Volume 70 | Supplement 2 | 2024

ACTA MARISIENSIS
SERIA MEDICA

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

CORDX MASTERCLASS 2024

Târgu Mureș, Romania
17-19 May 2024

BOOK OF ABSTRACTS

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

UNIVERSITY PRESS
19 99
TÂRGU-MUREȘ

Acta Marisiensis - Seria Medica

Volume 70 | Supplement 2 | 2024

THE SOCIETY FOR INNOVATION,
DEVELOPMENT AND MEDICAL EDUCATION
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GEORGE EMIL PALADE UNIVERSITY OF MEDICINE,
PHARMACY, SCIENCE, AND TECHNOLOGY OF TÂRGU MUREȘ

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Acta Marisiensis - Seria Medica

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

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

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or sent by e-mail to ammjournal@umfst.ro

Acta Marisiensis - Seria Medica is indexed in the following international databases:

· SCOPUS
· DOAJ
· EBSCO Discovery Service (since 01 July 2010, first indexed number - no.4/2010)
· National Library of Medicine
·Sciendo
·Baidu Scholar
· Celdes
· Google Scholar
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· Publons

DTP and Website Management
Editura Prisma

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

CORDX MASTERCLASS 2024

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EFFECTS OF LONG-TERM ANGIOTENSIN II ADMINISTRATION ON CARDIAC FUNCTION IN WISTAR RATS

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Background: Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia and is associated with high morbidity and mortality. Experimental studies are a powerful tool to clarify the pathology of AF.

Objective: To deploy and characterize a rat AF model, based on chronic administration of angiotensin II (AngII).

Material and methods: Thirty-three male Wistar rats were randomized into two groups AngII (n=17) and Control (n=16). Animals were implanted with radiotelemetry ECG transmitters and baseline continuous 24-h ECG recording and echocardiographic examination were performed. Inducibility of AF was tested using transoesophageal atrial pacing. Then, all rats were implanted with osmotic minipumps. AngII rats received continuous subcutaneous infusion of AngII (12 μg/kg/h) for 4 weeks. Control rats received a similar volume of normal saline. At the end of the protocol, 24-h ECG monitoring, echocardiographic examination, and AF inducibility assessment were performed.

Results: At baseline, no significant differences were found between the two groups (all $p > 0.05$). At the end of the study, AngII had similar heart rates ($p > 0.05$), but significantly higher systolic blood pressure (155.0 ± 5.8 mmHg vs. 113.7±2.0 mmHg; $p=0.001$) compared to Control. AngII presented similar ventricular parameters (all $p > 0.05$), but lower left atrial diameter (0.49 ± 0.03 cm vs. 0.58 ± 0.04 cm; $p = 0.03$) compared to Control. Although numerically higher, AF inducibility and spontaneous AF episodes and premature atrial beats were not significantly different between the two groups (all $p > 0.05$).

Conclusions: In this study, low-dose continuous AngII infusion was associated with a significant increase in blood pressure. Although spontaneous and electrically-induced AF episodes were numerically higher in the AngII-treated group, this effect was not statistically significant. These data indicate that 4-week administration of AngII at a dose of 12 μg/kg/h is insufficient to induce significant atrial remodeling and spontaneous or electrically-induced AF.

Keywords: angiotensin II, atrial fibrillation, atrial remodeling, rats

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USING CALCIUM SCORE IMAGES AS MASK TO IDENTIFY AREAS OF HYPOPERFUSION ON CORONARY CT IMAGES - A PROOF OF CONCEPT STUDY

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Background: Myocardial perfusion, crucial for cardiac function, is often compromised by coronary artery disease (CAD), which impedes blood flow through arterial narrowing or occlusion, leading to ischemia. Traditional imaging techniques occasionally fail to accurately localize ischemic regions, necessitating advancements in diagnostic methods. This study introduces a novel approach using calcium score images as masks within coronary CT angiography (cCTA) to enhance the detection of myocardial hypoperfusion. By leveraging the distinct Hounsfield unit value of calcified plaques, this method aims to improve the specificity and sensitivity of ischemia diagnostics in CAD patients.

Objective: To identify areas of rest myocardial hypoperfusion on CT images using subtraction data from non-invasive coronary CT angiography (cCTA) and calcium score.

Material and methods: 20 consecutive patients who underwent both CT calcium scoring and coronary CT angiography in 2021 were included. All CT examinations were performed using a 64 detector CT. Calcium score examinations were acquired using standardized protocols (25 cm FOV reconstruction, 2.5 mm step) and CT angiography examinations were performed using spiral acquisition, with end-diastolic 0.625 mm reconstructions, using 65 ml of contrast agent with 30 ml of saline flush, both at 5 ml/s. Using freely available software (Slicer 4.11), subtraction of the images was performed, with the calcium score acting as a mask, and the obtained image exported as DICOM for further assessment.

Results: No segments were found to exhibit hypoperfusion on standard CTA. However, through subtraction images, a total of 51 segments were delineated, with 20 located in the basal segment, 18 in the medio cardiac region, 13 in the apical segments and none in the apex.

Conclusions: Subtraction-based imaging outperforms visual assessment of the myocardium on CT images, allowing the identification of hypoperfused areas. The study is limited, since it was a single-center study with a limited number of participants.

Keywords: myocardial perfusion, coronary CT, hypoperfusion, coronary CT angiography

FETAL ECHOCARDIOGRAPHY IN TETRALOGY OF FALLOT: A RETROSPECTIVE ANALYSIS OF DIAGNOSIS AND MANAGEMENT

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Background: Tetralogy of Fallot (TOF) is a congenital heart defect characterized by four abnormalities: pulmonary stenosis, ventricular septal defect, overriding aorta, and right ventricular hypertrophy. It stands as the most prevalent cyanotic congenital heart defect, impacting up to 10% of individuals with congenital heart disease (CHD).

Objective: The aim of this study is to observe the management of patients diagnosed with TOF through fetal echocardiography, tracing their journey from diagnosis to surgical intervention.

Material and methods: Conducting a retrospective analysis, we examined all instances of TOF diagnosis via fetal echocardiography at the Pediatric Cardiology clinic of the Emergency County Hospital in Targu-Mures from 2021 to 2024.

Results: Among the 17 patients diagnosed with TOF during prenatal evaluation, the majority (41%) received diagnosis at 38 weeks of gestation. Seven patients (41%) were born from pregnancies carried to full term (40 weeks), while 6 patients (35%) were born at 39 weeks, 2 (12%) at 41 weeks, and the remaining (12%) at 37 and 38 weeks, respectively. Of these cases, 6 (35%) exhibited isolated TOF, 5 (29%) demonstrated Double Outlet right ventricle Fallot-type, 3 (18%) presented with TOF featuring a hypoplastic pulmonary artery annulus and well-developed pulmonary branches, 2 (12%) had TOF with a well-developed pulmonary artery annulus and hypoplastic pulmonary branches, and 1 (6%) showed an extreme form of TOF. Regarding interventions, 5 patients(30%) required a systemic pulmonary shunt in the newborn stage while the remaining 12 patients(70%) either already underwent surgery for pulmonary correction or they will in the future.

Conclusions: Early diagnosis holds great importance in the management discourse surrounding TOF cases, as it enables the determination of optimal therapeutic strategies for newborns. This consideration is imperative given the intricate nature of the condition, which carries profound implications for both the affected child and their famil

Keywords: TOF,CHD,echocardiography

SHEDDING LIGHT ON PULSE OXIMETRY TESTING: EXPLORING IMPLEMENTATION CHALLENGES AND EFFECTIVENESS IN NEONATAL SCREENING FOR CONGENITAL HEART DEFECTS

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Background: Congenital heart defects (CHDs) constitute the most prevalent category of congenital abnormalities. It is the primary contributor to infant mortality resulting from birth defects. Pulse oximetry (POx) has emerged as a valuable diagnostic tool for detecting critical congenital CHDs.

