genetic counseling is made, where the risks are explained, taking into consideration that the possible descendants of this couple (45 XY and 46 XX) may have the following karyotype: 1. Normal embryos, with 46 XX or 46 XY (16,6%) 2. Bearers of the translocation (16,6%) 3.

Trisomy 13, known as Patau syndrome, grave, pluriformative (16.6%) 4. Monosomy 13, unsustainable (16,6%) 5. Monosomy 22, unsustainable (16,6%) 6. Trisomy 22, unsustainable (16,6%). Furthermore, possible reproductive methods are presented, as screening methods and prenatal genetic diagnosis. **Conclusions:** The counseling is made based on the empiric risk, the couple having the following solution: 1. IVF, followed by PGD, the cytogenic analysis for the chromosomal zones of interest and the selection of phenotypically normal embryos. 2. For normal pregnancy, a biopsy of the chorionic villus/amniocentesis is recommended, followed by genetic counseling Both this methods present a high risk of recurrent chromosomal abnormalities, thus phenotypical abnormalities cannot be excluded either. NIPT is recommended by the end of the first trimester of the pregnancy. 3. IVF with the help of a sperm donor 4. Psychological counseling for the couple

Keywords: Robertsonian translocation, acrocentric chromosomes, chromosomal abnormalities, infertility

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CYTOMEGALOVIRUS INFECTION: TRIGGERING FACTOR FOR INTERSTITIAL LUNG DISEASE?

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Introduction: Interstitial lung disease represents a group of conditions that account for about 15% of respiratory clinical practice. They are characterized by varying degrees of inflammation and fibrosis, initially affecting the interstitial tissue of the lung and typically presenting with exertional dyspnea, with or without cough. **Case Report:** We would like to present the case of a 47-year-old female patient, with a history of dermographism urticaria and polyarthralgia of the hand's small joints in 2022, who was diagnosed with rheumatoid arthritis based on the single presence of the rheumatoid factor. Treatment with Methotrexate was initiated. After a month, the patient accused anterior chest pain with dry cough and expectoration effort and the presumptive diagnosis was pulmonary fibrosis within autoimmune background. A high-resolution computed tomography was performed. It revealed lesions with confluent, interstitial reticular appearance, bilaterally present, lung damage of about 30% bilaterally, likely fibrotic lesions after viral infection. Another month later, a full panel of autoimmune investigations revealed absence of autoimmune markers and elevated anti-cytomegalovirus IgG antibodies, so the rheumatological pathology was assed as cytomegalovirus arthritis. Body-pletismography and DLCO were performed and showed decrease of gaseous exchange function and low respiratory volumes. **Discussions :** Interstitial lung disease with progressive fibrotic type can have multiple etiologies, from professional exposure, autoimmune pathology, post medical reaction or hypersensitization pneumonitis. The isolated presence of the rheumatoid factor does not support the diagnosis of rheumatoid arthritis, so the complete investigation of the autoimmune panel is mandatory. In our case, if the imagistic lesions progress, antifibrotic treatment will be initiated and the case will be interpreted as pneumopathy with progressive fibrotic phenotype. Also, the cytomegalovirus viremia will be recalculated. At the time of the current episode, antifibrotic treatment (nintedanib) is not initiated. If the antibodies levels will remain high, the patient will be referred to the infectious diseases department for reevaluation. **Conclusions:** Although it was first thought that the rheumatoid arthritis is the incriminating factor for the appearance of pulmonary fibrosis, the full panel of blood tests gave us the hint that the cytomegalovirus is the one incriminated. Respiratory pathology is the most clinically obvious, and the determination of the triggering factor remains the focus of the medical team. Further evaluation is required to assess the evolution of the patient.

Keywords: pulmonary fibrosis, rheumatoid arthritis, cytomegalovirus, interstitial lung disease

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NOS LUNG CARCINOMA OR WHY IS IMMUNOHISTOCHEMISTRY SO IMPORTANT IN LUNG BIOPSIES? A CASE REPORT

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Introduction: Non-small cell carcinoma (NSCC) of the lung is an epithelial type of lung cancer, being a malignant pathology in which abnormal cells are formed and multiply in the lung tissue. Although there are common forms such as squamous cell carcinoma and adenocarcinoma, in this category are present other variants such as the category NOS (not otherwise specified). **Case Report:** The case of a 55-year-old male patient is being presented, who was admitted in the Pneumology Clinic for shortness of breath, cough, and weight loss. The patient undergo a

bronchoscopy from which a bioptic fragment was sent to Pathology Department. Grossing revealed two small bioptic fragments. Microscopically, the bronchial mucosa was observed partially covered by epithelium of the respiratory type. Underlyingly, at the level of the chorion, a tumour proliferation was observed composed of large cells, arranged in beaches or nests. The cells were big, had indistinct cellular limits, with enlarged, irregular and hypercromatic nuclei, with quantitatively reduced cytoplasm, the ratio of the cytoplasm nucleus being modified in favour of the nucleus. **Discussions :** Due to the fact that the tissue sample was very small, the immunohistochemical reactions were necessary to establish the histopathological diagnostic. The immunohistochemical profile revealed that the tumoral cells were positive to anti - CTK AE1/AE3 antibodies which determined the orientation of the diagnosis towards a carcinoma. On the other hand, the negative reaction of the tumour cells to anti-TTF1 and anti-p40 antibodies has excluded the possibility of an adenocarcinoma or squamous carcinoma. The Ki67 was positive in 10-15% of the tumour cells. None of the tumour cells were positive for vimentin, CD56, chromogranin A and synaptophysin, thus the neuroendocrine origin and a possibility of a small cell carcinoma tumour was ruled out. **Conclusions:** The histopathological appearance and immunohistochemical profile confirmed the differentiation of the tumour to a carcinoma, but has excluded the differentiation to an adenocarcinoma, a squamous carcinoma or a carcinoma with neuroendocrine differentiation. Due to the fact that the tumour cells were positive for CTK AE1/AE3, the diagnosis advocated for a broncho-pulmonary carcinoma in favour of non-small cell carcinoma NOS.

Keywords: bronchoscopy, non-small cell carcinoma, NOS, lung

A PARTICULAR CASE OF PNEUMOPERICARDIUM

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Introduction: We present the case of a 42 year old male patient, with no ischemic or structural heart disease and a history of intermittent paroxysmal AF, who underwent pulmonary vein isolation. **Case Report:** One hour after the intervention the patient presented violent retrosternal chest pain and cardiogenic shock. Emergency echocardiography examination revealed cardiac tamponade treated with emergency pericardiocentesis. A chest CT revealed haemo-pneumopericardium, with infra-centimetric air densities surrounding the pericardial drain and no imaging evidence of cardiac perforation, esophago- or gastro-pericardial fistulas, nor pneumomediastinum. Serial echocardiographic examinations did not reveal signs of cardiac tamponade, or fluid accumulation. The patient was closely monitored, after removal of the pericardial drain, with conservative management. The clinical evolution was towards spontaneous healing in 48 hours. **Discussions :** The main discussion point at this case is: What is the cause for the pneumopericardium after the pericardiocentesis? **Conclusions:** In this case we get to the conglusion, the most likeliest cause for the presence of air in the pericardial space following the pericadiocentesis after exclusion of esophago-, gastro-, pleuro – pericardial fistulas indicated a iatrogenic cause.

Keywords: pneumopericardium, pericardiocentesis, cardiac tamponade

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MILIARY TUBERCULOSIS IN A PEDIATRIC PATIENT: A CASE REPORT

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Introduction: Miliary Tuberculosis is a life-threatening disease that results from a massive lymphohematogenous dissemination of MT (Mycobacterium tuberculosis) bacillus in low-immunity children. The definite diagnosis is established by radiological and histological, and microbiological findings. **Case Report:** A 5-months-old female patient who was brought by her mother to her general practitioner (GP) with the following signs and symptoms : left submandibular (2,5/1 cm) and supraclavicular (1,5/1 cm) adenopathy, serous rhinorrhea and dry cough. Due to symptomatology persistence against the non-specific antibioterapy recommended by GP and patient's general wellbeing deteriorating, it was decided to admit her to the Pneumology Clinic. The X-ray detected multiple small nodular opacities measuring 1-4 mm diameters through both lungs and Mycobacterium tuberculosis infection was confirmed by DNA-polymerase chain reaction (GeneXpert). The patient was diagnosed with miliary and ganglionic tuberculosis. The strict supervised antituberculos treatment was initiated also the corticoterapy. Health status of the patient and radiological aspects improved after four weeks of daily treatment. **Discussions :** GeneXpert is a rapid test with high level of sensitivity and specificity that uses the PCR method to detect the MT complex and

resistance to rifampicin. In this case the GeneXpert was done using gastric lavage for a quicker confirmation of the infection but also considering the young age of the patient. **Conclusions:** Avoidance of complications especially in individuals who are most at risk consists in rapid detection and treatment. Early age patients have a better capacity to recover with minimum of pulmonary sequels if the treatment is initiated as soon as possible.

Keywords: Miliary tuberculosis, Pediatric patient, GeneXpert, Tuberculosis

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THE EFFECTS OF DRUGS IN THE EVOLUTION OF NEPHROTIC SYNDROME

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Introduction: Nephrotic syndrome is a consequence of morphological lesions that occur in the context of primary or secondary glomerular nephropathies. It is defined by proteinuria>3.5 g/24 hours, serum protein impairment with values below normal, serum albumin below 3g/dl, alpha-2 globulins>12%. It will generate significant dyslipidemia, observed through lipemia over 1000mg/dl, total serum cholesterol greater than 300 mg/dl, and edema. The specific mechanism of this pathology is characterized by massive proteinuria, a consequence of increased permeability of the glomerular membrane,being a systemic disease for the vast majority of patients. **Case Report:** On March 20, 2023, a 72-year-old female patient previously diagnosed with membranous glomerular nephropathy and treated with loop diuretics, ACE inhibitors, calcium blockers, antiplatelets, statins, and known with lumbar spondylopathy, having undergone three surgical interventions at the lumbar spine level, presents on the nephrology ward with modifications in the macroscopic examination of urine (cloudy urine), marked asthenia and fatigue, and the appearance of bilateral leg edema with a debut of approximately 2 weeks when the antihypertensive treatment was changed to Olmesartan/Amlodipine. After returning to the previous antihypertensive treatment-Leridip 10 mg 2x1 tb/day, Metoprolol 50 mg-2 tb/day, Enalapril 10 mg-2x1 tb/day, Furosemide 40 mg-1 tb/day, Tenaxum 1mg - 2x1 tb/day, the symptomatology remitted. The summary urine examination during the administration of Amlodipine showed a decrease in density-1010 and an increase in pH-6.5, unlike the previous summary urine-normal values. At the general exam, the patient had a moderate general condition, slightly pale skin and mucous membranes, SpO2=97%, bilateral breath sounds, normal chest conformation. BP=130/70 mmHg, HR=90/min, rhythmic heart sounds; minimal bilateral perimaleolar edema;enlarged abdomen due to adipose tissue, non-painful to palpation. Negative Giordano sign bilaterally;spontaneous micturitions, present diuresis=2700 ml/24 h, cloudy urine. **Discussions :** The patient underwent three surgical interventions at the lumbar spine level before being diagnosed with nephrotic syndrome. The question arises regarding the correlation between the treatment performed for lumbar spondylopathy, the patient's exposure to traumatic events, and the appearance of nephrotic syndrome shortly after. Also, the sensitivity to changing antihypertensive treatment manifested by the modification of macroscopic urine sediment and the alteration of the patient's general condition. Therefore, the effects of medications in the context of a systemic disease will be discussed. **Conclusions:** The uro-excretory system is the main purification system of the body, so the administration of any medication in the context of renal pathology must be done under careful medical supervision and regular monitoring of renal function.

Keywords: nephrotic syndrome, systemic disease, medication

ECHOES OF SYSTEMIC DISEASES IN THE RHEUMATOLOGICAL SPHERE

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Introduction: Scleroderma is a multisystemic illness that affects internal organs and has vasospasm (Raynaud's phenomenon). A almost ubiquitous characteristic of the disease is skin involvement with skin thickening, stiffness, which may be preceded by erythema and edematous swelling. Typically affected are the hands and face. Lyme disease is a tick-borne illness, most caused by pathogenic species of the spirochete Borreliella. The term "Lyme arthritis", due to manifestations such as arthralgia , was initially used to characterize Lyme disease in 1977 in examinations of a cluster of children who were believed to have juvenile rheumatoid arthritis. **Case Report:** I examined patient O.S., 48 years old, who came to the emergency room with an altered general condition and dizziness after experiencing an episode of lipothymia at home. She was discovered to have a grade 3 atrio-ventricular block with 27 bpm and was also diagnosed with Lyme disease, the patient being unable to anamnestically specify details of the infection. The patient is known to have Raynaud's syndrome since 2020, a

disease that began with a change in the skin color of the hands when exposed to low temperatures or stress. Her sclerodema has been suspected for three years, but immunological investigations have not been completed or followed up on. Customized testing and a rigorous physical examination also raise suspicion of an overlap with myositis. From the medical history we also learn about the pacient's recurrent miscarriages which leads us to think of an antiphospholipid syndrome. **Discussions :** The particularity of the case is given by the multitude of problems that could have given the heart damage that caused the atrioventricular block. Systemic sclerosis frequently has cardiac involvement, which goes undiagnosed until late in the course of the disease and affects the myocardium, pericardium, and conduction system, although typically a single manifestation predominates in a patient. In Lyme disease, on the other hand, the most common clinical feature of the cardiac damage is AV conduction block, which leads us to believe that this is the causative factor of our problem. **Conclusions:** The internal medicine department called rheumatology is a multidisciplinary science that combines multisystemic issues with an increased emphasis on the starting point of a pathology, medical tests and attention to detail. Without these, the infectious disease consultation would not have taken place and Borreliosis would not have been diagnosed, putting the problem down to scleroderma overlapping myositis.

Keywords: scleroderma, lyme disease, atrio-ventricular block, antiphospholipid syndrome

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UROGENITAL PLASMABLASTIC LYMPHOMA IN AN HIV-POSITIVE PATIENT: A RARE CASE PRESENTATION

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Introduction: Plasmablastic Lymphoma is one of the most aggressive and, at the same time, the rarest Non-Hodgkin Lymphomas with large B-cells. In most cases, it's related to immunosuppression caused by HIV or EBV infections, post transplantation or an elderly age, but it can also appear at immunocompetent patients. Epidemiologically speaking, this type of NH lymphoma often occurs in men with a median age at diagnosis of approx. 50 years old. The tumoral mass is often found in extra-nodal sites like the oral cavity, lungs, nasal cavity, gastro-intestinal tract, skin, or bones. **Case Report:** We present the case of a 25-year old woman known with a giant tumor process which interests the urinary bladder, urethra, the vagina, tangent to the anterior wall of the cervix, hypertrophied ovaries with tumoral aspect, suspicious pelvic and inguinal adenopathies detected at an MRI examination. The patient has been diagnosed with vesical globe and has an urinary catheter. At the Urology Clinic in Targu Mures a bioptic piece is harvested from the tumoral process through TUR-V and after an immunohistopathology investigation the presence of plasmablastic lymphoma is suspected. After many immunohistochemistry tests, the histopathologic diagnosis reveals a lymphoproliferative process with high grade of malignity: the histological aspect and the immunophenotype of the tumoral cells are compatibles with Plasmablastic Lymphoma. The patient is hospitalized at the Hematology and medullar transplant clinic in Targu Mures where she is tested positive for HIV infection and receives CHOP treatment. **Discussions :** The Plasmablastic Lymphoma's uncommon site in this case and the fact that it's invading the whole lesser pelvis is leading to a reserved prognosis. The evolution seems to be slowly favorable. **Conclusions:** In conclusion, this rare case emphasize the importance of the diagnosis given by histopathological examination where the only characteristic of the actual disease is the HIV infection.

Keywords: Plasmablastic Lymphoma, HIV, Non-Hodgkin lymphomas

FROM COLON TO PANCREAS: A RARE WAY OF METASTASIZING

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Introduction: Metastatic cancer of the pancreas from other primary sites is rare and represents less than 2% of pancreatic neoplasms. There is a variety of malignancies that could potentially lead to such metastases, but colorectal cancer is also an uncommon finding. **Case Report:** A 60-year-old male patient presented in the gastroenterology department for the evaluation of a recently discovered pancreatic mass on a routine MRI scan, 3 years after a right hemicolectomy for primary colon adenocarcinoma (pT3N2aM0). The imaging also showed multiple lung metastases and 3 suspect hepatic lesions. He was then undergoing chemotherapy with FOLFIRI. The physical examination revealed jaundice but was otherwise not remarkable. Blood tests indicated a total

bilirubin of 12.3 mg/dL, high transaminase values, elevated GGT and alkaline phosphatase levels, as well as high pancreatic enzyme values, demonstrating obstructive jaundice. Considering also the great values of the CEA and CA19-9 tumor markers, and the previous MRI scans, this prompted the question of a pancreatic metastasis or synchronous pancreatic neoplasm. An abdominal ultrasound showed gallbladder hydrops with biliary tree dilatation caused by a cephalic pancreatic mass. An endoscopic ultrasound was performed, revealing a mass invading the hepatic and superior mesenteric artery. On administering contrast, arterial hyperenhancement and a fast wash-out were shown and four fine-needle aspirations were performed. A metallic stent was later placed through ERCP to relieve the obstructive jaundice. The immunohistochemistry assessment of the specimens was compatible with a pancreatic metastasis of the previous adenocarcinoma. Although the patient's lab findings improved his prognosis remains poor. **Discussions :** The natural progression of untreated secondary pancreatic tumors is yet unknown. Treatment options vary greatly based on the primary site, stage and tumor burden, making systemic palliative chemotherapy the usual approach. In rare cases with no other dissemination sites, aggressive surgery might be performed. Currently, the lack of data in the literature cannot asses the survival benefits of these two approaches, highlighting the importance of reporting such rare cases. **Conclusions:** Metastasis to the pancreas should be included in the differential diagnosis for pancreatic masses, even more so as a primary non-pancreatic neoplasm was previously identified. The diagnosis is mandatory as the treatment will vary greatly. The lack of specificity between primary and secondary neoplastic lesions on imaging represents a challenge. However, endoscopic ultrasound with fine needle aspiration has become a more accurate diagnostic method.

Keywords: metastasis to the pancreas, colorectal cancer, endoscopic ultrasound, fine needle aspiration

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BIPHASIC MESOTHELIOMA MIMICKING UTERINE CANCER - A CASE REPORT

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Introduction: Mesothelioma is a rare and aggressive form of cancer that develops from mesothelial cells, most commonly in the pleura and the peritoneum and less often in the pericardium. The main risk factor in the development of mesothelioma is asbestos exposure. Asbestos fibers present in the air are inhaled or swallowed. They then settle in the stomach lining and induce uncontrolled cell division. The three main types of mesothelioma are epithelioid, sarcomatoid, and biphasic. Epithelioid mesothelioma is the most prevalent and the easiest one to treat. By comparison, sarcomatoid mesothelioma occurs rarely and responds poorly to treatment. Biphasic mesothelioma contains both epidermoid and sarcomatoid cells, and the ratio between them indicates the prognosis. **Case Report:** We present the case of a 74-year-old patient admitted with a diagnosis of a malignant uterine tumour of unspecified location. Abdominal hysterectomy with bilateral adnexectomy is performed. The intraoperative diagnosis of a pelvic tumour of the uterus is established, accompanied by secondary metastases located in the small intestine and the presence of ascites. Multiple tissue samples are obtained for histopathological examination. On gross examination, a large tumour is observed (7,1x8,5x4,9cm). It has a grey-brown colour, with a slightly increased friable consistency with haemorrhagic areas and yellowish-brown colour on section. On microscopic examination, the proliferation of epithelioid and fusiform tumour cells is observed, with areas of papillary, solid appearance, as well as multinucleated cells and marked nuclear pleomorphism. The immunohistochemical examination reveals the following data: CK AE1/AE3-positive, CK MNF116-focal positive, CK7-focal positive, RE-negative, RP-negative, Act-negative, ProtS100-negative, HMB45-negative, VIM-positive, Ki67-60%. **Discussions :** The microscopic and immunohistochemical results indicate a grade II malignant biphasic mesothelioma. Peritoneal mesothelioma is associated with a better prognosis compared to pleural mesothelioma. Factors that influence the prognosis are the tumour cell type, the stage of the disease at the time of diagnosis and the gender. **Conclusions:** Malignant peritoneal mesothelioma represents a challenge in medical practice due to the fact that it is a rare disease, often silent, and the clinical presentation is frequently non-specific, which makes preoperative diagnosis very difficult. Peritoneal infiltrates can be interpreted as tumour metastases. The histopathological examination with immunohistochemical analysis is essential for establishing a precise diagnosis.

Keywords: peritoneal mesothelioma, histopathological examination, biphasic mesothelioma

VARICELLA COMPLICATIONS IN ADULTS: THE WORST CASE SCENARIO - A CASE REPORT

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Introduction: Varicella is an acute infectious disease caused by the varicella-zoster virus (VZV), a DNA virus from the Herpesviridae family. Varicella pneumonia is a potentially fatal complication of VZV, is more prevalent among adults, and can be accompanied by sepsis and acute respiratory distress syndrome (ARDS). Adults infected with VZV have a much higher risk of developing pulmonary radiological changes, with an incidence of 5-50%. Varicella pneumonia is associated with a 22.7% mortality rate among adults and approaches 50% in those requiring mechanical ventilation. **Case Report:** We present a rare case of varicella pneumonia complicated by ARDS and sepsis in a young patient with no significant medical history. The 35-year-old patient is taken from the emergency department directly to the intensive care unit with severe acute respiratory failure following varicella pneumonia complicated by ARDS. Orotracheal intubation is required from the first day of hospitalisation due to his critical state. The patient develops ventilator-associated pneumonia. Despite appropriate management (oxygen therapy, antibiotic therapy, antiviral therapy, continuous hemodynamic monitoring), the patient's condition remains critical. The first signs of improvement are only observed after 14 days, but mechanical ventilation is still necessary. As a result, the patient requires a tracheostomy to facilitate weaning from the ventilator. During the prolonged hospitalisation, the patient develops a polymicrobial superinfected grade III/IV occipital decubitus ulcer, requiring local surgical treatment. **Discussions :** The patient's prognosis was strongly influenced by the severity of the disease but also by the consequences of prolonged hospitalisation. There is a strong association between long-term intensive care unit admissions and healthcare-associated infections. In this case, Acinetobacter baumannii and multi-drug-resistant Klebsiella pneumoniae were isolated. ARDS can also be accompanied by various latent complications that affect the physical, mental and social health of the patients in the long term. **Conclusions:** In general, patients present with respiratory distress within one to six days of the onset of a rash. Our patient presented with respiratory symptoms five days after the appearance of the rash. Despite being immunocompetent, the patient developed multiple life-threatening complications. This case ultimately had a favourable evolution, but demonstrates the fatal potential of VZV infection in adults even among individuals that are not at risk.

Keywords: varicella pneumonia, sepsis, acute respiratory distress syndrome, healthcare-associated infections

PRIMARY HYPERPARATHYROIDISM IN A PATIENT WITH KIDNEY CHRONIC DISEASE -A CASE REPORT

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Introduction: Primary hyperparathyroidism (PHPT) is a condition in which parathyroid hormone (PTH) is autonomously secreted in excess without negative feedback from calcium levels in blood. Due to overproduction of parathyroid hormone the calcium-phosphate metabolism is altered . As a result, serum calcium levels are usually high, with low phosphorus, and the chronic excess PTH can have a significant impact on kidneys ,bones , gastrointestinal or nervous system. **Case Report:** A 74 years old man with multiple cardiovascular comorbidities , chronic kidney disease (CKD) stage 4 (polycystic kidney disease) performs a DEXA scan which shows osteopenia (T-score L1-L4 = -1.9) , leading the patient to endocrinological evaluation , where the patient is diagnosed with primary hyperparathyroidism (PTH: 1308.2 pg/ml) with moderate hypercalcemia (13.7 mg/dl) and hypophosphatemia. The patient was treated with iv fluids with loop diuretics this lowering the calcium levels to a stable level around 12 mg/dl. Imagistic studies: ultrasonography of the neck and parathyroid scintigraphy reveal a left inferior parathyroid adenoma. Surgical intervention was recommended as a curative treatment for the primary hyperparathyroidism. **Discussions :** After minimally invasive parathyroidectomy the patient accuses mild paresthesia at upper limbs and is put on alphacalcidol and calcium supplementation due to risk of post-parathyroidectomy hypocalcemia. Parathyroid hormone levels after surgery are reduced to 10,10pg/ml, while the patient had a normal calcium-phosphate balance under activated Vitamin D and calcium supplementation. **Conclusions:** PHPT cases are frequently diagnosed incidental. Recent studies have shown a prevalence of bone demineralization in primary hyperparathyroidism of 39-62.5%. The particularity of our case was a incidental

discovery of a large left parathyroid adenoma that was obvious both sonographic and confirmed at scintigraphy in a male patient with osteopenia and CKD. While there was a high risk of post-surgical hungry bones syndrome, our patient had mild post-surgical hypocalcemia that was successfully controlled on oral Calcium and alphacalcidol supplementation.

Keywords: parathyroid, osteopenia, hypercalcemia, primary hyperparathyroidism

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ACUTE BACTERIAL PROSTATITIS TO SPINAL INFECTION: A CASE REPORT

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Introduction: Acute bacterial prostatitis is an infection of the prostate gland that can, and will cause in most of the cases pelvic pain and urinary tract sympotms, such as dysuria, urinary frequency and urinary retention, and could leat to abundent systemic symptoms, such as fever, chills, nausea, malaise and emesis. Although the true reasons are unknown, acute bacterial prostatitis compromise approximately 10% of all cases of prostatitis. **Case Report:** Aim of this case report is to observe the evolution of bacterial prostatitis, the complications and recovery, starting from the clinical examination. We present the case of a 69 year old patient, diagnosed 9 years ago with acute prostatitis and a history of percutaneus nephrolithotomy. At the moment of the diagnosis, the prostatitis was not treated adequate, the bacterial culture was deficient, not revealing the bacterial infection and the patient was discharged. After 9 years, the patient presents to the ER acusing lombar pain, fever and inability to move even for short periods of time. The MRI revealed the occurance of ankylosing spondylitis and multiple abcesses in the L4-L5, L5-S1 region. Bloodwork revealed an 154mg/L C-reactive protein and prostate specific antigen at 49,48 ng/ml. Treatment was started on the 25th of october with Augumentin and Ciprofloxacin, on the 21th of november the patient was discharged, after the drainage of the abcesses from the lombar region. On the 2nd of december, the patient came back for check-up, blood culture showed no sign of chlamydia or mycoplasma pneumoniae, the serology also showed no sign of HIV, hepatitis or syphilis, but the MRI showed signs of an increase in the findings described in the prevertebral area at the level of L2-3 vertebrae compared to the previous examination. The patient was discharged, on the treatment of Teicoplanin and Ciprofloxacin. **Discussions :** Bacterial prostatitis will be managed with drugs, but the improper diagnosis and it's consequences most likely will need to be managed in the OR. **Conclusions:** Hospitalization and broad-spectrum intravenous antibiotics should be considered in patients who are systemically ill, unable to voluntarily urinate, unable to tolerate oral intake, or have risk factors for antibiotic resistance. Surgical treatment should be avoided, but if necessary, it should be the ultimate life saving treatment.

Keywords: Prostatitis, Bacterial, Drugs, Culture

OVERINFECTED BRONCHIECTASIS: A CAUSE OF ASTHMA EXACERBATION OR CONCOMITANT PATHOLOGY?

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Introduction: Asthma and bronchiectasis are conditions that can suppress patients' immunity, making them more prone to infections. These can occur when bacteria or other pathogens infect the already-compromised airways. Despite bacterial infections being more common, respiratory fungal infections are more rare and severe. **Case Report:** We report the case of a 54-year-old man with a history of severe asthma GINA Step 5 treatment, including biologic therapy, which consists in Benlarizumab (an anti-IL-5 receptor antibody), bilateral basal bronchiectasis, and multiple other pathologies, the most relevant ones being arterial hypertension and diabetes mellitus type 2 insulin-dependent. The patient's health started deteriorating, accusing severe dyspnea at rest, one week before being admitted to the Pneumology Clinic in January 2022, when he presented himself with an abundant cough with purulent expectorates and hemoptysis. On further physical examination, his O_2 saturation was 95% and the auscultation of the lungs revealed normal breath sounds with bilateral crackles. Laboratory data indicated elevated leucocyte and neutrophil levels and the microbiological exam of the sputum detected the presence of both Staphylococcus aureus MSSA and Candida dubliniensis. Based on these findings, the final diagnosis was pneumonia and pulmonary candidiasis, the treatment being prescribed in accordance with the antibiogram.

Considering his favorable evolution, the patient was discharged one week later and continued his treatment at home. **Discussions :** Currently, the patient is periodically admitted to the Pneumology Clinic due to repeated infections with multiple pathogens such as SARS-CoV-2, Klebsiella oxytoca and Staphylococcus aureus MRSA. Considering his multiple comorbidities, this is a case that requires special attention, particularly due to his very deteriorated lung condition. Our patient is spinning in a vicious circle of his pulmonary pathologies: asthma and bronchiectasis. On the one hand, prolonged evolution of asthma has increased the risk of bronchiectasis. On the other hand, bronchiectasis as well as the multiple recurrent infections contribute to the acceleration of bronchial hyperreactivity. **Conclusions:** The importance of this case consists in the fact that, despite not being immunocompromised, the patient developed a very rare infection with Candida dubliniensis, a species that occurs in individuals affected by HIV/AIDS, cancer or those undergoing immunosuppressive therapy. The biological therapy did not represent a risk factor for the complications described, as these types of medical issues frequently occur when using anti-TNF-alpha biological agents. On the contrary, maintaining his therapy with Benlarizumab allowed us to provide the necessary support for a better pulmonary function.

Keywords: Candida dubliniensis, bronchiectasis, asthma, dyspnea

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A CASE OF ACUTE SHEEHAN'S SYNDROME IN A PATIENT WITH DIABETES MELLITUS: A RARE BUT LIFE-THREATENING COMPLICATION OF POSTPARTUM HEMORRHAGE

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Introduction: Sheehan's syndrome is thought to be a rare, but potentially life-threatening, obstetric event that causes hypopituitarism due to postpartum pituitary gland necrosis in association with hypovolemia or hemmoragic shock secondary to massive hemorrhage at delivery. This complication occurs in 1 out of every 100,000 births globally. Symptoms of Sheehan's syndrome appear as a result of decreased multiple pituitary hormones. These include agalactia, irregular periods, or amenorrhea, hot flashes, and decreased libido. **Case Report:** We present the case of a 33-year-old woman who presented to the endocrine unit with a pre-diagnosis of adrenal insufficiency. After she gave birth the third time, with a cesarean section for the third time, seven units of blood transfusion were needed during the surgical intervention. Menstruation stopped after two days of intensive care, and she was unable to breastfeed. Symptoms such as amenorrhea for one year, generalized weakness, fatigue even at rest, a constant desire to lie down, excessive sleepiness, and a lack of hunger showed up, but otherwise there was no blurring of vision or diplopia. She had no history of head trauma, surgery, or irradiation. Therefore, she was sent to the endocrinology department with a preliminary diagnosis of adrenal insufficiency. **Discussions :** The patient's history shows non-toxic diffuse goitre, vitamin D deficiency, and non-insulin-dependent diabetes mellitus with unspecified complications. The MRI of the patient revealed a significant thinning in the middle part of the adenohypophysis and sinusitic changes, which were compatible with Sheehan's syndrome since Sheehan's syndrome is mostly caused by hypopituitarism. The midline thickness was measured at 1 mm. The neurohypophysis is in a normal position and appearance. The infundibulum is of normal thickness in the midline. Suprasellar structures are normal. No pathological contrast enhancement was observed after the injection of IV contrast material. Laboratory findings showed the following: TSH 0,24 mIU/L (0,27-4,2 mIU/L), ACTH 3,23 ng/L (7,2-63,3 ng/L), PRL 2,91 ug/L (4,79-23,3 ug/L), IGF-I < 15,0 ug/L (71,2-234 ug/L), fT4 0,28 ng/dL (0,93-1,71 ng/dL), fT3 1,52 ng/dL (2,01-4,42 ng/dL). In this patient, the laboratory data and symptoms indicated adrenal insufficiency. **Conclusions:** Pituitary hyperplasia during pregnancy increases the need for blood supply while putting pressure on the pituitary gland. Severe postpartum hemorrhage causes hypovolemia and vasospasm of the supplying vessels, leading to infarction of the pituitary tissue. The diagnosis of Sheehan syndrome is made by history and physical examination and confirmed by laboratory tests. Hemorrhagic shock during pregnancy is an important diagnostic guide.

Keywords: Sheehan's syndrome, hypopituitarism, diabetes mellitus

AN UNTREATED CASE OF THROMBOPHILIA IN A PREGNANT WOMAN

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Introduction: Thrombophilia is a blood clotting disorder, a hypercoagulable state of the fluid which has an increased tendency to form thrombi where they are not needed. It can be caused by an inherited mutation with an autosomal dominant, autosomal recessive or X-linked transmission, but it can also be acquired in the context of other prothrombic diseases. **Case Report:** We are presenting the case of a 19 year old young woman, who after 2 weeks post-partum comes to the Emergency department with pain associated with an enormous blood clot in her left iliofemoral vein, alongside tumefaction and functional impotence of the limb. Upon a closer look, the genetic tests show a heterozygous Factor V Leiden mutation which is one of the key factors in Hereditary Thrombophilia, a homozygous C677T mutation in the MTHFR gene which makes the patient prone to arterial and venous thrombosis in association with other risk factors and is also responsible for high levels of Homocysteine and a Folate deficiency, a heterozygous Factor XIII V34L mutation and a homozygous PAI-1 4G/4G mutation that decreases the fibrinolysis process. As an usual complication of the thrombectomy procedure and selective thrombolysis with Actilyse, she developed a left inguinal hematoma. Because of the recent pregnancy, she experiences a secondary anemia and remitted hydronephrosis grade II in her right kidney. **Discussions :** The particularity of this case is the fact that the patient carried out a perfectly healthy pregnancy, without any spontaneous miscarriages in her medical history, keeping in mind that she had a combination of prothrombotic elements such as the gestation itself, the MTHFR gene mutation and PAI-1 mutation, while she was not on any anticoagulant medication. The uncommon trait of the patient is the Factor XIII V34L mutation that provides protection against Deep vein thrombosis which she had a higher risk of developing. **Conclusions:** Thrombophilia is a combination of multiple mutations, which untreated can lead to serious issues such as pulmonary thromboembolism and ischemic stroke, but if it is diagnosed in the early stage, the patient can lead a life without any symptoms.

Keywords: pregnancy, thrombophilia, mutations, thrombosis

BILOBECTOMY IN A CARDIOVASCULAR PATIENT? LET'S DISCUSS ANESTHETIC IMPLICATIONS.