Objective: The aim of this review is to investigate the effectiveness and limitations for implementing pulse oximetry testing.

Material and methods: A critical integrative review was undertaken using PubMed, ScienceDirect and Biblioteca Virtual em Saude (BVS), selecting studies from 2019 to 2024. A search was formed regarding the terms: “pulse oximetry”, “congenital heart defects”, “public health” and “neonatal screening”. Articles addressing the application of pulse oximetry in neonatal screening for congenital heart defects are included. Case reports were excluded. Bias risk was not assessed.

Results: Fifty-four articles from various nationalities were analyzed. As a consensus, all confirmed that a combined clinical examination with POx proves promising in detecting critical cases of coronary artery disease. They also considered culturally competent health education crucial for the population’s understanding of the importance of POx tests, as the acceptability of these national programs is fundamental for effective screening initiatives. They also highlighted the need for longitudinal patient screening throughout life. To achieve this, it was recommended to adequately increase surgical capacity in coronary disease and artificial intelligence to bridge the gap in the availability of echocardiography for testing and follow-up care in remote regions.

Furthermore, the implementation of POx was deemed vital to achieving the Sustainable Development Goals, particularly in reducing neonatal mortality rates.

Conclusions: Pulse oximetry is a simple, non-invasive, and cost-effective screening method for early detecting CHD in neonatal life. However, it has some limitations for its implementation, especially in developing countries, such as the lack of optimization of longitudinal referral systems to specialized centers, unequal access to treatment, and methodological limitations.

Keywords: Congenital heart disease, Neonatal Screenings, Mass Screening

SGLT2 INHIBITORS: A NEW ERA IN HEART FAILURE THERAPEUTIC OPTIONS

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Background: One of the leading causes of cardiovascular morbidity and mortality is heart failure (HF), a global health problem which affects around 64 million people globally. The latest addition to guideline directed medical therapy in HF are the SGLT2 inhibitors, a class of medications already used for the treatment of type 2 diabetes mellitus (T2D) due to its ability to increase glucose excretion.

Objective: This study aims to prove the outstanding cardioprotective effects of this new treatment pattern regarding the HF hospitalization span and the suitable outcomes.

Material and methods: We conducted a retrospective study over the past 3 years which carried out all the HF diagnosed patients from the Internal Medicine department database of Targu Mures County Hospital and we classified them into 2 subgroups based on their administered treatment during the hospitalization. We assessed the mean age, the diabetes status, the duration of hospitalization, the frequency of re-admission and the evolution.

Results: Of the 179 patients who met the inclusion criteria, 35 underwent SGLT2 inhibitors treatment, the overall age was 68,5 years and the hospitalization rate for the first sample was 6,29 days while for the second sample was 9,31 days with multiple re-admissions. Considering the evolution status we can show that the first group had 97,14% improved status of the patients comparing with the second group with only 88,15% improved patients and 10,37% stationary status.

Conclusions: Classically used as an antidiabetic drug, the SGLT2 inhibitors extend across T2D and in the light of the results from the recent trials, our study highlights and reiterates the impressive positive effects on reducing the worsening HF, decreasing hospitalization, the mortality risk and improving event-free survival.

Keywords: SGLT2 inhibitors, heart failure, mortality risk, hospitalization

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CT FOR ASSESSMENT OF TRANSPOSITION OF THE GREAT ARTERIES IN THE PEDIATRIC POPULATION – A LITERATURE REVIEW

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Background: Transposition of the great arteries (TGA) is described as the anatomical reversal of the aorta and the pulmonary artery. It is a critical congenital heart disease with a prevalence of 0.3 per thousand births. Echocardiography is the main diagnostic modality, with supplementary modalities applied as needed.

Objective: This literature review seeks to map out the role of CT imaging for TGA assessment and state its corresponding advantages and disadvantages in a comprehensive overview.

Material and methods: A systematic literature search of PubMed, Scopus, and the Cochrane Library databases was conducted based on predefined search terms and with latest access in December 2023. A total of 340 articles were screened according to predefined inclusion and exclusion criteria to identify articles focusing on patients diagnosed with TGA who are under the age of 18 and have undergone a CT scan.

Results: A total of 19 studies and 13 reports are included in the review. Of these, 12 are focusing on the follow-up of the Arterial switch operation (ASO), 4 give general considerations for CT in TGA, 4 evaluate the general postoperative follow-up, 3 check for use cases in preoperative assessment, 2 use CT for 3D visualization purposes, 2 evaluate pulmonary anomalies, one assesses the results of the Mustard procedure, and another rates the use of CT for stress imaging.

Conclusions: CT imaging has a vast variety of use cases for patients with TGA. The most important being the utilization of CT to visualize coronary artery anatomy, especially after ASO. Exposure to ionizing radiation presents the main disadvantage and differs heavily depending on the CT model and scan procedure.

Keywords: Transposition of the great arteries, CT scan, pediatric population, children

COARCTATION OF AORTA ASSOCIATED WITH AORTIC ARCH HYPOPLASIA: THE APT SURGICAL TECHNIQUE

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Background: Coarctation of aorta (CoA) is a congenital defect. It can be isolated or associated with other defects such as ventricular septal defect, bicuspid aortic valve, aortic arch hypoplasia (AAH). The surgical techniques used to correct a CoA associated with AAH depends on various factors. The most important factor being the classification of the AAH. There are three types of AAH: type I, distal arch hypoplasia ; type II, entire arch hypoplasia; and type III, absence of proximal arch.

Objective: The main objective of this review is to compare the indications, benefits and drawbacks of different surgical techniques used to treat a CoA associated with arch hypoplasia.

Material and methods: Online resources such as Pubmed and Researchgate were used to conduct a search based on keywords such as ''aortic hypoplasia", ''surgical" and ''coarctation". A methodology was set using PRISMA guidelines before conducting the research. Risk of bias was not assessed.

Results: It was found that there are different indications for approaching the repair via thoracotomy or sternotomy. The former is preferred in the case of an isolated CoA or CoA associated with transverse AAH. Sternotomy is indicated for CoA with proximal AAH or in the case of a small sized aortic arch. Although used commonly, extended end-to-end anastomosis (EEEA) showed some drawbacks when compared to end-to-side anastomosis (ESA). Aortic Arch Reconstruction via Autologous Pulmonary Artery Patch showed better outcomes in terms of post-opératoire aneurysms and hypertension when compared to EEEA.

Conclusions: There is no single preferred surgical technique when tackling CoA associated with AAH. The surgeons must take into account several factors such as type of AAH,size of Aortic Arch, general state of patient, etc. It is also important to analyse the possible risk factors for postoperative hypertension, abnormal growth of arch and recurrence.

Keywords: Coarctation of aorta, aortic arch hypoplasia, sternotomy, thoracotomy.

SURGICAL INTERVENTION FOR TRANSPOSITION OF THE GREAT ARTERIES IN A NEONATE: A CASE PRESENTATION

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Background: Transposition of the great arteries (TGA) is one of the most common causes of cyanosis in neonates. It is a congenital deformation where the positions of Pulmonary artery and Aorta interchange. It can be associated with defects such as ventricular septal defect, LV obstruction, etc. The presence of an open patent ductus arteriosus (PDA) with a good shunt before the corrective surgery is important for a good prognosis of the patient. The most common procedure used these days is the arterial switch.