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Introduction: Bilobectomy represents the surgical management of lung cancer involving the removal of two adjacent pulmonary lobes. Lung cancer and heart disease are the two leading causes of death worldwide, thus a patient with history including both conditions requires special perioperative care. This case presentation describes the particularities of anesthetic management in patients presenting with both cancerous and cardiovascular disease. **Case Report:** We present the case of a 69 year-old male with pre-existent chronic coronary syndrome, hypertension, stable angina and NYHA II heart failure, with a history of coronary bypass, right and left carotid stents and four coronary stents. During a routine cardiology check-up in 2022, a suspect nodular mass in the right superior pulmonary lobe was identified with computed tomography angiography (CTA). Following histopathological examination, adenocarcinoma was identified and surgery was indicated. **Discussions :** A critical step in perioperative guidance is antiplatelet therapy (Plavix) cessation one week before the intervention to avoid excessive blood loss during surgery. Preoperative care continues with thorough cardio-pulmonary evaluation using designated scores (Mallampati II, ASA III and Cardiac risk index score 2p). Regarding medication, among the classic anesthetic agents, magnesium sulfate and lidocaine are used to decrease the need of intraoperative fentanyl, an opioid well known for its respiratory depressant effects. The biggest challenge however is one lung ventilation (OLV) traditionally used for such cases. This technique implies exclusion of one lung during mechanical ventilation to allow good access to the thoracic cavity and to ensure contamination prevention to the contralateral lung. A procedure this complex in an already complicated individual calls for protective ventilation (PV) and it involves the use of low tidal volumes with PEEP, FiO2 less than 100% and low airway pressures. **Conclusions:**

Surgery remains pivotal in the sea of cancer treatments, therefore anesthesiologists continuously need to balance their approach to fit the diversity of their patients. This case, a lobectomy that turned into a bilobectomy, is a powerful example of anesthetic and surgical complexity and the ongoing need for individualized medicine.

Keywords: Bilobectomy, One lung ventilation, Lung adenocarcinoma, Anesthesia

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SEVERE ASYMPTOMATIC OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY IN AN ERDERLY PATIENT

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Introduction: Hypertrophic cardiomyopathy (HCM) is a complex inherited cardiac disease with a variety of phenotypes leading to different cardiac manifestations. Based on the distribution, it often involves the interventricular septum more than other left ventricle segments in an asymptomatic form that explains the underdiagnosis of the disease. Since it appears in around 1 in 500 individuals, effective screening can significantly influence cardiac-related mortality and morbidity. **Case Report:** We present the case of a 65-year-old patient, with negative family history previously diagnosed with HCM in a cardiological consultation before surgical treatment of a neorectal cancer (in 2010) affirmatively with permanent colostoma at the present moment. For the first assesment, cardiac ultrasound showed a preserved LV systolic function, with concentric LV hypertrophy predominantly affecting the interventricular septum(maximum 22 mm at the basal half), with the presence of the SAM phenomenon and LV ejection gradient up to 100 mmHg with a mild mitral insufficiency. Genetic testing for secondary HCM came back negative for Fabry disease. As a first line treatment, the patient was administered betablocker theraphy with the improvement of LV outflow obstruction . After 5 years with no subjective symptoms, ecocardiography revealed non-dilated, severely hypertrophied LV with a maximum SIV size of 21 mm, with left ventricular ejection tract gradient of 180 mmHg , without significant valvular disease, a preserved systolic function and normal-sized atriums. 24 hour Holter ECG monitoring showed repetittive episodes of paroxysmal atrial fibrilation with a maximum rate of 152 bpm, then after 5 days of amiodarone loading dose, revealed only the presence of synus rhythim. **Discussions :** Nowadays, HCM has become a treatable disease with oral medication or septal ablation /myomectomy. Guideline indication for these procedures is reserved for symptomatic individuals in which oral medication theraphy fails since any invasive treatment comes with the risk of causing malignant arrhythmia. In our case, having no documented symptomatic episodes of syncopes or ventricular arrhythmias with the exclusion of cardiac stress examination, the patient does not meet the criteria for intracardiac defibrilator or invasive treatment for the disease. **Conclusions:** Being mostly a silent disease, early diagnosis of HCM can be quite difficult. Differential diagnosis between HCM and other types of ventricular hypetrophy is only possible with genetic screening. Prevention of hipertrophy with symptomatic therapy or device related reduction of sudden cardiac arrest are the ultimate goals for this condition.

Keywords: obstructive, hypertophic, cardiomyopathy, asymptomatic

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A RARE GENETICAL ANOMALY: OSLER-WEBER-RENDU

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Introduction: Osler-Weber-Rendu disease, also known as hereditary hemorrhagic telangiectasia (HHT) is a rare autosomal dominant vascular disorder characterized by mucocutaneous telangiectasia, visceral arteriovenous malformations, and epistaxis. **Case Report:** We present a 71-year-old female, with a medical family history of father, 2 brothers, and a son with Osler-Weber-Rendu disease and a personal medical history with Osler-Weber-Rendu disease diagnosed at the age of 7, lobectomy of the left lower lung lobe for recurrent bleeding, repetitive gastro-intestinal bleedings, hepatic angioma, and multiple arterio- venous malformations. During physical examination were detected perioral cyanosis, telangiectasias of cheekbones and lips, pale skin, systolic murmurs in the tricuspid area, heart rate of 65 bpm and normal blood pressure, no pulmonary rales, edema and hepatomegaly. Right heart catheterization was performed and precapillary pulmonary hypertension (mean PAP=43 mmHg, pulmonary artery wedge pressure=7 mmHg) was diagnosed. Computed tomography revealed chronic pericarditis, right and left superior pulmonary lobe arterio-venous malformation, portal vein thrombosis, and multiple hepatic hemangiomas were identified. **Discussions :** Pulmonary Hypertension (PH) is defined as a mean

pulmonary artery pressure of ≥20 mmHg or above at rest. Chronic thromboembolic pulmonary hypertension (CTEPH) is a complication of pulmonary embolism and a cause of PH leading to right heart failure and death (the possibility of CTEPH should be considered in all patients with suspected or confirmed PH). Osler-Weber-Rendu manifests when the genes for Endoglin and Acvrl-1 receptors suffer mutations. Both genes code a membrane glycoprotein expressed in endothelial tissue cells and make up the surface receptor for TGH-β which mediates vascular remodeling. The problem of treatment happens due to the thrombotic nature of CTEPH and the hemorrhagic nature of Osler-Weber-Rendu disease. **Conclusions:** This case shows the importance of recognizing and diagnosing CTEPH and the provocation that comes with the association of Osler-Weber-Rendu disease in patient management.

Keywords: Osler-Weber-Rendu, pulmonary hypertension, CTEPH, hereditary hemorrhagic telangiectasia (HHT)

OVARIAN STIMULATION THERAPY: A NEED OR A LEAD TO AUTOIMMUNE DISEASES?

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Introduction: Ovarian stimulation therapy (OST) is a hormone-based treatment, involving the growth and maturation of eggs in the ovaries, leading to higher levels of estrogen. Dermatomyositis (DM) represents an inflammatory myopathy that combines symmetrical proximal muscle weakness and specific skin manifestations. Graves' disease (GD) is an autoimmune disorder, being the most common cause of hyperthyroidism. Women undergoing OST have a higher incidence of autoimmune diseases, including thyroid disorders and DM, compared to women who didn't undergo it. The aim of this presentation is to highlight a possible implication of OST in developing autoimmune diseases. **Case Report:** A 47-year-old female is known for a severe form of DM, GD, and bilateral hand arthrosis. Fifteen years ago, OST was prescribed for the purpose of achieving pregnancy but proved to be ineffective. Two years later, she was diagnosed with GD. Later on, she presented to the rheumatology ward, exhibiting a heliotrope rash, proximal muscle weakness and atrophy, myalgia, dysphagia, mechanic's hands, and bilateral calcinosis cutis on both inferior limbs and abdomen. The patient's paraclinical assessments noted elevated muscle enzymes, and positive anti-Ku and anti-PL-7 antibodies. Electromyogram and a muscle biopsy were conducted, leading to the definitive diagnosis of DM. The paraneoplastic DM was ruled out by multiple investigations. The primary treatment administered was a combination of methotrexate and prednisone. Over time, she probably developed iatrogenic Cushing syndrome, and secondary diabetes. During this period, immunoglobulin therapy was initiated, but it failed to alleviate the patient's myalgia. Currently, the calcinosis cutis is in remission; even so, myalgia persists despite undergoing treatment. **Discussions :** The patient was diagnosed with DM at the age of 35, which is typically seen to develop between the ages of 40 and 60. Moreover, calcinosis cutis is a rare condition that is commonly observed in pediatric patients with DM; however, this adult patient, presented an extensive form. In the literature, there are limited reported cases of GD and DM induced by OST. Elevated estrogen levels caused by OST can impact the immune system, altering cytokine production, and promoting autoimmune processes. Also, prolonged corticosteroid therapy might cause adverse effects, as evidenced by the patient's complications. **Conclusions:** Therefore, careful monitoring of patients undergoing OST is recommended, particularly those with predisposing factors, in order to minimize the onset of autoimmune diseases. In conclusion, while there might be potential connections between OST, autoimmune thyroiditis, and DM, further research is needed to fully understand the relationships between these conditions.

Keywords: ovarian stimulation therapy, dermatomyositis, Graves’ disease, calcinosis cutis

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GIANT CORONARY ARTERY ANEURYSMS, COMPLICATIONS OF KAWASAKI DISEASE

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Introduction: The coronary artery aneurysms in children are complications often caused by the Kawasaki disease, which is a vasculitis that involves the medium-sized arteries, in particular the coronary arteries. The most affected are children aged 1 to 8 years old. Same as in adults, the aneurysms could increase and rupture or cause a myocardial infarction because of thrombosis. **Case Report:** The aim of this paper is to present the challenges in therapeutic management of coronary aneurysms in children. We present the case of a 7 years and 7 months-old boy, with Kawasaki disease and giant coronary artery aneurysms bilateral, confirmed by thoracic Angio-CT which

also revealed an anomaly of origin of the right coronary artery. The echocardiographic evaluation highlights coronary artery aneurysm of the right coronary artery (Boston z score +9.37). The 24h EKG - monitorization did not show any anomalies. His recent medical history brings to light enterocolitis with Rotavirus, SARS-Cov2 infection and Epstein Barr Virus infection. **Discussions :** The early diagnosis of Kawasaki disease is very important to institute correct treatment and to prevent the risk of cardiac complications. An adequate therapy reduces acute symptoms and the incidence of coronary artery aneurysm from 20% to 5%. The prognosis and the recovery are very good in absence of coronary artery disease. At the onset of the disease, patient was treated in a local hospital with IVIG (intravenous immunoglobulin), methylprednisolone and aspirin. We decided to add to the treatment anticoagulant and calcium channel blocker. As recommendations the physical effort is prohibited, monitoring the blood pressure and dispensarisation at 3 months. **Conclusions:** The particularity of the case consists in the difficulty of therapeutic management for a pacient with Kawasaki disease and giant coronary artery aneurysms.

Keywords: Kawasaki disease, coronary artery, children, aneurysm

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A RARE CASE REPORT WITH BIOTINIDASE DEFICIENCY, NON-SPECIFIC SYMPTOMATOLOGY AND NEGATIVE EVOLUTION

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Introduction: Biotinidase (BTD) deficiency is an autosomal recessive disease, with up to 62 mutations of the BTD gene being described. The first symptoms appear most frequently at children aged between 3 and 6 months. Clinically, these children present neurological syndrome (which includes symptoms such as seizures, hypothonia, developmental delay), skin damage (including eczema and alopecia) and other symptoms such as respiratory disorders and hepato-splenomegaly. **Case Report:** The aim of this paper is to present the case of a new-born female patient, who died 4 months after birth in less than 12 hours from the first presentation to the hospital. Therefore, she presented with non-specific symptoms: hypothonia, lethargy, with an unfavorable evolution and rapid decompensation, which ultimately led to death. The histopathological examination confirmed the diagnosis of acute myeloid leukemia (AML). Trio-WES (whole exome sequencing, patient and parents) was performed and one mutation was identified in each parent. The final results confirmed the suspicion of the child being born compound heterozygous. **Discussions :** Metabolic screening is done to newborns in order to detect different diseases that might be life-threatening. In this case, it was impossible to diagnose the patient with biotinidase deficiency due to the non-specific symptoms and the rapid unfavorable evolution. Moreover, the diagnosis of acute myeloid leukemia may have been caused by a global suffering of the body, including the hematogenous bone marrow, or as a second congenital desease (situation that was reported only at one patient in the literature). **Conclusions:** The evolution of the disease is unfavorable without treatment, especially in forms with very low enzyme activity. The percentage of carriers is high, an element that made the physicians consider such a suspicion of diagnosis in newbornes.

Keywords: BTD, hypothonia, AML, metabolic screening

BRAIN DEATH CAUSED BY ISCHEMIC STROKE, STILL A CHALLENGE

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Introduction: Brain death is defined as the impossibility of recovery of the brain, including the brainstem, along with loss of consciousness, which includes the abolishment of the cognitive and affective mental functions. Brain death occurs as a result of an extra- or intracranial injury leading to deterioration in brain oxygenation and compromising cerebral perfusion. The aim of this case report is to emphasize the importance of multidisciplinary approach in the management of potential brain dead patients to improve transplantable organ quality. **Case Report:** We present the case of a 53 year old patient previously diagnosed with hypertension, type II diabetes, Hashimoto thyroiditis who had previously sustained an ischemic vertebrobasilar stroke in 2019. The patient was admitted to the Emergency Department in Cluj-Napoca following an episode of speech impairment and loss of balance. Multiple investigations concluded with the confirmation of bilateral occlusion of vertebral arteries at V4

level. The patient was transferred to the Interventional Radiology Department in Târgu Mureș where thromboaspiration and stent placement on the V4 segment of the right vertebral artery was performed. **Discussions :** The process of brain death confirmation started with cessation of continuous intravenous sedative medication for three consecutive days in order to adequately assess loss of brainstem reflexes. Evaluation of cranial nerves function to varied stimuli together with consecutive electroencephalograms and apnea tests provide essential proof about the definitive loss of brainstem activity. Once brain death is confirmed, a complex, personalized intensive care treatment protocol begins in order to preserve viable organs of the potential donor. Maintaining the hemodynamic variables and the laboratory parameters in normal ranges in the intensive care unit (ICU) can lead to a successful organ donation. **Conclusions:** The particularity of this case is represented by the previous ischemic stroke targeting the same vertebrobasilar area and causing alteration in the cerebral tissue structure. Regardless of the reperfusion attempts, restoring blood flow to the vertebrobasilar area was ineffective, thus brain death protocol to assess permanent brain damage was initiated. This topic still sparks conflict amongst specialists due to the lack of compliance with a standardized protocol worldwide. Precisely because of the diversity of causes and particularities of patients, a consensus could not yet be reached.

Keywords: brain death, ischemic stroke, personalized treatment, intensive care

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GLOMUS TUMOR - THE 1 IN A MILLION INCIDENCE

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Introduction: Glomus tumors are rare, benign vascular neoplasms that arise from the neuromyoarterial body, also known as the glomus body. They represent less than 1% of soft tissue tumors. Glomus tumors are typically small, slow-growing lesions that can present as painful nodules in the fingertips, especially matrix unguis area, and can present as solitary or multiple lesions. They are often misdiagnosed or underdiagnosed, which can lead to delayed treatment and potential complications. **Case Report:** We report a case of a 30-year-old female who was admitted to the Surgery Department for a subungual tumor. Following the surgical excision, the surgical specimen was subjected to macroscopic examination. Due to a lack of clear evidence of tumor mass at macroscopy, all fragments underwent microscopic examination and immunohistochemical analysis. At microscopy, a nodular formation was identified. It was composed of small tumor cells organized into nests. Tumor cells presented well-defined borders, eosinophilic cytoplasm, and round nuclei with prominent nucleoli. The nests of tumor cells were separated by a hyalinized stroma in which numerous thickened-walled blood vessels were identified. Tumoral cells were positive for immunolabelling with anti-Caldesmon and anti-SMA (Smooth Muscle Actin) antibodies. Additionally, endothelium cells from peritumoral vessels were positive for the anti-CD31 antibody. **Discussions :** Histopathological and immunohistochemical investigation plays a crucial role in the diagnostic process, as glomus tumors can mimic other lesions. By using specific immunohistochemical markers, we managed to accurately identify the typical structural units found within the glomus body and precisely pinpoint the cell type responsible for the tumoral formation The prognosis is mostly favorable, and the treatment procedure consists of complete surgical excision. **Conclusions:** Despite their rarity, glomus tumors should remain an important consideration in the differential diagnosis of subungual nodules, and further research is needed to better understand their pathogenesis.

Keywords: glomus tumor, benign vascular neoplasm, immunohistochemical, antibodies

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THE IMPORTANCE OF A HEAD-TO-TOE EXAMINATION OF A PATIENT IN CARDIAC ARREST

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Introduction: When arriving on the scene where a patient is in cardiac arrest, the first priority is stabilising him and then looking for an answer to his state. Oftentimes, however, the reason a patient goes into cardiac arrest is unclear. A thorough clinical examination is mandatory to find the cause and to be able to apply the correct treatment. **Case Report:** A 33 year old male patient was brought to the emergency department by an ambulance

after having fallen off of a ladder while working on his roof. Losing consciousness at the scene, he was presented in cardiac arrest, but was successfully provided with basic life support. While the patient was still unconscious, the objective examination revealed no further significant trauma. Arriving in the ER, a CT scan was ordered, but the results came back showing no signs of trauma. The laboratory findings were, also, within normal limits. While the patient was being admitted, two blisters were found on both soles of the feet, indicating a burn caused by an electric shock. He was admitted to the ICU. **Discussions :** Immediately after the fall, the man was conscious, the sudden loss of consciousness and heartbeat occurring just before the ambulance was called. Having fallen from a high place, the patient was at risk of serious spine trauma. With the initial examinations all coming back within normal levels and the CT scan negative, there seemed to be little to no explanation for him losing consciousness and going into cardiac arrest. In general, patients who fall from a high place would be more likely to fall into a coma. The burn marks on his feet indicate the fact that he was electrocuted while working on the roof of his house, which caused him to lose balance and fall, ultimately going into cardiac arrest. **Conclusions:** In spite of his initial state, the patient is making progress. A few days after being admitted to the ICU, he was able to breathe on his own and regained his consciousness. The cardiac arrest did, however, have repercussions on his brain and there is a chance he may not be able to fully recover.

Keywords: emergency, cardiac arrest, electric shock

THE INVOLVEMENT OF MRI INVESTIGATION IN THE DIAGNOSIS OF GLIOBLASTOMA- A CASE REPORT

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Introduction: Glioblastoma is a type of malignant intracranial neoplasm that is rated as being not only one of the most common brain tumors, but also the most aggressive one. The etiology of this disease is not yet fully established, however it is believed that ionizing radiation, as well as genetic factors can be considered trigger factors in its pathogenesis. **Case Report:** We present the case of a 59-year old patient who was admitted after accusing an ongoing headache as well as intermittent loss of balance and vision. An MRI examination was performed, revealing a diffuse profound ischemic lesion in the left temporal lobe with T2 and T2 FLAIR hyperintense aspect and inhomogenous contrast enhancement, measuring 42/27/46mm (AP/LL/CC). Perilesional non-digitiform oedema was present with minimal compression effect against the left lateral ventricle, fact that may influence the final diagnosis and leave room for a suspicion of an ischaemic lesion instead of a malignancy. Due to an initial denial phase, the patient chose not to opt for a biopsy, instead she chose to delay any other invasive maneuvers. After a follow-up MRI a few months later, due to the aggravation of her previous symptoms and an accentuated deviation of the median cerebral axis, the suspicion of a glioblastoma arose. An intraoperatory partial excision was conducted and sent to the pathology department. The results confirmed the diagnosis of glioblastoma, which led to the implementation of the appropriate oncological treatment scheme. Despite all efforts, considering the size of the tumor, the surgical resection was only partially accomplished. Moreover, the procedure was accompanied by radio-chemotherapy but unfortunately they were not curative, due to the aggressive invasion of the tumor and the patient suffered a relapse 5 months later. **Discussions :** The development of a low-grade glioma with imaging findings identical to those of an ischemic stroke, which eventually progressed into a glioblastoma in a brain region previously treated as an ischemic lesion, was the distinctive feature that set this case apart from other glioblastoma diagnoses in medical literature. **Conclusions:** When dealing with a patient diagnosed with glioblastoma, treatment schemes are scarce. On top of that, the association of a previous ischemic area that led to a stroke, can significantly complicate the results of the elected therapy. In cases like these, it is mandatory to carefully and consistently conduct follow-up MRI exainations at short time intervals, in order to improve the life expectancy of the patient.

Keywords: Glioblastoma, MRI, ischemic area, ischemic lesion

IDIOPATHIC PULMONARY FIBROSIS- THE SILENT ENEMY?- A CASE REPORT

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Introduction: Idiopathic pulmonary fibrosis (IPF) is a chronic, fibrotic, highly morbid malady, in which the healthy pulmonary tissue is destroyed by a continuous scarring process accompanied by an extensive inflammatory response. What sets IPF apart from other interstitial lung diseases is the absence of any other external factors that may be culpable in its triggering.These may be etiological factors such as the exposure to a viral or bacterial pathogenic agent or even an underlining pre-existing condition such as systemic sclerosis. **Case Report:** We present the case of a 77-year-old patient who was admitted in 2015 accusing severe dyspnoea, being initially diagnosed with bilateral basal fibrosis. Two years later, after a cardiovascular examination, a coronary angioplasty with two stent insertions was conducted, in order to rule out the hypothesis that a cardiovascular issue might have been responsible for the dyspnoea. In 2021, after being readmitted with the same symptoms, further testing revealed the lack of autoimmune involvement (ANCA, rheumatoid factor).However, after a high-resolution CT scan, the diagnosis of IPF was finally established. The treatment scheme with Nintedanibum was initiated, being efficient in granting the patient an initial improvement in the evolution of the disease. Despite this, the patient's health began to fluctuate between aggravation and improvement, leading the patient to opt against completing the treatment, decision which was influenced by enduring multiple major depressive episodes. **Discussions :** Considering the associated cardiovascular diseases that were mentioned above, it is vital to underline the complexity of determining a final diagnosis, when dealing with such general symptoms like dyspnoea. As a competent doctor, it is the utmost importance to understand that whilst dealing with a patient with such a burdening condition, one must opt for a multidisciplinary approach, in which the emotional side of a patient is also taken into consideration. **Conclusions:** Despite the rarity of this condition - as well as the reserved prognosis rates, which state that in most IPF cases respiratory failure occurs after 3-7 years post diagnosis - understanding the pathogenesis and management of any ongoing chronic fibrotic lung disease is of key importance in ensuring a higher quality of life.

Keywords: IPF, Rheumatoid Factors, Dyspnoea, Nintedanibum

EXTRANODAL GASTROINTESTINAL DIFFUSE LARGE B-CELL LYMPHOMA – A CASE REPORT

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Introduction: Diffuse large B-cell lymphoma (DLBLC) is the most common type of non-Hodgkin lymphoma worldwide. Patients most often present with a rapidly growing tumor mass in nodal or extranodal sites. Overall, diffuse large B-cell lymphomas are aggressive but potentially curable malignancies. **Case Report:** We present the case of a 41-year-old male who presented to the Gastroenterology Department with anemia and 10 kg weight loss in the last two months. The colonoscopy revealed a gray-brown vegetative tumor of 60x50x15 mm in size, that circumferentially occupies the cecum. A right hemicolectomy has been performed and the specimen was sent to the Pathology Department. At the microscopic examination was observed a diffuse proliferation of medium and large tumoral cells with pale cytoplasm, quantitatively reduced, with large, irregular, hyperchromic nuclei and one or two prominent nucleoli. A high number of mitoses has been also observed. The tumoral cells were positive for CD20, BCL-6, and PAX 5 markers and negative for CD3, CD5, BCL-2, CD10, CD23, CTK AE1/AE3, and Chromogranin A markers. The nuclear proliferation index Ki-67 was 90%. The tumor invaded the serous layer but with free surgical margins. No metastasis has been found in 24 lymph nodes. **Discussions :** Diffuse large B-cell lymphoma usually arises in lymph nodes, the gastrointestinal tract being the most common extranodal site (20%). BCL-6 is a master transcription factor for the regulation of T follicular helper cells and is frequently translocated and hypermutated in DLBCL. **Conclusions:** Even if the DLBCL invaded the serous layer of the colon and the proliferation Ki-67 index was high, no lymph node metastases have been found in this patient. Given BCL-6's role in B-cell lymphomas, it can be used as a therapeutic target which can considerably increase the disease-free survival for this patient.

Keywords: B-cell lymphoma, hemicolectomy, non-Hodgkin lymphoma

ACUTE TRANSIENT SYNOVITIS IN A 7-YEAR-OLD BOY WITH COVID-19 INFECTION

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Introduction: Transient synovitis (TS) is a relatively common condition in children aged 4- 7 years. Diagnosis is made by history, physical examination and X- Ray findings. The treatment is generally conservative, including rest, analgesics and decreased physical activity. Hospital admission is only required for persistent pain or in order to rule severe conditions, such as bacterial arthritis or osteomyelitis. The coexistence of COVID- 19 infection is rare and may require further surveillance of both diseases. **Case Report:** A 7- year old boy presented with limping, right hip and right iliac fossa pain, lasting for 24 hrs. Had no fever or other systemic symptoms. Laboratory data significant for monocytosis (0.85 x 103/ uL, 10.3% of total white blood count- WBC; normal = 0.15- 0.70 x 103/ uL, 3- 7% of total WBC) and elevated C- reactive protein (CRP) level of 32.9 ng/ mL (N < 10.0 ng/ mL). The abdominal ultrasound (US) was significant for mesenteric adenitis and small amount of free peritoneal fluid. He also tested positive for SARS-CoV- 2 infection (rapid nasal Ag test). He was admitted for surveillance and isolated in the COVID- 19 pediatric area. He was treated with analgesics, Ibuprofen, Isoprinosine, and bed rest. The symptoms gradually improved, he resumed walking. Lab data showed normal WBC, CRP, ESR (erythrocyte sedimentation rate), LDH and D- dimer levels. A second SARS-CoV- 2 test was negative before discharge. **Discussions :** Transient synovitis is a benign, self- limited condition in children, and hospitalization is only required for fever, significant pain or to rule out similar conditions. The coexistence of SARS- CoV- 2 infection in areas of high incidence should be checked at admission. Children can develop mild forms of this infection with minimal inflammatory response and no systemic implications. **Conclusions:** Transient synovitis (TS) is a relatively benign condition in children. In COVID- 19 children, care must be taken to ensure proper isolation and prevention of the spread of SARS-CoV2- infection if they get admitted. There looks to be no influence of the viral infection and the primary condition (TS).

Keywords: Transient synovitis, Child, COVID-19

CO-INFECTION WITH MYCOBACTERIUM TUBERCULOSIS AND MYCOBACTERIUM AVIUM IN A HIV POSITIVE PATIENT

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Introduction: The association between the etiological agent of Tuberculosis (TB) and the Human Immunodeficiency Virus (HIV) has the capacity to accelerate the deterioration of immunological functions, exposing the patient to a higher risk of latent TB reactivation. *Mycobacterium avium* is a pathogen widely spread in the environment, causing infections in both immunocompetent patients as well as in immunocompromised ones. This case study examines a co-infection with *Mycobacterium tuberculosis (MTB) and Mycobacterium avium Complex (MAC).* **Case Report:** We present the case of a HIV sero-positive 59-year-old man infected with *Mycobacterium Tuberculosis* and non-tuberculous strains (NTM). A conclusive symptomatology of high fever, asthenia and fatigue, led to the patient's admission to the Infectious Diseases Unit. During his stay at the hospital, five specimens of sputum, stool and urine were collected, all with negative results. After two months, we can observe significant bacterial growth on the Lowenstein-Jensen medium obtained from a urine specimen. Approximately 30 to 100 type "R" colonies were revealed and turned out to be MTB Complex with Rifampicin and Isoniazid resistance. An identical result was obtained from a stool specimen. In addition, microscopy and culture of the sputum specimens revealed non-tuberculous mycobacteria. The GeneXpert MTB/RIF test of the biological sample of sputum did not detect MTB. For additional species identification, the culture was sent to a reference laboratory. Genotyping identified infection with Mycobacterium avium Complex. **Discussions :** The goal of this study is to highlight the fact that *Mycobacterium tuberculosis* and non-tuberculous Mycobacteria can co-exist. The HIV clinical category of C3, which is characterised by a decrease in the number of CD4 T lymphocytes, made it possible for the patient to develop an opportunistic infection with *Mycobacterium avium.* The early detection of opportunistic infections is essential for an immunocompromised patient to receive efficient treatment. **Conclusions:**

Physicians should be aware of the fact that both tuberculosis and non-tuberculosis Mycobacterium could be present in infections. When they are in the process of developing a diagnosis, they can compile the necessary information for an accurate diagnosis and provide optimal decisions for subsequent care.

Keywords: Mycobacterium tuberculosis;, Mycobacterium avium;, HIV;, co-infection;

A RARE CASE OF SYNCHRONOUS EXTRANODAL MARGINAL ZONE LYMPHOMAS (MALT) IN THE SMALL BOWEL

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Introduction: Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue, also called MALT lymphoma, is one of the entities of marginal zone lymphomas. These lymphomas are originated from indolent B-cell lymphomas and involve many organs such as the gastrointestinal tract, salivary gland, skin, lung, thyroid, or breast. Ileal MALT lymphoma is relatively rare, and clinical symptoms are usually atypical. **Case Report:** We present the case of an 83-year-old female patient with two synchronous small bowel masses. The first tumor had 55x45x30 mm, while the second tumor had 55x45x11 mm. Microscopically, a diffuse lymphoid proliferation consisting of small and medium cells with a monomorphic appearance, pale cytoplasm, pleomorphic nuclei, and rare mitosis was observed in the submucosa of the small intestine. The tumoral cells produced focal lymphoepithelial lesions leading to glandular destruction. The tumor infiltrated the whole intestinal wall, invading the serosa. Immunohistochemically, the tumoral cells were positive for BCL-2 and CD20 and negative for CD10 and BCL-6. CD5 marked the normal T lymphocytes. The Ki-67 index was 20 % in the tumor cells. The histopathologic diagnosis was of a synchronous extranodal marginal zone lymphoma involving the ileum, with positive surgical margins, for which a surgical reintervention was necessary. **Discussions :** The majority (60-75%) of the extranodal lymphomas within the gastrointestinal tract involve the stomach and are associated with Helicobacter pylori infection. When lymphomas arise in the small bowel, they are most often diffuse large B-cell lymphomas; MALT lymphomas represent one-third of the small bowel lymphomas. **Conclusions:** In patients with synchronous tumors, the surgical options are always challenging and have to be discussed according to the locations of the synchronous cancers and histological grade. The detection of synchronous lesions will obviously affect the long-term prognosis of this patient, as synchronous lesions require more aggressive chemotherapy than isolated MALT lymphomas.

Keywords: MALT, Ileum, Lymphoid

RECURRENT GASTROINTESTINAL STROMAL TUMOR OF THE SMALL INTESTINE WITH LYMPH NODE METASTASES

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Introduction: Gastrointestinal stromal tumors (GISTs) are tumors arising most commonly in the stomach or small intestine. This type of tumor develops from specialized cells, called interstitial cells of Cajal or precursors of these cells. **Case Report:** We present the case of a 59-year-old male diagnosed in 2014 with GIST of the small intestine on a resected specimen. In 2017, a mesenteric lymph node was sampled and found to have GIST metastasis, followed by oncologic treatment with tyrosin-kinase inhibitors. In 2023 the CT scan revealed a nodular mass in the proximal small intestine for which a second segmental resection of the small intestine was performed. Microscopically, the tumor developed in the muscle layer and invaded the serosa and the mesentery. The tumor proliferation consisted of spindle and epithelioid cells with eosinophilic cytoplasm and large, hyperchromic nuclei of various sizes, with 3 mitoses/50 fields/HPF. The tumor presented extensive necrosis (60%). The tumor cells were positive for CD117 (c-Kit) and DOG-1. Ki-67 proliferation index was 20%. The patient was diagnosed with high-grade recurrent GIST and now is following oncologic treatment with Imatinib. **Discussions :** GISTs are best identified by computer tomography (CT) scans. Immunohistochemically this type of tumor is positive for CD117 and DOG-1. Many risk stratification systems are calculated based on tumor size, mitosis rate, location, and metastasis. GIST tends to liver metastasis and peritoneal recurrence, however, primary lymph node involvement or metastasis is rare, and unlike adenocarcinomas, usually, the lymph nodes are not assessed. **Conclusions:**

Surgery remains the gold standard in the treatment of patients with resectable GISTs, without metastases. Although lymph node metastasis rarely occurs in patients with GIST, lymph node sampling should be considered for patients with suspicion of nodal metastasis, accompanied by tyrosine-kinase inhibitors as an oncologic treatment.

Keywords: proliferation, adenocarcinomas, oncologic, metastasis

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CASE REPORT- COMPLICATIONS OF NEPHRECTOMY ON THE BACKGROUND OF UROTHELIAL CARCINOMA

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Introduction: Urothelial carcinoma (UC) develops from the organ's transitional epithelium and accounts for more than 90% of bladder malignancies. The World Health Organization (WHO) reports that urinary bladder cancer is the sixth most prevalent cancer in men, with an incidence rate of 5.6/100000, and the ninth leading cause of death. Around 80% of patients are between 50 and 80 years old and more than 1/3 of patients usually have a second urothelial tumor. **Case Report:** We present the case of a 77 years old male patient with a history of urothelial carcinoma of the left distal ureter diagnosed in 2018, followed by laparoscopic nefrouretrectomy with perimeatic cystectomy. Later that year was discovered a new space replacement process in the ureteral stump with endovesical and exovesical development, left seminal vesicle infiltration and prostatic adenocarcinoma which lead to surgical removal of bladder, prostate and seminal vesicles (cystoprostatovesiculectomy) with cutaneous right ureterostomy. Four years later, after an MRI, is observed an atrophic right single surgical kidney with compensatory medullary hypertrophy, leading to a diagnosis of chronic kidney disease stage G4 and acute kidney injury. Other ecographic investigations show the presence of bilateral pleurisy, ascites, anasarca and hydroureteronephrosis caused by the movement of percutaneous ureteral splint. **Discussions :** The patient was successfully treated by emergency splint replacement and initiation of hemodialysis resulting in an improvement of the patient's clinical status with remission of hydroureteronephrosis, decrease in the amount of pleural fluid, ascites and anasarca. **Conclusions:** Early discovery and frequent investigation is required for effective treatment in urothelial carcinoma as it produces metastases within a short period of time. In most cases, treatment involves surgical removal of the affected organ, situation in which the patient's quality of life will be influenced and more complications may occur. The particularity of this case consists in the speed within certain medical decisions must be made in order to solve a clinical challenge with a positive outcome.

Keywords: urothelial carcinoma, hydroureteronephrosis, ascites, anasarca

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THE EVOLUTION OF A SEVERE CASE OF CORNELIA DE LANGE SYNDROME

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Introduction: Cornelia de Lange syndrome(CdLS) is a rare genetic disorder bearing the name of the dutch pediatrician who first described it in 1933. Nowadays, this condition is estimated to occur in 1 out of 10.000 live births. Features and symptoms of CdLS differ from one affected individual to another, varying from mild to severe. The most common are slow growth, both during pregnancy and after birth, leading to short and underweight individuals, moderate to severe intellectual disability, specific facial features. Other signs include limbs abnormalities, microcephaly, hypertrichosis, heart deffects, hearing loss, digestive and respiratory problems and autism-like behaviour. **Case Report:** We present the case of a 13 years old female patient diagnosed with CdLS at birth. Her case was classified as a severe form of this condition. No genetic tests were performed during pregnancy. She currently measures 115 cm(SDS= -7.3) and weights only 15 kg(SDS= - 5.2), resulting in a BMI of 11.3(SDS= -2.7). She presents microcephaly, the specific facies associated with this disorder(synophrys, small and widely spaced teeths, upturned nose, low-set ears), a claw-shaped nail at the 5th finger of the left hand and hypertrichosis, the last two becoming more and more obvious with the age.This patient has a severe psychomotor retardation, making her bed bound. She presents none of the physiological changes specific for puberty. She was hospitalized over 20 times for pathologies associated with CdLS, such as upper respiratory tract infections and digestive tract problems. The treatment this patient received was mainly symptomatic and supportive. She didn't receive growth hormone teraphy or suffered any surgeries to date. **Discussions :** Although CdLS might be

suspected during pregnancy, based on the observation of multiple ultrasonographic features, a certain diagnosis often occurs only at birth. Even if there is no specific treatment for CdLS itself, these patients will often be hospitalized and will need extensive medical care for their associated conditions. Other treatment options include GH therapy and surgeries to correct various defects such as cardiac/diaphragmatic defects, cleft palate, etc. CdLS usually does not affect the life expectancy of the affected individuals, but it is highly likely that they will have some degree of dependancy of a caregiver, mainly due to their intellectual disabilities. **Conclusions:** What makes this case particularly interesting is the fact that it shows how the long term development of an individual with a severe form of CdLS looks like unaltered by any kind of surgeries or GH therapy until puberty age.

Keywords: CdLS, genetic disorder, psychomotor retardation, genetic testing

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RADIATION-INDUCED PLEXOPATHY – DO YOU KNOW EVERYTHING YOU DID 30 YEARS AGO?

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Introduction: Lumbosacral plexopathy is the term that defines a variety of pathologies that interfere with the function and/or integrity of the lumbosacral plexus. Common causes are diabetic neuropathy, sarcoidosis, primary neuronal neoplasia or local metastases, and compressions like abscesses or hernias, to name a few. One of the rarer causes, and arguably more difficult to diagnose, is radiotherapy toxicity, with an incidence of 0.8-3% of radiotherapy treated patients, and a latency of up to 36 years before manifestation. **Case Report:** A 64 y/o woman, presenting to the neurology department for progressive motor weakness and paresthesia in the lower limbs, which started insidiously 8 years' prior. The patient's history is also positive for cervical cancer, surgically removed and treated with cobalt radiotherapy 29 years ago. On examination, it was revealed that the patient presented difficult swinging gait, non-systematized Romberg sign, positive paresis signs, severe hypotrophy, hypotonia with abolished reflexes, and occasional fasciculations. Hypoesthesia and impaired proprioception was also noted. Several potential diagnoses have been brought into question, including ALS, neuroborreliosis, local neoplasia, hernias, CIPD, and B12 hypovitaminosis to name a few. Through the use of EMNG, MRI, and bloodwork, such as autoimmunity markers, viral markers, B12 level, and ELISA test for Borrelia, all the differential diagnoses have been infirmed, confirming the late-onset radiation-induced plexopathy. Symptomatic treatment with analgesics, benzodiazepines, and antiepileptic medication was initiated to reduce pain and paresthesia. Additionally, neurotrophic vitamins, physiotherapy, and kinesiotherapy have been recommended to slow down the progression. **Discussions :** The lack of pathognomonic signs and purely exclusion based diagnosis, together with the long exposure-manifestation period, make radiotherapy induced plexopathy extremely difficult to properly diagnose. Due to the lack of effective treatment, it is of great importance to not misdiagnose other neurological conditions, which have specific therapies, as it, but also to not ignore the possibility of it, in order to initiate adjuvant therapies that could slow down the progression, and thus increase the quality of life of patients afflicted by it. As a result of increased life expectancy thanks to improved cancer therapies, the incidence of late-onset radiation-induced plexopathy might temporarily increase, thus making this condition more important to be recognized by neurologists, oncologists, and any other clinicians who care for cancer patients. **Conclusions:** Radiation-induced plexopathy is a rare, yet severe complication of radiotherapy. Being irreversible and progressive, it has a negative outcome. In the absence of evidence for other plexopathy cause, it should be taken into consideration.

Keywords: Radiation-induced plexopathy, neurology, plexopathy

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OCULAR TOXOPLASMOSIS AND COMORBIDITIES: REQUIRING ADDITIONAL CARE FOR PATIENTS WITH GLAUCOMA.

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Introduction: Posterior uveitis, the inflammation of the pigment layer or uvea, is an ophthalmologic emergency requiring urgent anti-inflammatory treatment in most cases in order to prevent severe complications.Accounting for less than 10% of uveitis cases, infectious uveitis is an important subset due to the need for additional treatment. Research into ocular toxoplasmosis, the most common cause for infectious uveitis, is divided regarding the effectiveness of corticosteroid therapy, lacking sufficient evidence for or against it. **Case Report:** A 59 y/o male,

presenting to the ophthalmology department accusing painless blurred vision in the right eye with an insidious onset 3 months prior. The patient' ophthalmic comorbidities include open-angle glaucoma held under treatment.Ophthalmologic evaluation revealed decreased visual acuity in the right eye with normal intraocular pressure and disseminated white keratic precipitates in the absence of other inflammation markers in the anterior pole. Fundus examination uncovered a creamy-yellow lesion in the supero-temporal quadrant, and "headlight in fog" vitreous inflammation. Serological tests were run to unveil the underlying cause of uveitis. Results were positive for toxoplasmosis.Treatment was initiated with the medication available in our country: Clindamycin, Trimethoprim-Sulfamethoxazole, and intravenous followed by oral corticosteroids, due to the low availability of first line medication. Of note is the fact that the inflammation aggravated when corticotherapy was tapered. Through personal means, the patient was eventually able to obtain Pyrimethamine and Sulfadiazine medication, which is the first line treatment option for ocular toxoplasmosis, thus making a full recovery. **Discussions :** Given that the majority of uveitis cases are idiopathic or associated with other systemic diseases, infectious uveitis is a rare occurrence. However, due to the need for a different treatment scheme, it is of great importance for it to be diagnosed in a timely manner.Additionally, the diagnosis ca be delayed in cases where an apparent source of infection, like ownership of cats, consuming unwashed produce or raw meat, are not present, like in the present case.In our case the inflammation became significant and corticosteroid therapy led to rise of intraocular pressure necessitating reevaluation of glaucoma medication. Under antiparasitic and corticosteroid therapy, the inflammation and associated symptoms remitted. **Conclusions:** Ocular toxoplasmosis is a unique kind of uveitis. Management includes: antiparasitic medication along with corticosteroid therapy for inflammation control. In patients who associate glaucoma it is of great importance to pay attention to the potential rise of intraocular pressure under corticosteroids and to adapt the treatment consequently.

Keywords: Infectious uveitis, Posterior uveitis, Toxoplasmosis, Glaucoma

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LATE DIAGNOSIS FOR CVID: IGNORING THE OBVIOUS

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Introduction: Common variable immunodeficiency (CVID), an umbrella term for multiple rare genetic immunological disorders, is a type of primary immunodeficiency, characterized by low levels of circulating antibodies, due to impaired production, and defects in cell mediated immunity. These patients are predisposed to repeated infections, as well as to cancers, allergies, lymphoproliferative diseases, just to name a few. Being usually diagnosed in young adults, it is important to recognize the specific signs and symptoms, to provide treatment and prevent side effects. **Case Report:** We present the case of a 56 y/o female, whose late diagnosis of CVID posed a threat to her health not only because of the primary disease, but also because of the possible complications. Her relevant medical history began in 2003, at the age of 37, when she was diagnosed with gastric adenocarcinoma, which was surgically removed with a subtotal gastrectomy. At 39, she started having multiple episodes of pneumonia with atypical microbial agents, such as Aspergillus spp., and thus she developed bronchiectasis. However, no immunodeficiency was suspected, be it primary or secondary. Only 13 years later, at 55, she was diagnosed with CVID. She started treatment immediately, with IV/subcutaneous administered immunoglobulins. Starting at 52, she suffered from chronic diarrhea and, therefore, under a routine colonoscopy, she was diagnosed with lymphoid nodular hyperplasia (LNH), a benign lymphoproliferative disease characterized by multiple small nodules dispersed in the small and large intestine. If left unchecked, it can progress to malign lymphoma. Because of proper treatment, the chronic diarrhea and the LNH remitted. **Discussions :** CVID, the second most common primary immunodeficiency, has an approximate prevalence of 1:10.000□□□□□□□□□□□□The mean age of diagnoses for women is 33, 20 years earlier than our patient. Even more, CVID patients have an increased risk of gastric and lymphatic affections, namely a 47, respectively a 30-fold increase for gastric cancer and lymphoma. To prove this point, the mean age for gastric adenocarcinoma diagnosis is 70 y/o, whereas her diagnosis came at 37. Summed with multiple episodes of pneumonia, this should have prompted an in-depth analysis to identify her condition, which happened too late. Because of this, her newly diagnosed LNH could have posed a threat, was it not for CVID patients' routine colonoscopies. **Conclusions:** Late and misdiagnosis are genuine health threats, especially for immunodeficient patients. Real efforts must be made by clinicians to identify in time the tell-tale signs of immunodeficiency, all to improve the patients' quality of life.

Keywords: Common variable immunodeficiency, Lymphoid nodular hyperplasia, Late diagnosis CVID, Adenocarcinoma

IN THE TICK OF DIFFERENTIAL DIAGNOSIS: WHEN DIABETIC NEUROPATHY ISN'T THE CAUSE

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Introduction: Bilateral facial palsy (BFP), a rare neurological affection, with an incidence of 1 in 5 million patients, poses a challenge in determining the cause, as several differential diagnoses can be listed. It often has a severe underlying cause and demands emergency interventions. One possible cause of BFP is neuroborreliosis, caused by Borellia burgdorferi, which must be differentiated from diabetic neuropathy. **Case Report:** We present the case of a 53 y/o man, previously diagnosed with diabetes mellitus type 1, who presented to the neurology department, following the bilateralization of a previous unilateral facial paralysis. Six weeks before admission, he suddenly experienced peripheral left facial palsy. A CT scan revealed nothing, thus his condition was considered to be Bell's palsy, which was treated empirically with corticosteroids and antivirals. As the symptoms worsened, he was hospitalized for a proper management and diagnosis. Upon admission, several blood tests were done, which tested for circulating auto-antibodies, as well as infectious markers for CMV, EBV, syphilis and so on, which all came back negative. Other tests were also performed, such as a pulmonary radiography which exclude cancer and sarcoidosis, and an electroneuromyography which revealed diabetic polyneuropathy. However, due to the low incidence of BFP caused by diabetic polyneuropathy, additional investigations were performed to exclude other causes. Eventually, Borrelia-specific antibodies were also tested and came back positive, so a lumbar puncture was performed for a proper diagnosis. Upon detection of specific IgG antibodies, treatment with IV ceftriaxone was initiated. Of interest is the lack of erythema migrans, which complicated the differential diagnosis. The patient started facial kinetotherapy, which partially ameliorated the BFP, leaving mild sequelae, most likely due to his diabetic condition. **Discussions :** Neuroborreliosis is an infectious cause of BFP, posing a challenging differential diagnosis not only with other infectious diseases such as CMV, EBV, TB, syphilis etc., but also with non-infectious ones, like cancer, sarcoidosis, or diabetic polyneuropathy. Due to the importance of etiological treatment, neuroborreliosis should be considered in any case of BFP. Proper blood tests, as well as a thorough anamnesis should be performed. In the case of type I diabetic patients, the polyneuropathy caused by the life-long disease could be a confounder, as well as an adjuvant for BFP, due to demyelination lesions. **Conclusions:** Neuroborreliosis, although mostly self-limiting, can rarely lead to severe nervous complications. Differential diagnosis is of utter-most importance, especially in patients with other underlying conditions, especially long-term diabetes.

Keywords: Bilateral facial palsy, Neuroborreliosis, Diabetic neuropathy

CYTOMEGALOVIRUS INFECTION – A TRICKY INFECTION IN INFANT

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Introduction: Cytomegalovirus (CMV) infection is a common, but tricky infection due to its wide-spectrum of clinical manifestations. Although it is usually asymptomatic especially in older patients, it might cause severe complications in infants such as life-threatening malformations as a result of intrauterine infection or acute encephalitis in infants. CMV-associated central nervous system manifestations include focal or tonico-clonic seizures.The aim of this case report is to increase the pediatrician's awareness regarding CMV infection in infants presenting with seizures of unknown etiology. **Case Report:** We report the case of 2-month-old infant admitted in our clinic for an episode of tonic-clonic generalized seizure lasting for a few seconds without fever. The family history pointed out an upper respiratory tract infection in the infant's siblings. The clinical exam at the time of admission was normal. The routine laboratory parameters revealed mild leukocytosis with lymphocytosis and monocytosis, increased erythrocyte sedimentation rate and elevated level of transaminases. After 8 hours from admission the infant presented another similar seizure lasting for approximately 3 months. On the third day of admission, the patient presented another seizure lasting 3-4 minutes. The neurologist raised the suspicion of acute encephalitis and solicited several laboratory tests with a a positive IgM for CMV infection raising the suspicion of acute encephalitis with CMV, but she also recommended the initiation of phenobarbital as an anticonvulsant along with depletive therapy (dexamethasone and furosemide). The lumbar puncture was not possible due to the

repeated seizures. The electroencephalogram revealed discharges with slow waves. The brain MRI showed mild frontal and temporal cortical atrophy. For clarifying the etiology, we obtained a viral load for CMV and noticed a significantly increased value (344 UI). Based on all the aforementioned findings, we established the diagnosis of acute infection of central nervous system with CMV and symptomatic tonic-clonic seizures. The patient's evolution was favorable with the administered treatment, but we were not able to initiate the treatment with antiviral due to its unavailability at that time. **Discussions :** CMV infection is usually asymptomatic or mildly symptomatic in newborns at term and who are immunocompetent due to the presence of maternal antibodies. Nevertheless, those who present with primary or secondary immunodeficiencies will associate severe forms of infection involving pneumonia, hepatitis or central nervous system impairment. **Conclusions:** Although we found no evidence of immunodeficiency in our case at the time of admission, it will definitely require a thorough approach in order to elucidate an underlying disease.

Keywords: infant, cytomegalovirus, seizures, encephalitis

THE HIDDEN SIDE OF PEDIATRIC SEIZURES

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Introduction: Pediatric seizures represent one of the most important causes of admission in the emergency hospitals requiring multidisciplinary approach and urgent management. Celiac disease or gluten sensitivity is defined as an autoimmune disorder with a wide-spectrum of intestinal and extraintestinal manifestations. The association between epilepsy and undiagnosed celiac disease is a complex challenge for both neurologist and pediatrician. **Case Report:** We report the case of a 8-year-old girl admitted to our clinic for an episode of tonic-clonic seizure with left hemiplegia lasting for approximately 30 minutes. The family history of patient revealed that the mother was diagnosed with autoimmune thyroiditis suffering from febrile seizures during childhood, while the father was diagnosed with homocysteinemia. The patient's personal history was negative. The clinical and neurological exam at the time of admission pointed out motor deficit involving both left lower and upper limbs. The laboratory test at the time of admission revealed no pathological findings. During admission, we performed several complex laboratory tests and identified elevated inflammatory biomarkers, increased D-dimer, mildly increased antinuclear antibodies, vitamin D deficiency, positive genetic tests for thrombophilia and surprisingly, severely elevated anti-transglutaminase antibodies (>20 fold the upper normal limit). The electroencephalogram revealed focal epileptic discharges on the right derivations. The brain MRI showed no abnormalities. We initiated treatment with levetiracetam, low-weight molecular heparin and gluten-free diet. The patient's evolution was favorable. **Discussions :** Gluten sensitivity is associated with a wide-spectrum of neurological such as headaches, ataxia, peripheral neuropathy, and epilepsy. The brain MRI in patients with celiac disease might be normal or might reveal interesting findings such as cerebral calcifications, hippocampal sclerosis, or temporal lobe epilepsy. Moreover, the efficacy of antiepileptic drugs might be impaired due the improper absorption as a result of celiac disease-induced intestinal injuries. Several studies revealed an increased prevalence of epilepsy in patients with celiac disease and vice-versa. Recent evidence reported a pooled prevalence if celiac disease in pediatric patients with epilepsy of 1.83% suggesting the importance of celiac disease testing in patients with epilepsy of unknown cause. Both thrombophilia and vitamin D deficiency might burden the long-term evolution and prognosis of children with celiac disease and epilepsy. **Conclusions:** Increasing awareness of the association between celiac disease and epilepsy might represent the cornerstone in the acute management of every pediatric presenting with seizures. Therefore, we consider that multidisciplinary approach is absolutely mandatory in cases when the neurological presentation is tricky.

Keywords: child, seizures, celiac disease, vitamin D deficiency

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SUBMERSED, YET ALIVE - CASE REPORT OF A 3-YEAR-OLD PATIENT

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Introduction: Drowning is one of the leading causes of unintentional traumatic death in children ages 1 to 4 worldwide. Severe hypothermic submersion injuries may have complex therapeutic management and the

neurological outcome may vary from case to case. **Case Report:** We present the case of a 3-year-old male patient, brought in to the Emergency Department of the Emergency County Clinical Hospital Târgu Mureș, by air ambulance. The patient was found by his mother in a frozen pool, submerged for an unknown period of time. Upon the first responder's arrival, he was unconscious, Glasgow Coma Score (GCS) 4 points, hypothermic (30.2°C nasopharyngeal measurement), with stertorous breathing, vesicular sounds with crackling rales were audible. Endotracheal intubation was performed, passive and active warming has been initiated. At the admission, core temperature was 34.2°C, SpO2=98%, ventricular rate 150 bpm, blood pressure100/54 mmHg. Laboratory tests showed leukocytosis with monocytosis and neutrophilia, elevated inflammatory markers, hyponatremia, hypokalemia and hyperglycemia. Arterial blood gases revealed severe mixed acidosis (pH=7.063, pCO2= 53.9mmHg, Lactate=5.1). The CT scan revealed mild diffuse cerebral edema, focal congestion, and interstitial alveolar pulmonary consolidation in the 1/3 inferior left lung and right perihilar area. The patient was transferred to the pediatric intensive care unit with the following diagnoses: Medically induced coma, submersion induced hypothermia, aspiration pneumonia, acute respiratory failure. Antibiotherapy, anticoagulant, hydro-electrolytic rebalancing was initiated. After only 24 hours the patient was extubated, hemodynamically stable with efficient breathing using a simple facial mask(SpO2=99%). **Discussions :** It is well known that the hypothermia is a neuroprotective factor by reducing the brains metabolic rate and the decreased speed in generation of reactive species of oxygen. The neurological exam performed by the Pediatric Neurologist revealed that the sensory and motor skills were unaffected, active movements were present, no tonicity disorders were found, all the reflexes were preserved and present. Four days after the injury he was able to walk by himself with no imbalances while walking. **Conclusions:** Despite the unprecise submersion time in the frozen swimming pool and all the complications, the cardiac arrest did not occur and the patient had a completely functional recovery thanks to the rapid interdisciplinary response of the medical team and due the protective role of hypothermia.

Keywords: Drowning, Pediatric emergency, Hypothermia, Submersion

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DIAGNOSIS AND MANAGEMENT OF IMMUNE CHECKPOINT INHIBITOR MEDIATED COLITIS: A CASE REPORT

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Introduction: Immune checkpoint inhibitors (ICIs) - such as Pembrolizumab - have revolutionized the management of several advanced cancers and can result in durable responses in a percentage of patients. Unfortunately, immune-mediated colitis (IMC) is a common side effect associated with ICI treatment. **Case Report:** We present a case of severe pancolitis induced by the administration of Pembrolizumab for stage IV pulmonary adenocarcinoma treated with Pembrolizumab and Pemetrexed. A 50-year-old woman known with metastatic bronchopulmonary adenocarcinoma is treated with ICIs (Pembrolizumab 380 mg subcutaneous) and after 7 cycles of cancer therapy, diarrhea and rectorrhagia occurred. Despite the inflammatory syndrome, the coproculture and coproparasitological examination in addition to Clostridium difficile test were negative. The medical team decided to perform a colonoscopy which revealed erosive pancolitis MAYO 3, possibly caused by an allergic reaction to ICIs. Moreover, the diagnosis of ulcerative pancolitis is confirmed by the histopathological examination. The clinical, endoscopic, and histopathological presentations are non-specific and overlap with those of colitis caused by other etiologies, such as infection (intestinal tuberculosis, bacterial, parasites, viral) and medication (adverse effect of chemotherapy). The diagnosis of ICI-induced colitis is one of exclusion and requires putting other competing etiologies aside. However, except for a possible CMV infection (the test was positive, but the sensitivity of detecting viral inclusions on histologic examination is low) the other etiologies were infirmed by their specific tests. After all the clinical examinations, the medical team claimed the final diagnosis to be erosive pancolitis induced by an allergic reaction to Pembrozilumab. The colitis was classified as grade 2, which determined the suspension of ICI therapy. The initial management was represented by corticosteroids and 5 ASA drugs, as current guidelines universally recommend. **Discussions :** Taking into consideration that colitis is an allergic reaction to ICIs, the multidisciplinary team decided to stop the administration of Pembrozilumab, but continue the cancer therapy with Pemetrexed. Moreover, as colitis did not respond to corticotherapy, it was decided to step up the treatment by using biological therapy (Vedolizumab). Although Vedolizumab is specifically used for the treatment of inflammatory bowel disease, it is also a potential treatment for ICI-associated colitis. **Conclusions:** IMC is one of the most common adverse effects associated with checkpoint inhibitors. Multidisciplinary collaboration among gastroenterologists and oncologists is necessary to better characterize these immune-

mediated adverse events and improve upon current standard management algorithms.

Keywords: Immune-Mediated colitis, Immune-Checkpoints Inhibitors, Biological therapy

CORONARY ARTERY PERFORATION: ALPHA AND OMEGA?

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Introduction: Coronary artery perforation (CAP) known as rare complication of percutaneous coronary intervention (PCI)(<0.5%) is reported to be directly proportional to the complexity of coronary artery disease and in severe cases can be lethal, in the absence of a prompt action. The objective of this paper is to highlight the importance of treating angioplasty procedural complications during PCI through a case report of CAP in a patient with NSTE-ACS (Non ST-elevation acute coronary syndrome). **Case Report:** We present the case of a 93-year-old patient with personal history coronary artery stenting, who was admitted into Cardiology Department of Rouen University Hospital-Charles Nicolle for an NSTE-AC. The ECG revealed negative T waves within the antero-lateral territory. The transthoracic echocardiography showed left ventricle (LV) anteroapical wall hypokinesia, but with well conserved LV ejection fraction. The patient underwent a coronary angiography within which an in-stent restenosis in the middle segment of the left anterior descending (LAD) artery and a significant stenosis (>70%) of the 3rd marginal artery were identified. **Discussions :** Subsequently, a successful stent implantation of the 3rd marginal artery was performed. In a second time, LAD artery approach was attempted in the framework of which intimal perforation downstream the stent restenosis has occurred during pre-dilatation phase with concomitant rupture of the balloon. Therefore, the placement of a new balloon for perforated artery occlusion was achieved while guiding a covered stent via "Ping Pong" technique with a favorable angiography outcome. There were no echocardiographic evidence of pericardial effusion as a secondary complication and the patient subsequently presented a favorable evolution. **Conclusions:** Undergoing PCI may involve seriously complications such as the life-threating coronary perforation in which the "Ping Pong" double guiding technique reveales a valuable contribution regarding the treatment performance. Undergoing PCI may involve serious complications, with life-threatening potential, in which fast "Ping Pong" double guiding technique approach is necessary to deal with these dire complications.

Keywords: Non ST-elevation acute coronary syndrome, Coronary perforation, In-stent restenosis

NON-OBSTRUCTIVE CORONARY ARTERY DISEASE: A DIAGNOSTIC AND THERAPEUTIC CHALLENGE (CASE REPORT)

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Introduction: Non-obstructive coronary artery disease is a condition in which there is evidence of coronary artery disease on diagnostic testing but no macroscopic atherosclerosis. Instead, it can be caused by endothelial dysfunction, coronary vasospasm, microvascular dysfunction or myocardial bridging. **Case Report:** A 58-year-old nonsmoking woman presented to the cardiologist with a 3-4-month history of thoracic discomfort and dyspnea on exertion. She had a history of stage 2 hypertension and type 2 diabetes mellitus. A clinical diagnosis of CCS II angina was made. Differential diagnosis excluded pericarditis as the pain did not improve on leaning forward and anemia as there was no pallor. Hypo and hyperthyroidism were ruled out because there were no symptoms related to decreased or increased metabolic rate. Pulmonary hypertension was also excluded due to the lack of jugular vein distention and cyanosis. Laboratory tests showed increased values of glycemia, uric acid and LDL-C and decreased HDL-C. The echocardiography revealed concentric left ventricular hypertrophy and a normal ejection fraction. Subsequently, a cardiac stress test terminated after 8 minutes showed an ST depression of 1.5-2 mm and a Duke Treadmill Score of -10 (moderate risk - 95% survival at 5 years). Due to persistent thoracic pain, coronary angiography was performed showing no significant obstruction. Treatment was started with nitroglycerin, calcium channel blockers, statins, angiotensin-converting enzyme inhibitors and aspirin, providing partial symptomatic relief. **Discussions :** Primary prevention with low-dose aspirin (75-100 mg/d) was considered. Studies and guidelines do not recommend it in patients with medium cardiovascular risk as the benefits are outweighed by the increased bleeding risk. Primary prevention is recommended in high cardiovascular risk, implying macroscopic

atherosclerosis which the patient didn't have. Clinical judgment had to be weighed versus following the guidelines. **Conclusions:** Our case presents an infrequent type of coronary artery disease. Diagnosis is challenging due to the lack of evidence in imaging tests. Specific treatment is limited and symptomatic relief is often partial.

Keywords: Cardiac Stress Test, Duke Treadmill Score, Coronary Angiography, Diagnostic Workup

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THE MANAGEMENT OF A PATIENT WITH MULTIPLE DISEASES AND A PERIFERIAL PULMONARY TUMOR: A CASE REPORT

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Introduction: The management and therapeutic approach of elderly patients with multiple comorbidities is a challenge for today's medicine. They also often present a high risk for the development of a malignant tumor, and its pulmonary location is very common with a poor prognosis. **Case Report:** The aim of this Paper is to present the case of an 80-year-old patient admitted to the Medical Clinic II Târgu-Mureș, complaining of dyspnoea, fatigue and progressive decrease in exercise capacity, leg oedema and episodes of vertigo with diaphoresis, occurring predominantly at night. The Patient was also hospitalized in 2012, being diagnosed with arthritis and Tophaceous gout, essential hypertension grade 3,prostate adenoma, hepatic steatosis, and essential hyperbilirubinemia. Also then, a chest X-Ray was performed revealing a normal-looking heart and lungs. In 2023, the objective examination revealed wheezing and snoring sounds bilaterally detectable by auscultation, partially improved after treatment with glucocorticoids. A Chest X-ray was performed which reveals a left infraclavicular nodular opacity with an irregular contour and imprecisely delineated. A thoracic-abdominal-pelvic CT contrast scan was performed that confirms the presence of a peripheral pulmonary mass located in the posterior segment of the left upper lobe. It has an irregular and spiky contour with a retractable character on hilum structures with dimensions of 25/32/38 mm, showing small areas of necrosis. Multiple mediastinal adenopathy was also observed in the aorta-pulmonary window. At the same time, the steatosis, coronary atherosclerosis, diverticulitis of the sigmoid colon and multiple degenerative changes in the spine was revealed. Echocardiography reveals multiple valvulopathies with a preserved EF and Carotid Doppler Echography confirms generalized carotid atheromatosis. Non Susteined Supraventricular tachycardia, ventricular and supraventricular extrabeats was confirmed by EKG Holter explaining possible symptoms. **Discussions :** The multiple pre-existing pathologies as well as the high cardiovascular risk group of the patient become a challenge when it comes to the diagnosis and management of the tumour. In this case, EBUS/TBNA or CT-guided biopsy puncture was recommended for final diagnosis and starting the treatment. The risk of a general anaesthesia is high, therefore for that case a Ct- guided puncture with local anaesthesia can be the investigation of choice. **Conclusions:** In the follow-up of chronic patients with multiple pathologies, the careful examination is necessary for the evolution of known diseases and the early diagnosis of lung cancer even in non-smoker patients.

Keywords: pulmonary tumor, comorbidities, thopaceous gout

MALIGNANT MELANOMA IN A 44-YEAR-OLD FEMALE: DIAGNOSIS AND TREATMENT

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Introduction: Malignant melanoma is a type of tumour produced by the malignant transformation of melanocytes, the cells which produce the pigment melanin. Given the increasing number of melanoma cases in the past decades, it is now considered one of the most frequent carcinoma that occurs in young adults. **Case Report:** A 44-year-old female presented at the Municipal Clinical Hospital of Cluj-Napoca in July 2022 after discovering a pigmented skin lesion in the right supraclavicular area which changed in size, shape and colour over the past eight months. Physical examination revealed a 8 mm darkly pigmented, irregularly shaped lesion with asymmetrical borders and variable coloration. A microscopical examination from the biopsy using Hematoxylin-Eosin (H&E) staining revealed a tumoral mass with mixed melanocitary proliferations, asymmetrical, composed of epiteloid or fusiform cells with clear or pale eosinophilic cytoplasma, with moderated or severe atypia; 2-3 small nests were detected in the papillary dermis, with a Clark II level and an Breslow thickness of 0,53 mm. The mitosis rate in the

junctional component is 1 mitosis/mm^2, associated with a moderate non-brisk lymphocytic inflammatory infiltrate. Immunohistochemistry (IHC) was performed and yielded the following results: Melan-A(MLANA) intensely positive at the level of the proliferation, HMB45 intensely positive, diffuse at the level of proliferation, both in the junctional component and the nests in the papillary dermis, PRAME negative, p16 weak and isolated positive, ki67(pKi67): 10-15%. According to the microscopical examination and the immunohistochemistry the final diagnosis was Melanoma in situ LOW CSD pT1a Nx Mx. The patient underwent local excision shortly after the diagnosis. The excision was successful in removing the entire lesion, and no evidence of metastasis was found in the sentinel lymph node. **Discussions :** Malignant melanoma is a challenging disease to diagnose and treat, and requires a multidisciplinary approach. In this case, the patient presented with a suspicious pigmented lesion on her right shoulder, which was ultimately diagnosed as malignant melanoma. Early diagnosis and treatment is critical for improving outcomes in patients with melanoma, as metastasis can occur rapidly and is associated with poor prognosis. **Conclusions:** Malignant melanoma is a serious and potentially deadly disease that requires prompt diagnosis and appropriate treatment. This case highlights the importance of early detection and multidisciplinary management, and demonstrates the successful use of surgery in treating a patient with melanoma.

Keywords: malignant melanoma, immunohistochemistry, melanocytes

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GASTRIC ASPIRATION SYNDROME MISDIAGNOSED AS VIRAL PNEUMONIA- HAS COVID 19 CLOUDED OUR CLINICAL JUDGMENT?

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Introduction: Eso-tracheal fistula represents the pathological communication between the esophagus and the trachea, having serious consequences to the respiratory system because of the penetration of food into the respiratory tract. Acute respiratory distress syndrome is a serious condition that represents the consequence of different diseases as part of exaggerated inflammatory response - fluid fills the pulmonary alveoli, the gas exchange capacity is significantly reduced, and finally acute respiratory failure. **Case Report:** We describe a case of a 32-year-old man, who presented in emergency service accusing dyspnea, cough, and chest pain in clinostatism, which had started 4 days before. The patient was admitted to the intensive care unit with spontaneous breathing, a respiratory fraction of 26 breaths per minute, signs of acute respiratory failure, and involvement of accessory respiratory muscles. The patient was isolated due to a suspicion of SARS-COV 2 viral pneumonia, however RT-PCR test invalidated our diagnosis. The first arterial blood gas test showed a pH of 7.44, PaO2 of 50.7 mmHg, PaCO2 of 19.4 mmHg, HCO3 of 13.5 mmol/l, P/F Ratio of 242.8, and SaO2 of 79%. The patient was intubated and mechanically ventilated. The patient underwent thoracic Angio Computed Tomography with the following results: alveolar infiltration at the level of the lower half of the bilateral lungs, bronchopneumonia foci and pneumomediastinum. We performed gastroscopy and bronchoscopy. The initial bronchoscopy clearly showed a fistula opening above the tracheal bifurcation. Gastroscopy was therefore performed to confirm the diagnosis. During gastroscopy, the fistula was closed using metal clips. **Discussions :** The presence of abnormal communication between the esophagus and the trachea led to a series of repercussions, such as the penetration of food and saliva into the respiratory tract, with the appearance of bronchopneumonia. The clinical and paraclinical examinations led to the diagnosis of bronchopneumonia, severe ARDS, and in the setting of the SARS-COV 2 pandemic, a viral infection was considered. Chronic alcohol consumption and smoking were described in the patient's history. The motivation for performing a bronchoscopy was supported by the patient's history of alcohol usage and the related risk of gastroesophageal reflux and gastric aspiration, a diagnosis that was later confirmed. **Conclusions:** In the presented case, we had a young patient with no comorbidities but a high risk of gastric aspiration due to alcohol consumption. The correlation of clinical examinations, imaging, and laboratory parameters helped us improve our comprehension of the patient's pathology thus being able to have a curative therapeutic attitude.

Keywords: Eso-tracheal fistula, COVID 19, ARDS, Viral pneumonia

INVASIVE PULMONARY ASPERGILLOSIS IN A COVID-19 CASE WITH ACUTE RESPIRATORY DISTRESS SYNDROME: HISTOPATHOLOGICAL DIAGNOSTIC CLUES

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Introduction: Acute respiratory distress syndrome (ARDS) is the lung response to intra- or extrapulmonary injury. It results from the damage of the capillary-alveolar membrane and its pathognomonic histological marker is the presence of the diffuse alveolar damage. Covid-19 is the disease given by the SARS-CoV-2 that led to the global pandemic. It is known to affect many organs, especially the lungs, resulting in ARDS, pneumonia, and respiratory insufficiency. Invasive pulmonary aspergillosis is difficult to diagnose because Aspergillus is a fungus that can be found in the environment and can be inhaled. However, in people with weakened immune systems or lung diseases, Aspergillus can invade the lungs easier. Our aim was to present the interesting histopathological features and diagnostic clues in a case of invasive aspergillosis (IA) associated with Covid-19. **Case Report:** The 72-year-old female patient, unvaccinated against SARS-CoV-2, was admitted in the pneumology department with altered general status and positive for Covid-19. She was diagnosed four days prior admission by RT-PCR, presenting cough, dyspnea and weakness for the past week, but refused hospitalization and treatment. Upon admission, she presented altered state and bilateral ground glass opacity on the chest CT, showing acute Covid-19 pneumonia in evolution. After 23 days she was discharged, presenting stable condition. Treatment at home and long-term oxygenation were recommended. No data were available regarding the antibiotic treatment. Two days later she died, with the diagnosis of cardiopulmonary arrest and post-Covid-19 status. A forensic autopsy was performed. The macroscopic examination showed massive bronchopneumonia associated with coronary atherosclerosis, myocardial sclerosis, aortic atherosclerosis, pulmonary edema, and nephrosclerosis. Microscopically, the lung tissue consisted of invasive pulmonary aspergillosis with numerous septate and acute-angled branching hyphae associated with a necrotizing and purulent inflammation, and ARDS. The kidney presented necrosis areas, vascular thrombi with intra- and perivascular structures suggestive for mycelial filaments of the Aspergillus, and severe nephrosclerosis. The heart tissue showed myocardial sclerosis, and acute ischemic lesions. **Discussions :** Based on the lung tissue examination, the diagnosis was suggestive for an IA in a Covid-19 positive woman with ARDS and secondary renal dissemination. **Conclusions:** Histopathological examination is very important for a final precise diagnosis of IA, since there are not specific biomarkers. As in our case, IA is often undiagnosed premortem. Complex presenting features in an elderly patient with multiple comorbidities and SARS-CoV-2 co-infection, and low rates of invasive diagnostic procedures may have led to missed diagnoses of IA.