Objective: This is the case of a 1 day old male full term baby(APGAR 6/7). He was admitted in the ICU one hour after birth with a mediocre general state and generalised cyanosis. On further investigation it was revealed that he had TGA and was urgently referred to the Department of Pediatric Cardiac Surgery at Marie Curie Emergency Hospital for Children, Bucharest.

Material and methods: Clinical investigation revealed a TGA associated with atrial septal aneurysm, tricuspid stenosis and PDA with a good shunt. The patient went through a two-stage procedure. A palliative atrial septectomy on bypass followed by a corrective atrial switch. The general state of the patient after the second surgery was poor, therefore, he was put on extracorporeal membrane oxygenation (ECMO). This helped the patient recover better and regain the ventricular contractility. The patient had an ejection fraction (EF) of 50% when he was taken off ECMO and on closure of the sternum.

Results: The two-stage procedure for TGA repair was a success and the patient regained a normal EF.

Conclusions: The prognosis of a patient with TGA depends on concurrent congenital defects. It is essential to maintain an open PDA or point of mixing before the corrective surgery.

Keywords: Transposition of the great arteries, atrial septal defect, patent ductus arteriosus

A RARE CASE OF SUBACUTE INFECTIVE ENDOCARDITIS AFTER PERCUTANEUS BALLOON PULMONARY VALVULOPLASTY

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Background: Isolated pulmonary stenosis (PS) is a rare condition and accounts for approximately 8% of all congenital heart defects. Balloon pulmonary valvuloplasty (BPV) represents the first line of treatment for PS thanks to its safety and excellent early and intermediate outcome. Although BPV has been performed for over 40 years worldwide, endocarditis after BPV for PS is very rarely seen or reported.

Objective: We aim to present the preoperative evaluation and the diagnostic approach in a patient with subacute infective endocarditis after percutaneus balloon valvuloplasty for the pulmonic stenosis.

Material and methods: We present the case of a 34-year-old female patient admitted to our clinic complaining of dyspnea and fatigue at low exertion, and a persistent febrile episode about 6 weeks prior. The patient underwent a BPV approximately 7 months ago when the peak transvalvular gradient was reduced after the procedure from 127 to 46 mmHg without significant valvular regurgitation. In addition, the patient is known to have factor V Leiden mutation and antiphospholipid syndrome.

Results: The clinical examination revealed a V/VI systolic murmur at the pulmonary area, and the ECG indicated sinus rhythm with a right bundle branch block. Transesophageal echocardiography (TEE) identified a bicuspid pulmonary valve, hypermobile, with a hyperechogenic vegetation attached to the anterior cusp on the pulmonary side, with an area of 0.6 cm2 and turbulent flow at this level. No signs of pulmonary thromboembolism were shown on the thoracic CT scan. Serial blood cultures were negative.

Conclusions: IE following BPV is extremely rare but a potentially lethal condition. Diagnosis should be considered in any febrile patient with an underlying congenital defect. TEE remains a valuable imaging method for both diagnosis and monitoring of these patients.

Keywords: Isolated pulmonary stenosis , Balloon pulmonary valvuloplasty, infective endocarditis

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DILATED CARDIOMYOPATHY-A PATHOLOGY WITH MULTIPLE SUBSTRATES: CASE PRESENTATION

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Background: Dilated cardiomyopathy represents a substantial health concern among adults, linked with elevated rates of morbidity, mortality and hospitalisations.

Objective: We aim to outline the case of a 45-year-old patient diagnosed with dilated cardiomyopathy, who has a background of recurrent paroxysmal atrial fibrillation and unsustained episodes of electrically converted monomorphic ventricular tachycardia.

Material and methods: Notably, the patient's mother passed away two years prior following a heart transplant due to idiopathic dilated cardiomyopathy. Furthermore, the patient's sister died suddenly at the age of 40, with autopsy findings revealing the presence of dilated cardiomyopathy. Clinically speaking, the patient presented with fatigue during moderate to high levels of exertion and paroxysmal nocturnal dyspnea with orthopnea, denying the use of drugs, alcohol, or chemotherapy. The electrocardiogram displayed significant left bundle branch block (QRS duration = 140 msec). Echocardiography revealed a severely dilated left ventricle, severe global systolic dysfunction with an ejection fraction of 20%, and global hypokinesia. No ischemic changes were observed on coronary angiography. To investigate the etiology of this cardiomyopathy, particularly in the absence of evidence of ischemia or valvular pathologies, cardiac MRI was utilized. Utilizing the Lake Louise criteria, the Magnetic Resonance Imaging (MRI) suggested the presence of idiopathic dilated cardiomyopathy. Considering the possibility of genetic transmission, genetic testing revealed mutations affecting the TTN, LMNA, TNNT, RBM20, PLN and FLN.

Results: Cardiac resynchronization therapy with a defibrillator (CRT-D) implantation was selected to enhance the patient's survival prospects and reduce the risk of sudden death. The presence of genetic defects corroborates a genetic predisposition to dilated cardiomyopathy, underscoring the importance of screening family members for early detection and intervention.

Conclusions: The uniqueness of this case is highlighted by the presence of significant genetic defects, which have profound implications for the prognosis. These defects elevate the risk of sudden death, contribute to left ventricular remodelling and predispose the patient to atrial and ventricular tachyarrhythmias.

Keywords: Dilated cardiomyopathy,CRT-D,genetic defects

VALVE-IN-VALVE TRANSCATHETER AORTIC VALVE IMPLANTATION: A LIFELINE FOR PATIENTS WITH BIOPROSTHETIC AORTIC VALVE FAILURE - CASE REPORT

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Background: The use of bioprosthetic valves (BPV) for severe symptomatic aortic stenosis has been a standard surgical replacement technique for older patients. Due to their limited durability, in the failure of BPVs Valve-in-Valve Transcatheter Aortic Valve Implantation (ViV-TAVI) emerged as the alternative to surgical treatment.

Objective: We present the case of a 81-years-old male patient with aortic BPV failure.

Material and methods: On admission the patient described dyspnea, fatigue and the medical history revealed aortic BPV (Saint Jude no. 23) implanted 8 years prior, heart failure with mildly reduced ejection fraction (EF), arterial hypertension, permanent atrial fibrillation (AFib), type II diabetes and treated gastric ulcer. The clinical exam revealed an overweight patient with post-sternotomy scar, arhythmic heart sounds and aortic systolic murmur, without signs of congestion. The electrocardiogram revealed AFib and left bundle branch block (LBBB). Echocardiography showed severely degenerated aortic BPV with gradients of 90/55mmHg, moderate mitral and tricuspid regurgitation and a hypertrophic non-dilated left ventricle with EF of 45-50%. No significant epicardial coronary lesions were present on the coronarography. Considering the patient's age, prior heart surgery and surgical risk (EuroSCORE II 10.9%), ViV-TAVI was chosen to treat the failed BPV.

Results: Transfemoral ViV-TAVI was performed with an Edwards Sapien 3 no. 23 balloon-expandable valve, with the fracture of the BPV with good results. Post-procedural electrocardiogram was unchanged. Echocardiography showed mild trans-prosthetic regurgitation, trans-prosthetic gradient of 30/15mmHg, moderate mitral and tricuspid regurgitation and normal-diameter left ventricle with EF of 40-45%.