Keywords: ARDS, Covid-19, invasive aspergillosis

EVEROLIMUS IN FETAL RHABDOMYOMA CAUSED BY SCLEROSIS TUBEROSA

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Introduction: The first symptom of sclerosis tuberosa (ST) is often revealed by ultrasound in the fetal life by the rhabdomyoma originating from the heart muscle. Fortunately, after birth, these heart tumors most often decline. In the later course of the disease, brain and skin symptoms develop. However, in some cases, tumors of very large size that cause outflow obstruction or rhythm disorder can be significant morbidity and mortality factors in the fetal and newborn ages. **Case Report:** We present you with the case of a 34-year-old woman who is pregnant in week 29 and who presents herself for periodic follow-up for her fetus. During the ultrasound analyses, beside the little tumors between 5-8 mm that we found in the area of the atrium and crux cordis, we also found a bigger mass with a size of 3x4 cm, which is concordant with the size of the heart. It is located in the pericardium and compresses the heart. The left ventricle and aorta are moderately hypoplastic. No rhythm disorders were recorded. During a week's follow-up, a new tumor was found in the left atrium in addition to the tumors initially detected. The appearance of pericardial fluid was detected, as was an increase in the width of the vena cava. The fetal magnetic resonance examination confirmed the presence of heart coils with a density corresponding to sclerosis tuberosa; in addition, it also described brain deviations characteristic of sclerosis tuberosa. The large tumor dislocates the heart and

trachea. The mother was treated with Everolimus in the 30th week, the fetus was born, and the rabdomyoma and its side effects ceased. The baby has since been healthy and free of symptoms. **Discussions :** mTOR inhibitors everolimus and sirolimus have been shown to be effective in the treatment of subependymal giant cell astrocytoma, renal angiomyolipoma, and epilepsy. In recent years, there have been several reports of the strong overall tumor inhibitory and reducing effect of everolimus in cases of neonatal hemodynamic complications. **Conclusions:** Given the threatening circulatory failure and adaptation problem, as well as the fact that everolimus and sirolimus have an effective therapeutic and pass through the placenta, their effect on the fetus is also manifested, the side effects are mild, and with the end of the drug administration they are eliminated, the therapy is short, a few weeks, and in the literature it is considered to be a favorable and very effective practice.

Keywords: Sclerosis Tuberosa, Rhabdomyoma, Everolimus

EISENMENGER SYNDROME AS AN EARLY LIFETIME COMPLICATION

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Introduction: Eisenmenger syndrome (ES) is the process by which a long-standing left-to-right cardiac shunt caused by a congenital heart defect causes pulmonary hypertension and eventually reverses into a cyanotic right-to-left shunt. **Case Report:** A 35-year-old patient, known with complex cyanogenic congenital heart malformation, transposition of large vessels, ventricular septal defect with non-restrictive bidirectional shunt predominantly left-right, valvulopathies and multiple associated comorbidities, presented to our clinic with dyspnoea (NYHA functional class IV), occurring for about 10 days before presentation, paroxysmal dyspnoea accompanied by an affected general state. Physical examination revealed perioronasal and extremity cyanosis, Hippocratic fingers, convex left hemithorax, bilateral basal subcrepitant rales, O2 saturation of 89%, apexian shock in the VI intercostal space outside the left medioclavicular line, tachyarrhythmic heart sounds, systolic murmur at all foci of auscultation, liver with the inner edge 4 cm below the right costal border. Initial work-up included a 12-Lead rest ECG presenting atrial fibrillation. The 24-hour Holter recording highlighted the presence of permanent atrial fibrillation and did not detect any malignant ventricular arrhythmias. Targeted lab test showed a value of 5313 pg/mL for NT-proBNP. Transthoracic echocardiography showed left ventricle with double entrance, mild systolic dysfunction (FE 40%), transposition of large vessels, ventricular septal defect with non-restrictive bidirectional shunt, severe tricuspid regurgitation, moderate mitral and pulmonary regurgitation, and moderate pulmonary stenosis. Right heart catheterization revealed mPAP 56 mmHg, PAWP 26 mmHg, PVR 12.83 WU, Qp/Qs ratio 2.88 (big left-right shunt). **Discussions :** Once ES develops with either a bidirectional shunt or right to left shunt, correction of congenital heart malformation is contraindicated to avoid sudden right ventricle (RV) compromise. Medical management with pulmonary vasodilators like PDE5, endothelin antagonist, and prostacyclin agents or a combination is preferred to salvage the failing RV. Our patient has a history of specific treatment for PH, initially with Sildenafil that was stopped because the patient presented a persistent headache and facial rash with remission of the symptoms after stopping the medication, later an attempt was made to administer an ERAs (Bosentan) with intolerance to this medication (marked dyspnoea, hepatomegaly). In our case adjustment of medication by escalating diuretic treatment or combined heart□ □□ □□□□ transplantation is the final option for treatment. **Conclusions:** Patients with cyanosis require careful assessment to ensure that proper treatment is applied.

Keywords: Cardiovascular diseases, adult congenital heart defects, pulmonary hypertension, Eisenmenger syndrome

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HEREDITARY ANGIOEDEMA- A HIDDEN ENEMY THREATENING PATIENT'S QUALITY OF LIFE

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Introduction: Angioedema is a condition characterized by cutaneous or mucosal swelling, typically present in areas with loose connective tissue, such as the face, throat, larynx, bowel wall, thighs, etc. The hereditary form is caused either by a deficiency of C1-inhibitor esterase (C1INH), or an altered function of C1INH. Affecting 1 in 50000 persons, this rare genetic disorder might be misdiagnosed often, leading to a wrong therapeutical protocol. **Case Report:**

Patient VD is a 23-years old female diagnosed with hereditary angioedema. Her first angioedema attack supposedly happened in 2008, due to a trauma leading to a spleen rupture and pancreas fissure, surgically treated afterwards. During medical examinations, the doctors discovered an accumulation of oedema liquid (~1200 mL) located in her abdominal wall and multiple elevated formations on her liver, resembling hepatic cirrhosis. The next attack happened in 2017, due to appendicitis. After this incident, the attacks occurred every two weeks, mainly located in her abdominal wall, accompanied by severe pain, diarrhea, vomiting, cutaneous eruptions, loss of consciousness. In February 2019, she was hospitalized due to an abdominal attack; later in July, she had her first facial attack, when wrongly treated with 10mL adrenaline. This attack was the one that led to the correct diagnosis of her condition. Her treatment consisted of Icatibantum (only in attacks) and Cinryze (twice a week), after one year, replaced by Lanadelumabum (once every two weeks), inefficient during attacks; one particular aspect is most types of anesthetics are inefficient in her case. The main causes for the angioedema attacks are: stress, trauma, various types of food, alcohol, hormonal deficiencies, sexual intercourses, menstrual hemorrhage and ovulation. There were no recorded cases of hereditary angioedema between her relatives, including her dizygotic twin, furthermore the doctors could not determine if her condition is hereditary or acquired due to her long history of surgical procedures (~4). **Discussions :** The main question raised by this case is the etiology of patient's illness: whether it is hereditary or acquired, as there are no reported cases describing an association between multiple surgical procedures and a deficiency of C1INH. Another questionable aspect is the anesthetics resistance, not proven to be associated with angioedema. **Conclusions:** This case illustrates the ambiguous transmission of this condition and the harmful consequences of misdiagnosing this severe disorder. Proper and innovative treatment for this illness will provide a significant improvement in the patient's quality of life.

Keywords: Hereditary angioedema, Multiple surgical procedures, Lanadelumabum, Anesthetics

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A 3-WAY ASSESSMENT FOR LUNG ADENOCARCINOMA – THE PATHOLOGYST VIEW – CASE REPORT

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Introduction: The non-small cell carcinoma is one of the most common types of lung cancers. Adenocarcinoma, a non-small cell carcinoma, represents over a third of all lungs malignant tumors and is characterized by the formation of malignant glands. **Case Report:** We report a case of a 71-year-old woman who presented to the Pneumology Department with shortness of breath, persistent cough, and chest pain present for the past few months. A bronchoscopy was performed and a biopsy was sent to the Pathology Department. Microscopically, on the bioptic fragments, a proliferation of small groups of tumoral cells with irregularities was seen with large, hyperchromatic, and irregular nuclei. In the thoracocentesis fluid there were tumoral cells with marked cyto-nuclear pleomorphism: enlarged, irregular, vesicular and hyperchromatic nuclei that a form glandular structures . A third view from the bronchoscopy suction fluid revealed the presence of inflammatory cells of lymphocytic type and macrophages that separated tumoral cells disposed in small groups wich present cyto-nuclear atypia, large and hyperchromatic nuclei. Immunohistochemically, on the biopsy, the tumor cells were positive for TTF1 and negative for p40 markers. **Discussions :** The histopathological characteristics and the immunohistochemically profile are in concordance with a non-small cell carcinoma, in favor of an adenocarcinoma, Since the bioptic fragment was very small, the necessity of immunohistochemistry was very important to establish the diagnostic. The particularity of the case is emphasized by the fact that 3 specimens □□□biopsy, pleural fluid, and bronchoscopy suction fluid □□□ were collected and all confirmed the presence of malignant cells. **Conclusions:** In conclusion, we emphasized the importance of the histopathological aspect, the immunohistochemical profile on biopsy and the assessment of the pleural fluid to establish the diagnosis of lung adenocarcinoma. The combined approach may lead to a strong diagnosis to increase the patient's quality of life.

Keywords: lung adenocarcinoma, non-small cell, immunohistochemistry

HEREDITARY ANGIOEDEMA – A CONSIDERABLE, YET TREATABLE, IMPACT ON THE PATIENT'S QUALITY OF LIFE

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Introduction: Angioedema is a condition characterized by cutaneous or mucosal swelling, typically present in areas with loose connective tissue, such as the lips, eyelids, throat, larynx, bowel wall etc. While angioedema is usually seen in association with anaphylaxis, the hereditary form (Hereditary Angioedema, HAE), caused by a deficiency of C1-inhibitor esterase (C1INH), causes recurrent angioedema attacks that have a considerable impact on the patient's quality of life and that are potentially lethal, due to asphyxia. **Case Report:** We present the case of a 61-year old female patient with recurrent episodes of isolated angioedema, lasting from 1 to 7 days, during which she would notice extreme swelling of the face, throat, extremities, and upper-thorax. These episodes are intermittently accompanied by intense, crushing abdominal pain (most likely caused by intestinal swelling), or a similar pain in the swollen extremities, dyspnea, dysphagia, aphonia. Symptoms had onset at age 5, and have a median frequency of 3-4 episodes per week. Patient's file documents over 150 laryngeal attacks. The condition was misdiagnosed and mistreated until the age of 51, when the patient presents to the emergency care unit for a severe laryngeal attack. In the meantime, one of her older sisters is diagnosed with HAE and dies from a laryngeal attack while being hospitalized for an abdominal attack in a Gastroenterology department. Due to the condition not responding to otherwise ineffective treatment for HAE, such as antihistamines, corticosteroids or adrenaline, she is transported to the Pilot Centre of HAE, Targu-Mures, where she is given frozen fresh plasma (the only available treatment at that moment in Romania) as emergency treatment and, fortunately, survived without any sequelae. After the correct diagnosis is established, she is given the treatment for acute attacks (icatibantum). Her quality of life improved significantly after the diagnosis. In 2022, prophylactic long term treatment with lanadelumabum is started, along with the on demand treatment, resulting in almost negligible episodes that would last for a few hours the most. **Discussions :** HAE is a disease that, if untreated, not only threatens the safety of the patient, but also impairs their ability to live a regular life, thus requiring a swift diagnosis. **Conclusions:** This case illustrates the potential for severe consequences in patients suffering from hereditary angioedema, and the importance of delivering an early diagnosis for this rare, but severe disorder. Initiating proper treatment for this illness will be met with an outstanding improvement of the patient's quality of life.

Keywords: Quality of life, Angioedema, Edema, Bradykinin

HIRATA'S DISEASE: FROM LITERATURE TO CLINICAL PRACTICE

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Introduction: Insulin autoimmune syndrome (IAS) or Hirata's disease, is a rare pathology characterized by high titter of insulin autoantibodies which lead to hypoglycaemic episodes. The disease occurs when a trigger factor interacts with an underlying predisposing genetic background, leading to immune-mediated hypoglycaemia. **Case Report:** A 61-years-old female patient presented in the Diabetes Clinic, complaining of typical symptoms of hypoglycemia: sweating, tremors and visual disturbances, aggravated in the 3 weeks prior to admission. The blood glucose values were between 44-68 mg/dl. The patient was admitted for further testing and treatment. The next step was to fit the patient with a sensor for continuous monitoring of glycemic values, in order to obtain graphs and analyze glycemic variations. An unusual fact was the exaggerated increase in blood sugar levels after the consumption of simple carbohydrates, followed by a sudden decrease of the glycemic values. The ratios between blood sugar and insulinemia were determined, finding slightly increased values of insulinemia in relation to blood sugar. C-peptide levels were also elevated. The prolonged glucose tolerance test was performed and stopped after 5 hours due to a glycemic value of 40 mg/dl. Suspicion of insulinoma was raised and later dismissed by CT examination. Furthermore, the anti-insulin antibodies were dosed showing a high titer, concluding the diagnosis of autoimmune insulin syndrome. Corticosteroid therapy was initiated with an initial dose of 0.5 mg/kg prednisone. The patient was later discharged with an improved condition. **Discussions :** Careful revision of differential diagnosis between the multiple causes of hypoglycaemia must be performed. A prolonged fasting test, up to 72

hours, can determine if the insulin is produced in excess without any sugar intake. This is an extremely useful investigation for confirming or excluding the insulinoma diagnosis. Furthermore, these hypoglycaemic episodes can have a particularly serious impact on the vital prognosis and the treatment performed differs greatly depending on the aetiology. **Conclusions:** Hirata disease is a rare pathology and its diagnosis can sometimes be challenging. Fortunately for patients, once diagnosed and managed properly, the disease is self-limited and has a very good prognosis.

Keywords: hypoglycaemia, autoimmunity, corticotherapy

A CASE REPORT ON THE MULTIFACETED CHALLENGES OF SCOLIOSIS SURGERY: ADRENAL INSUFFICIENCY, LYMPHOMA, AND ACHALASIA

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Introduction: Adrenal insufficiency is a rare but serious condition that can occur due to various medical procedures or underlying health conditions. **Case Report:** In this case report, a 25-year-old female patient underwent scoliosis surgery that led to retroperitoneal hemorrhage, resulting in adrenal ischemia and subsequent adrenal insufficiency. After a year patient developed symptoms of adrenal insufficiency , and the diagnosis was confirmed through a Synacthen test. The patient also presented with inguinal and axillary adenopathy and was later diagnosed with 4cm inguinal Hodgkin lymphoma, for which treatment was initiated. Recently, the patient presented to the emergency room with an adrenal crisis due to not taking the prescribed hydrocortisone medication. After receiving treatment, the patient experienced difficulty swallowing, and a subsequent esophagogastroduodenoscopy with dilation revealed achalasia. The cause of the achalasia is currently unknown and requires further investigation. **Discussions :** This case highlights the potential complications of scoliosis surgery, such as retroperitoneal hemorrhage and adrenal ischemia, leading to adrenal insufficiency. It also underscores the need for careful monitoring and management of patients with multiple comorbidities, such as adrenal insufficiency and lymphoma. Furthermore, this case illustrates the importance of timely management of adrenal insufficiency to avoid complications like adrenal crisis. The cause of achalasia in this case is not known, and further research is necessary to identify the underlying cause. Physicians must consider all possible complications and comorbidities when treating patients with complex medical histories to provide them with the best care possible. **Conclusions:** This case report emphasizes the importance of careful monitoring and management of patients with multiple comorbidities and highlights the potential complications of scoliosis surgery. It also underscores the need for timely management of adrenal insufficiency to prevent complications like adrenal crisis. Further research is required to determine the cause of the achalasia in this case.

Keywords: Adrenal Insufficiency, Scoliosis Surgery, Retroperitoneal Hemorrhage, Achalasia

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A 185 YEARS OLD RARE GENETIC DISEASE – ECTODERMAL DYSPLASIA

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Introduction: Taking part into the rare genetic disorders group, ectodermal dysplasia is characterised by the triad of hypotrichosis, hypohidrosis and hypodontia. It is a congenital, nonprogressive disorder that can occur by mutations in the *EDA*, *EDAR* or *EDARADD* genes with the patients having a characteristic physiognomy. The ectoderm is the peripheric layer of the three germ layers that develop during the embryotic life and is the one that gives rise to the epidermis and the nervous system. **Case Report:** After a paediatric evaluation, a 2-year-old patient is sent for a genetic consult with an ectodermal dysplasia suspicion. On clinical exam, the patient presents thin, sparse scalp hair, pale translucid skin, left microtia and tapered fingers, oral cavity revealing four conical teeth. The patient's mother affirms that the girl is slightly sweating, otherwise the patient presents normal physical growth and psychomotor development. The patient comes from a normal primary pregnancy, no inbreeding and no family history of genetic disorders. An ectodermal dysplasia panel of 27 genes plus 2 extra genes is performed in order to get the genetic diagnosis and the result confirms the patient is positive for a heterozygous missense mutation of the *EDA* gene located on the X chromosome. **Discussions :** Ectodermal dysplasia also known as

Christ-Siemens-Touraine Syndrome, was first mentioned as early as 1838 and it's form of transmission is X-linked recessive. The disorder can occur after inheriting the mutation from an affected father (which is not the case of our patient), from a carrier mother that has no phenotypical manifestation or the proband may have a *de novo EDA* gene mutation. For certainly establishing the roots of the patient's mutation, family counselling would recommend genetic testing of the mother. This would settle down the question of a hereditary cause of ectodermal dysplasia and would be able to put down the likelihood of the 50% chance of recurrence for the future male descendants. Our patient is also advised about getting yearly dermatological consult and dental treatment during her development years that would be able to help with the speech, masticatory function and redeem self-esteem. **Conclusions:** With an international prevalence of 7 per 10000 births, ectodermal dysplasia is a rare genetic disorder that has the same life expectancy as general population, but with a higher risk of malignant melanoma. Challenges and management strategies of this patient include an interdisciplinary team composed by a geneticist, paediatrician, dermatologist, otorhinolaryngologist, periodontologist, paediatric dentist and a psychologist.

Keywords: Ectodermal dysplasia, genetic consult, rare genetic disorder, interdisciplinary team

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POST-COVID-19 LUNG ABSCESS AND PNEUMOTHORAX: A DOMINO EFFECT

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Introduction: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a pathogen better known for the illness it causes: coronavirus disease 2019 or as the world has come to call it: COVID-19. Its repercussions on the human body vary considerably from slight fatigue to multiple organ failure and death. A lung abscess is a circumscribed accumulation of puss generally caused by the aspiration of nasopharyngeal secretions containing polymicrobial flora, leading to local infection around the bronchial tree, as well as a very rare post-COVID-19 complication, especially in young, otherwise healthy males. **Case Report:** A 43-year-old male is transferred from another hospital, on 22.02.2021, to undergo ECMO therapy for ARDS, while intubated and mechanically ventilated, positive for SARS-COV-2 infection with severe lung damage (70%), presenting hypoxia, and hypercapnia with a PaO2/FiO2<50%. A CVC through the right internal jugular vein is inserted percutaneously under anticoagulant therapy and gasometry is ameliorated. During ECMO the patient develops numerous pneumothorax episodes which are drained. After 31 days the patient is decannulated and ECMO is stopped, and 3 days later the patient is extubated. Initially, the patient is conscious, and temporospatial oriented, with post-reanimation neuropathy. Kinetotherapy and physiotherapy through C-PAP NIV are initiated. The patient redevelops many pneumothorax events, bilaterally, drained successively, for which dynamic CT is ordered, revealing the progression of lung damage to over 95%. Later the patient catches a persistent fever, and another CT scan brings to light multiple pulmonary abscesses for which anti-biotherapy is started but is ineffective. CT-guided drainage of the abscesses is done. Days later, a septic syndrome occurs and the patient is reintubated. Despite targeted anti-biotherapy, he sustains multiple organ failure with progressive deterioration of hemodynamic and biological status with no answer to rebalancing attempts, even with extensive doses of inotropic and vasoactive medication. Evolution is unfavorable with a progressive increase in pharmacological support until resuscitation dosages are reached. Unsuccessfully, on 22.04.2021 the patient's condition worsens reaching asystole refractory to every resuscitation attempt. The patient passes away shortly after. **Discussions :** Despite the absence of comorbidities besides grade I obesity, the patient acquired two extremely rare complications, both worsening his prognostic: pneumothorax and several lung abscesses. **Conclusions:** Since the original first case in Wuhan, China in December 2019, COVID-19 has spread worldwide, putting a halt on almost all of humanity's activities at one point. This case shows that its aftermath on our health, in the long run, is still being studied with worrying results.

Keywords: COVID-19 rare complications, CT-guided drained lung abscess, reucurring pneumothorax

LATE-ONSET CONGENITAL ADRENAL HYPERPLASIA DIAGNOSED AFTER TWO YEARS OF WRONGLY DIAGNOSED AND MANAGED AS POLYCYSTIC OVARIAN SYNDROME: A CASE REPORT

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Introduction: Late-onset congenital adrenal hyperplasia (LOCAH) is an autosomal recessive cortisol synthesis defect with postnatal androgen excess. Its prevalence is 1:500 to 1:1000 in the general white population, higher at 1:50 to 1:100 in communities with high rates of consanguineous marriages. **Case Report:** We present the case of an 18-year-old girl who presented to the clinic with complaints of increasing facial and body hair, severe acne, and absent menstrual periods for 18 months. She had previously been diagnosed with the polycystic ovarian syndrome (PCOS) by three doctors and was treated with oral contraceptives, metformin, and herbal medicines without improvement. Physical examination revealed severe hirsutism, muscular body, frontal balding, and clitoromegaly. Laboratory investigations showed a very high testosterone level in the male range and markedly elevated 17-OH progesterone level, indicating the diagnosis of LOCAH, the patient was referred to an endocrinologist and treated with Dexamethasone and Cyproterone Acetate. **Discussions :** The progression of hirsutism, age at presentation, and testosterone levels indicate a specific disease process. Androgen-secreting tumors cause rapid hirsutism progression, while PCOS progresses slowly. LOCAH usually presents in puberty, while PCOS presents in the second and third decades. Ovarian hyperthecosis occurs after menopause, while tumors can occur at any age. High testosterone levels are typically seen in tumors and Congenital adrenal hyperplasia (CAH) (>5 nmol/l), while PCOS is associated with modest increases (2.5-4 nmol/l). In LOCAH, low cortisol but preserved aldosterone results in no salt wasting or adrenal crisis, the ultrasound picture of ovaries in all cases with hyperandrogenism will show a polycystic picture. For this reason, more serious causes of hyperandrogenism like tumors, CAH, and Cushing's syndrome should be excluded before diagnosing PCOS. This was evident in this case where the patient was wrongly diagnosed with PCOS and therefore a delay in the correct diagnosis caused more morbidity for the patient. LOCAH is caused by 21 hydroxylase deficiency in 95% of cases. It results in low cortisol, which drives more ACTH production, resulting in high levels of testosterone and 17OH progesterone. The latter is pathognomonic to this condition and was present in this case. **Conclusions:** This case emphasizes the importance of considering alternative diagnoses when PCOS treatment fails to improve symptoms and the need for thorough investigation and screening for LOCAH. Early detection and management can prevent further morbidity for the patient. Screening siblings for this autosomal recessive condition is also important.

Keywords: Late-onset congenital adrenal hyperplasia, Polycystic ovarian syndrome, LOCAH, Androgen excess

A PARTICULAR CASE OF POST-COVID INFECTION

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Introduction: The long-term effects of SARS-CoV-2 (COVID-19) infection (long COVID) is a topical and often debated issue. Long COVID symptoms may include cardiovascular, myocarditis, thrombosis, brain fog, depression and several other conditions. **Case Report:** We describe the case of a young patient (32 years old) with no previous cardiac history who experienced an acute coronary syndrome after SARS-CoV-2 infection. The patient presented with chest pain, positive troponin and ECG changes several weeks after SarsCoV2 infection. Cardiac CT revealed a highly vulnerable coronary plaque producing a 70% stenosis in the left anterior descendant artery. Coronary angiography was performed in emergency, associated with optical coherence tomography, which revealed a ruptured plaque and a large lipid pool, successfully treated with stenting. Control magnetic resonance imaging revealed signs of post-COVID myocarditis and myocardial scar in the territory of the left anterior descendant artery. **Discussions :** . The particularity of this case is the co-existence of post-COVID-19 myocarditis and acute coronary syndrome producing ischemic myocardial necrosis, as a result of post-COVID coronary plaque vulnerability. **Conclusions:** Individuals with COVID-19 may be exposed to a higher risk of serious cardiovascular complications that go beyond the initial viral illness.

Keywords: COVID-19, stenosis, Miocarditis

COVID-19 EVOLUTION IS STILL UNPREDICTABLE

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Introduction: The evolution and complications of SARS-CoV-2 (COVID-19) infection is a topical and often debated issue. Even if the vaccines are widely available and offer protection against the virus, Covid-19 evolution can still be unpredictable. **Case Report:** A 68-year-old male patient has been infected with Covid-19 in March of 2022. The patient has been vaccinated against the virus with Pfizer vaccine, receiving third doses. The patient has a predisposition for high blood pressure, an HBs antigen positivity and is above 65 years old, but presents no other comorbidities or risk factors. Due to his worsening condition, he was admitted to the hospital in the 10th day of his illness with a sustained fever. At admission, a slight increase in Protein C reactive value is observed, but with no serious lung damage. Taking into account the late presentation, antiviral treatment was not an option, antibiotic and anticoagulant treatment is initiated. After 3 days of treatment, the patient was still suffering from fever and a chronic cough. CT scan reveals upon the 4th day of admission that 50% of his lungs were affected. IL-6 levels indicate a cytokine storm (IL-6 level was 106, normal value being 7 pg/ml.), anti IL-6 and dexamethasone treatment has been initiated to which the patient responded well. After 5 days of treatment, CT findings show an improvement, the pulmonary affection being 20% and no embolism. **Discussions :** The severity of the case is surprising as the patient was imunised against vaccination against the virus and presented with mild comorbidities. Even if the patient suffered from major pulmonary affection and a chronic cough, his pulse oximeter indicated saturation never dropped below 94%. Covid-19 infection is prone to create a pro-coagulative state, administration of anticoagulants proved to be efficient in protection against a possible embolism. **Conclusions:** Even with vaccines, Covid-19 infection can still have an unpredictable evolution, an early diagnosis is vital for a good prognosis.

Keywords: Covid-19, lung damage, COVID vaccine

POST-SURGICAL DEMYELINATING POLYNEUROPATHY: CASE REPORT

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Introduction: Post-surgical demyelinating polyneuropathy is a rare complication that occurs after a surgery, and it requires special attention due to the risk of producing long-term comorbidities and also because of medico-legal aspects that may be involved. **Case Report:** We describe a case of a 37-year-old, 70 kg Turkish woman presenting with bilateral lower limb pain started two weeks prior presentation, with loss of walking ability. The medical history showed that she is a diabetic patient for 8 years and she had 30 pack years of smoking history. She had 3 children and history of 2 spontaneous abortions in 2021 and 2022. She had undergone laparoscopic Roux-en-Y gastric bypass surgery in January 2023. In February 2023, she started to complain of pain in her legs. She visited the emergency clinic where the doctor prescribed analgesics and myorelaxant drugs. The situation worsened and a few days later she suddenly lost her ability to walk. She visited the university hospital's neurology clinic and a neurological examination revealed normal function of the upper limbs, but proximal weakness was found in the lower limbs, with preserved reflexes. Cranial nerve examination was normal, and the MRI didn't show any significant results for her symptomatology. After the blood tests and the other examinations no conclusive and significant results were found. The EMG performed revealed polyneuropathy and the diagnosis of post-surgical demyelinating polyneuropathy was made. The treatment prescribed was 28 gram/day intravenous immune globulin for 5 days in a month based on her weight, total of 140 grams and 100 mg/day thiamine for 7 days. After 7 days she noticed remarkably positive results. The patient is still under close supervision. **Discussions :** Post-surgical neuropathy can have an iatrogenic origin, or it can have as etiology of humoral immune-mediated adaptive process. In the second case, the activation of B cells and the production of antibodies against the myelin layer will lead to the formation of immune complexes, and the activation of the membrane attack complex, as well as their

phagocytosis by the macrophage will generate the demyelination of the peripheral nerves. **Conclusions:** There are different mechanisms underlying post-surgical neuropathy, and once its etiology is elucidated, the patient can receive appropriate treatment. Post-surgical demyelinating polyneuropathies do not have an increased frequency, but due to the fact that surgery can trigger such a clinical manifestation, it is necessary to properly inform the patient or the caregiver about the less known neurological complication of surgical procedures.

Keywords: Polyneuropathy, Demyelination, Post-surgical

A CASE OF HEREDITARY SPHEROCYTOSIS IN A NEWBORN PRESENTING WITH RESISTANT HYPERBILIRUBINEMIA

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Introduction: Hereditary spherocytosis is the most common congenital hemolytic anemia, which is caused by functional and structural abnormalities in the proteins that make up the cell skeleton, such as spectrin, ankyrin, band 3, and protein 4.2. It results in severe anemia, jaundice, and splenomegaly. In this presentation, a case of hereditary spherocytosis in a newborn with persistent hyperbilirubinemia and anemia is presented. **Case Report:** A 28-year-old mother who had her 4th pregnancy and 2nd live birth delivered a male baby of 3700g at 38 weeks via normal spontaneous vaginal delivery. On postnatal day 27, the baby was brought to the pediatric emergency clinic due to jaundice, and was admitted to the hospital because the total bilirubin level was 19 mg/dl. Physical examination revealed bilateral icteric sclerae, jaundice of the whole body, normal respiratory sounds, and other physical examination findings. Tests for reticulocyte count, Direct Coombs test, peripheral blood smear, LDH, G6PD, Pyruvate Kinase, and maternal and neonatal blood group determination were performed to determine the etiology of jaundice. The baby was diagnosed with hereditary spherocytosis using the incubation osmotic fragility test, which showed numerous spherocytes on the peripheral blood smear. **Discussions :** The patient received treatment with phototherapy, but because the total bilirubin level did not decrease below 26 mg/dl, despite tunnel phototherapy, an exchange transfusion was performed. After the exchange transfusion, the total bilirubin level was found to be 10 mg/dl and the Hb level was 12 g/dl in the blood sample taken. Following transfusion, due to inadequate efficacy of single phototherapy and persistence of hyperbilirubinemia, the patient was treated with phototherapy using a tunnel phototherapy device and started on phenobarbital. A single dose of erythrocyte suspension was administered at 15 ml/kg. When the total bilirubin level returned to the normal range, phototherapy was stopped. On the 5th day of hospitalization, follow-up tests showed that the total bilirubin level was 6 mg/dl and the Hb was 12.2 g/dl. The infant, who was feeding well, breathing comfortably, and in good general condition, was discharged with a referral to the pediatric hematology outpatient clinic, and phenobarbital was discontinued. **Conclusions:** Hereditary spherocytosis, which is a rarely seen disease from an etiological perspective in newborns with persistent hyperbilirubinemia, should be investigated.

Keywords: Hereditary spherocytosis, Resistant Hyperbilirubinemia, Newborn

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A CASE OF PEDIATRIC BRUCELLOSIS WITH SEVERE PANCYTOPENIA

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Introduction: Brucellosis, caused by Brucella bacteria, is transmitted from infected animals and has a wide clinical spectrum. Mild anemia and leukopenia are common, while severe pancytopenia is rare and can be confused with malignancy. This zoonosis is endemic in Mediterranean countries and has no specific distinguishing symptoms from other infections. **Case Report:** A 15-year-old female patient with no prior medical conditions presented to the polyclinic with high fever, sweating, weakness, and dizziness. Despite antibiotic treatment, she did not respond and was referred with the suspicion of etiological pancytopenia. The patient's history revealed that she had moved to a village two months prior and was engaged in animal husbandry. On physical examination, the patient appeared pale, had a fever of 39°C, a pulse of 105 beats/minute, and hepatomegaly. Laboratory investigations

showed a WBC count of 1330/mm3 (% 40 neutrophils, % 58 lymphocytes, % 2 monocytes), a platelet count of 100,000/mm3, Hct of 21.8%, Hgb of 6.8 g/dL, and an erythrocyte sedimentation rate of 45 mm/hour. Biochemical tests revealed an LDH level of 749 U/L, AST level of 71 U/L (N: 10-37 U/L), ALT level of 19 U/L (N: 10-40 U/L), and CRP+++ level. No atypical cells were identified in the peripheral blood smear. The Wright agglutination test for Brucella was positive with a titer of 1/1280. No bacterial growth was identified in blood cultures. The patient was diagnosed with brucellosis based on clinical and serological tests and was started on treatment with doxycycline, rifampicin, and gentamicin. The total treatment was planned to be completed in six weeks. The patient was discharged for monitoring after the fever subsided on the sixth day, and an improvement in both laboratory and clinical results was observed within one week. **Discussions :** Accurate diagnosis and treatment of brucellosis requires a thorough patient history as it can have varied clinical manifestations. In this case, patient's history of animal husbandry was crucial in suspecting brucellosis. Identifying the cause of brucellosis is essential for treatment planning. **Conclusions:** When investigating the etiology of pancytopenia in areas where brucellosis is endemic, it should be kept in mind that severe pancytopenia may also occur during the course of acute brucellosis along with other causes. This way, unnecessary tests can be avoided and complications that may develop due to brucellosis can be prevented with early treatment.

Keywords: Brucellosis, Pancytopenia, Zoonosis

THE MAJOR IMPACT OF IMMUNOTHERAPY: BENEFITS AND SIDE EFFECTS OF CHECKPOINT INHIBITORS

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Introduction: Immune checkpoint inhibitors (ICIs) are a type of immunotherapy that can activate the T-cells to eradicate tumor cells. One such drug is Nivolumab, an Anti-PD-1 mAb that blocks the interaction between PD-1 checkpoint expressed by T-cells and its ligand, PD-L1. Their communication would inhibit the activation of T lymphocytes. These ICIs have been proved to exhibit promising therapeutic effects in several advanced cancers. However, blocking of PD-1/PD-L1 immune checkpoints can lead to several toxicities to the skin, liver, endocrine glands etc. **Case Report:** A 47-year-old woman presents with suspect lesions on the left thigh and abdomen. After being extracted, the histopathological exam determined the diagnosis of melanoma, stage Clark 5 with abdominal metastasis. Two years after the initial diagnosis, she presented more metastases, some of which were surgically extracted. However, she had an inoperable axillary tumor for which she started immunotherapy with Nivolumab and Ipilimumab. Shortly after the start of the treatment, the patient presented with immunotherapy induced autoimmune thyroiditis, characterized by a brief period of hyperthyroidism, followed by hypothyroidism. She started corticotherapy and hormone replacement therapy with levothyroxine. However, the prednisone was inadequate, since a month later the patient had increased transaminase levels, suggesting the diagnosis of autoimmune hepatitis. Ipilimumab was removed from the treatment plan, while the corticosteroids were increased. Despite the use of monotherapy, she developed diabetes mellitus type 1, once again caused by immunotherapy and the treatment with insulin was introduced. In the following months, the patient presented with more side effects such as autoimmune colitis, vitiligo, as well as steroid-induced iatrogenic adrenal insufficiency. During this time, the patient did not present any progression of the cancer and the axillary tumor had decreased in size, demonstrating complete remission. She is continuing immunotherapy and her autoimmune disorders are kept under control with treatment. **Discussions :** Melanoma is an aggressive form of skin cancer, with a poor prognosis once metastases have developed. Nivolumab is a valuable treatment for adult patients with metastatic melanoma, regardless of BRAF mutation status. However, the reactivation of the immune system can lead to side effects known as immune-related adverse events that can be life-threatening without intervention. Regarding our patient, because the side effects were manageable, the treatment was continued. **Conclusions:** The complexity of this case resides in the numerous side effects the patient suffered, despite the successful therapeutic results. Therefore, monitoring and treating the possible adverse reactions is an important step for every patient following immunotherapy.

Keywords: checkpoint inhibitors, melanoma, nivolumab

CONGENITAL DIAPHRAGMATIC HERNIA

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Introduction: Congenital diaphragmatic hernia (CDH), is a congenital condition in which there is an incomplete development of the diaphragm during intrauterine life, resulting in ascension of the abdominal organs into the chest cavity, affecting proper lung development. Neonates with this condition present early after delivery various grades of respiratory distress up to respiratory failure that can be life-threatening. **Case Report:** We present a case of post-term newborn with a gestational age of 41 weeks, vaginally delivered in cranial presentation, that weights 3100 grams and had an Apgar score of 6/1 minute, 8/5 minutes, who was suspected of having a diaphragmatic hernia by routine antenatal ultrasound screening. At birth, the neonate presented with a severely altered general condition, requiring intubation and prolonged resuscitation. The neonate was transferred to newborn intensive care unit (N.I.C.U), with cyanosis, absent breath sounds on the left hemithorax, displaced heart sounds to the right, oxygen saturation of 70-78% in room air and scaphoid abdomen. Assisted ventilation and intensive therapy measures were initiated. The diagnosis of diaphragmatic hernia was confirmed by chest X-ray (opaque airless mass in the left hemithorax), chest ultrasound and CT scan. Imagistic investigations also revealed a large right pneumothorax, for which thoracic drainage was performed. Cardiac ultrasound established a diagnosis of aortic coarctation with a diaphragm-like appearance in the isthmus area, a small atrial septal defect with a left-to-right shunt, large persistent arterial canal with a right-to-left shunt and severe pulmonary hypertension. Intravenously treatment with Milrinone 0.3 mcg/kg/min, sildenafil 0.1 mg/kg, and dopamine 5μq/kg/min was started. Also, antibiotic therapy with ampiplus and amikacin was initiated. Other drugs included in the treatment list were midazolam, morphine, fentanyl, paracetamol, pantoprazole, hydrocortisone. **Discussions :** Severe pulmonary hypertension and the hemodynamic instability did not allow the surgical intervention for the repair of the congenital defect of diaphragm. The association with the cardiac diagnosis of aortic coarctation also delayed the surgery. These factors led to a progressive deterioration of the general condition that eventually resulted in cardiac-respiratory arrest and death at 36 hours of life. **Conclusions:** Despite the treatment, congenital diaphragmatic hernia has an unfavorable prognosis when associated with severe pulmonary hypertension, air leaks and cardiac malformation.

Keywords: congenital malformation, pulmonary hypertension, aortic coarctation, diaphragmatic hernia

POMPE DISEASE

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Introduction: Pompe disease or Glycogen Storage Disease type 2 is a neurological condition that directly affects glycogen-storing tissues. It is a genetic disease that manifests symptoms such as muscle fatigue, hepatomegaly, and decreased muscle tone due to a deficiency in acid alpha-glucosidase. This autosomal recessive condition can be of two types: infantile or late-onset, with a better prognosis for the latter type, with an increase in glycogen deposits in the muscles and liver. **Case Report:** In this presentation, we will talk about a 41-year-old patient diagnosed with late-onset Pompe disease at the age of 34 through enzymatic and genetic testing of the amount of enzyme in the fibroblasts . He presents with gait disturbances and difficulties in climbing stairs or getting up from a chair, describing them as progressive and more bothersome in the lower part of the body. The diagnosis was quite difficult to pinpoint because these symptoms could describe an inflammatory myopathy and hide behind symptoms commonly encountered in various other conditions. Therefore, a differential diagnosis must be made, and tests such as electromyography, respiratory function tests, creatine kinase and serum transaminases by blood tests and also muscle strength testing should be made to observe hypotonia predominance . On neurological examination, there is a low muscle strength in the pelvic girdle, proximal lower limbs, and paravertebral muscles. Abolished lower limb reflexes, global muscle atrophy are present without sensory or coordination disorders. The patient, with good general condition, also presents a history of hepatic steatosis. **Discussions :** The diagnosis of Pompe disease was made in 2017, and enzyme replacement therapy was started every 2 weeks with MYOZYME 20mg/kg bodyweight, 31 flac of 50 mg in saline I.v. The patient reports an improvement in symptoms and continues to return for treatment every two weeks. **Conclusions:** Although a challenging condition to diagnose, our patient is living

proof that with proper treatment and compliance, symptoms can be improved for the optimization of quality of life.

Keywords: Acid alpha-glucosidase, muscle atrophy, hypotonia, myozyme

PREOPERATIVE MANAGEMENT FOR D-TRANSPOSITION OF THE GREAT ARTERIES: CASE REPORT

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Introduction: The transposition of great arteries is a critical congenital heart defect encountered in newborns infants, characterized by the wrong connection of the ventricles with the proper artery, that will lead to a segregation of the the pulmonary and systemic circulation. Without the presence of an opening between the two circulation this malformation leads to the death of the newborn. **Case Report:** In this case presentation we will talk about a newly born baby with d-transposition of the great arteries already suspected during the intrauterine life. He was born vaginally in cranial presentation at 41 weeks of gestational age, weight at birth 3800g, length: 57cm, PC: 34 cm. APGAR score of 9/1 min, 9/5 min. Due to the suspicion of the defect, the patient was transferred in the neonatal intensive care unit (NICU), for further investigations and appropriate treatment. At the beginning of hospitalization the general condition was easily influenced, with generalized cyanosis, no edema, respiratory rate: 60-70 breaths per minute, oxygen saturation: 80-85%, normal heart sound with no additional murmurs, the heart frequency was 150/170 beats per minute. The heart ultrasound reveal the d-transposition of great arteries and also, a 4-5 cm ostium secundum atrial septal defect with left - right shunt and persistent ductus arteriosus with bidirectional shunt mostly from aorta to the pulmonary artery. Intravenously Prostaglandin treatment was started with the initial dose of 0.003 micrograms/kg/min under preductal and postductal SPO2 monitorization to maintain the oxygen saturation at 75-85%. Diuresis and blood gases were also monitored. Subsequently, based on serial heart ultrasound, the need for emergency septostomy was excluded, respectively the prostaglandin doses were adjusted, with the gradual decrease the dose to 0.005 µg/kg/min, the oxygen saturation being maintained at 85-87%. **Discussions :** The evolution was favorable during the hospitalization in NICU, without any desaturations and side effects of prostaglandin administration. After 6 days, the patient was transferred to the cardiovascular surgery department for arterial switch. **Conclusions:** Early identification of the critical cardiac congenital malformations such as transposition of the great arteries along with preoperative treatment and early performed surgery will have a favourable prognosis for the newborn's outcome.Before the definitive intervention of the arterial switch, the treatment consists in the administration of prostaglandins E1 intravenous, to keep the arterial channel open and, if necessary, it is followed by a septostomy intervention that leads to widening the communication between the 2 atrial cavities.

Keywords: d-transposition of the great arteries, congenital heart defect, Arterial septal defect, prostaglandin

COMPLICATED LEFT VENTRICULAR DIVERTICULUM MIMICKING MYOCARDIAL TUMOR

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Introduction: Left ventricular diverticulum (LVD) is a rare congenital abnormality characterized by a dilated invagination of the cardiac wall containing all layers of the heart. These anomalies are mainly asymptomatic and usually discovered incidentally during other investigations. Our study also highlights the importance of Magnetic Resonance Imaging (MRI) in LVD diagnosis, standing to determine types of tissues and elude therapeutic misguidance, unlike other imagistic methods that can have their specific limitations. **Case Report:** We report a case of a 42-year-old male patient with no pathological antecedents who arrived in the emergency room accusing an extended ischemic cerebrovascular accident. A cerebral angioCT portrayed no artery occlusion; the patient developed intracranial hemorrhage and followed a decompressive craniotomy with surgical drainage of the hematoma, Echocardiography evidentiated a thickened interventricular septum presenting a suspicious tumoral mass as a probabilistic embolus formation source. The diagnosis, based on MRI, showed a fibrous myocardial diverticulum with atypical localization on the interventricular septum complicated with thrombosis in the diverticular sac; the patient follows anticoagulant treatment due to intradiverticular thrombus, motor recovery, and imagistic monitoring. **Discussions :** LVD has a good prognostic, generally, but complications such as thrombosis, embolism, lesions, and ventricular arrhythmias may appear. Diverticulum can develop in the apex and perivalvular

region, but studies have shown its presence in every ventricular wall area. It presents synchronous contractility and can close during the systolic phase making it hard to diagnose by ultrasound. LVD differential diagnosis was with a tumor or a septal aneurism complicated with thrombus; MRI criteria for the tumor was not suggestive and the patient has no myocardial infarction in antecedents or representative modifications on electrocardiogram for ischemia. **Conclusions:** The particularity of this case is the thromboembolic complications of the myocadiac lesion due to LVD existing in the interventricular septum and the atypical localization of the anomaly. Cardiac MRI helped with the differential diagnosis, preventing unnecessary treatment for the patient.

Keywords: Rare Cardiac Congenital Anomaly, Fibrous Myocardial Diverticulum, Magnetic Resonance Imaging

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A RARE CAUSE OF PRIMARY AMENORRHEA: MORRIS SYNDROME

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Introduction: Morris Syndrome, also known as Androgen Insensitivity Syndrome (AIS), is a rare genetic disorder characterized by complete, partial, or mild androgen resistance. Depending on the severity of the androgen resistance, patients might have a female phenotype, but with primary amenorrhea and male karyotype (46, XY). **Case Report:** We present the case of a 15-year-old patient who presented to the Endocrinology Department complaining about primary amenorrhea. Regarding her medical history, she had a surgical intervention for a right inguinal hernia at the age of 14 months. Clinical examination revealed a high stature with a female phenotype, with adequate breast development and female external genitalia, without axillary hair and scarce pubic hair. The patient underwent hormonal investigations that described elevated levels of testosterone as well as elevated levels of follicle-stimulating hormone (FSH), luteinizing hormone (LH), and anti-mullerian hormone (AMH). The pelvic ultrasound confirmed the absence of the ovaries and uterus. Karyotype was performed which showed a male karyotype (46, XY). **Discussions :** AIS includes three clinical forms that differ from each other depending on the severity of androgen resistance: complete androgen insensitivity syndrome (CAIS), partial androgen insensitivity syndrome (PAIS), and mild androgen insensitivity syndrome (MAIS). CAIS is usually diagnosed during puberty when patients with a female phenotype undergo investigations for primary amenorrhea, PAIS might be diagnosed at birth following the presence of ambiguous external genitalia, while MAIS could present with a masculine phenotype, gynecomastia, and infertility. Treatment of this condition must be individualized for each patient and typically requires a multidisciplinary team. The management of AIS depends on the clinical form and usually implies psychological counseling, hormone replacement therapy, and surgical care such as orchidectomy, correction of hypospadias, or reduction mammoplasty. **Conclusions:** AIS can present in three main clinical forms, each of them having a particular pattern regarding the physical exam, diagnosis, and management. The diagnosis relies on clinical examination, hormonal investigations, pelvic imaging, and genetic analysis. The management requires a multidisciplinary team and is individualized for each patient.

Keywords: Morris Syndrome, Androgen Insensitivity Syndrome, Primary amenorrhea, Karyotype

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A COMPLEX OF ANOMALIES REQUIRING A CONTINUOUS FOLLOW-UP.

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Introduction: VACTERL syndrome is a rare birth disorder that refers to the co-existence of at least three of the congenital anomalies after which it was named: vertebral/vascular anomalies, anal atresia, cardiac malformations, tracheoesophageal fistula, renal anomalies and limb anomalies.It was described for the first time in 1972 by Linda Quan (an emergency room physician) and Sam Smith (a dysmorphologist) with the name VATER, and included vertebral anomalies, anorectal malformations, esophageal atresia, radial anomalies. After several years, some studies revealed that cardiac, renal and limb anomalies may be included, and the syndrome's name was changed to VACTERL.According to a study done by EUROCAT (European Surveillance of Congenital Anomalies) between 2012 and 2016, the prevalence of VACTERL was 1 in 20,000 live births. **Case Report:** We present the case of an 8 years old male patient who presented esophageal atresia with tracheoesophageal fistula at birth. The defect was surgically corrected in the first 24 hours and the patient showed a favorable evolution. He also presented atrial and ventricular septal defects that spontaneously closed until the age of 3.At age of 3, our patient suffered an emergency surgery for peritonitis (due to accidental ingestion of a toy battery) during which Meckel's diverticulitis

was also revealed and treated.Our patient also presents a right congenital hydronephrosis with cystic degeneration (recent abdominal ultrasound examination: no palpable mass in the right renal bed; the left kidney is compensatory expanded).He was recently diagnosed with asthma for which he was prescribed antihistaminic treatment.Based on the presence of four specific anomalies, the diagnosis of VACTERL was established. **Discussions :** VACTERL syndrome is an association of malformations. To manage it, we must have a good treatment plan, prioritizing the life-threatening conditions that must be corrected immediately, but also keeping these patients under constant observation.In this case, the patient had an esophageal astresia with tracheoesophageal fistula that was surgically treated in the first days of life. However, other malformations and complications that were not immediately visible at birth were diagnosed in the following years. This case proves the importance of a continuous follow up for the patients diagnosed with VACTERL syndrome. **Conclusions:** Patients with VACTERL syndrome must be kept under close observation from the first day of life in order to correct the malformations at the right time and to prevent other complications that can occur (including after surgical interventions) and can influence the long-term prognosis.

Keywords: VACTERL syndrome, esophageal atresia, Meckel's diverticulitis, Asthma

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THE ROLE OF MILITARY CHEST SEAL IN IMPROVING THE MANAGEMENT OF PENETRATING THORACIC TRAUMA

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Introduction: Penetrating chest trauma is one of the main causes of potentially preventable prehospital death, as it is associated with high mortality. Open pneumothorax results from the accumulation of air within the pleural space, secondary to penetrating chest trauma. Without prompt treatment, this can lead to tension pneumothorax and obstructive shock, which may degenerate into respiratory and circulatory failure. **Case Report:** A 17-year-old male, victim of physical assault, had sustained two stab wounds. The lesions were located in the left axillary area and in the right lumbar area, respectively. Upon the arrival of the prehospital team, the patient was conscious, pale, showing respiratory insufficiency (tachypnea, left side absent breath sounds, SpO2 of 73%) and circulatory distress (AV=105 bpm, BP=105/75, prolonged capillary refill time, cold and diaphoretic skin). Considering the shock index was 1.0, obstructive shock due to the collapsed lung was suspected. The chest wounds were covered using SAM® Vented Chest Seal and preparations for a chest tube insertion were initiated. Nevertheless, after the placement of the chest seal, the patient's vital signs improved considerably. As such, the placing of the chest drain was performed after the patient's admission, the procedure taking place in a more controlled and sterile environment. The patient was discharged on day 8, without infectious complications. **Discussions :** Chest seal devices are commonly used in military settings to create an airtight seal over a wound, preventing the entry of further air into the pleural space and thereby reducing the risk of tension pneumothorax and improving patient outcome, thus easing prehospital management. The traditional treatment of an open pneumothorax is a sterile occlusive dressing manually taped on three sides, that would allow air to escape from the pleural cavity while preventing its further accumulation. Although this option has proved effective, there are no standardized techniques or evidence that support it. In comparison with the commercial devices specifically aimed at treating open pneumothorax, the manually-made dressings could be less adhesive to the skin, especially when it comes to a diaphoretic patient with increased respiratory effort or in extreme temperature or weather conditions. **Conclusions:** To conclude, although the sterile occlusive dressing is a rapidly available management option for an open pneumothorax, commercial ready-to-use chest seal devices represent easier and more reliable methods for immediate prehospital stabilization of critical patients with thoracic penetrating wounds, in spite of the lack of evidence in reducing mortality and improving patient's outcome.

Keywords: penetrating chest trauma,, assault,, prehospital,, open pneumothorax

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SEVERE EOSINOPHILIC ASTHMA AND MONOCLONAL ANTIBODIES THERAPY: A CASE REPORT

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Introduction: Severe asthma is a very serious condition that affects health and life quality of over 260 million

people worldwide (about 4-6 percent of total asthma patients). The most common phenotype responsible for the severe disease is eosinophilic asthma, characterized by abnormal levels of type 2 innate lymphoid cells and type 2 cytokines. Recognition is very important as it has important implications for management of the disease and the potential to improve patient outcomes. **Case Report:** We present the case of a 53-year-old woman known with GINA IV asthma and multiple substances allergy who was presented at the County Hospital from Targu Mures, Pneumology Clinic, complaining of wheezing, dyspnea, thoracic pain and extreme fatigue. She was admitted with acute exacerbation of asthma and acute respiratory insufficiency and was treated with intravenous glucocorticoids, oxygenotheraphy, painkillers and bronchodilator medication. Laboratory examination showed high levels of eosinophils as high as 0,68x 10^9/L. Despite great compliance to treatment with high-dose inhaled glucocorticoids, long-acting beta-2 adrenergic agonists associated with oral glucocorticoids and short-acting beta-2 adrenergic agonist, the patient has several exacerbations yearly. Considering the history and lab results, a treatment with monoclonal antibody (Benralizumab) was initiated. After just one subcutaneous injection, eosinophils number lowered drastically to 0,28x 10^3/ul. **Discussions :** Benralizumab is a monoclonal antibody that lowers the number of eosinophils by attaching to the interleukin 5 receptors that are produced on them. In this case it was initiated considering the multiple asthma exacerbations of the patient, associated with eosinophilia, despite an adequate maximal bronchodilator treatment. The patient's level of eosinophils drastically decreased after receiving just one dosage of Benralizumab, and she will continue the medication under close medical monitoring as she is expected to fully recover and have a better life quality with less acute exacerbations. **Conclusions:** Some patients with severe asthma have frequent exacerbations associated with persistent eosinophilic inflammation despite continuous treatment with high dose inhaled glucocorticoids with or without oral glucocorticoids. It is crucial that every asthmatic patient is tested for eosinophilia, as monoclonal antibody-therapy is very efficient in treating this phenotype.

Keywords: severe asthma, eosinophilia, exacerbation, monoclonal antibody therapy

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A NUTRITIONAL COMPARISON BETWEEN NEW PLANT-BASED MEAT AND MEAT PRODUCTS USING NUTRITIONAL LABELS

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Introduction: On a global level, it is recommended to choose a lifestyle that from a nutritional point of view contains less protein that comes from animal sources or processed meat and more plant-based products that come from sustainable protein sources. This paper aims to evaluate the evidence of the nutritional quality of plant-based meat products based on their labelling. **Case Report:** Articles were selected from scientific databases (ScienceDirect, PubMed, and Scopus), using the following keywords: "plant-based meat", "meat analogues", "alternative protein", "nutritional quality". **Discussions :** Several nutritional parameters have been identified and compared, such as: energy value, fat content, especially saturated fat content, protein content as a source of essential aminoacids, carbohydrate content, salt, and dietary fiber content. Plant-based meat products have a good nutritional profile for consumption, because they are lower in calories and saturated fats, and have a higher dietary fiber content than their meat analogues. **Conclusions:** Scientific data shows that plant-based meat products can be considered a good source of alternative protein. "This work was supported by the University of Medicine, Pharmacy, Science and Technology "George Emil Palade" of Târgu Mureș Research Grant number NR.164/14/10.01.2023."

Keywords: plant-based meat, meat analogues, alternative protein, nutritional quality

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DEEP VENOUS THROMBOSIS AS AN EXTRAINTESTINAL MANIFESTATION OF ULCERATIVE COLITIS - CASE REPORT

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Introduction: Ulcerative colitis (UC) is a chronic inflammatory condition of the colon with unclear pathogenesis, characterized by ulcerative lesions in the intestinal mucosa, associated with rectal bleeding, colicky abdominal pain, diarrhoea, and fever. Extra-intestinal manifestations of UC are seen to occur in more than one quarter of

patients, among them deep vein thrombosis (DVT) being a life-threatening condition. **Case Report:** We present the case of a 49-year-old female patient who was diagnosed with ulcerative colitis in 2011 through lower gastrointestinal endoscopies and repeated biopsies. She was treated with mesalazine and corticosteroids po, but with irregular follow-up. She presented with worsening symptoms over the past month, including nocturnal diarrhea with rectal bleeding, diffuse colicky abdominal pain, weight loss, and marked fatigue, which were not improved by self-administered corticosteroids. The patient was treated with methylprednisolone and mesalazine, with gradually increasing fecal calprotectin levels up to 2000 µg/g. Laboratory tests showed marked leukocytosis, hypertriglyceridemia, hypercholesterolemia, neutrophilia, and hypoferritinemia. During hospitalization, leukocytosis increased up to 27.72 x 10^3/µL, partly due to increased doses of intravenous steroids. Tests for Clostridium difficile and stool culture were negative. A rectosigmoidoscopy was performed, which showed severe changes in the investigated segments of the sigmoid mucosa, including multiple deep, serpiginous ulcerations with a tendency to form pseudopolyps and intense friable mucosa. The histopathological examination supported the diagnosis of diffuse chronic colitis with moderate activity. Systemic corticosteroid therapy was initiated, which improved the patient's general condition, with a decrease in diarrhea and the presence of semi-solid stools in the last 3 days, as well as an improvement in abdominal discomfort. However, one week after discharge, the patient presented with pain in the lower right leg, and venous Doppler echography revealed a popliteal thrombosis. Low-molecular-weight heparin was started without complications. **Discussions :** The persistence and increase of leukocytosis, the increased fecal calprotectin level, and the recto-sigmoid endoscopic appearance described after lower gastrointestinal endoscopy suggests resistance to corticosteroid therapy. In this regard, initiation of biologic treatment is proposed. The chronic inflammatory nature of inflammatory bowel disease has been identified as a predominant reason for a state of Virchow`s, eventually leading to the onset of venous thromboembolism. **Conclusions:** Despite appropriate treatment, patients with moderate to severe ulcerative colitis may experience worsening symptoms. Patients with UC present a high risk associated with ulcerative colitis and steroid consumption for the development of venous thromboembolism in patients with inflammatory bowel disease.

Keywords: Ulcerative colitis, Deep vein thrombosis, corticosteroid therapy

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VERTEBRAL-SUBCLAVIAN STEAL SYNDROME

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Introduction: Vertebral-subclavian steal syndrome consists of flow reversal in the vertebral artery that is caused by a hemodynamically significant stenosis of the proximal ipsilateral subclavian artery. Whether asymptomatic or clinically manifest, subclavian artery stenosis is a marker of systemic atherosclerosis and is associated with an increased risk for cardiovascular events. **Case Report:** A 62-year-old female with a history of hypertension and dyslipidemia, was admitted to the cardiology department for left arm claudication and paresthesia on minimal exertion. A 40mmHg difference in brachial blood-pressure was noticed in favor of the right arm. A bruit was heard in the left supraclavicular fossa and the left radial artery pulse was absent. Transthoracic echocardiography excluded the presence of aortic disease. The left ventricular ejection fraction was normal and no significant valvular heart disease was present. Doppler ultrasound revealed a dampened, monophasic waveform in the distal left subclavian artery and the reversal of ipsilateral vertebral artery flow. No significant carotid artery lesions were described. A diagnosis of left vertebral-subclavian steal syndrome was established and an indication for subclavian artery revascularization was made. Through right common femoral artery access, an invasive angiography of the supra-aortic vessels was performed. The examination showed the presence of a proximal left subclavian artery occlusion and confirmed the flow reversal in the ipsilateral vertebral artery. Unfractionated heparin was administered at a dose of 100UI/kg. The left subclavian artery was selectively intubated, and the occlusion was crossed with a 0.035" hydrophilic guidewire. The lesion was predilated with an 8.0/40mm balloon and a 9.0/38mm balloon-expandable stent was deployed. Normal antegrade flow was restored in both the subclavian and the vertebral artery. Double antiplatelet therapy was administered for one month and the patient made an uneventful recovery. **Discussions :** Atherosclerosis is the most common cause of vertebral-subclavian steal syndrome. However, thoracic outlet syndrome or large artery vasculitis must be excluded in specific clinical scenarios. Percutaneous or surgical subclavian artery revascularization is indicated in symptomatic patients. In asymptomatic cases, subclavian revascularization is recommended in the presence of an ipsilateral internal mammary artery graft to the coronary arteries, with evidence of myocardial ischemia, or in patients on hemodialysis with an ipsilateral arterio-venous fistula. **Conclusions:** Awareness of the condition and a high index of suspicion is required for the diagnosis of vertebral-subclavian steal syndrome. This case illustrates the typical clinical and

imagistic findings of vertebral-subclavian steal syndrome in a patient with atherosclerotic subclavian artery occlusion.

Keywords: vertebral-subclavian steal syndrome, subclavian artery occlusion, percutaneous revascularization

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EISENMENGER SYNDROME CAUSED BY UNTREATED ATRIAL SEPTAL DEFECT: A CASE REPORT

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Introduction: Atrial septal defects are a group of common congenital heart disorders that cause failure to close communication between the atria. The result is a left to right shunt in the heart that may cause right heart hypertrophy / overload / high output states over time. Eventually, this can lead to Eisenmenger syndrome, where the pressure in the right atrium becomes high enough that the flow is reversed, resulting in a right to left shunt. **Case Report:** A 51 year old female presented to the emergency room accusing dyspnea, palpitations, vertigo and dry coughing, after 2 weeks of worsening symptoms. When admitted, the patient had a history of an atrial septal defect, congestive heart failure, coronary heart disease as well as tricuspid and mitral valve regurgitation. A physical exam revealed tachycardia, peripheral cyanosis, crackles in the lungs, lower leg edema and an enlarged liver. Following an EKG that showed atrial fibrillation, the emergency diagnosis was acute heart failure with tachyarrhythmia. An ultrasound investigation revealed an 9.3 mm ASD with apparent bidirectional flow, increased pulmonary arterial pressure with dilated arteries, a dilated right ventricle and inferior vena cava, as well as bilateral pleural collections. A chest X-ray revealed an opacity in the right lung. Eisenmenger syndrome was suspected, but a thoracic ultrasound was inconclusive. Because the patient was hemodynamically stable, they received IV treatment with antibiotics, diuretics, antithrombotics and antiarrhythmics. Over the next week, their edema, crackles and cough have disappeared while her exertion tolerance has increased and the patient was discharged, with treatment for chronic heart failure. **Discussions :** Eisenmenger syndrome is diagnosed by evaluating the signs of pulmonary hypertension, followed by complete cardiac catheterization. Although catheterization wasn't performed, the symptoms (cyanosis, pulmonary hypertension, apparent bidirectional flow) were suggestive of the syndrome. Because repair of the atrial sept defect is contraindicated and a donor for cardiopulmonary transplantation is unlikely, treatment with endothelin antagonists should be considered. **Conclusions:** If left untreated, atrial septal defects larger than 5 mm result in symptoms that begin manifesting after 30 years. Patients may present with dyspnea, exercise intolerance, palpitations or signs of right heart failure. For this reason, these defects should be treated as soon as they are discovered.

Keywords: Eisenmenger syndrome, atrial septal defect, heart failure, pulmonary hypertension

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IS THERE A ROLE OF THEOPHYLLINE IN THE MANAGEMENT OF BRADYCARDIAS? CASE STUDIES – COINCIDENCES OR SCIENCE.

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Introduction: In many cases, symptomatic severe bradycardias are managed using temporary, or, if the condition is persistent, permanent pacing. However, in certain specific cases (e.g. due to the option of the patient) there is a need for other, conservative approaches. In this regard, theophylline (TPhy) has been used for a long time in heart rate acceleration. TPhy is a medication from the group of Xanthine's. Next to its bronchodilating effect, it also has a positive inotropic and chronotropic effect on the heart. **Case Report:** 1. GM: 74 years old woman with severe rheumatic mitral stenosis, atrial fibrillation, two episodes of syncope with serious thoracic injury. Slow atrial fibrillation on ECG and numerous pauses on Holter ECG, including asystole >6 seconds during the night. Under TPhy 200 mg two times a day, only a couple of persisting pauses (>1,5 seconds), were still recognized during the night. The patient is asymptomatic during the day. 2. SzS: 86 years old man with total AV block, causing fatigue, who refused pacemaker implantation. On TPhy 200 mg two times a day, the total AV block disappeared, persisting only a long PR interval. 3. ZE: 77 years old woman with sinus node disease (atrial tachyarrhythmias alternating with severe sinus bradycardia). Administration of TPhy 200 mg per day. On the Holter EKG an improvement of the bradycardia was recognized without pauses (> 1,5 seconds). 4. BG: 82 years old man with atrial fibrillation. Paroxysmal nocturnal AV block with pauses up to 7,5 seconds. TPhy 200mg per day were administered in the

evening. On the Holter ECG it is recognized, a significant reduction in the number of pauses (> 1,5 seconds). **Discussions :** In this series of cases, we tried to demonstrate the role of TPhy in the management of bradycardias. Due to the positive inotropic and chronotropic effects of Tphy it is possible the existence of a potential positive effect on patients with bradycardia. As the cases above show, there was a clear improvement of the cardiac status of the patients after the administration of Tphy. This improvement can be related to the effect of Tphy on the rate and contraction of the heart. **Conclusions:** In the specific cases presented above, TPhy has a rescue effect on severely slow heart rates. Keeping in mind the importance of guideline-based management of bradyarrhythmias, we tried to focus on the potential beneficial effect of the drug in certain, rare, real life circumstances.

Keywords: Theophylline, Bradycardias, Case studies

PORTAL VEIN THROMBOSIS

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Introduction: Portal vein thrombosis (PVT) refers to either a complete or a partial obstruction of the blood flow in the portal vein due to a thrombus formation. As a result of the thrombosis, the portal vein undergoes cavernous transformation, which causes the normal, single-channel portal vein to be replaced by a network of tortuous venous channels. It is a major cause of portal hypertension in children, with high morbidity rates due to its primary complication - upper gastrointestinal bleeding. Both ulcero-necrotic enterocolitis and neonatal sepsis are frequently linked to PVT. The progression of PVT generally leads to portosystemic collateral blood vessels to the development of splenomegaly, portal hypertension, and rectal varices (hemorrhoids). **Case Report:** The patient with confirmed PVT was carefully observed from 8 March 2022 to 5 April 2022. In addition to some blood tests, he had imaging results from an abdominal ultrasound and a CT scan with contrast for the abdomen, pelvis, and thorax. Computed tomography (CT) shows us dilated portal vein bed which is filled with numerous tortuous/serpiginous vessels. Moreover, we observe the splenomegaly. **Discussions :** I would like to present a case study of a patient who underwent treatment for portal vein thrombosis at the Emergency Hospital for Children, "Sfântul Ioan" Galaţi, with a focus on diagnosis, presentation and clinical complications, as well as the management of portal hypertension. The patient showed up at the hospital's emergency room due to the fact he was experiencing nausea and vomiting in addition to pyrexia (his highest temperature was 39◦ C at home). A pharyngeal exudate was performed which proved to be positive for the influenza A virus for which he received Tamiflu for five days. The CT scan revealed dilated splenic vein and left gastric vein, mesenteric adenopathy, and small bilateral intrapleural fluid effusion, without ascites fluid. He was transferred to the surgical department following stabilization. **Conclusions:** After stabilization, the patient will benefit from specialized treatment from the surgical team. Surgical intervention was attempted, but unfortunately it was not successful. The patient is now on the waiting list for a liver transplant.

Keywords: Portal vein thrombosis, Cavernous transformation, Splenomegaly, Hemorrhoids

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IS IT REALLY A FIBROMA OR IS IT SOMETHING MORE? – A COMPLETE HYDATIDIFORM MOLE CASE REPORT

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Introduction: A complete hydatidiform mole is a type of gestational trophoblastic disease, caused by the over-proliferation of the chorionic villi of the placenta, which has no traces of fetal tissue. Although this is a benign condition, it is also considered a pre-malignant lesion. Molar pregnancies have a low frequency and are associated with extreme maternal age (under 20 and greater than 35). There are no specific symptoms. **Case Report:** A 32-year-old female patient presented to our clinic with lower abdominal pain and irregular menstruation. On the ultrasound exam, the uterus appeared enlarged due to a heterogenous, calcified cystic mass, highly suggestive of a fibroma. On the MRI exam, the endometrial tumor appeared heterogenic, with cystic areas as well, but also surrounded by hemorrhage. The myometrium had a normal width with small invasion areas in the upper region, but no extra-uterine extension. Consequently, the MRI aspect suggests the diagnosis of a complete hydatidiform mole.

The imagistic results were correlated with high beta-HCG values (>500.000 mUI/ml), confirming the diagnosis. Treatment consisted of evacuation of the uterus by dilation and curettage. Having known the fact that this is a pre-malignant lesion, it was also sent to the histopathological exam, which showed no signs of choriocarcinoma. **Discussions :** Most complete molar pregnancies are diagnosed in the first trimester, due to ultrasonography, which is the standard imaging tool used in these kinds of pathologies. However, ultrasonography has its downsides: it is highly operator-dependent and in our case, due to the large size of the tumor, it could not specify whether the exact location of the mass was at the level of the myometrium or the endometrium. MRI played a critical role and provided a better understanding of the tumor's nature, proving that the diagnosis should not rely on a single imaging technique. **Conclusions:** This case study aims to emphasize the underestimated importance of MRI in the diagnosis of a hydatidiform mole and the crucial role of histopathology in excluding the possibility of a choriocarcinoma.

Keywords: Hydatidiform mole, MRI, fibroma, choriocarcinoma

WHEN PAIN BECOMES A HABIT: A CHALLENGING DIAGNOSIS OF FUNCTIONAL ABDOMINAL PAIN

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Introduction: Functional abdominal pain syndrome (FAPS) is a distinct chronic gastrointestinal pain disorder characterized by the presence of constant or frequently recurring abdominal pain that is not associated with eating, change in bowel habits or menstrual periods. The aim of this presentation is to raise awareness around functional pathologies in order to reach a faster diagnosis and treatment. **Case Report:** A 73-year-old woman presented to the hospital with diffuse abdominal pain, mainly centered in the umbilical region, flatulence, and anorexia. The patient reported a long history of abdominal pain, lasting for nearly 40 years, unmodified by the usage of antispasmodic, NSAIDs or antiflatulent medication and being unrelated to physiological events. The clinical examination revealed sensitivity in the umbilical region. Further on, all organic causes have been excluded by numerous examination: gastroscopy, colonoscopy, abdominal ultrasound and abdominal, and pelvic MRI. The differential diagnosis was made between functional abdominal pain, irritable bowel syndrome, abdominal migraine and diabetic neuropathy, however the patient met all the criteria for Centrally Mediated Abdominal Pain Rome IV Class D1, meaning a continuous abdominal pain unmodified by physiological events which limits aspects of daily functioning, it is not feigned and cannot be explained by another structural disorder. The medication administrated consisted of a tricyclic antidepressant, amitriptyline, with favorable evolution, resulting in pain relief in the first month. **Discussions :** The difficulty in assessing functional patients may lead to lengthy periods of uncertainty for both the patient and the doctor, especially because very often there is also a psychological part involved. One of the most demanding aspects of this process may be establishing whether or not the patient simulates the symptoms. **Conclusions:** Considering the hectic lives of today's existence and the constant pressure on peoples' minds, it is clear that incidence of functional pathologies is on the rise, especially since psychosocial disturbances play a major role in triggering these diseases. Doctors should be more aware of this when facing such patients, ensuring that the process of diagnosis is smooth and empathic. Moreover, clinicians must also take into consideration that the inability to carry on daily tasks is a considerable burden on patients. Most often this results in amplified symptoms, an issue that must be addressed with proper understanding.