Conclusions: Despite the mild trans-prosthetic regurgitation, the procedure achieved its goal without serious complications. However, the complication rate could be higher in ViV-TAVI. Thus, we believe this paper contributes to the growing body of evidence that ViV-TAVI is a feasible therapeutic option for patients with failed BPVs.

Keywords: ViV-TAVI, Bioprosthesis, High-risk, Valve failure

ACUTE MYOCARDIAL INFARCTION IN A YOUNG PATIENT – WHAT LIES UNDERNEATH?

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Background: The incidence of acute myocardial infarction in younger patients has risen over time. While atherosclerotic plaque rupture accounts for most cases, coronary vasospasm, hypercoagulability, spontaneous coronary artery dissection, and drug-induced lesions are among non-plaque etiologies.

Objective: We report the case of a 35-year-old male subject with no prior medical history who presents to the emergency room with prolonged moderate stabbing chest pain and severe dyspnea, two days after the symptoms onset.

Material and methods: Upon admission, ECG reveals elevated heart rate, and Q waves and ST segment elevation in the anterolateral leads, respectively. Laboratory tests unveil marked leukocytosis (27.52 x109/L), and elevated levels of C-reactive protein (>150 mg/L), high-sensitivity cardiac troponin I (>50000 ng/L), creatine kinase-myocardial band (>200 ng/mL), N-terminal pro-B-type natriuretic peptide (4905 pg/mL), with minor lipid profile changes. Echocardiography shows dilated left cardiac chambers and reduced left ventricular ejection fraction (25-30%). Clinically, the patient displays signs of hypoperfusion (cold, mottled skin), requires face mask oxygen therapy (SaO2 91% on room air) and remains tachycardic, but maintains normal blood pressure. Sympathomimetic toxidrome is considered and, after repeated requests, the patient admits recent consumption of psychoactive substances. Additionally, urine drug testing confirms tetrahydrocannabinol, methylenedioxyamphetamine, and methylenedioxymethamphetamine use.

Results: Diagnostic coronary angiography reveals ostial occlusion of the left anterior descending artery. Along with the patient's history, clinical findings and paraclinical data, the diagnosis of anterior myocardial infarction is established. Given the delayed presentation, a conservative approach without percutaneous coronary intervention is preferred. The in-hospital course is favorable, and the patient is discharged electrically, hemodynamically, and respiratory stable, without symptom recurrence.

Conclusions: Recreational drug use can have devastating effects on the cardiovascular system. We emphasize the risk of major acute events in younger individuals without underlying diseases or traditional risk factors.

Keywords: acute myocardial infarction, psychoactive substances, sympathomimetic toxidrome

A RARE CASE OF SHONE SYNDROME

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Background: Shone Syndrome is a very rare congenital cardiac malformation, which includes obstructive left side congenital lesions. Frequently, it associates supravalvular mitral membrane, parachute mitral valve, subaortic stenosis, bicuspid aortic valve, coarctation of the aorta. Other entities have also been included recently in its definition.

Objective: Our presentation highlights a rare case of Shone Syndrome which illustrates how important the approach of diagnosis and following treatment is.

Material and methods: We present a case of a 38-year-old male, admitted for reporting fever, weakness, fatigue, dizziness, headaches for over 6 years, with recent exacerbation. He underwent investigations in other medical services, but no medical files were available. He did not receive treatment.

Results: General examination was unspecific. Cardiac examination revealed rhythmic cardiac sounds, an intense systolic murmur heard in all auscultation areas, especially in the aortic zone and Erb's point; the carotid radiation was insignificant; no pulmonary or systemic stasis. Normal blood pressure. ECG: sinus bradycardia, left ventricular hypertrophy. Emergency echocardiography: dilatation of ascending aorta, descending aorta with turbulent flow – rising suspicion of aortic coarctation, bicuspid aortic valve, severe aortic regurgitation; in left ventricular outflow tract (LVOT) a membrane was revealed – subvalvular stenosis; the mitral valve had a parachute aspect with mitral regurgitation (grade I/II); pulmonary hypertension was found. No vegetations were described at transthoracic echocardiography (TTE). Due to those findings, there was a rising suspicion of Shone complex. An angioCT was performed – aortic ectasia; aortic coarctation or patent arterial duct were not confirmed. The patient was submitted for further evaluation for establishing the therapeutic approach.

Conclusions: Besides the rarity of the syndrome, the difficulties of diagnosis and treatment need to be taken into consideration. As for its variability in signs and symptoms, Shone Syndrome has to be actively searched. The patients need to start receiving the right treatment before developing other complications, mainly pulmonary hypertension.

Keywords: parachute mitral valve, subaortic stenosis, bicuspid aortic valve

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CHALLENGES IN THE MANAGEMENT OF A DORV-FALLOT TYPE: CASE PRESENTATION

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Background: Double-outlet right ventricle (DORV) is a conotruncal defect with an incidence of approximately 0.006% in newborns.

Objective: We present a case of a 9-year-old patient with a known congenital heart malformation, without compliation to doctor's appointments.

Material and methods: The patient was admitted with dyspnea, chest pain and perioral cyanosis.

Electrocardiography showed right axial deviation and right ventricular (RV) hypertrophy. Echocardiography revealed dilated right cavities, with dilated inferior vena cava and suprahepatic veins with reverse flow. Significant tricuspid regurgitation was noted.

The dextroposition of the aorta by more than 50%, without mitro-aortic continuity, was observed. A wide ventricular septal defect (VSD) in the subaortic portion with subpulmonary extension and conal septal deviation in the RV ejection tract with bidirectional shunt was identified. Significant valvular pulmonary stenosis(maximum velocity of 4.4 m/s and maximum gradient of 97 mmHg), along with subvalvular pulmonary stenosis (maximum gradient of 15 mmHg) were also detected. The pulmonary ring measured 7mm (z-score= -6.9) and the pulmonary artery trunk 8mm (z-score= -5.9). The right pulmonary branch was 6 mm (z-score= -4.49), while the left pulmonary branch measured 5 mm (z-score= -4.68).

The DORV-Fallot type with hypoplasia of the pulmonary ring, trunk and pulmonary branches was corroborated by CT-angiography- no aorto-pulmonary collaterals detected.

Results: The chronic cyanosis and hepatomegaly oriented to surgery. Due to the hypoplasia of the pulmonary branches, primary correction was not feasible. Therefore, a Blalock-Taussig shunt is an initial option, next step being the closure of the VSD and the opening of the ejection tract of the RV, once the pulmonary branches have grown.

Conclusions: The wide VSD with the subpulmonary reduced cone and the insignificant obstruction in the ejection tract of the right ventricle showed no hypoxic crises, a rare situation in DORV, highlighting the age and the uncorrected malformation.

Keywords: Double-outlet right ventricle, cyanosis, pulmonary stenosis

HEMODYNAMIC PARTICULARITIES OF NEONATAL EBSTEIN'S ANOMALY: CASE PRESENTATION

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Background: Ebstein's anomaly (EA) is a congenital malformation characterized by abnormalities of the tricuspid valve (TrV) leaflets that are partly attached to the TrV annulus and partly attached to the right ventricle (RV). Presentation in the neonatal period is one of high mortality. Echocardiography is the key test for the initial anatomic evaluation of EA. Symptomatic neonates with severe cyanosis, severe cardiomegaly, and respiratory distress require intense medical management.

Objective: The aim of this case report is to highlight the importance of the individualized management in each neonate with EA considering electrical and echocardiographic monitoring.