Keywords: Roma IV, Centrally Mediated Abdominal Pain, Amitriptyline, psychosocial disturbances

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A CHANCE AT LIFE: THE RIGHT MANAGEMENT OF FANCONI SYNDROME AND PATENT DUCTUS ARTERIOSUS IN A 6 WEEKS OLD FULL-TERM INFANT

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Introduction: Fanconi Syndrome (FS) is a rare genetically heterogenous autosomal recessive disorder characterised by congenital malformations, progressive marrow failure and malignancies. Physical features as congenital heart defects occur in less than 5% of patients diagnosed with FS. Patent ductus arteriosus (PDA) is the

vital communication between the left pulmonary artery and aorta in the intrauterine life, but a source of decompensation if the patency of ductus is maintained. Percutaneous and surgical closure are the 2 alternatives for PDA closure, both with potential per-operative and post-operative side effects. There is little literature concerning the best alternative for patients with PDA weighing between 2 and 6 kg. **Case Report:** This paper aims to present the case of a full-term female baby who was admitted to the Pediatric Cardiology Department of the Timone University Hospital of Marseille, France, at 6 weeks of life for heart murmur with dorsal radiation and failure to thrive. The subject's genetic report after birth was compatible with the cytogenetic diagnosis of FS. Additionally, she presented hexadactyly, ectopic positioning of both kidneys, low attached medullae and an interhemispheric cyst. Pharmacological closure with 2 doses of Ibuprofen during the first week of life was unsuccessful. Transthoracic echocardiography showed normal anatomy, but persistent wide PDA (3 mm), with significant but mildly restrictive left to right shunt (velocity 2,7 m/s). Right ventricular pressure was mildly elevated (45 mmHg) and left atrium was dilated (LA/Ao = 2/1). Percutaneous closure of PDA was performed at the weight of 2,3 kg. The device was inserted into the duct through the femoral veins. Complete ductal closure was obtained, but mild stenosis of left pulmonary artery was noticed at the end of the procedure. The patient had a favourable evolution with a decrease in symptoms. She was discharged to the neonatology department, two days after the percutaneous intervention. At follow-up, cardiac status was favourable, with on ultrasound complete ductal closure, mild left pulmonary artery stenosis, normal pulmonary pressures and normal left atrial and left ventricle dimensions. **Discussions :** Our clinical case shows that percutaneous closure can be an appropriate choice in small children weighing less than 6 kg with patent duct. **Conclusions:** The challenge in low weight PDA infants is to find the most appropriate solution according to the needs and context of the patient, whilst being ready to intervene in case side effects occur. Future studies comparing surgical with percutaneous closure will help clinicians in choosing the best option.

Keywords: Patent Ductus Arteriosus, Fanconi Syndrome, Congenital Heart Defects, Percutaneous Closure

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AUTOIMMUNE POLYGLANDULAR SYNDROME TYPE 1 - THE DIAGNOSTIC AND THERAPEUTIC CHALLENGE STARTING FROM A CLINICAL CASE

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Introduction: Autoimmune polyglandular syndrome type 1 (APS-1) is an autoimmune disease characterized by a triad of hypoparathyroidism, primary adrenal insufficiency, and chronic mucocutaneous candidiasis. Diagnosis is made by finding antibodies against interferon-omega or interferon-alpha or by detecting disease-causing mutations in the autoimmune regulatory gene (AIRE). **Case Report:** We present the case of a 25-year-old patient regularly evaluated in the Cluj Endocrinology department for APS-1. At the age of 5, she was diagnosed with hypoparathyroidism and mucocutaneous candidiasis (onychomycosis, oral candidiasis), and treated with calcium, magnesium, and an active form of vitamin D (calcitriol). At 15, chronic lymphocytic thyroiditis (Hashimoto's) was found based on an increased titer of anti-thyroid peroxidase, anti-thyroglobulin antibodies (Abs), and increased TSH values. Substitution treatment with L-thyroxine was initiated. At 19, she presented with nausea, vomiting, abdominal pain, constipation, paresthesia and muscle cramps, and clinically she had mucocutaneous pigmentation, dehydration and orthostatic hypotension. Biochemical analyzes showed hyponatremia, hyperkalemia, elevated transaminase levels, low 8 a.m. cortisol= 5.92 µg/dL (5-25), high ACTH at 1092 pg/mL (7.2-63.3), PTH=2.5 pg/mL (11-67), total Ca=9.5 mg/dL (8.8-10.6) under treatment, TSH=3.47 uIU/mL (0.4-4) under L-thyroxine 25 µg/d, Thyroid Peroxidase Ab=580 (<10). Adrenal primary insufficiency was diagnosed and treatment with Hydrocortisone: 20 mg/d and Fludrocortisone 0.05 mg/d plus Calcitriol 1-1.5 µg/d, Ca2+ 1.5-2 g/d, Mg 1 mg/d was initiated. The patient experienced intermittent oligomenorrhea, and the investigations for the gonadal axis showed FSH=23.4 mIU/ml (2.8-11.3) and Estradiol <20 pg/ml (20-160), suggesting a diminished ovarian reserve. Pernicious anemia was found 1 year later with low vitamin B12 associated with erythematous atrophic gastritis and positive antiparietal cell and intrinsic factor Abs, with need of vitamin B12 injections. Autoimmune hepatitis was excluded by normal anti-liver kidney microsomal Abs, antinuclear Abs, anti-smooth muscle Abs, anti-mitochondrial antibodies and anti-soluble liver antigen. **Discussions :** A homozygous nonsense variant AIRE c.769C>T, p.(Arg257*) was identified also in her 6-year-old brother, who recently complained of candidiasis and autoimmune hepatitis. Management of APS-1 is difficult due to the complexity and severity of its associated diseases and includes antifungal therapy and treatment of associated endocrine and autoimmune abnormalities. Therapeutic success also depends on the patient's compliance with the treatment. **Conclusions:** Management of this disorder requires collaboration among multiple specialties, due to the multitude of organs affected. Further studies will be

needed to develop and implement innovative gene therapies capable of improving the prognosis of this disease.

Keywords: Autoimmune polyglandular syndrome type 1, hypoparathyroidism, Addison disease, mucocutaneous candidiasis

THE DIAGNOSIS AND TREATMENT OF PARAGANGLIOMA: A CASE STUDY

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Introduction: Paragangliomas are rare neuroendocrine tumors that arise from the extra-adrenal autonomic paraganglia and have the ability to secrete catecholamines. Clinically, patients present hypertension, episodic headache, sweating, and tachycardia. Diagnosis of a secretory paraganglioma is typically made by measuring the urinary and/or plasma fractionated metanephrines and catecholamines. **Case Report:** We present the case of a 50-year-old woman diagnosed with mediastinal paraganglioma. The current illness started suddenly with dyspnea on exertion and a small amount of pericardial effusion. Chest CT scan incidentally discovered an intensely vascularized polylobate tumor of 56/65/55 mm in the anterior mediastinum and slightly on the left side of the aorta, respectively superior to the pulmonary arterial trunk. Surgical resection of the mediastinal tumor and pericardial drainage were performed. Histopathological and immunohistochemical examination argues for a paraganglioma of the sympathetic ganglion system, possibly malignant given Ki67 of 12%, PASS score=8, GAPP score=4, vascular invasion and resection margin invasion. Plasma metanephrines were not measured before surgery. The postoperative evaluation shows that plasma metanephrines are within normal limits, as well as other markers of neuroendocrine tumor; thyroid function is normal, calcitonin is negative, and total calcium and PTH are within normal limits. In September 2022, external radiotherapy was performed in a total dose of 50 Gy/25 fractions/46 days at the anterior mediastinal level. Cervico-thoracic-abdominal control CT did not indicate a residual tumor or nodal extension of the disease. F18-FDG-PET/CT of the whole body revealed an infiltrated appearance at the postoperative level, but without the outline of a focal area. **Discussions :** Sequence analysis identified a heterozygous nonsense variant SDHB c.603G>A, p.(Trp201*). Loss of function is an established disease mechanism in this gene. Conditions caused by SDHB variants are inherited in an autosomal dominant manner. Any offsprings of the patient are at 50% risk of inheriting the variant and being affected. The SDHB-related diseases may derive from a de novo variant. Genetic counseling and family member testing are recommended. Locoregional management of paragangliomas is difficult due to the risk of malignancy. **Conclusions:** The clinical course of paraganglioma is highly variable, therefore a multidisciplinary approach to management and treatment is optimal. Additional studies are required to create and apply new gene therapies that can enhance the outlook for this condition.

Keywords: paraganglioma, SDHB variant, neuroendocrine tumor, Catecholamines

PULMONARY TUBERCULOSIS AND ITS THROMBOEMBOLIC IMPLICATIONS

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Introduction: Tuberculosis (TB) is an infectious disease caused by Mycobacterium tuberculosis, representing one of the top 10 causes of death worldwide. The immune response developed following infection with Mycobacterium tuberculosis shows that macrophages play a key role in phagocytosis and the secretion of pro-inflammatory cytokines. Due to acid-alcohol resistance, the bacillus cannot be phagocytized by macrophages and multiplies within them. **Case Report:** We present a 54-year-old patient, known to have abscess pneumonia treated in the background, who appears in the program in the Pneumology section, accusing her of dyspnea at small effort and rest, asthenia, fatigue, an 8-kg weight loss in 13 months, and a cough with productive expectoration. Laboratory tests suggest neutrophilia and thrombocytosis. Non-specific antibiotic therapy and symptomatic treatment were initiated. Thoracic computer tomographic examination decelerates multiple nodular infiltrates with the miliary appearance of a "tree in bud" with a tendency to confluence, arranged in both pulmonary fields and accentuated at the level of the right lung. Apical, bilateral solid masses are observed with a tendency to cavitation□□□□□□□□□□ tuberculoma. The suspicion of secondary pulmonary tuberculosis is raised, the result of bronchial aspiration is positive for Mycobacterium tuberculosis, and the patient is transferred to the TB compartment. Treatment is administered according to the National Tuberculosis Control Program. Initially, the patient's progress was

favorable, with relief of respiratory symptoms.During hospitalization, the patient suddenly experiences afasia, oculo-cephalogira deviation to the left, right hemiparesis, positive Babinski sign to the right. Native cranial CT examination reveals an ischemic stroke constituted in the vascularization territory of the left ACM and left hemispheric cerebral edema with mass effect on the ipsilateral lateral ventricle. Trombolysis is performed with CT control every 24 hours and favorable progression. The patient is transferred to the Pneumology Department and continued treatment with Furosemide, Manitol, antiaggregant and low molecular weight heparins. Following treatment, the patient shows a favorable progression with partial recovery of motor deficiency and afasia. **Discussions :** In patients with pulmonary tuberculosis, trombocyte hyperaggregation and increased activation have been reported, with them often experiencing thrombocytosis correlated with elevated levels of acute phase reagents. The association between inflammation and hemostatic changes can lead to a state of hypercoagulability. It is believed that the inflammatory and infectious substrate of tuberculosis can be a risk factor for stroke, which is the peculiarity of this case. **Conclusions:** Tuberculosis is an infectious condition with systemic complications, associating parenchymal and ganglional lesions at the lung and extrapulmonary levels.

Keywords: tuberculosis, thrombocytosis, stroke

COMPLICATIONS OF BRONCHOPNEUMONIA CAUSED BY UNUSUAL MICROORGANISMS

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Introduction: Bronchopneumonia is an inflammatory/infectious condition that leads to the formation of intraparenchymal foci with a tendency to confluence. The histological substrate indicates the presence of a consolidated purulent exudate in the lumen of the bronchi. Pulmonary involvement in the case of sarcoidosis is interstitial, or in the early stages, only hilar and mediastinal adenopathies. Their pathogenic substrate is represented by granulomatous, noncaseous lesions. **Case Report:** We present the case of a 36-year-old patient, diagnosed with sarcoidosis 10 years ago, for whom he underwent 6 months of treatment with methylprednisolone, who presented to the Pneumology Section of the Emergency Department with a radiological image of extensive right pneumonia doubled by symptoms of infection: high fever, dry cough. Laboratory analyses revealed leukocytosis with neutrophilia, IgG for Mycoplasma pneumoniae and Chlamydia pneumoniae, and antibiotic treatment was initiated. Although the general condition initially improved, on the second day of hospitalization the patient complained of chest pain, and the chest X-ray revealed a left basal pleural effusion. Thoracentesis was performed, and 200 mL of turbid fluid were drained, revealing an exudate with elevated LDH values and low glycopleuria, suggesting empyema. The CT scan supported this diagnosis, and subsequently the treatment regimen was changed, combining three antibiotics (Gram negative spectrum, Gram positive and anaerobe) with very good clinical and imaging evolution. One day before discharge from Pneumology, without having performed any pleural puncture in the last 72 hours, the patient suddenly complains of dyspnea and chest tightness after minimal effort. An emergency X-ray showed a left partial pneumothorax, for which he was transferred to surgery for drainage. Seven days later, the patient had made a successful recovery with lung extension to the chest wall and was released. **Discussions :** Is sarcoidosis a risk factor in the evolution of some superimposed conditions? According to studies, young people with immune system anomalies are more likely to acquire particular lesions that affect the bronchi and pleura. In the presented case, the lesions were non-specific, the aspirate for Mycobacterium tuberculosis was negative. The particularity of this case is supported both by the serious evolution of bronchopneumonia and by the appearance of the left pneumothorax with minimal effort. **Conclusions:** Bronchopneumonia generates complications by extending the inflammatory process to the level of the pleura, where it activates a cascade of inflammatory events, weakening tissue integrity. Therefore, a favorable environment is established for the appearance of a continuity solution and the development of pleural empyema or pneumothorax.

Keywords: Bronchopneumonia, Empyema, Pneumothorax, Sarcoidosis

AN UNUSUAL CLINICAL PRESENTATION OF A PATIENT WITH INHERITED THROMBOPHILIA

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Introduction: Acute arterial thrombosis and thromboembolism are important life-threatening conditions that, in most cases, are a consequence of atherosclerosis, or a cardioembolic event. In this paper, we present the case of a patient admitted to our clinic with extensive arterial thrombosis due to an inherited thrombophilia disorder. **Case Report:** A 49-year-old female patient, presented to the County Emergency Hospital Cluj-Napoca for acute, intense left hypochondrium pain irradiating to the left shoulder, accompanied by nausea and vomiting. The patient was a non-smoker, with no history of miscarriages or other thrombotic events and was previously diagnosed with hypertension and type 2 diabetes mellitus. Laboratory results showed hypochromic and microcytic anemia, leukocytosis with neutrophilia, and increased C-reactive protein. Abdominal ultrasound revealed an inhomogeneous spleen which raised suspicion of splenic infarction which was confirmed by contrast-enhanced ultrasound. Abdominal CT angiography scan also revealed bilateral renal infarction and occlusion of the gastroduodenal and right hepatic arteries for which anticoagulant therapy was initiated. Dynamic laboratory studies showed marked and persistent thrombocytosis (1,2 $x10^6$/μL) which prompted the need for further investigation. Extensive thrombophilia screening identified mutations in Factor II gene (prothrombin G20210A), MTHFR C677T gene and the presence of 4G/4G genotype of PAI-1 gene, all associated with a higher risk of thrombosis. Anticoagulant therapy with low-molecular-weight heparin was administered and careful timing of splenectomy was considered, yet postponed, due to partial recanalization of the splenic artery. **Discussions :** The activity of Protein S, Protein C, and Antithrombin was normal and the localization of the thrombi in the arteries is also unusual for thrombophilia, the most common manifestation being venous thrombosis. Other possible etiologies considered were: myeloproliferative disorders such as Essential thrombocythemia, Polycythemia vera (negative bone marrow biopsy, absent JAK2 mutation, and normal hemoglobin levels), antiphospholipid syndrome (IgG and IgM antiphospholipid antibodies were negative), COVID-19 infection (tested negative), multiple arterial emboli (the echocardiogram did not reveal left atrial thrombus, valvular damage or infective endocarditis). Differential diagnosis in such cases is key for patient management, evaluating long-term prognosis, and choosing the best therapeutic options. **Conclusions:** Multiple organ infarctions can be an unusual manifestation of an inherited thrombophilia profile. Early recognition of symptoms in such patients can be challenging, yet invaluable for targeted diagnostic testing, while accurate differential diagnosis is key for short and long-term patient management.

Keywords: thrombophilia, infarction, thrombosis

BRAF MUTATION MELANOMA – A USEFUL ERROR OR A TRAGEDY ?

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Introduction: Melanoma is the most aggressive form of skin cancer that can arise from a preexisting nevus or even on normal skin. The estimated annual increase in incidence is 3□ □□–□worldwide for Caucasians. The frequency of BRAF mutations varies widely, from more than 80% in melanomas and nevi, 5% in colorectal to 1%□□□–□in lung carcinoma.**Case Report:** A 54-year-old patient presented to a dermatologist after observing a change in color, diameter and border of a mole that she had on the left lumbar zone (2006). She described the changes as very characteristic of a melanoma mole □ □□borders developin g unevenly, multiple colors and an enlargement of the lesion up to 6.3mm. After a biopsy, the result revealed the presence of a malignant transformation of melanocytes. The personal oncological history described 2 types of cancer - left subscapular region stage Clark II/III melanoma (diagnosed in 1999), excised and ovarian carcinoma stage IIIC (diagnosed in 2005), treated with chemotherapy. Furthermore, the patient's medical history presented other chronic diseases, such as stage II hypertension, severe mitral valve regurgitation and carotid atherosclerotic disease. After further investigation, a CT scan revealed the presence of axillary adenopathies and solid brain structures, which were very suggestive for cerebral metastasis. The biopsy from the axillary ganglia showed a relapsing form of melanoma. Given the results of studies which compare the 5-year survival rates between immunotherapy and chemotherapy-

treated melanoma and the presence of chronic diseases, the chemotherapy prescribed until present time has been Dabrafenib/Trametinib (anti-BRAF/anti-MEK) combination. **Discussions :** Although the BRAF mutation reveals a genetic predisposition to more aggressive and young-onset cancer development, BRAF-positive patients receiving targeted treatment have significantly better survival rates than their BRAF-negative counterparts. Notwithstanding, early detection of the BRAF mutation is key in choosing the correct therapeutic approach, critical for the evolution of the disease. Furthermore, brain metastasis is a major clinical and treatment challenge occurring in up to 60% of patients suffering from melanoma, for they cause significant clinical symptoms and impair the overall survival prognosis. **Conclusions:** In 2021, the 5-year survival rate for people receiving treatment for BRAF-positive metastasised melanoma was up to 71% due to the targeted therapy (chemotherapy) rather than immunotherapy (check-point inhibitors). In our case, the Dabrafenib/Trametinib (anti-BRAF/anti-MEK) combination leads to a fast clinical and radiological response with good toxicity profile and good management of adverse events.

Keywords: melanoma, brain metastasis, chemotherapy, immunotherapy

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THE IMPORTANCE OF GENETIC TESTING IN DIFFERENTIATING BETWEEN ALPORT SYNDROME AND THIN BASEMENT MEMBRANE NEPHROPATHY- A CASE REPORT

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Introduction: Alport syndrome is a hereditary disease which affects the primary basement membrane of the glomeruli and it can be a result of various mutations affecting the collagen IV protein family. This disease can often be associated with hearing loss and ocular lesions. Its prevalence is 1:50.000 births in Europe. Thin Basement Membrane Nephropathy is a renal pathology which affects up to 9% of the population, although less than 1% is diagnosed. Its key element consists of glomerular basement membrane thinning, a process for which renal biopsy is necessary. **Case Report:** We present the case of a 34-year-old patient, female, without any genetic history, which came to the hospital for renal function evaluation. After a previous renal biopsy has been done on the patient, the diagnosis was set for Alport Syndrome, although with the recommendation for genetic testing. The patient has a two-year history of Stage III Hypertension with High Cardiovascular Risk, under treatment at home with angiotensin-converting enzyme inhibitor and alpha-blockers. Biologically, the patient presents nephritic syndrome with microscopic hematuria and low proteinuria. An ENT consultation revealed light hearing loss and the Ophthalmology consultation shows normal parameters. Samples were taken for genetic testing. **Discussions :** The molecular genetic testing for Alport Syndrome came up negative. As such, given the patient's clinical manifestation and follow-up investigations, the diagnosis of Thin Basement Membrane Nephropaty is proposed. Our aim consists of showing the importance of genetic testing in differentiating between these two diseases, Alport Syndrome and Thin Basement Membrane Nephropaty, given that they are both very similar in the way they manifest. Even though most of the signs in this case pointed towards Alport Syndrome, the genetic test allowed us to place the proper diagnosis and manage the case accordingly. The genetic test was important because it excludes Alport Syndrome, a disease which can lead to kidney failure, and, as such, gives the patient a much better prognosis. The patient remains under observation and continues her chronic treatment. **Conclusions:** In conclusion, Alport Syndrome and Thin Basement Nephropathy are very similar diseases and it can be difficult to differentiate between the two. This case report showed how important genetic testing can be and how it can contribute towards a better outcome for the patient.

Keywords: Alport Syndrome, renal biopsy, genetic test

PITUITARY INSUFFICIENCY, LIVING YOUR LIFE WITHOUT KNOWING

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Introduction: Hypopituitarism presents itself as a state of complete or partial deficiency of pituitary hormones. In cases of combined pituitary hormone deficiency (CPHD), the phenotype still makes it difficult for clinicians to diagnose. The causes of CPHD are multiple, from infraction, infiltration, injury, iatrogenic or even inherited (PROP1 gene mutations). CPHD is associated with deficiencies of growth hormone (GH), thyroid-stimulating hormone (TSH), luteinizing hormone (LH) and follicle-stimulating hormone (FSH), prolactin (PrL), and adrenocorticotropic

hormone (ACTH). **Case Report:** A 52- year-old woman is referred to our department from the pneumology department after, during the treatment of a respiratory infection, low levels of cortisone, TSH and FT4. The patient complained of loss of appetite, cold intolerance, concentration difficulties, asthenia, and primary amenorrhea. Examination revealed: height- 137cm, weight: 34 kg, arm span: 138cm, BP: 90/50 mmHg, eyelid oedema, cold and dry skin, generalized pallor, brittle hair, carotenoderma, Tanner stage 2 breast and lack of pilosity. Parents and siblings are of normal height and even though the patient did not develop secondary sexual characteristics during her life, there was no intention of making a doctor's appointment. The hormonal profile shows a decrease in TSH, ACTH, LH, FSH, IGF-1, FT4, cortisol and estradiol. Osteoporosis was diagnosed with osteodensitometry and the abdominal ultrasound revealed visceral hypotrophy. MRI of the pituitary gland shows the aspect of empty sella. Genetic testing of PROP1 was positive (301- 302delAG). Hormone replacement therapy was initiated but the patient did not return for a checkup. **Discussions :** When it comes to PROP1-related CPHD, neonates usually lack perinatal signs of hypopituitarism. The signs of hormone deficiency occur progressively. First, the GH deficiency could be identified in the first months after birth, and the TSH deficiency occurs after. LH and FSH deficiencies are typically identified at the onset of puberty. ACTH deficiency is less common and could occur during adolescence or adulthood. **Conclusions:** PROP1-related combined pituitary hormone deficiency is a rare condition that is often diagnosed early in life. In this case, the particularities reside in the late diagnosis, the genetic etiology and the progressive occurrence of symptomatology during early life.

Keywords: PROP1, Hypopituitarism, Hormonal profile, Empty sella

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FIBER OPTIC INTUBATION IN A PATIENT WITH ANTICIPATED DIFFICULT AIRWAY SCHEDULED FOR HELLER MYOTOMY FOR ACHALASIA. CASE PRESENTATION

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Introduction: Intubation is a critical moment during general anaesthesia induction, and failure can result in patient death. Therefore, it is essential to identify difficult intubation criteria beforehand and select the best airway management approach. **Case Report:** In this case, a 69-year-old patient with a history of achalasia who was referred for surgical treatment. From the antecedents, one failed intubation attempt can be noted. The patient exhibited difficult intubation criteria, including a Mallampati III score, grade II obesity with a body mass index of 35.3, reduced cervical spine mobility, a neck circumference of 44 cm, and a thyromental distance of 5 cm. As a result, difficult intubation was anticipated, and awake intubation was chosen. In the operating room, the patient's vital functions were monitored and local anaesthesia with 2% lidocaine was administered in the hypopharynx via a "drop by drop" method, with the patient aspirating the lidocaine. Oral anaesthesia was then performed with lidocaine 10% spray and 1 mg of intravenous anxiolytic midazolam. The tracheal intubation was carried out using a 3.7 mm diameter flexible bronchoscope, protected by an oropharyngeal cannula size 4, and a tracheal tube of 7.5 mm internal diameter was used. General anaesthesia was induced with fentanyl, propofol, and rocuronium and maintained using total intravenous anaesthesia with propofol target controlled infusion technique. At the end of surgery, awake extubation was performed without any notable incident. **Discussions :** Managing a difficult airway is a unique challenge that can have deadly consequences. When difficult airway criteria and a history of failed intubation are present, awake intubation under local anaesthesia and light sedation is preferred over traditional intubation with patient sedated and no breathing, which can lead to impossible intubation and death. Other anaesthesia techniques, such as epidural or spinal anaesthesia, have been ruled out in this case since they are not indicated. **Conclusions:** Encountering a difficult airway is uncommon in clinical practice and demands a distinct approach, such as intubating the awake patient using an optical fiberscope. This technique can guarantee patient's comfort when local anaesthesia is administered correctly.

Keywords: Difficult intubation, Awake intubation, Local anaesthesia, Flexible bronchoscope

EFFICACY OF VALGANCICLOVIR TREATMENT IN PATIENT WITH CYTOMEGALOVIRUS INFECTION

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Introduction: Cytomegalovirus (CMV) infection is one of the most common congenital infections widespread among the adult population (seroprevalence being 85-95%) that is characterized by diverse clinical manifestations. Intrauterine transmission from pregnant women with primary infection occurs in 30-50% of cases, and 5-18% of newborns have symptomatic CMV infection at birth, increased risk of lethality, severe complications and sequelae. **Case Report:** 4-month-old child, born at 31 weeks, weighing 1800 grams (g) and Apgar score 6/7. Prior to hospitalization, the patient was diagnosed with congenital microcephaly, lissencephaly with ventriculomegaly and periventricular calcifications, pachygeria, Dandy-Walker malformation, protein - calorie malnutrition, psychomotor retardation, grade II deficiency anemia, urinary tract infection associated CMV infection with clinical manifestations. At the time of admission, the result of Polymerase Chain Reaction (PCR) test for CMV from blood and urine samples resulted in 123,000 copies/ milliliters (ml) and 206,575,944 copies/ml, respectively. Additional laboratory tests were performed, the complete blood count (CBC) showing grade I anemia without neutropenia, with liver transaminases within normal limits. Antiviral treatment was initiated with Valganciclovir tablets 16 milligrams per kilogram of body weight, administered in two doses per day, according to the Clinical Consensus Protocol. DNA CMV PCR tests were performed repeatedly, the results showcasing improvement after one month (plasma negative, urine 13 987 015 copies/ml), 3 months (plasma negative, urine 106 991 copies/ml) and over 4.5 months of treatment (blood negative, urine 22 954 copies/ml). Dose correction was not necessary, since neutropenia, thrombocytopenia, hypertransaminasemia were not determined at the weekly CBC. **Discussions :** Literature data demonstrate that CMV infection with clinical manifestations requires the initiation of antiviral treatment as soon as possible, which decreases the rate of complications and death. Treatment with Valganciclovir has been shown to be effective, as in the case of Gancyclovir administered intravenously, but more conveniently in tablet form. After antiviral treatment with the synthetic analogue of guanine cessation of viral replication was obtained, but the time assessment of CMV DNA by PCR in blood and urine is necessary. **Conclusions:** Untreated CMV infection in children has the risk of sequelae - hearing loss, epilepsy, psycho - verbal and psychomotor retardation, optic nerve atrophy in 90% of cases. Treatment with Valganciclovir is not only an effective way of viremia and viruria countering, but also convenient to administer and well tolerated by patients.

Keywords: Valganciclovir, Cytomegalovirus (CMV) infection, Infectious diseases

UNEXPECTED ASSOCIATION BETWEEN NEGATIVE POSTOPERATIVE MRI AND HIGH IGF-1 LEVELS IN PERSISTENT ACROMEGALY

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Introduction: Persistent acromegaly after transsphenoidal resection of pituitary adenoma is a common occurrence in acromegalic patients. The persistence of disease is monitorized through pituitary-MRI and IGF-1 levels and is managed with somatostatin analogues (SSA), growth hormone receptor antagonists (Pegvisomant) and dopamine agonists (Cabergoline). Acromegaly can produce numerous systemic complications, hence the importance of controlling the high levels of IGF-1 and GH. **Case Report:** We report the case of a 31-year-old man diagnosed with acromegaly, who has undergone a transsphenoidal pituitary adenoma resection in 2017. The histopathological result indicated a pituitary adenoma positive for GH and negative for the other tropic hormones, ki67 2-3%. Nonetheless, his postoperative screening revealed high levels of IGF-1 (1145 ng/ml) and a mass of 12/14/15 mm on the pituitary-MRI, interpreted as a tumoral remnant. Treatment with first-generation somatostatin analogues was initiated, but the control of the disease was not obtained. Pegvisomant and then Cabergoline (1-2/week) were added as a triple-therapy with insufficient result. A borderline optimal control of the disease was managed only on PG 30 mg/day + CAB 4 mg/week (IGF-1 < 1.3 X ULN). Sanger genetic sequencing was done to detect a possible AIP mutation but no variant was found and familial isolated pituitary adenoma was excluded. The

patient followed this treatment for 3 years with no adverse effects. His yearly checkup MRI showed each time a stationary aspect. In August 2022 the patient has undergone a second surgery but surprisingly his IGF-1 was still very high (1027 ng/ml), the HP result coupled with IHC revealed: non-tumoral pituitary hyperplasia, ki67<1%, while the control MRI revealed no tumoral remnant. The same treatment with Pegvisomant and Cabergoline was restarted and the patient reached a borderline control of his disease with an IGF-1 of 281,4 ng/ml (NV=118-253 ng/ml). **Discussions :** This case report highlights the incongruence between the postoperative MRI images and the extremely high levels of IGF-1. Furthermore, the patient does not have an AIP mutation but still presents resistance to first generation somatostatin analogues, which is correlated in literature with AIP variant and more aggressive and familial cases of acromegaly. **Conclusions:** The GH receptor antagonist, Pegvisomant, is a good option for patients with postoperative acromegaly, with negative MRI and with high levels of IGF-1, in reaching a borderline optimal control of the disease.

Keywords: persistent acromegaly, postoperative MRI, IGF-1, Pegvisomant

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ADENOSQUAMOUS CARCINOMA INVADING THE COLONIC WALL

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Introduction: Primary adenosquamous carcinoma of the colon accounts for 0.1% of all colon cancers and represents an epithelial malignancy with glandular and squamous elements, with a poorer prognosis than adenocarcinoma alone. More often, the colon is affected by adenosquamous carcinoma by contiguity due to its proximity to the genital tract. **Case Report:** We present the case of a 75-year-old female patient who presented to the Gastroenterology Department with rectorrhagia, diarrhea, and fatigue. The Computed Tomography revealed a nodular, para-uterine mass of 25x28mm in contact with the lateral left wall of the sigmoid colon and two nodules in the anterior peritoneum. The patient underwent surgery with excision of the recto-sigmoid colon and the two masses. The microscopic examination revealed a normal colonic mucosa, with solid and glandular tumoral infiltration of the submucosa, subserosa, and serosa layers of the colonic wall. The glandular components presented high atypia and cytonuclear pleomorphism. The solid component consisted of nests of large, polygonal tumor cells with abundant eosinophilic cytoplasm and keratine pearls. The epiploic masses were metastasis of the same lesion. Immunohistochemistry revealed that the tumor cells were positive for Estrogen Receptor and Vimentin stains and negative for CDX-2, indicating that the tumor has a genital origin, not a colonic one. **Discussions :** After the first histopathological diagnosis, the patient underwent radical hysterectomy and chemoradiation. The second histologic examination demonstrated the cervical origin of the primary tumor infiltrating the colonic wall by contiguity. **Conclusions:** Newly diagnosed tumors are often presumed to have their origin in the tissues that are found. This case suggests the importance of a correct evaluation of the tumor's primary origin in the Pathology Department, demonstrated by both macroscopic and microscopic aspects, associated with a panel of immunohistochemistry stains. Determining the origin of the tumor is essential for proper oncologic treatment.

Keywords: adenosquamous carcinoma, histology, immunohistochemistry

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ANATOMICAL VARIATIONS OF SURAL NERVE

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Introduction: The sural nerve is a sensory nerve, which provides cutaneous innervation from the distal third of the calf up to the lateral portion of the dorsum of the leg. The sural nerve is formed in the upper part of the calf from the two root origins and the communicating branch of the sural nerve. According to the literature, more than 15 variants of sural nerve formation have been described. **Case Report:** Male cadaver, fixed in 4% formalin, dissected during the courses for the students of Anatomy and Embryology of the University of Medicine, Pharmacy, Science and Technology "George Emil Palade" of Târu Mureș. The dissection was realised unilaterally, at the level of the left lower limb and a different pattern of formation of the sural nerve than the classic one was observed **Discussions :** In the upper third of the dissected calf the medial root of the sural nerve (MCSN), originating from the tibial nerve and continuing as the sural nerve, is identified, while the lateral sural cutaneous nerve and the communicating branch of the sural nerve are completely missing. **Conclusions:** The literature

reports multiple variations in the formation of the sural nerve, and the variant in our case falls into the uncommon variants.

Keywords: Sural Nerve, Anatomical Variation, LSCN

ASYMPTOMATIC GASTRIC INCIDENTALOMA OF NEUROENDOCRINE ORIGIN: A CASE REPORT

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Introduction: Gastric neuroendocrine tumors (GNET) account for 7,8% of all gastrointestinal neuroendocrine neoplasms. GNETs arise from enterochromaffin-like cell hyperplasia, and it is common for them to manifest as multiple lesions. **Case Report:** In this report, we describe the case of a 53-year-old male patient who presented to the internal medicine clinic for inappetence and a weight loss of 5 kg over a period of 2 months. A malignant growth was suspected. No significant family history was reported. He was underweight, with a BMI of 17 kg/m2, smoker, consuming 35 packs of cigarettes per year. The patient was in good general condition, with no fever, normal blood pressure and heart rate, and normal arterial blood oxygen saturation. The physical examination showed a soft abdomen, exhibiting normal respiratory movement. Blood tests were within normal ranges and a chest X-ray showed no relevant abnormalities. Coincidentally, an abdominal ultrasound uncovered a 3 cm lesion in the gastric wall. A gastrointestinal echoendoscopy showed it to be under the mucosa, and allowed for a biopsy of the tumor, the latter of which described a low-grade, G1, neuroendocrine tumor. Biomarker levels were measured, including Chromogranin A, serotonin, and 5-hydroxyindoleacetic acid, all of which were within normal ranges, indicating a nonfunctioning tumor, with no carcinoid syndrome present. Gastrin levels were also normal. Atypical gastrectomy with gastroraphy was performed. Histopathological results indicated a well-differentiated, G1, gastric neuroendocrine pT2NxL0V0Pn0R0 tumor, with a Ki-67 index <3%. **Discussions :** GNETs are rare tumors of the stomach, with varying potential for malignancy, and usually present as multiple lesions. Type 3 GNETs are generally less differentiated than Type 1 and 2 and might become functioning, thus producing carcinoid syndrome. This case is an example of a 3 cm, benign, well-differentiated GNET, manifested as a singular lesion, with no carcinoid syndrome present. They may exhibit a number of signs and symptoms, including slow gastric emptying, impaired vitamin B12 and iron absorption, anemia, etc. We present an asymptomatic case of a sporadic GNET, which has been incidentally discovered during an abdominal ultrasound. **Conclusions:** GNETs represent <1% of all gastric tumors. This case is a rare example of an asymptomatic, neuroendocrine, nonfunctioning gastric incidentaloma that was diagnosed and treated in a timely manner.