Material and methods: We present the case of a premature infant, delivered by caesarean section due to fetal distress, hemodynamically unstable, diagnosed immediately postnatal with EA (Carpentier type B, GOSE II), significant TrV regurgitation, and absence of RV forward flow (RVFF). The therapeutic management consisted of mechanical ventilation (FIO2 100%), pulmonary vasodilator therapy (Sildenafil), and inotropic support (Milrinone). Serial echocardiographic evaluations detected development of RVFF one-hour after birth. In the presence of a patent ductus arteriosus and moderate pulmonary regurgitation, a relatively well-tolerated circular shunt (CS) developed, with hemodynamic improvement after spontaneous closure of the ductus arteriosus 48-hours after birth. Subsequently, the occurrence of electrical disturbances, atrial tachycardia and orthodromic atrioventricular re-entrant tachycardia, had a significant hemodynamic impact on the clinical course. Rhythm disturbance was controlled with Sotalol.

Results: The newborn was discharged at 28-days of age, hemodynamically and electrically stable, with well-represented RVFF, moderate/significant TrV regurgitation, and GOSE I.

Conclusions: Accurate identification of pulmonary valve morphology may improve the outcome of neonates with EA and absent RVFF. The presence of CS complicates the clinical course, and the management approach should be individualized to each patient. Aggressive medical treatment should be initiated first; usually neonatal hemodynamics improve with gradual pulmonary vascular resistance decrease.

Keywords: Ebstein's anomaly, echocardiography, neonate

INSIGHTS AND CARE PATHWAYS IN A PATIENT WITH PULMONARY ATRESIA WITH INTACT VENTRICULAR SEPTUM

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Background: Pulmonary atresia with intact ventricular septum (PA/IVS) is a critical congenital cardiac malformation that involves the complete obstruction of the right ventricular outflow tract (RVOT), resulting in a nonexistent communication between the right ventricle (RV) and pulmonary arteries associated with different degrees of tricuspid valve defects.

Objective: The aim of this case report is to highlight the importance of an individualized therapy approach, based on the patient's morphological varieties and clinical features.

Material and methods: We present the case of a term neonate transferred to our tertiary center 3 days postnatally with severe generalized cyanosis. She was diagnosed with pulmonary atresia with intact ventricular septum with ductal dependent pulmonary circulation, malformation and malinsertion of tricuspid valve and bipartite right ventricle. At 2 weeks she underwent enlargement of the RVOT with heterologous paricardial patch and pulmonary valve commissurotomy. After surgery, the patient was hemodynamically unstable with sever RV disfunction, requiring triple inotropic support.

The echocardiography revealed severe residual RVOT stenosis (maximum anterograde gradient of 40 mmHg) requiring ductus arteriosus maintenance. After the improvement of RV function, withdrawal from Prostaglandin E1 was attempted unsuccessfully as SaO2 dropped below 75%, confirming that pulmonary circulation is still ductal dependent.

Results: Subsequently, considering the measurements recorded on echocardiography and CT angiography, ductus arteriosus stenting was performed with Resolute Onyx 4x18mm stent. After the procedure, echocardiography evaluation indicated a left to right shunt at the ductal level and adequate left atrium venous return .The patient was discharged in stable condition.

Conclusions: Management of PA/IVS remains challenging, requiring a team of pediatric cardiologist, heart surgeon and interventionist in order to achieve long-term survival.

Keywords: PA/IVS, ductal dependent pulmonary circulation, PDA stenting

ANOMALOUS ORIGIN OF THE RIGHT CORONARY ARTERY FROM THE NON-CORONARY SINUS - A CASE REPORT

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Background: In coronary interventions, understanding the complex anatomy of coronary arteries, including their variants, is critical. The primary coronary arteries, the right coronary artery (RCA) and the left main coronary artery (LMCA), originate from designated aortic sinuses. Occasionally, the RCA anomalously emerges from the non-coronary sinus—an area typically devoid of coronary arteries. This rare anatomical variant can significantly complicate both diagnostic and interventional procedures, potentially leading to unforeseen clinical complications.

Objective: To highlight the significance of early detection and detailed characterization of coronary artery anomalies through state-of-the-art imaging, with a view to mitigating adverse clinical outcomes.

Material and methods: We report the case of a 35-year-old male patient presenting to the cardiology department complaining about chest pain. The patient had no medical or family history. The coronary CT ngiography (cCTA) revealed that the RCA starts from the coronary sinus – positioned posteriorly. The non-coronary sinus is positioned anteriorly, resulting in the RCA dominance of the heart. The calcium score was 0 IU on the Agatston Scale, corresponding to the patient's age, gender, and ethnicity.

Results: There was no evidence of stenosis and possible diagnoses like myocardial infarction (MI) or angina pectoris were ruled out. Although the exact cause of the patient's chest pain symptoms was unknown, it is important to remember that coronary artery anomaly (CAA) are linked to symptoms similar to those our patient experienced.

Conclusions: We report a rare case of a CAA with an anomalous origin of the RCA right coronary artery from the non-coronary sinus. This case underscores the critical need for awareness and advanced diagnostic capabilities in the identification of coronary artery anomalies to prevent potential adverse outcomes. Routine use of cCTA in patients presenting with unexplained cardiac symptoms can provide crucial insights into their underlying causes, guiding more informed clinical decisions and intervention strategies.

Keywords: coronary artery anomaly, coronary CTA, anomalous RCA

POSTERIOR MEDIASTINAL MASS: A POSSIBLE TRIGGER FOR ACUTE ATRIAL ARRHYTHMIA? A CASE STUDY

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Background: Atrial fibrillation (AF) is the most commonly treated cardiac arrhythmia. The severity and scope of symptoms are influenced by the patient's underlying cardiac condition, age, presence of diabetes, and the speed and regularity of the ventricular response.

Objective: We report the case of a 75-year-old man with history of pulmonary embolism and peripheral atheromatous plaques who presented with complaints of right thoracoabdominal region pain, syncopes, recurrent falls, significant weight loss, hyporexia, NYHA II-III and atrial fibrillation with rapid ventricular response (A-fib with RVR).

Material and methods: In the Magnetic Resonance Angiography (MRA), a heterogeneous mass was identified in the posterior mediastinum, with infiltrative appearance, exerting pressure on the right atrium and in contact with the descending aorta at approximately 90°. The same mass, on chest CT scan, presents with partially defined borders and hypo-enhancement after contrast. On echocardiography, the patient has an ejection fraction of 68%, grade 1 diastolic dysfunction of the left ventricle, and pulmonary hypertension.

Results: The patient, with hemodynamic stability, received intermittent Amiodarone reversion to sinus rhythm. The mass was biopsied, revealing metastases of solid arranged carcinoma in lymph node 7.

Conclusions: The AF is a typical medical presentation, however, in this case, doesn't have a well-established origin. Considering the patient did not have it previously, it's possible that mediastinal mass is closely related to it, raising doubts as to whether a tumor can cause changes in the cardiac electrical axis if it grows adjacent to it.

Keywords: Atrial Fibrillation, Cardiac Arrhythmias, Metastases

ELEVATED LIPOPROTEIN(A) IN A YOUNG PATIENT WITH STEMI AND NO CLASSIC RISK FACTORS FOR CORONARY ARTERY DISEASE

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Background: Lipoprotein (a) [Lp(a)] has been associated with an increased risk of cardiovascular disease, including coronary artery disease (CAD), stroke, and peripheral artery disease. Genetics plays a significant role in determining Lp(a) levels, with levels being largely determined by inheritance. Lifestyle changes and medications that typically lower low-density-lipoprotein cholesterol levels, such as statins, are generally ineffective at lowering Lp(a) levels.