Keywords: gastric incidentaloma, asymptomatic neuroendocrine tumor, nonfunctional

BODY COMPOSITION - BENEFITS OF TREATMENT IN ADULT GROWTH HORMONE DEFICIENCY

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Introduction: Adult growth hormone deficiency (GHD) is a rare disease that leads to variable non-specific clinical features such as lack of energy and depression. It also presents with changes in the body composition, favoring lower muscle mass, reduced bone mass and increased body fat, along with alterations of the lipid profile. The most common cause of adult onset GHD are pituitary tumors. The GHD is caused either by the tumors themselves or by the surgical and radiation treatment performed for them. **Case Report:** We describe the case of a 28-year-old male patient that underwent transfrontal adenomectomy at the age of 11 for an invasive intra- and suprasellar tumor with extension in the cavernous sinus measuring 3.6/3.2/3.7 cm, with a histopathological result of growth hormone and prolactin secreting pituitary adenoma. The treatment was followed by a gamma-knife radiotherapy two years later due to residual mass. After the procedures, the patient developed panhypopituitarism and central diabetes insipidus, following hormone replacement therapy with Prednisone, Levothyroxine, Desmopressin, Testosterone up to present date and recombinant human growth hormone (rhGH) during late puberty and early adulthood. At the age of 27, the rhGH treatment was resumed according to current guidelines, with no adverse effects and with an improvement in the general well-being. The patient also adhered to a lipid-lowering diet. According to the bioimpedance results, significant effects on body composition were observed after a 6 month

period. There was a decrease in total body fat from 28 kg to 25.5 kg, a 2.1% increase in muscle mass. A decrease of the body mass index and increase of sarcopenic index were noted. We also observed an improved lipid profile, with a decrease in total cholesterol and LDL-cholesterol and an increase in HDL-cholesterol levels. **Discussions :** While lifestyle changes can also contribute to an improvement in body composition, most studies on adult GHD patients showed that growth hormone treatment directly impacts the body composition and bone mineral density, reducing cardiovascular disease risk factors and also improving the general quality of life. rhGH treatment is an important therapeutic approach along with diet and exercising in GHD patients. **Conclusions:** In our patient there was an improvement of the body composition following 6 months of replacement therapy with rhGH, as well as an improvement of the metabolic profile. In adults with suspected GHD further investigations should be performed to establish the diagnosis and rhGH treatment should always be considered.

Keywords: Growth hormone deficiency, Adult, Body composition, Bioelectrical impedance analysis

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THE FOLLOW-UP OF GASTROESOPHAGEAL REFLUX DISEASE AND ITS MANAGEMENT IN A NON-TERTIARY GASTROENTEROLOGY CENTER

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Introduction: Gastroesophageal reflux disease (GERD) is one of the most common and chronic digestive disorders. GERD continues to be the most frequent pathology encountered in the primary-care setting by internists and gastroenterologists. It is estimated that one-fourth of the general population suffers from reflux symptoms and its various complications, which is a growing health concern. The pathophysiology behind GERD is produced by a dysfunction of the lower oesophageal sphincter (LES), resulting in frequent or prolonged relaxation. This promotes the reflux of gastric contents into the oesophagus, manifesting the typical discomforting GERD-like symptoms. If left untreated, it can progress to esophagitis, Barrett's oesophagus, oesophageal strictures, or oesophageal adenocarcinoma. **Case Report:** This retrospective study aimed to determine the characteristics of patients who presented to the gastroenterology department in Tîrgu Mureş. Analysing the demographics of the patient facilitates the identification of essential aspects, such as the presenting pathologies, diagnostic procedures, and therapeutic management. According to the knowledge of the author, this is the first study of its kind conducted in this region of Romania. The patient registry from the Tîrgu Mureş County Hospital was accessed, with a total of 122 patients identified as being diagnosed with GERD or esophagitis. Extracted from the registry were patient demographics, symptoms presented upon admission, diagnostic tests performed, co-morbidities, diagnosis, and prescribed treatments. This study's data was analysed using IBM SPSS 25. **Discussions :** The average age of the admitted patients was 60,5 years old. The most frequently reported symptom was upper GI pain, followed by acid reflux and abdominal discomfort. A statistically significant and direct relationship existed between bleeding as a symptom and hiatal hernia ($r = 0.178$, p 0.05). Gastroscopy was the most commonly performed diagnostic test in 89.3% of patients, followed by gastric biopsy in 56.6%. Gastritis and esophagitis were the most prevalent diagnoses, with LA Grade 2 in 36% of patients. Proton-Pump-Inhibitors (PPI) were the most frequently prescribed pharmaceutical treatment in 108 patients. **Conclusions:** Patients referred for endoscopy and subsequently diagnosed with GERD were primarily treated with pharmacological therapy, with PPI as the primary agent. Clinicians should prioritise the use of therapeutic guidelines, paying special attention to dosage and indication of PPI treatment. Further research should focus on tracking the progression of patients and assessing their changing symptoms.

Keywords: GERD, Esophagitis, LA-Grade

ATYPICAL ASSOCIATION BETWEEN PURPURA AND LIMITED SCLERODERMA

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Introduction: Systemic sclerosis is a connective tissue disease that is related to autoimmune abnormalities. Vasculitis, platelet defects, disorders of connective tissue can present as purpura. This case report aims to present uncommon associations of these diseases. **Case Report:** A 52-year-old female patient who is known with limited scleroderma (feb 2015-anticentromere antibody>400) presented to the Rheumatology Department with a one-month history of purpuric rash limited at the leg, forearm and face, which was treated by a rheumatologist with prednisone and had a minimal response. She also complained of heartburn, difficulty swallowing, arthralgia,

xerostomia and xerophthalmia. Her medical history included: Los Angeles grade C esophagitis, Hashimoto`s thyroiditis, total hysterectomy(genital cancer). Her treatment included: hydroxychloroquine, pentoxifylline, nifedipine, levothyroxine, acetylsalicylic acid. On examination, she was apyrexial. We noted elevated non-itchy purpura at both legs, forearms and face, puffy hand, sclerodactyly, salt-and-pepper appearance of the skin on the back, telangiectasia on lips, palms and face, pitted scars on fingertips, dry eyes. During hospitalization, the patient underwent treatment with two pulses of methylprednisolone and alprostadil. After treatment, she showed significant improvement. An immunosuppressive treatment with azathioprine was also employed. **Discussions :** An infrequent complication of scleroderma is thrombotic thrombocytopenic purpura. An association with ANCA-systemic vasculitis and cryoglobulinemia vasculitis was observed in a small number of patients. In this case laboratory tests showed negative anti-MPO antibodies and anti PR3-antibodies, no consumption of complements and there was no presence of circulating cryoglobulins. Thrombocytes, APTT and PT were normal. An infectious cause that could lead to purpura was also excluded (AcHCV-non reactive, AgHBs-non reactive, urine culture test-negative, pharyngeal exudates-negative). Henoch Schoenlein purpura was excluded because IgA has not increased significantly. Cutaneous vasculitis, with clinically palpable purpura is common manifestation of Sjogren`s syndrome. Anti-Ro antibodies, Schirmer test, and ultrasound aspect were also normal which exclude Sjogren`s syndrome. The patient didn`t undergo chemotherapy, immunotherapy or radiotherapy before or after the hysterectomy. No drugs were identified that could have induced purpura. **Conclusions:** Limited scleroderma and purpura are both important medical conditions that affect the skin and other organs. Scleroderma can rarely be associated with small vessels vasculitis, whose clinical manifestation can be purpura. More research is required to completely understand the causes of these two diseases and to see if purpura is a direct complication of scleroderma or if it`s only an accidental association in this case.

Keywords: Limited scleroderma, purpura, vasculitis

TRANSCATHETER AORTIC VALVE IMPLANTATION - A SUITABLE SOLUTION FOR AN INCREASED VARIETY OF PATIENTS

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Introduction: Cardiovascular pathologies represent the leading cause of death in Europe, up to 37%, most of them having a degenerative mechanism, like the calcification of the heart valve, forming aortic stenosis. Although the leading factor can be genetic or autoimmune, the most common appearance of the disease is age-related. That may become a problem, as an older person can develop other associated conditions that contraindicate heart surgery. **Case Report:** An 84-year-old female, with previous diagnoses of type 2 diabetes, chronic cardiac insufficiency NYHA II and kyphoscoliosis, presented to the cardiology consult accusing of shortness of breath and pectoral angina during light effort and nocturnal paroxysmal dyspnea with orthopnea. Her symptoms had appeared seven years before, with alleviated manifestations, when she refused the proposed valve implantation. Subsequently, six months before admission, her symptoms started aggravating, imposing a balloon valvuloplasty. The outcome was suboptimal and associated with multiple complications, such as hemopericardium and hematoma at the catheter insertion place. The clinical exam revealed an underweight patient with light thigh edema and a grade V/VI systolic heart murmur irradiating to the carotid artery. Echocardiography showed a narrowed aortic emergence and a rounding waveform with increased acceleration time, specific for severe aortic stenosis. Other modifications were the thickened interventricular septum, also illustrated on ECG, the narrowing of the carotid artery (doppler echocardiography), and increased NT-proBNP (2000 pg/ml), confirming NYHA class II cardiac insufficiency. Since the cardiac symptoms had become more severe and contraindicated surgery, the doctor performed a minimally invasive femoral transcatheter aortic valve implantation (TAVI) with good results. As a further treatment, he prescribed blood thinners such as Clopidogrel and Aspirin and recommended a diabetology consult for the institution of SGLT2 inhibitors. **Discussions :** Tremendous endeavors have been made in the last years concerning valve implantation to include as many patients as possible, especially those with multiple comorbidities and different chest conformations. Scientific literature demonstrated a noninferiority between surgical and transcatheter valve replacement considering fatality rates, both having solvable complications for various categories of patients. The lack of cardiomyopathies or myocardial infarctions is a positive prognostic indicator. **Conclusions:** Degenerative aortic stenosis initially causes mild non-specific symptoms, long neglected until a later evolution step when the systemical status (cardiac insufficiency, spinal deformity, diabetes) may represent a surgical contraindication. TAVI is a good solution for elderly patients with complex pathologies. It is especially recommended in high-gradient aortic stenosis when the treatment is most likely to relieve the symptoms.

Keywords: degenerative aortic stenosis, transcatheter aortic valve implantation (TAVI), age-related comorbidities, doppler echocardiography

A CASE REPORT OF AN AUTOIMMUNE HEPATITIS-PRIMARY SCLEROSING CHOLANGITIS OVERLAP SYNDROME

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Introduction: Autoimmune Hepatitis-Primary Sclerosing Cholangitis overlap syndrome presents features of autoimmune hepatitis and cholangiographic changes on magnetic resonance cholangiopancreatography and has a high prevalence on young males (18-39 years old). **Case Report:** We report a case of a young male (21 years old) with nausea, abdominal pain, fatigue, nocturnal sweatness and hepatic cytolisis (ALT 958 U/L ; AST 592 U/L). Because the abdominal ultrasound demonstrated diffuse echogenic thickening of the intrahepatic bile ducts we recommended the patient a Magnetic Resonance Cholangioancreatography (which was suggestive for Primary Sclerosing Cholangitis). Viral hepatitis, Ebstein Barr, Cytomegalovirus infection, primary biliary cirrhosis, Wilson disease, Hemochromatosis were excluided and autoimmune panel showed positive ANCA antibodies, positive ANA antibodies and high levels of IgG. Under corticotherapy and imunosupressive agent together with ursodeoxycholic acid the clinical and biological outcome was improved. **Discussions :** The clinical and biological evolution was favourable under corticotherapy (Prednison in decreasing doses) and immunomodulators (Azathioprin) toghether with Ursodeoxicolic acid (symptoms improvement, ALT from 958 U/L to 72 U/L, AST from 592 U/L to 35 U/L, ALP from 754 U/L to 111 U/L and GGT from 324 U/L from 45 U/L) **Conclusions:** Complex investigations were performed to determine the etiology of liver disease.The patient needs a close and long surveillance in the Gastroenterology Clinic due to the high risk of developing cholangiocarcinoma and colorectal cancer.

Keywords: Overlap Syndrome, Primary Sclerosing Cholangitis, Autoimmune Hepatitis, hepatic cytolisis

WOLF-HIRSCHHORN SYNDROME PRESENTING WITH COMPLEX CONGENITAL HEART DISEASE: A PAEDIATRIC CASE REPORT

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Introduction: Wolf-Hirschhorn syndrome (WHS) is caused by partial loss of material from the distal portion of the short arm of chromosome 4 (4p16.3). Its frequency is estimated as 1/50.000-1/20.000 births, with a female predilection of 2:1. The common clinical manifestations include growth restriction, microcephaly, distinctive facial features with a "Greek warrior helmet" appearance, congenital heart disease (CHD), intellectual disabilities. **Case Report:** A female neonate was born at 38-weeks of gestation with birth weight of 2500g. On examination, she had distinctive facial features: microcephaly, hypertelorism, epicanthal folds, flat nasal bridge, low set ears, micrognathia and clinodactyly. Genetical molecular analyses showed 4p16.3 deletion (genes WHSC1, LETM1, TACC3, PIGG). On the basis of clinical features and genetic analyses diagnosis of WHS was made. 2-D echocardiography showed atresia of the tricuspid valve with normally related great vessels (type I) with large ventricular septal defect, with unobstructed systemic and pulmonary outflow tracts. 3-weeks after birth she developed congestive heart failure due to elevate blood flow and over-circulation. She required neonatal surgical palliation for pulmonary flow restriction by placement of a pulmonary artery band, and at 4-months of age a superior cavo-pulmonary anastomosis was performed. **Discussions :** WHS is a rare genetic disorder characterized by complex clinical manifestations and a severe prognosis. Structural heart defects are often mild, and occur in approximately 50% of cases. A few cases of complex CHD associated with WHS are reported. WHS candidate 1 (WHSC1) gene is deleted in all known cases of WHS. One of the factors that WHSC1 modulates is Nkx2-5, a central transcriptional regulator of cardiac development. Phenotype expression depends on the size of the deletion of the chromosome. Here, we describe a female baby with a 4p deletion, who had the majority of the main phenotypic features of WHS and severe CHD manifesting at birth. The large size of chromosomal deletion detected in our case can be involved in the severity of the cardiac manifestations. **Conclusions:** Genetic anomalies remain one of the biggest problems of modern paediatrics worldwide. Early diagnosis of WHS by

identification of facial features will help in managing these patients. Echocardiography remains the primary imaging modality for patients with single ventricle pathology due to its ability to assess the structural lesions and hemodynamics.

Keywords: Wolf-Hirschhorn syndrome, paediatric, congenital cardiac disease

FROM DIABETES MELLITUS TO POLYGLANDULAR AUTOIMMUNE SYNDROME TYPE II: A CASE REPORT

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Introduction: Polyglandular autoimmune syndrome type II (PAS-2) represents an autoimmune disorder targeting both endocrine and non-endocrine tissues sequentially. Diagnosis is positive when 2 out of the following 3 diseases are associated: Addison's disease, Hashimoto's/Graves' disease and type 1 diabetes mellitus (T1DM). **Case Report:** A 35 years old woman, without known diabetic heredity and a BMI=28, was misdiagnosed in 2008 with type 2 diabetes mellitus, as she had been admitted into hospital presenting polyuria, polydipsia, polyphagia, hyperglycemia and normal C peptide level. The oral antidiabetic medication administered had proven little effect, her glycemic levels being constantly high. In 2009 she developed Hashimoto's and celiac disease, her autoimmune background being confirmed through elevated values of thyroid peroxidase antibodies (TPO) and tissue transglutaminase IgA (tTg-IgA). T1DM antibodies were not made due to financial circumstances, however autoimmunity would be suggested through the previously confirmed autoimmune diseases. C peptide level being at the lower reference limit coupled with high glycemia suggested low levels of insulin production. This, along with a tendency to ketosis, without a known underlying cause (the patient underwent investigations regularly) and the presence of associated autoimmune pathologies lead to submitting the diagnosis of T1DM, and therefore PAS-2. The patient started insulin treatment, with relatively good glycemic control during hospitalization. However, the treatment and dietary changes were not properly followed through at home. She presented episodes of both hypo and hyperglycemia alternatively: hypoglycemia due to inadequate insulin administration and hyperglycemia due to bad dietary habits. In the following years, every 3-6 months, the patient returned to the hospital presenting high glycemic values and, at times, autoimmune myxedema. With each admission, overall treatment was adjusted accordingly as she was given higher insulin doses to compensate her state. In the course of 15 years since her diagnosis, her weight gain lead to a BMI of 38. **Discussions :** The present case proved remarkable as the C peptide level remained normal since the beginning of T1DM. This could be explained by a minimal residue of pancreatic cells producing insulin to combat hyperglicemia. However, they are not enough for the inulin resistance caused by long term obesity. Obesity was mostly sustained by dietary mistakes leading to hyperglicemia and eventually stabilized by insulinotherapy. Studies point out that excessive adipose tissue could further lead to autoimmunity. **Conclusions:** Insulinotherapy is mandatory, despite C peptide level being unusually high in a T1DM scenario, which might create the confusion that the patient has T2DM.

Keywords: autoimmunity, PAS-2, insulin resistance

TO DRINK OR NOT TO DRINK? A CASE OF CENTRAL PONTINE AND EXTRAPONTINE MYELINOLYSIS CAUSED BY EXCESSIVE ALCOHOL CONSUMPTION IN A YOUNG FEMALE PATIENT

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Introduction: Central pontine myelinolysis (CPM) is a rare neurological disorder that is characterized by damage to regions of the brain, typically the pontine white matter. Extrapontine myelinolysis (EPM) can occur in □10% of patients with CPM. The condition was first described as appearing in alcoholic and malnourished, but now it is more frequently caused by inappropriate correction of hyponatremia. Only a few cases of CPM induced by excessive alcohol consumption have been reported, so the estimated prevalence is unknown. **Case Report:** A 35-year-old female patient, known for long-standing alcohol abuse, was admitted for altered general condition and abdominal pain. On the examination, she presented difficulties in maintaining an upright position, restlessness and delirium due to alcohol withdrawal. Computed tomography reveals signs of acute pancreatitis. Laboratory tests

showed only dyslipidemia and potassium level 2.4 mmol/L. A diagnosis of alcoholic pancreatitis was established, and the patient was subsequently discharged home after treatment. After a week, she presented to the neurology department, complaining of repeated episodes of insomnia, nausea, and vomiting. On the neurologic examination, she had diminished pharyngeal reflex, dysarthria, dysphagia, bilateral Babinski sign, inferior limbs hypoesthesia, ataxic gait, and incoordination of the limbs. Sodium and potassium levels were normal. She was diagnosed with depression and anxiety during the psychiatric examination. Brain magnetic resonance imaging (MRI) showed a dorsal thalamic lesion, hyperintense on T2-weighted and fluid-attenuated inversion recovery (FLAIR) sequences, and also an area of restricted diffusion was identified within the central pont. These findings were suggestive for CPM and EPM. Following the diagnosis of CPM, she was treated with corticosteroids, diuretics, and antioxidant supplements to sustain nerve cells. **Discussions :** Osmotic injury in alcoholics can harm vascular endothelial cells, leading to the release of toxic factors, vasogenic edema and brain dehydration. This can cause axon and myelin sheath separation. She has hypokalemia which increases the risk of development of CPM, but no hyponatremia was found. She presented with an array of neuropsychiatric symptoms indicating pont and extrapontine lesions. Based on previous longstanding history of alcohol abuse and typical MRI findings, she was diagnosed with CPM and EPM. **Conclusions:** This case emphasizes that alcohol itself may induce CPM and EPM in chronic alcoholics patients, even if they are normonatremic or hyponatremic. To diagnose CPM and provide different rehabilitation programs, it is recommended to rely on MRI instead of just verifying sodium levels, which sometimes can appear within normal range.

Keywords: neurological dysfunction,, osmotic demyelination,, alcohol

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SUPRAGLOTTIC SQUAMOUS CELL CARCINOMA: MANAGING THE GROWTH OF LARYNGEAL CANCER

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Introduction: Squamous cell carcinoma of head and heck is a type of carcinoma which derives from stratified squamous epithelial cells, the most common sites of origin being the oral cavity, rhinopharynx and larynx. Supraglottic squamous cell carcinoma, which is associated with mutations in TNFRSF10B, PTEN, and ING1 genes, accounts for approximately 95% of all larynx cancers and is known to locally infiltrate the base of the tongue and the vocal chords. **Case Report:** We discuss the case of a 52-year-old patient who presented to the Oncology Institute Cluj-Napoca in October 2022 to continue oncological treatment. They had been diagnosed and treated for squamous supraglottic carcinoma at another healthcare service. In the period 26.10-13.12.2021 the pacient was administered 3 cycles of TPF chemotherapy with good tolerance. A reevaluation CT was performed which indicated the state of stable disease. The decision to perform simultanous radiation and chemotherapy was made. The patient was administered 2 cycles of Cisplatin along with helical tomotherapy. After these procedures, on 20.04.2022 a CT showed that a tumour located in the pre-epiglottic space decreased in size. On 19.06.2022 the pacient returned to the IOCN for their periodic control complaining of dysphagia, inappetence and odynophagia. For further investigation, a CT identified the enlargement of a tumour located at the base of the tongue. Due to the relapse of the cancer and the high toxicity of Cisplatin (which caused anaemia), a new treatment was established, which consisted of the Carboplatin, Gemcitabine and Cetuximab. The pacient showed good tolerance and the carcinoma was evaluated as stable disease. **Discussions :** Despite the improvement observed after the chemotherapy and radiation therapy treatment, the patient's condition began to degrade and the tumor relapsed. After the change in treatment, the carcinoma was regarded as stable disease. The evolution of their condition in response to the administration of Cetuximab was satisfactory, this being in line with the current studies of its efficacy in the treatment of head and neck squamous carcinoma. Although in medical literature Cetuximab and Cisplatin have shown similar results, Cetuximab paired with Gemcitabine and Carboplatin was efficient in the context of a carcinoma which had relapsed and spread in multiple areas, making a laryngotomy not possible. **Conclusions:** Cetuximab paired with Gemcitabine and Carboplatin was found to be an effective option in case of relapse. Stabilizing the disease is a crucial step in order to limit the area of tissue affected so that a laryngotomy can be performed.

Keywords: Supraglottic squamous cell carcinoma, Cisplatin, Cetuximab

AUTOIMMUNE ATROPHIC GASTRITIS AND LATENT VITAMIN B12 DEFICIENCY

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Introduction: Autoimmune chronic gastritis is the most frequent cause of vitamin B12 deficiency and is associated with numerous other autoimmune conditions. **Case Report:** A 59-year-old male presents for evaluation of dyspeptic symptoms manifested by epigastric pain, anorexia, nausea, weight loss, memory, concentration and sleep disorder, symptoms present for about a year. The patient has a history of autoimmune thyroiditis with euthyroidism and type II diabetes treated with metformin. Blood tests showed Hgb 11 g/dl, MCV 104 fl, MCH 33.0 pg, serum iron 29 µg/dl, transferrin 250 mg/dl, ferritin 25 ng/ml. Upper gastrointestinal endoscopy showed antrum with circular areas of hyperemia in the white light, corpus and fornix with mucosal folds disappeared, submucosal vascular pattern visualization, rare supradenivelated formations of 2-3 mm with hyperplastic appearance with NBI filter, abundant secretion of viscous mucus. Biopsies from the antrum, gastric angle, corpus, and fornix were diagnostic for atrophic gastritis, with chronic antral gastritis with reactive aspects with activity and chronic corporal and fornix gastritis with severe atrophy, corresponding to an OLGA II staging. Gastric parietal cell antibodies 56.7 U, positive anti-intrinsic factor antibodies. Serum vitamin B12 level was determined - 205 pg/ml, folate 23,3 ng/ml, homocysteine 44 µmol/l, methylmalonic acid 1.2 µmol/ml. Substitutive treatment with oral vitamin B12 1000 µg/day is initiated, metformin is replaced with dapagliflozin 10 mg, and oral iron is administered too. On the 10th day of treatment, he presents a reticulocyte crisis (15%), with normalization of the hemogram, correction of iron reserves in week 8 from initiation. Neurological and digestive manifestations partially improved after 6 months of vitamin B12 treatment. **Discussions :** The association of atrophic gastritis with mild macrocytic anemia and low iron reserves raises delicate diagnostic issues, especially in the context of a quasi-normal level of vitamin B12. Subclinical vitamin B12 deficiency, when undiagnosed, leads over time to serious and irreversible neurological changes. Broadening the scope of biochemical investigations of vitamin B12 metabolism is essential for confirming deficiency and accurately classifying anemia. Furthermore, iron deficiency is another complication of atrophic gastritis, often leading to non-specific hematological presentations and incorrect anemia classification. Therapeutic response attests a correct diagnosis of anemia. **Conclusions:** Autoimmune atrophic gastritis is the main cause of vitamin B12 deficiency. Latent vitamin B12 deficiency must be diagnosed early, homocysteine and methylmalonic acid being highly relevant biomarkers.

Keywords: autoimmune atrophic gastritis, B12 deficiency, methylmalonic acid, homocysteine

PARTICULARITIES OF THE RESPONSE TO BIOLOGIC THERAPY IN ULCERATIVE COLITIS – CASE REPORT

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Introduction: Ulcerative colitis is a chronic inflammatory bowel disease with an unknown etiology, involving genetic susceptibility, changes in the intestinal microbiome, and altered immune response □□□the last one a target for biologic therapy. **Case Report:** A 37-year-old man known to have pancolic ulcerative colitis for 4 years, treated with acid-5-amino-salicilic, presents with disease flare, with a Mayo Score of 11. Intolerance to thiopurines due to pancytopenia (homozygous for TPMT*3A) led to corticosteroid therapy and an anti-TNF-alpha agent - adalimumab for inducing remission, 160 mg initially, followed by 40 mg every 2 weeks, with cortisone withdrawal, clinical, biological, and endoscopic response at week 12, Mayo Score 5 points. Adalimumab therapy continues for 1 year, after which a new disease flare occurs □□□FMS12 points. Serum adal imumab level of 9.89 µg/ml - normal, serum TNF alpha level of 400 pg/ml - normal. This is interpreted as secondary loss of response to adalimumab, which is discontinued, and therapy with JAK inhibitor, tofacitinib 2x10 mg/day initiated with suboptimal response, Mayo Score 10 at week 8, corticosteroid withdrawal not feasible, and biological assessment at week 10 - D-dimers 155 µg/ml, C and S protein deficiency in the context of malnutrition, leading to discontinuation of tofacitinib and exploration of the patient for possible deep vein thrombosis. Treatment with anti-integrin α4β7 antibodies, vedolizumab 300 mg, is decided, with a favorable evolution at 8 weeks, Mayo Score 8, but cortisone withdrawal not feasible; the maintenance dose is optimized at 300 mg every 4 weeks. Favorable evolution at 3 months, corticosteroid withdrawal, reduction in Mayo Score by 4 points. **Discussions :** The guidelines dictate the initial or

subsequent therapeutic course, but in the event of infeasibility or failure, therapy utilizing new biological agents involves selecting immunological targets that align with the patient's specific profile. Severe adverse effects, such as pancytopenia and thrombogenic status, mandate the importance of monitoring adverse reactions as vigilantly as treatment response. The progressively expanding array of therapeutic options provided by new biological agents enable the induction of remission, even in instances of previously ineffective biological intervention. **Conclusions:** The response to biologic therapy in ulcerative colitis is particular to each patient, requiring careful monitoring, dose optimization, identification of adverse reactions, and the specific choice of a certain agent for maintaining remission.

Keywords: loss of response to adalimumab, adverse reactions tofacitinib, vedolizumab

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EXPLORING TREATMENT OPTIONS FOR CROHN'S DISEASE RESISTANT TO INFLIXIMAB, ADALIMUMAB, AND VEDOLIZUMAB: A CASE STUDY

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Introduction: Crohn's disease is a chronic inflammatory condition that primarily affects the digestive tract, although it can occur in any part of the body from the mouth to the anus. While there are several treatment options available, some patients may not respond well to them. In particular, loss of response to biological drugs such as Infliximab, Adalimumab, and Vedolizumab can pose a significant challenge for patients and their healthcare providers. **Case Report:** A 17-year-old male patient presents to the hospital complaining of diffuse abdominal pain, weight loss of 6kg in 6 months, oral canker sores, and odynophagia for the past 3 weeks. The patient was diagnosed with Crohn`s disease A1aL3B1G1, 8 years ago after a clinical consultation in which he did a colonoscopy with a biopsy. An MRI-Enterography highlighted the thickening of the colonic wall up to 9 mm, over a distance of 18 cm, with an inflammatory aspect of the ascending and transverse colon. The interesting point of this case presentation is that he was sequentially administered Adalimumab and then Infliximab, with antibodies developed during the treatment monitoring. Finally, Vedolizumab was administered, also with a poor response to this new molecule. The treatment strategy was to try to obtain his clinical remission with corticosteroids and mesalazine. The purpose of the therapy was to prevent further complications and improve his general condition, which was realized during his hospitalization. Positive diagnosis: Ileocolic Crohn`s disease Latent infection with Ebstein-Barr Latent infection with Cytomegalovirus Underweight (BMI 16) **Discussions :** Biological therapies, such as anti-tumor necrosis factor (TNF) agents, have been effective in treating many patients with Crohn's disease. However, in some cases, the disease may become resistant to these therapies, making it difficult to manage. Surgical resection has its limitations and it can only reduce the symptoms. In recent years, there has been growing interest in alternative therapies for Crohn's disease, such as dietary changes, probiotics, and fecal microbiota transplantation. **Conclusions:** We showed a rare situation of a failure in treating a pediatric Crohn`s disease with multiple lines of biological therapies. The difficulty of finding the right treatment for maintaining his remission is high due to the low concentration of the drug in the blood and the high titer of antibodies against anti-tumoral necrosis factor (Adalimumab, Infliximab). Also, recent studies showed a poor response to anti-integrins (Vedolizumab) after anti-TNF failure.

Keywords: Anti-tumoral necrosis factor, Crohn`s disease, MRI-Enteroghraphy, Biological therapy

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SYNOVIAL LIPOMATOSIS (LIPOMA ARBORESCENS/HOFFA DISEASE): A CASE REPORT IN A 70 YEARS OLD MAN

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Introduction: Synovial lipomatosis (SL), also known as lipoma arborescens or Hoffa disease, is a rare articular lesion that consists of subsynovial villous proliferation of mature fat cells. It usually affects the knee and has an insidious onset of painless swelling of the joint that persists for many years, followed by progressive pain and intermittent episodes of joint effusion. **Case Report:** We here present the case of a 70 year-old male diagnosed with primary gonarthrosis and secondary genu varum. Arthroscopic synovectomy, extensive debridement and biopsy of the synovial membrane were performed and the specimen was sent to the Pathology Department. Macroscopically e observed a 80x30x20mm brown synovial membrane sample, with villous aspect and soft

consistency. At microscopy, an hyperplastic and hypertrophied synovial membrane forming projections in the form of papillae were observed. Synoviocites were arranged in single or multiple layers, had an eosinophilic cytoplasm and round nuclei with no atypia. The core of the papillae contained a stroma that exhibited an increased amount of mature adipose tissue, with almost complete substitution of subsynovial tissue by mature adipocytes.The histopathological diagnosis was consistent with SL(Hoffa desease). **Discussions :** SL is a rare benign indolent synovial proliferative disease that involves primarily the knee joint. There are two etiological types of lipoma arborescens, primary and secondary, depending on the age of onset and underlying precipitating condition. **Conclusions:** Our case is an example of secondary SL, the most common subtype, defined as SL associated with underlying chronic irritation, such as degenerative disease, trauma, meniscal injury, or synovitis, and is usually seen in elderly patients. Awareness of its clinical, imaging and pathological characteristics is essential for early diagnosis and treatment, as well as to avoid misinterpretation of this condition as other aggressive articular masses.

Keywords: synovial lipomatosis, rare, secondary

POSTER - DENTAL MEDICINE

HALITOSIS: PHOBIA OR REALITY?

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Introduction: Pseudohalitosis, psychological halitosis, and halitophobia are common reasons for patients to visit the dental office. **Case Report:** Three cases of psychological halitosis that consulted several dentists with different specialties were studied. The patients did not accept the fact that the diagnosis of halitosis (diagnosis assumed by the patient) was not confirmed. A thorough anamnesis was carried out, as specialized dental consultation, investigations, scaling, and minor dental treatments. Several general medicine specialists evaluated the patients "intensely": ORL, internist, gastroenterologist, and endocrinologist. None of the doctors confirmed the existence of any condition, nor the supposed patients' halitosis. The patients repeatedly refused psychiatric or psychological consultation. **Discussions :** The patients wanted a confirmation of the diagnosis, namely of the halitosis they assumed. The concern for this non-existent condition has become obsessive, with exaggerated oral hygiene in terms of dental procedures and materials used, but also aggressive through the frequency of tooth brushing and the auxiliaries used for sanitization (oral douches, mouthwashes, oral antiseptics excessively used) with exaggerated anxiety and repeated scheduling to dental consultations with different doctors to eliminate the causes of non-existent halitosis. Social and family problems arose, the constant refusal to consult a psychologist with the argument that the patient is being sent away due to the incompetence of the dentist. The complaints of patients towards the entire "army" of general practitioners and the continuation of unnecessary medical investigations with the creation of a vicious circle. **Conclusions:** In the case of psychological halitoses, there is a need for a "hidden" psychological/psychiatric counseling carried out in a very "clever" manner with the dentist to help the patient cope with the problem in conditions where the patients refuse any referral to a consultation psychiatric/psychological specialist but accept any other medical consultations that could lead to the disappearance of the imagined halitosis.

Keywords: halitosis, pseudohalitosis, psychological counseling, phobia

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INTERDISCIPLINARY APPLICATIONS OF DIGITAL SMILE DESIGN

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Introduction: The smile is an attention-grabbing personal characteristic which plays an important role in how others perceive a person. Using digital dentistry, dentists are able to respond to patients complaints regarding: fast dental restorations, minimally invasive procedures and of course satisfying their aesthetic needs. Among the latest techniques used to achieve aesthetic results is Digital Smile Design (DSD), which consists in a series of photographs analyzed through a special software. In the present study were addressed treatment possibilities for improving smile aesthetics by previewing the results using DSD. **Case Report:** A 45-years-old adult female patient presented to a dental office for aesthetic reasons, being bothered by the appearance of her smile. The established orthodontic diagnoses was dento-maxillary disharmony associated with dental retrusion, first Angle class dental and skeletal malocclusion (occlusal dysfunction with significant abrasions at the level of the upper incisors with their passive eruption and mandibular edentation of 3.6 tooth). The treatment plan consisted of the following stages: 1.Oral professional hygienization, filling of the carious lessions. 2.Orthodontic treatment with fixed bimaxillary appliance, aiming the alignment and leveling, respectively creating the space necessary for the reconstruction of the upper and lower incisors. Intrusion of upper incisors was necessary for compensateing the passive eruption. The previously made DSD served as a template. 3. Proshetical and implantary treatment of the edentulous space. 4. Reconstruction of the upper and lower incisors minimally-invasively with composite materials, based on the DSD. **Discussions :** In the case of dental abrasions and passive eruption, the therapeutic options are orthodontic intrusion of the incisors, gingivo-alveolo-plasty or lengthening the edge of the incisors. The therapeutic decision is based on several factors: the mini aesthetic characteristics of the smile, the occlusal relationships in the frontal area, and last but not least the patient's desire. To be able to simulate which of these methods would give the best results, the DSD is an important tool. **Conclusions:** With the use of the DSD, the orthodontic treatment plan becomes much more precise, the necessary orthodontic movements can be very well

quantified. DSD is a real help in interdisciplinary treatments and communication between specialists.