Objective: To present the case of a young patient with no classic risk factors for CAD who presented with ST segment elevation myocardial infarction

Material and methods: A 38-year-old male with no medical history and a nonsmoker presented to the emergency department complaining of constrictive chest pain at rest that spread to the jaw, lasting 40 minutes, and was accompanied by fatigue and dyspnea, started two hours prior to presentation. The ECG showed a sinus rhythm with ST segment elevation in leads II, III, and AVF. Transthoracic echocardiography revealed slightly impaired systolic function, with left ventricular inferior wall hypokinesis and a left ventricular ejection fraction of 45%. The lab results showed hs-cTnI 420 ng/L and CK-MB 8.7 ng/mL. The lipid profile was within normal limits.

Results: Emergency coronary angiography revealed acute thrombotic occlusion at the level of the right coronary artery, for which per primam coronary angioplasty with drug-eluting stent is performed, with favorable subsequent evolution. Taking into account the young age of the patient, the lack of classic risk factors for CAD, it was decided to measure the levels of Lp(a), which were 1.23 g/L, considered very high.

Conclusions: Because of its association with cardiovascular risk and the difficulty in lowering its levels, Lp(a) has garnered increasing attention in the field of preventive cardiology. Researchers are exploring various treatment approaches, including novel medications specifically targeting Lp(a), to address this novel risk factor.

Keywords: lipoprotein (a), prevention, risk factor, STEMI;

WHAT IS BEHIND THE BICUSPID AORTIC VALVE DURING CHILDHOOD?

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Background: Bicuspid aortic valve (BAV) is known to be among the most frequent congenital heart defects in pediatric patients. BAV is usually associated with valvular and aortic diseases such as aortic valve stenosis (AS), aortic regurgitation (AR), aortic dilatation (AD) or coarctation of the aorta (CoA), all of which could have an impact on this pathology.

Objective: The aim of this study was to evaluate the relationship between AD and valve morphology, corrective intervention, and the association of AS, AR, and CoA in pediatric patients with BAV.

Material and methods: We performed a cross-sectional study which enrolled pediatric patients with BAV of any type and no underlying genetic disease who were evaluated in our center between 2019-2023. AD was defined by the Cantinotti score Z value over 2 standard deviations in any of the aortic annulus, aortic root, sinotubular junction, or ascending aorta diameters.

Results: Sixty-two patients were included in our study, out of which 43 (69.3%) had AD. There was no significant difference regarding age of diagnosis in subjects with and without AD ($p=0.93$), and no relationship was found between the presence of AD and gender ($p=0.48$). BAV morphology was not significantly associated with AD (all $p>0.05$). The age of correction was similar between the two groups, and AD was not associated with corrective intervention (both $p>0.05$). However, reintervention was more likely to be necessary in patients without AD ($p=0.002$). In relation to associated cardiovascular conditions, we found no significant relationship between AD and the presence of CoA ($p=0.15$) and AS ($p=0.27$). In contrast, AD was strongly associated with AR ($p=0.0005$).

Conclusions: In our study population, association between AD and AR suggests hemodynamic modifications for which causality should be determined to offer a better understanding of the pathogenetic mechanisms in BAV. Moreover, the likeliness of patients without AD to require reintervention suggests further evaluation of BAV in pediatric patients.

Keywords: BAV, congenital heart disease, aortic dilatation

OPEN REDUCTION INTERNAL FIXATION OF PROXIMAL FEMORAL FRACTURE IN 88 YEAR OLD PATIENT - A CASE REPORT

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Background: A significant amount of lower limb fractures involve the femur. Incidence in such conditions peak in the first and last decades of life. While teenagers and young adults are likely to associate the fracture with high velocity damage and related skeletal trauma, people over 75 years old are likely to associate the condition with minor incidents often localised in their households. The high prevalence of osteoarticular diseases in the elderly population is heavily responsible for such cases, a large percentage of them being female.

Objective: Comminuted fractures are characterised by multiple bone fragments, their number increasing relative to the force of the causative impact. Surgical protocol is defined by internal fixation using a rod or anatomical plate with screws, while reducing intraoperatie time in order to mitigate possible complications aggravated by the patients advanced age and associated comorbidities.

Material and methods: Open Reduction Internal Fixation (ORIF) surgery is characterised by the realignment of bone fragments via open surgery and placing a centromedular titanium rod to promote osteosynthesis. The surgical approach was made from the right hip and the patient underwent general anesthesia with an operating time not exceeding 70 minutes in total. The patient later underwent subsequent radiological examination to evaluate the post-operative condition.

Results: Recovery from ORIF surgery is a lengthy process especially in older patients. However, the reduced operating time and minimal intraoperative blood loss allowed for the recovery period to be devoid of complications. A mild post operative fever was suppressed in less than 24 hours and subsequent dressing and wound examination revealed no abnormal discharge from the surgical site.

Conclusions: Extensive comorbidities associated with older patients often hinder good surgical outcomes. However, it appears that ORIF surgery is a viable option for achieving positive results even in complex conditions. This finding is favourable especially given the increasing amount of lower limb fractures among the elderly population.

Keywords: ORIF, femoral fracture, comminuted fracture

PERSONALIZED TREATMENT OF TIBIAL PLATEAU FRACTURES

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Background: Tibial plateau fractures represent a complex and heterogeneous group of injuries with variable treatment outcomes. Traditional approaches often employ standardized treatment protocols, but recent advancements in personalized medicine suggest the potential for tailored interventions based on individual patient characteristics and fracture patterns. This study addresses the need for personalized treatment strategies to optimize outcomes in tibial plateau fractures.

Objective: The objective of this study is to evaluate the effectiveness and feasibility of personalized treatment approaches for tibial plateau fractures. Specifically, we aim to assess whether personalized treatment plans lead to improved clinical outcomes compared to traditional, standardized protocols.

Material and methods: A retrospective study was conducted on a total of 52 patients from the Orthopedics and Traumatology Department of the Târgu Mureș County Emergency Clinical Hospital with tibial plateau fractures treated over a period of 2 years. Patient demographics, fracture characteristics, treatment modalities, and clinical outcomes were collected from medical records.

Results: Preliminary analysis reveals differences in clinical outcomes between the personalized treatment group and the standard protocol group. Patients undergoing personalized treatment demonstrated improved functional recovery, an earlier return to activities, reduced rates of postoperative complications, and a lower rate of additional surgeries.

Conclusions: Personalized treatment approaches for tibial plateau fractures show promising results in optimizing clinical outcomes. Tailoring treatment strategies to individual patient characteristics may enhance fracture healing, functional recovery, and patient satisfaction.

Keywords: Tibial plateau fracture, personalized medicine, treatment optimization, fracture morphology, clinical outcomes.

ANATOMO-CLINICAL AND SURGICAL TREATMENT FEATURES IN MEDULLARY THYROID CARCINOMA

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Background: In the last 30 years there has been an incidence increase of medullary carcinoma due to the development in diagnostic methods. MC represents 2% out of all thyroid carcinomas.

Objective: Objective: Monitoring the therapeutic approach in medullary carcinoma

Material and methods: Our retrospective analysis includes a cohort study of patients that underwent surgeries in 2nd Department of Surgery, UMFST Targu Mures, during 2018-2023. I have included individuals with the diagnosis of medullary carcinoma, meanwhile the exclusion criteria were: other type of thyroid dysfunction that underwent surgery, or associated with other types of anomalies (parathyroid). The results were statistically analyzed.