Keywords: Digital Smile Design, orthodontic, aesthetic

THE INFLUENCE OF SPECIALIZED UNIVERSITY STUDIES ON STUDENT'S ORAL HYGIENE

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Introduction: Studying dental medicine can have a major impact on the student's oral hygiene practices. Learning in-depth over the course of six years different areas of dentistry is not just contributing to a student's level of theory knowledge, but also improves his personal hygiene habits. **Case Report:** Using an online questionnaire that was conducted among 96 students, (41% of which were dental students) we wanted to show the close interdependence between a study in the dental medicine and an elevated day to day oral hygiene by highlighting the differences in the knowledge of oral health as well as the oral hygiene practices between dental students and students from other faculties at UMFST "George Emil Palade", Targu Mures. **Discussions :** Even though all of the students show pretty good oral hygiene habits, dental students seem to have better knowledge in this field by implementing it in their day to day life. They show per average an increased knowledge of brushing techniques (including different methods like Bass, Bass modified or Fones), a longer brushing time (2.73 minutes comparing to 2.27 minutes for the rest of the students) and the usage of additional aids for oral hygiene like mouthwash, dental floss, interdental brush or an irrigator on a regular basis. Also, 20% of the non-healthcare students do not know the answer or gave a wrong one to basic oral-health questions like "Does the diet affect the development of dental caries, periodontitis and oral cancer?". They skip brushing their teeth in the morning or at night more often (48.2% versus 32.5%), 12.5% brush their teeth just one time per day (in comparison to 5%) and they tend to make an appointment at the dentist just when having a noticeable problem (pain, inflamation or an issue of aesthetics). **Conclusions:** Dental students are improving their daily oral hygiene practices while studying them, but more important, these skills might have a major role in their future career when it comes to giving therapeutic advice by taking into the consideration their personal experience.

Keywords: Oral hygiene, students, Knowledge, oral health

POSTER - PHARMACY

THE IMPORTANCE OF ANTI-ACNE COSMETICS CAUSED BY THE COVID-19 PANDEMIC

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Background: Wearing of face masks was considered a measure to prevent and limit the spread of COVID-19, but it seems to have some consequences on the skin leading to trigger mask-related acne (maskne). Mask wearing has exacerbated existing conditions and even created new ones. **Objective:** The aim of this study was to evaluate the features of acne eruptions, the possible causes of facial dermatoses and the importance of using cosmetic products with anti-acne effect during the COVID-19 pandemic. **Material and methods:** The research method used in this study was based on an Google Forms online questionnaire. A number of 126 participants (106 female; 20 male) with acne prone skin were included. **Results :** 73% of the participants reported acne eruptions during the COVID-19 pandemic - 64.3% presented comedones, 46% pustules, 36.5% papules and 14.3% nodules. The most affected areas by acne were the chin and jawline (51.6%), the nose (37.3%), the cheeks (29.3%) and the mouth area (27%). Cosmetic products were the most used treatments for acne relief. Cleansing products were used by 81% of the participants, 72.2% applied moisturizing products, 55.6% SPF products and 25.4% camouflaging make-up products. The most used cosmetic brands were reported to be imported products (La Roche Posay, CeraVe, Bioderma and Vichy). **Conclusions:** More than half of the subjects with acne prone skin due to face mask wearing during the COVID-19 pandemic included in the study, used cosmetic products for the improvement of their skin condition. Factors that favored the appearance of acne eruptions during the pandemic were considered to be face mask wearing, stress and poor skin care. Anti-acne cosmetic products have an essential role in improving skin condition of maskne patients. Considering this, special consideration for skincare should include anti-bacterial gentle cleansers and moisturisers that help maintain a healthy skin barrier and microbiome.

Keywords: acne, maskne, cosmetics, COVID-19 pandemic

EVALUATION OF ALLANTOIN HYDROGELS PROPERTIES USING DIFFERENT PREPARATION METHODS WITH THE HELP OF A SEMI-SOLID CONTROL DIAGRAM (SSCD)

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Background: Nowadays, the trend of using skin care products with different pharmaceutical ingredients is increasing. Allantoin □□□the selected active pharmaceutical ing redient (API) considered in this study is known as a natural chemical compound that has beneficial properties on the skin, such as anti-irritant effects, wound healing, hydration, and epithelization. Different gelling agents can be used to obtain hydrogels such as Hypromellose, Carbopol, Polyvinylpyrrolidone, Guar Gum, and Xanthan Gum (XG). In this study, the selected gelling agent to develop a hydrogel was XG. **Objective:** The study aims to establish a suitable preparation method for allantoin hydrogel using the Semi-Solid Control Diagram (SSCD) and to characterize the rheology and consistency behavior of the allantoin hydrogels. **Material and methods:** Four hydrogels were prepared, two blanks coded M01 and M02, and two containing allantoin (M1 and M2) using two different preparation methods: first - magnetic stirring was used to prepare M01 and M1 gel whilst the M02 and M2 were prepared in a mortar through trituration. The hydrogels were evaluated using the SSCD, by the evaluation of the following parameters: organoleptic properties (homogeneity, color, flow through a tube or a cannula, absence of air and texture), viscosity, extensibility, loss on drying and centrifugation, and of the following indexes: Parametric Index, Parametric Profile Index, and Good Quality Index. Besides the previously mentioned parameters, the following gel variables were evaluated: consistency and rheology. **Results :** For the evaluated gels, the following results were obtained considering the Parametric Index M1=1, M2=0.8, M01=1, M02=0.8. With the help of the Parametric Profile Index, the following results were highlighted: M1= 8.362, M2=7.27, M01=8.608, M02=8.508. The blank gels show better values in comparison to the allantoin gels. The Good Quality Index shows a higher value for M1=6.27 compared to M2=5.45. This result is also underlined by the value of M01=6.45, which is higher than M02=6.38. Considering the consistency, the M01 formulation has the highest spreadability, following in order M02, then allantoin hydrogels: M1 and M2. The rheological behavior emphasized a thixotropic pseudoplastic flow for all the evaluated gels. **Conclusions:** Four hydrogels, two blanks M01 and M02, and two with allantoin were successfully prepared. The blank and allantoin hydrogels were evaluated using SSCD Diagrams outlining the properties that need

improvement and the method that is more suitable to prepare the allantoin hydrogels. Also, the influence of the API while suspended in the XG-hydrogel was evaluated and the proper method to develop allantoin hydrogel was outlined (stirring method).

Keywords: Xanthan Gum, Allantoin hydrogel, Rheology, Semi-solid Control Diagrams

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CUTTING-EDGE THERAPIES IN PTSD, DEPRESSION, AND POST-WITHDRAWAL DEPRESSION

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Background: Mental disorders are considered one of the most significant burdens of today's society. This scientific work is based on the outline of new pharmacological approaches, their understanding, and integration for the treatment of post-traumatic stress disorder (PTSD), depression, and depression associated with withdrawal. Numerous factors can lead to the imbalance between neurotransmitters and the diagnosis of a mental disorder, such as physical or psychological trauma, chronic stress, substance abuse, and genetic predisposition. The diagnosis is usually based on criteria provided by the fifth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5) and International Classification of Diseases (ICD-11). The effectiveness and safety of the therapeutic choices used for treatment, including psychotherapy, medicine, and other complementary therapies , varies from patient to patient. The amount of knowledge regarding cutting-edge therapies for these diseases is expanding. Examples include ketamine infusion therapy, transcranial magnetic stimulation, and psychedelic-assisted therapy. These treatments may provide a more individualized and successful therapy option for patients who do not respond to conventional medications since they have demonstrated encouraging results in clinical trials. **Objective:** This study's goal is to assess the effectiveness and security of novel therapeutic options, including cannabidiol (CBD), psilocybin, and 3,4-Methylenedioxymethamphetamine (MDMA) for individuals with PTSD, depression, and post-withdrawal depression who have not responded to conventional therapy. **Material and methods:** In order to find pertinent material on the use of cutting-edge treatments for PTSD, depression, and post-withdrawal depression, we analyzed the published literature data through medical databases such as PubMed, ScienceDirect, and Google Scholar. The search approach included keywords pertaining to the illnesses of interest, such as PTSD, depression, and post-withdrawal depression, as well as innovative treatments of interest, such as CBD, psilocybin, and MDMA. **Results :** PTSD, depression and post-withdrawal depression patients who have not responded to conventional therapy may find fresh relief with CBD, psilocybin, and MDMA, according to the findings of our literature review. **Conclusions:** After treatment with these therapeutic options, several trials have documented notable symptom reductions as well as improvements in mood and quality of life. To further understand the effectiveness and safety of these treatments as well as their potential mechanisms of action, additional research is required because the overall quality of the evidence is still of low quality.Acknowledgment: This work was supported by George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș Research Grant number 510/19/17.01.2022.

Keywords: PTSD, Depression, Mental disorders, CBD

ALTERNATIVE TREATMENT OF MIXED ANXIETY–DEPRESSIVE DISORDER (MADD)

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Background: Mixed anxiety-depressive disorder (MADD) is a diagnostic category that defines patients with both limited and equal intensity anxiety and depressive symptoms, with at least some autonomic features. In this case the usual treatment methods did not lead to satisfactory results. After switching to the alternative treatment with CBD drops, a successful treatment was achieved. **Objective:** In this work we would like to show the alternative treatment of Mixed anxiety-depressive disorder (MADD). This patient was admitted several times with a history of depression and anxiety. **Material and methods:** This case report presents a 64 years female who was firstly admitted in a private psychiatry setting in 2009 with no significant medical history. She complained of anxiety and depression and so got treated with Venlafaxine 75mg and Alprazolam. This cured her for the next 3 months. In 2013 she showed up again with the same complains. After another 3 months she got cured with the same

treatment again. In March 2017 her grandson was born with medical problems which triggered another episode of depression, anxiety and sleep disorders. This time the treatment with Venlafaxine 75mg and Alprazolam didn´t respond properly and the doctors increased the dose. In the following years the patient went through several drug and dose adjustments, but none of them was a game changer. In 2019 she got CBD drops (1x daily/4mg) for the first time. **Results :** Switching to CBD drops led to a significant improvement in the patient general state. The other medications were discontinued. . For the following examination appointments the patient did not show up. **Conclusions:** We have performed a retrospective clinical pharmacological evaluation of the case. Like in this case, CBD oil therapy for MADD can be a valid option. It improves the quality of life for the patient although conventional treatment methods fail. Furthermore, the undesirable side effects of common antidepressants can be avoided.

Keywords: Mixed anxiety–depressive disorder (MADD), alternative treatment, Canabidiol, Psychiatry

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THE DEVELOPMENT OF GEL BASES USED FOR THE POTENTIAL INCORPORATION OF VARIOUS PHARMACEUTICAL INGREDIENTS

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Background: Gels are semisolid systems used in pharmaceutics for their simple preparation and patient compliance. Currently used for a vast number of conditions, gels are colloidal materials in which countless ingredients with pharmaceutical benefits can be incorporated. **Objective:** Provided that in more recent years oleogels (OGL) have become a topic of greater interest, this study aims to analyse and compare them to the classical option represented by the hydrogels (HGL). During this process, both formulations were tested alongside the combination of the two, which generated a bigel (BGL). **Material and methods:** To obtain the HGL, the xanthan gum was used as a gelifying agent. As for the OGL, sunflower oil was combined with carnauba wax, known for its excellent oil-binding capacity. The BGL was developed by mixing the HGL with the OGL using two surfactants (Tween 80 and Span 80). The following parameters have been evaluated: rheological characteristics, consistency, spreadability, adhesivity, gel texture (microscopic study), and microbiological tests. **Results :** The HGL showed higher resistance at penetration (28.8 mm) in comparison with the oil-based gel (29.9 mm), which had a fluid consistency. During the spreadability studies, the formulations which included oil displayed an irregular distribution whilst adding the heaviest weight (500 g). Regarding adhesivity, HGL and BGL generated a stronger force (22.38*10-3 N/cm2 and 21.22*10-3 N/cm2) in contrast with 10.63*10-3 N/cm2 for OGL to produce the detachment of the upper plate. When the rheological behaviour was analysed, it showed pseudoplastic thixotropic flow for all three gel bases. The microscopic evaluation revealed a crystalline microstructure for OGL and a porous one for HGL, reducing the crystal aggregation in the BGL structure. In addition, there were no contaminating microorganisms found during the microbiological examination. **Conclusions:** Based on the research and analysis made on the aforementioned types of preparations, significant properties were highlighted, which imply that the differences between formulations can represent both an advantage and a disadvantage. All three gels are suitable for further incorporation of pharmaceutical ingredients, the choice depending on the characteristics of the product designed and the compatibility of the active ingredients with the excipients.

Keywords: hydrogel, oleogel, bigel, rheology

STUDY OF PARTICLE SIZE DISTRIBUTION ON PHARMACOTECHNICAL FACTORS IN DICLOFENAC SODIUM HYDROGEL FORMULATIONS

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Background: The substance chosen for this study is diclofenac sodium, a nonsteroidal anti-inflammatory and analgesic compound that can be incorporated into semisolid formulations (hydrogel). This active ingredient is recommended in rheumatoid arthritis, for injuries (usually used by athletes), or after minor injuries. **Objective:** The main objectives of the study foresee the development of 1% diclofenac sodium hydrogels and the analysis of the specific technological parameters of the pharmaceutical formulation. **Material and methods:** The substances used in this study are diclofenac sodium, Carbopol®940, glycerin, triethanolamine, Tween 80, ethanol, and distilled water. Four hydrogel formulations were prepared using different methods: one blank (GBD1), and three

formulations with active ingredient coded GD2 (the active substance was suspended in the gel base), GD3 (the active substance was dispersed in alcohol), and GD4 (the active substance was dispersed in a hydroalcoholic mixture, with Tween 80 added to obtain a homogeneous dispersion). The gels are evaluated in terms of consistency, spreadability, adhesivity, rheological characteristics, and the "particle size" distribution - FRX using a microscope. **Results :** The penetrometry study highlighted the following ascending order: GD4<GBD1<GD2=GD3. The GD4 formulation had the highest spreadability capacity whilst the blank formulation had the lowest spreadability. Considering the way of applying the gels (at the cutaneous level), evaluation of the adhesivity was necessary which presented a growth of the following order: GD3<GD4<GBD1<GD2, ranging betwixt 3506 ± 46.3 dyne/cm2 for GD3 and 11741 ± 398.2 dyne/cm2. Through the rheological study, the viscosity and flow curves were graphically representing outlining pseudoplastic thixotropic behavior. To achieve the particle size distribution, the average mean of the diameters of the particles was measured, without GBD1 as in the case of the blank gel there were no suspended particles. The ascending order of the formulas is: GD4<GD3<GD2. GD4 has the smallest particles, therefore it has the highest stability among the three formulas. **Conclusions:** In conclusion, three formulations of diclofenac sodium hydrogels were successfully prepared. After the particle size distribution analysis, higher stability was observed for GD4. By correlating the results obtained during the particle size experiment it was observed that an increased particle diameter could lead the growth in penetration depth and adhesivity. In comparison with the blank formulation, the diclofenac sodium gels presented an increased viscosity.

Keywords: Diclofenac sodium hydrogels, Pharmacotechnical analysis, Particle size distribution

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SUSTAINABLE PROTEIN ALTERNATIVES, FROM PLANT-BASED MEAT TO INSECT PROTEIN POWDER

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Background: Growing populations, climate change, animal welfare, the incidence of diseases related to the consumption of red meat and processed meat have led to the development of new type of foods obtained from alternative, sustainable proteins. **Objective:** The aim of this study is to highlight the currently existing protein alternatives. **Material and methods:** Articles were selected from scientific databases (ScienceDirect, PubMed, and Scopus), using the following keywords: "plant -based meat", "cell- based meat", "insect powder", "sustainable protein". **Results :** The data base search has revealed that the sustainable protein alternatives are plant-based meat (PBM) products, insect powders and cell-based meat (CBM). Regarding the type of foods obtained from alternative proteins, there is a great interest in PBM. These products mimic meat products from a nutritional and sensory point of view. Insect powders are increasingly studied, they are added to products to increase their nutritional value. CBM products are still in early stages of development, more research is needed to create safe products for consumption. **Conclusions:** Foods made from alternative proteins or improved with sustainable proteins are a necessity nowadays. Although consumers are restrained regarding the consumption of products that have insect powder content and the future consumption of cell-based meat products, PBM products are becoming more popular, more appreciated, and more consumed." This work was supported by the University of Medicine, Pharmacy, Science and Technology "George Emil Palade" of Târgu Mureș Research Grant number NR.164/14/10.01.2023."

Keywords: plant- based meat, meat analogues, cell-based meat, insect powder

BIOMEDICAL ENGINEEERING - BIOMEDICAL ENGINEEERING

AIR QUALITY ASSESSMENT INSIDE THE ORTHOPEDICS-TRAUMATOLOGY DEPARTMENT

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Background: In the Targu Mures County Emergency Clinical Hospital, indoor air quality is monitored in the operating rooms, out-patient care rooms, and wards. The overall levels of air pollutants are increasing. **Objective:** The objective of this paper is to evaluate the air quality inside the different compartiments of the Orthopedics-Traumatology I Department and to compare it with air quality indices in other departments of the hospital. **Material and methods:** With the support of air quality sensors connected to a uRADMonitor SMOGGIE device, between March 1 and 15, 2023, we prospectively measured the air quality in the different compartiments of the Orthopedics-Traumatology Department: ward, emergency room, out-patient care room, operating room. These areas are located on different levels of the hospital: ward on the 3rd floor, emergency room on the ground floor, out-patient care room on the 1st floor, operating room on the 2nd floor. It was assessed particulate matter <2.5 mm in diameter (PM2.5), carbon dioxide (CO2), volatile organic compounds (VOCs) and nitrogen dioxide (NO2) concentrations. It was evaluated the effectiveness of the intervention between orthopedic compartiments that use air purifiers and those that do not use such devices. **Results :** The general concentrations of CO2, VOC and PM2.5 in the Orthopedics-Traumatology I ward were significantly higher than those in the out-patient room. Indoor air quality was worst during periods of low temperatures when the heating system was operating. In spaces that use air purifiers the concentration of PM2.5 is lower. **Conclusions:** The medical staff, as well as the patients, are frequently exposed to indoor air pollution in the Orthopedics-Traumatology I Department. Therefore, in these areas of the hospital, it is necessary to adopt health-related strategies to protect against indoor ambient air pollution.

Keywords: orthopedics-traumatology, volatile organic compounds, nitrogen dioxide, carbon dioxide

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DETECTION OF CLOTS IN HEMATOLOGY TUBES BY ULTRASONOGRAPHY

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Background: Blood clot formation in hematology samples is a common occurrence in medical laboratories. Even a small clot in the sample tube can disrupt the accuracy of hematological investigations. Hematology analyzers can signal the presence of a clot during sample aspiration, but there are cases where tubes containing microclots may not be detected by the analyzer, leading to unreliable results. **Objective:** The aim of the study is to create a setup to detect the presence of blood clots using ultrasonography. In addition to detecting blood clots, the setup should be capable of measuring the volume of the blood sample to confirm correct blood collection. **Material and methods:** To ensure homogeneity of the hematology tube before ultrasound scanning, a stand was created. The ultrasound scanning head was mounted vertically on a small platform that holds the tube support. The transducer is placed in a way that it touches the bottom of the tube after it is placed in the holder. The platform was secured on the axle of a stepper motor, which was driven by an Arduino module. The stepper motor performs a 0 to 130 degree up-down rotation 10 times to ensure sample homogeneity. The GS200i laboratory ultrasonographic echoscope was used for signal generation and acquisition in mode A, using a 4MHZ transducer. The A-scan, together with trigger signals gathered from the echoscope, were acquired using the same Arduino module, where they were further processed. **Results :** Six sample tubes were prepared for measurement: three containing only water with different volumes, and three containing water with a rosin clot of varying dimensions. The clot was detected immediately after the last down-to-up movement was finished, where we measured a small amplitude moving from right to left. From the signal amplitude, we calculated the volume of the clot. In samples containing only water, the system did not detect any amplitude change. By measuring the time elapsed until the highest signal amplitude, we were able to calculate the exact volume of liquid in the sample tube. **Conclusions:** Using a clot scanning device as part of the preanalytic process for hematology sample tubes could be a beneficial approach for ensuring high-quality results. Although, using ultrasonography gel between the transducer and sample tube could pose challenges in routine laboratory workflows. Further research is needed to find ways to address this issue and make the use of clot scanning devices more feasible in practical settings.

Keywords: blood clots, ultrasonography preanalitycal, hematology results

ULTRASONOGRAPHY AS A "REAL TIME" COMPONENT OF MODERN MINIMALLY INVASIVE PROCEDURES IN PHLEBOLOGY

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Background: Minimally invasive medical and surgical procedures in phlebology are the future of many diagnostic and treatment protocols. Ultrasonography is a non-invasive procedure performed "real time" and can be recorded for further analysis and evaluation. It allows highly accurate visualisation of both the morphological features being addressed and the minimally invasive instruments introduced into the body under visual control **Objective:** The objective of this paper is to demonstrate the usefulness and development prospects of ultrasonography in minimally invasive medical and surgical procedures. **Material and methods:** We will present the echogenic puncture approach to superficial veins in endovenous laser treatment (endolumenal photo-thermoablation with 1470 nm diode laser) of varicose veins of the lower limbs, respectively echogenic sclerotherapy (intravenous injection of a sclerosing agent - Etoxysclerol) of varicose bundles. For the visualization of anatomical elements and instrumentation related to minimally invasive procedures we used linear transducer ultrasonography machine (8-10 MHz) in Doppler Duplex and B-mode. Theoretical documentation and practical registration were performed in the operating room, Angio Center for Vascular Medicine, Tîrgu Mureș. **Results :** We conducted an analysis of 50 clinical cases with varicosity of the lower limbs. Each individual patient was previously investigated by Duplex Doppler ultrasonography, with mapping of the deep and superficial venous system, creating a schematic map for minimally invasive therapeutic compliance. We recorded and analysed procedures with ultrasonographic guidance. We documented the evolution of resolved cases and compared with data from the literature in the field. In all cases we used linear transducer (10 MHz). Ultrasound-guided puncture approach was performed in all cases (100%). Ultrasound fiberoptic (laser) guidance was performed in every patient, stepped vein approach was required in three cases (6%) due to the sinuous trajectory. Echogenic puncture sclerotherapy of varicose bundles was performed in all cases without incidence (100%). **Conclusions:** 1.Ultrasonography is the main "real time" component indispensable in minimally invasive procedures. 2.Ultrasonography ensures the accurate and safe performance of modern minimally invasive techniques applied in phlebology. 3.It is a non-invasive procedure that is easy to perform and can be repeated as needed without risk. 4.Ultrasonographic guidance in the cases studied was 100% successful compared to the empirical clinical approach, with 82% accuracy.

Keywords: ultrasonography, ultrasound guiding, minimal invasive procedures

EXTERNAL DEFIBRILLATOR WITH AUTOMATIC SYNCHRONIZATION USING THE LATEST TECHNOLOGIES IN BIOSIGNAL ACQUISITION

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Background: Ventricular fibrillations are the most common cardiac rhythm abnormalities and can endanger the patient's life. Restoring normal rhythm is primarily achieved with the help of an external defibrillator, preferably using a biphasic waveform. **Objective:** The aim of the study was to create an external defibrillator that acquires and processes the ECG signal obtained from a biosignal simulator, then discharges a biphasic truncated exponential (BTE) wave during the QR interval. **Material and methods:** The device consists of two main parts: an ECG acquisition board and an electrical discharge board. To acquire the ECG signal, an Arduino board was used in tandem with a MAX30001 development board. An Arduino code was written to process the ECG signal and display both the processed signal and impedance values obtained from the FLUKE Prosim 3 biosignal generator. The device uses the last five detected QRS intervals to predict the sixth QR segment and trigger two discharge commands via two digital pins. The first discharge signal generates the positive biphasic truncated exponential (BTE) wave, while the second generates the negative wave. To ensure safety, the discharge energy is kept at a magnitude 100 times lower than the typical energy levels used in defibrillation. A table is used to determine the charging energy for the energy storage capacitor (ESC) and calculate the discharge time based on known correlations between patient impedance and discharged energy. The ESC charging magnitude and discharging circuit are organized in a H-bridge using IGBT transistors and are simulated in the Infineon SPICE environment for different patient impedances. **Results :** The system was tested using the Fluke Prosim 3 patient simulator, which

generated various ECG waveforms ranging from 60-200 bpm, with or without artifacts. The system successfully detected the QRS complex and triggered the discharge on the next predicted QR segment. The energy storage capacitor (ESC) was discharged through a 0-580 ohm rheostat, which was also used to simulate the patient's impedance. The measured time and energy were in accordance with the values in the implemented table. **Conclusions:** The developed setup successfully acquires and processes ECG signals, generates discharge profiles based on patient impedance and delivers the required energy according to the implemented table (100x lower for safety). It has been tested only on healthy ECG signals. The setup can be used to study various discharge signals, gain a better understanding of biomedical signal processing and generate different discharge profiles.

Keywords: defibrillation, ECG, biosignal, discharge

MANAGEMENT OF DIABETES THROUGH DIET USING INTERACTIVE GRAPHICAL USER INTERFACE

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Background: Diabetes mellitus (DM) is a chronic disease that affects both adult and pediatric patients, characterized by insulin resistance and the development of hyperglycemia, with obesity and a sedentary lifestyle being significant risk factors. **Objective:** The aim of the study is to develop an interactive program that will assist DM patients in closely monitoring their blood glucose levels, insulin dosages, dietary regimen and calorie calculations, routine tests, physical activity levels, and ultimately in generating periodic progress reports. **Material and methods:** The device contains software with the capacity to store demographic patient data for daily monitoring of food intake, blood glucose levels, and reminder for insulin administration if necessary. The study was conducted on two sedentary adolescent patients diagnosed with DM. The study spanned two weeks, during which the device was used throughout the day. Selecting the food type from the system menu, generated suggestions for substitutions if necessary, the number of calories, and the number of macronutrients for the selection made, and warned patients about any potential risks they may be exposed to. The HMI (human-machine-interface) software displays food images and macronutrient values on a capacitive touchscreen when patients select their desired food items from the device's memory. It also generates graphs based on glucose levels and physical activity data to facilitate comprehensive condition management. **Results :** It was observed that the patients were able to maintain consistent glucose levels and experienced a significant improvement. Additionally, it was found that the patients became aware of the importance of nutrition and gave up unhealthy food choices, opting instead for healthier food options. **Conclusions:** These results suggest that dietary intervention can be an effective strategy for improving the health of patients with glucose problems and promoting a healthy lifestyle. The results obtained in this study show that the interactive device developed can be a valuable tool for managing DM. Patients can gain a better understanding of how their lifestyle affects their health. However, it is important to consider that this study was conducted on a small number of patients over a limited period, so further research is needed to validate the results and evaluate the long-term effects of device use.

Keywords: hyperglycemia, sedentary lifestyle, human-machine-interface, diabetes mellitus

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MECHATRONIC SYSTEM FOR ORTHODONTIC CLASPS CREATION

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Background: Orthodontic clasps are anchoring elements required in mobile orthodontic appliances, forming a stable and secure point of support. In the absence of these clasps, the functionality of the orthodontic appliance may be affected, which can compromise the approach to patient cases. **Objective:** The aim of the study is to build a mechatronic system able to automatically bend orthodontic wire based on predefined models. Currently, the only way to create orthodontic clasps is through a manual process. Given the variety of models, technology can be used to assist technicians by automating the process of creating the clasps using an automatic device. **Material and methods:** The system was composed of a Straightener for straightening and removing the initial curvature of the orthodontic wire; Feeder, which pulled the wire from the coil into the Straightener, and pushed it towards the Bender; Bender, which was responsible for bending up to ±130 degrees with a minimum radius of 1 mm on the Y

and Z axis according to the selected model. All movements were performed using stepper motors. The program for motor control had been developed on an Arduino interface. **Results :** The distances, the angles, and the coordinates were measured manually on a gypsum model and entered into the software that controls the motors. A low-complexity clasp model was chosen, and it was repetitively created five times by both the device and two technicians, a beginner one and an experienced one. We evaluated the minimum, average, and maximum time required for creating a clasp, as well as its quality. For this purpose, we used a numerical scale from 1 (least suitable) to 5 (most suitable). The results showed that the average time of the device was 28 seconds, the time required by the first technician: 17 minutes and 20 seconds, and the time required by the second technician: 4 minutes and 15 seconds. The quality of the models created by the first technician was on a scale of 3, by the second technician: scale 4.5, and by the device: scale 4. **Conclusions:** The automatic system can reproduce the chosen model with the same fidelity as an experienced technician, but in a much shorter time. The disadvantage is the additional time required to create the program for the model, but this device can become an indispensable companion in orthodontic laboratories.

Keywords: Orthodontic clasps, Mechatronic system, Automation

DEVELOPMENT OF A SIMULATED INDUSTRIAL PROCESS CONTROLLED WITH PLC

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Background: Industrial processes are essential in the production of goods and services, and their control is vital for obtaining quality products and reducing costs and risks. An efficient way to control an industrial process is through a programmable logic controller (PLC), which is an industrial automation solution. The development of a simulated industrial process controlled with a PLC is a complex process that involves creating a PLC control system, integrating it into the industrial process, and simulating it to test the functionality and effectiveness of the system. This process can be used to improve existing industrial processes or to develop new processes. **Objective:** Within this process, the PLC is programmed to monitor and control various aspects of the process, such as temperature, pressure, liquid level, or rotation speed. PLC programming involves defining a list of instructions to control inputs and outputs and make decisions based on them. **Material and methods:** The material and method for developing a simulated industrial process controlled with a PLC involves the following steps: Identification of the needs and objectives of the industrial process - in this phase, the needs of the industrial process are established, and the objectives and performance requirements of the control system are identified. Design of the PLC control system - this phase involves the design of the PLC control system, including the selection of PLC components, sensors, and actuating devices. The programming language to be used in the PLC is also decided upon. Programming of the PLC - this phase involves programming the PLC to control the industrial process according to the requirements established in the design phase. **Results :** To provide the results obtained by developing a simulated industrial process controlled with a PLC, the control system objectives and performance criteria established in the design phase must be specified. Generally, the control system objectives are to improve efficiency and reduce errors and defects in the industrial process. The results obtained by developing a simulated industrial process controlled with a PLC include: Precise control of the industrial process - the PLC can control the industrial process with high precision, thereby minimizing errors and defects in the industrial process. **Conclusions:** In conclusion, the development of a simulated industrial process controlled with a PLC is a complex and important process for improving industrial processes. This process involves PLC programming, integration into the process control system, and simulation to verify its functionality and effectiveness.

Keywords: PLC, JavaScript, Node-RED, Simulated process

EVALUATION OF INTENTIONAL TREMOR USING SEMG

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Background: An intentional tremor is a type of tremor that occurs during voluntary movements, such as reaching for an object or writing. It is also known as an action tremor or kinetic tremor.Intentional tremors are typically characterized by rhythmic oscillations of a limb or body part during purposeful movements. The tremor may be mild and barely noticeable or severe enough to interfere with daily activities. It is often exacerbated by stress, anxiety,

or fatigue. Intentional tremors can be caused by a variety of factors, including neurological conditions such as multiple sclerosis or Parkinson's disease. **Objective:** The aim of the study is to use surface electromygram (sEMG) to record muscle activity, which can be used to assess intentional tremor. These objectives include: identifying and locating the muscles involved in tremor, measuring the degree of muscle activity, assessing the severity of the tremor and monitoring the progression of the tremor. **Material and methods:** To evaluate the intentional tremor using sEMG, the AD8232 frontend was used. The AD8232 is an integrated signal conditioning block for ECG and other biopotential measurement applications. It was designed to extract, amplify, and filter small biopotential signals in the presence of noisy conditions, such as those encountered in clinical environments. sEMG signals were acquired from five muscles: Flexor Carpi Radialis (FCR), Flexor Carpi Ulnaris (FCU), Extensor Carpi Radialis Longus (ECRL), Extensor Carpi Radialis Brevis (ECRB) and Extensor Carpi Ulnaris (ECU) from the left forearm using five Bitalino EMG modules. The modules were arranged in on a flexible bracelet for comfortable use. The signals were processed using Bitalino MCU module and sent via Bluetooth to a PC where they were plotted using OpenSignals software. Each signal was named according to muscle abbreviation. The presence of motion and its motion frequency, amplitude, and duration were recorded and further analyzed. **Results :** sEMG signals from the left forearm of a healthy subject were acquired from FCR, FCU, ECRL, ECRB and ECU muscles. The subject was instructed to perform different wrist movements, mimicking intentional tremor with different frequency and intensity. Evaluating the resulting signals we could measure the frequency, intensity and motion pattern of the studied muscles. **Conclusions:** This paper proposes an approach to analyze the muscles involved in intentional tremor and their parameters, including frequency, intensity, and pattern. The findings of this study may prove useful in measuring the effectiveness of treatments for intentional tremor.

Keywords: intentional tremor, sEMG, biosignals

THE IMPORTANCE OF CAPACITY MANAGEMENT TO ENSURE PRODUCT QUALITY IN AN INDUSTRIALIZATION PROJECT

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Background: The quantity and quality of products is influenced by various factors which may be related to the companies internal decisions or customers requests. The flexibility of the modern world and the uncertainty after the pandemic have also influenced the agreements between the companies (supplier-company-customer). How is this corelated with the process of manufacturing? When a random company wins a contract with a specific customer and in there it is mentioned some defined quantities necessary/year than that company digs deeper internally and finds the right machines and methods to achieve those quantities. All should be fine but as mentioned before there is a flexibility written down in the agreement even if there is mentioned a fixed/maximum quantity requested. This flexibility is defined as a percentage which can be above or below the fixed volume in one year. As an example it can be: 30% more. This increase of volume will make the company which produce find other ways to deliver the requested amount. They are struggling to push the people, to improve the machine OEE, to improve the process flow and why not to use some other equipment after checking with the customer. But all of these may have a direct impact on the quality of the products because at that moment the focus is switched from quality improvement to the output improvement/increasing. **Objective:** The purpose of this analysis is to demonstrate that the capacity of a production line is a very important aspect for every company and may have influence on the quality of the products. Also the other topic which is considered as an objective is that a very new project should be defined in such a way that can provide the same flexibility in terms of capacity as the flexibility of the product volumes. **Material and methods:** The analyze is being done by using a real example from an industrialization project. The data will be presented using graphs. Program used for timeline representation: Microsoft project. **Results :** Higher scrap rate due to efforts in increasing the output. Better understanding of the importance of having flexibility in terms of capacity item. **Conclusions:** Capacity issues have a big influence on the quality of the products and the same on the motivation/mood of employees.

Keywords: capacity, quality, management

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