Results: Within the examined period there were 422 cases of thyroid intervention, including 4% of which were represented by medullary carcinoma. 75% of those cases were women and 25% men, with the average age of 55. In 7% of the cases, the tumor was located in both lobes, 27% in the left lobe, and 67% in the right lobe. In 5 of the cases, total thyroidectomy (TT) was performed with CCND (central compartment neck dissection) and selective bilateral neck dissection; in 4 cases TT with CCND and selective unilateral neck dissection; one case of TT with CCND; 4 cases of TT; one case of right isthmolobectomy; one case of reoccurrence in central compartment

Conclusions: Medullary carcinoma is a rare oncological condition which requires an extensive approach based on the clinical stage of the disease.

Keywords: medullary carcinoma, total thyroidectomy, thyroid

ABDOMINAL TRAUMA. NOTHING ELSE?

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Background: Abdominal trauma is primarily caused by road traffic crashes. Other mechanisms include: falls, animal attacks and even gunshots. Unfortunately, nowadays none of these are uncommon and frequently they are also associated with thoracic trauma. Due to its possible catastrophic outcome, any trauma patient needs to be carefully handled.

Objective: The aim of this study was to decide when surgery is needed in abdominal trauma patients and how the therapeutic behavior is affected if the patient suffered both abdominal and thoracic trauma.

Material and methods: This retrospective study was conducted on 17 patients with abdominal trauma admitted in the Emergency County Hospital, “Surgical clinic 1”, Targu Mures between 01.01.2023-31.12.2023. The patients were divided into two groups based on their trauma type: abdominal trauma alone and polytrauma (abdominal and thoracic trauma). Demographic, clinical and paraclinical data was also analyzed.

Results: Out of the 17 patients, 11 (65%) were males and 6 (35%), females. The average age was 50, the youngest patient being 20 and oldest, 72 years old. 8 patients suffered abdominal trauma and 9 polytrauma. 2 patients from the first group only required conservatory treatment, the other 15 underwent exploratory laparotomy, evacuating the hemoperitoneum. Six patients also required splenectomy, 1 appendicectomy, 2 hepatic sutures. From the polytrauma group, besides laparotomy, 5 of them required pleurotomy and pleural drainage and one, suture of the diaphragm. The average hospital stay of the first group was 5.83 days whereas for the second group it was almost double measuring 9.5 days. (p=0.03).

Conclusions: Patients presenting abdominal trauma might also hide thoracic implications. If so, early diagnosis and surgery is vital. Although this implied more interventions and hospitalization time, there was no statistical significance between the two groups regarding infection and leucocyte values (p=0.49).

Keywords: Abdominal trauma, Exploratory laparotomy, Hemoperitoneum

METHODS OF SOFT TISSUE RECONSTRUCTION OF FINGERS THROUGH FLAP TECHNIQUES

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Background: Fingers are complex structures, epitomizing elegant functionality in human anatomy. Injuries to the fingers affect individuals across all age groups and stem from both occupational and recreational activities. The exposed positioning of the fingers is responsible for their cosmetic importance as well as the increased susceptibility of injury. The best reconstructive strategy depends on the complexity of the defect along with the principles of the reconstructive ladder.

Objective: The study presents reconstructive methods alongside functional and aesthetic outcomes, complications, defect coverage degree and post-reconstruction quality of life.

Material and methods: This study is developed based on the archives of the Emergency County Hospital of Târgu Mureș and the forms completed by patients. We included patients who underwent a finger reconstruction between the years 2019-2023 and we excluded under-age patients, individuals with altered general health status and those who refused to participate in the study. Mean values, standard deviations, and the percentages were determined with MS Excel and statistical analysis was made using MedCalc version 19.

Results: Pain during recovery was expressed by 75.0% of patients with thumb intervention and by 36.0% of patients with intervention on other digits. Mobility satisfaction was present in 91.7% of patients with thumb intervention and in 60.0% of patients with intervention on other digits. 51.7% of men and 37.5% women described a difficult recovery. 89.7% men and 75.0% women noticed an improvement in their daily activities.

Conclusions: Men reported a more discomforting convalescence in contrast to women. Regarding aesthetic and quality of life outcomes, men expressed greater satisfaction than women. More patients undergoing thumb surgery experienced pain and difficult postoperative recovery compared to those with procedures on other digits. However, individuals with thumb surgery reported higher functional and aesthetic satisfaction and had a lower incidence of postoperative infection.

Keywords: finger reconstruction, flaps, functional and aesthetic outcomes

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INTENSIVE POSTOPERATIVE RECOVERY PROTOCOL FOLLOWING TOTAL HIP ARTHROPLASTY IN PATIENTS OLDER THAN 70 YEARS

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Background: Osteoarthritis is a debilitating condition among the elder generation. It affects the joints causing joint deformity and swelling in the joint capsule long term. It leads to constant pain, stiffness, and limited mobility; thus, reducing the quality of life in these patients.

Objective: Our focus was to analyze the results of the group that received an intensive postoperative recovery protocol compared to a control group following standard protocol.

Material and methods: The research was conducted at the Mures County Clinical Hospital, department of Orthopedics. Inclusion criteria was age over 70, history of osteoarthritis and having undergone total hip arthroplasty. Patients were split into two groups. The first (72) followed a more intensive, targeted recovery protocol, meanwhile the second (56) followed a normal postoperative recovery protocol. To assess results following surgery we used the following: Harris Hip Score, WOMAC score, Dependency Score. The same evaluations were used during the six-month follow-up.

Results: Despite pain intensity being higher during the first few days following the procedure, a notable improvement in mobility was observed in the group following an intensive recovery protocol, compared to the control group. At six-month follow-up, Harris Hip Score improved by an average of 24,8 points in the intensive recovery group, while in the control group improvement was 19,4 points. The WOMAC score of the patients receiving intensive recovery was lower by 26,2 points.

Conclusions: Despite our research having a limited number of patients, it still managed to demonstrate the importance of a targeted and intensive postoperative recovery protocol among patients with total hip arthroplasty. Using this protocol allows patients to return to a normal, active life substantially faster, increases the patient's satisfaction, and improves the functional results of hip arthroplasty surgeries.

Keywords: Osteoarthritis, Recovery protocol, Harris Hip Score, WOMAC score

HYPER-RADICAL SURGICAL TREATMENT FOR FEMALE PACIENTS SUFFERING FROM NON-GYNAECOLOGICAL CANCER – CASE SERIES

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Background: Pelvic exenteration is described by Alexander Brunschwig as being the most radical surgical treatment for pelvic cancer. It is a very challenging surgical procedure, which is only performed for advanced pelvic cancers or recurrent cancers strictly involving the pelvis.

Objective: The aim of this study is to present the outcome for patients who underwent this type of surgery.

Material and methods: In our retrospective study, we included 8 female patients diagnosed with different types of non-gynaecological cancers between 2018 and 2022, who have been admitted to the Obstetrics and Gynaecology Clinic I from the Emergency Clinical Hospital Targu Mures.

Results: Female patients were diagnosed with 3 different types of cancer: 5 patients with bladder cancer, 2 patients with colorectal cancer and one with undifferentiated pelvic sarcoma. Their age was between 45 and 72 and the mean age was 58,5. Out of all 8 exenterations, one was total exenteration, two were posterior and the other 5 were anterior exenterations. Regarding the surgical approach of the levator ani muscle, in one case the surgical team performed an infralevatorian exenteration, while in the other 7 cases they performed a supralevatorian exenteration. Early postoperative complications were registered in 2 patients. One suffered a massive pulmonary embolism which leads to death and another one developed an anastomotic fistula, which was surgically repaired. Late postoperative complications have not been registered in our patients.

Conclusions: Despite its difficulty and complexity, pelvic exenteration can be the only curative surgical procedure for patients with advanced cancer types invading the pelvic structures.

Keywords: pelvic exenteration, colorectal cancer, bladder cancer, undifferentiated pelvic sarcoma, non-gynaecological cancer

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ANTEROGRADE CEREBRAL PERFUSION IN ACUTE TYPE A AORTIC DISSECTION

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Background: Acute aortic dissection is characterized by injury to the inner layer of the blood vessel, resulting in the formation of a false lumen within the aortic wall. Selective cerebral perfusion is crucial during surgery to protect the brain. Two methods are commonly used: antegrade and retrograde.

Objective: The aim is to maintain sufficient cerebral blood flow via antegrade selective perfusion during surgery for acute type A aortic dissection. Over the past five to ten years, this method has become the standard in many centers due to its minimal impact on cerebral metabolic function and lesser visceral impairment compared to retrograde perfusion.

Material and methods: We present a case of a 45-year-old hypertensive and smoker pacient, with no prior cardiovascular history, who presented to the emergency department with severe retrosternal pain. Acute ascending aortic dissection was suspected and confirmed via angio-CT and echocardiography. The surgical procedure consisted in replacing the ascending aorta with a 30mm dacron prosthesis and performing aortic valve commissuroplasty on cardiopulmonary bypass, utilizing right femoral arterial and central venous cannulation.

Results: During surgery, deep hypothermia (25 degrees Celsius) was induced to provide additional cerebral protection. Right and left carotid cannulation was performed to ensure continuous cerebral perfusion. In contrast to unilateral cannulation, which allows a maximum ischemic time of 30 minutes, selective cerebral perfusion offers the advantage of being feasible for a more extended period without impacting the patient's postoperative neurological status. For this patient, a 25-minute duration was achieved, and subsequently, the postoperative course was favourable, being discharged neurologically intact, hemodynamically stable, and without respiratory complications.

Conclusions: Hence, ensuring antegrade cerebral perfusion is crucial for the postoperative well-being of patients, reducing mortality rates, lowering the risk of permanent neurological deficits, and mitigating complications such as multiorgan failure, sepsis, and acute ischemic events.

Keywords: acute aortic dissection, cerebral perfusion, hypothermia

MINIMALLY INVASIVE TREATMENT FOR ATRIAL SEPTAL DEFECTS IN ADULT PATIENTS

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Background: In the present days cardiovascular surgery is embrancing minimally invasive techniques in a growing number. It consists of small incisions and the divergence of median sternotomy. This leads to shorter duration of hospitalization, decreased blood loss, less postoperative pain and scarring, and faster recovery.

Objective: The aim of the study is to conduct minimally invasive surgical closure of an atrial septal defect under femoro-femoral cardiopulmpnary bypass. A supplementary cannula that is inserted straight through the thoracic aperture drains the superior vena cava. We offer a present approach wherein a single two-stage femoral cannula is used to drain both vena cavae.

Material and methods: The cannula is inserted through the femoral vein, its proximal holes remain in the IVC while the distal ones are directed into the SVC. To increase the venous return, a centrifugal pump is installed on the venous line between the cannula and the venous reservoir. The right atrium is isolated using clamps on the IVC and SVC cannula before the atrium is opened and the ASD is fixed.

Results: We recently used this method on a 60-year-old male patient. Passive venous drainage was 2.6 l/min, while the perfusion theoretical flow was 5.4 l/min. However, adding the centrifugal pump boosted the flow to 5.4 l/min, resulting in an ideal perfusion flow. The CPB duration was 38 minutes, and the operative time was 140 without complications. The patient was discharged on postoperative day 5.

Conclusions: Minimally invasive procedure is a great alternative to the transcatheter treatment,avoiding sternotomy. Administering a single venous catheter to drain both vena cavae streamlines the procedure and adds to the development of minimally invasive cardiac surgery.

Keywords: minimally invasive, ASD, venous catheter

EVALUATION OF FLUID DYNAMICS IN CIRCUMFERENTIAL LIPOSUCTION 360-A CASE STUDY.

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Background: Circumferential liposuction 360 is an invasive aesthetic procedure, used for removing fat excess in different areas of the body. It is recognized as a method of sculpting and eliminating the lipid layer from certain problem areas, which cannot be excluded with diet or physical exercises.

Objective: In the present case study, it will be discussed the 360 circumferential liposuction, an intervention performed under general anesthesia, with the infiltration of tumescent substance, being a prospective study of a group of 36 patients. Our objective is to evaluate the average of liquid absorption in power-assisted liposuction and to choose the best technique for safe liquid administration to avoid dilution anemia or hypervolemia of patients.

Material and methods: The study took place between the years 2020-2024, incorporating 36 patients, of which 30 women and 6 men. Three liters of Klein tumescent solution was infiltrated with an infiltration-aspiration ratio of 1:1.

Results: The results of the administered and extracted volumes were being collected intraoperatively and postoperatively. Postoperative hemoglobin decreased by 6g/dl, but red blood cell levels remained stable. All patients in this study were hemodynamically stable without the need for blood transfusion or prolonged oxygen therapy.

Conclusions: In any liposuction procedure, it is important to maintain the volume of infiltrated tumescent in a smaller ratio compared to the patient's blood volume, in order to have the best postoperative results and to keep the patient in an optimal state of health.

Keywords: Circumferential liposuction 360, klein tumescent solution, postoperative hemoglobin;

UTERINE SARCOMA WITH SUBPERITONEAL GROWTH AND INVOLVEMENT OF THE LEFT URETER- A CASE REPORT

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Background: Uterine sarcomas represent a particularly rare condition, comprising only 2-5% out of all reported malignant tumors affecting the uterus. Deriving from mesenchymal cells belonging to the myometrium, such tumors are characterized by soft hemorrhagic tissue masses often associated with extended areas of necrosis. Case complexity is related to extensive and unusual growth involving surrounding tissues and even encasing nearby structures and vessels.

Objective: The surgical procedure aimed to fully discern the extension of the tumor relative to surrounding structures and to safely remove it while preserving the integrity of the encased ureter and proximal iliac vessels. The surgery also allowed for a complete histopathological examination to be performed , for the suspected diagnosis to be later confirmed.

Material and methods: An uterine sarcoma with subperitoneal development involving the left ureter was operated in a tertiary university clinic.

Results: After opening the abdomen, a 20 cm solid uterine tumor, extremely immobile, in contact with the left pelvic side wall and left iliac vessels was discovered. Also, about 2 liters of ascites were found. The tumor dissection was difficult because of its large volume and the lack of surrounding space hindering manoeuvrability. The tumor also involved the left ureter, which was finally freed. The blood loss was relatively high- 900 ml, and intraoperatively, a blood transfusion was performed. A total hysterectomy plus bilateral adnexectomy was completed. There were not other intra-or postoperative complications and the patient was discharged on the 5th postoperative day.

Conclusions: Uterine sarcomas have a high potential to develop into large masses extending into neraby structures and gradually reducing available space. Surgical attempts to remove such tumors can often be complex and challenging and thus require an experienced team.

Keywords: Uterine sarcoma, left ureter, uterine surgery

UNPREDICTABLE COMPLICATIONS IN LOWER LIMB TRAUMA

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Background: In the realm of trauma surgery each traffic accident is unique, testing medical expertise.

Objective: The objectives were to preserve and restore functionality of the affected limbs following trauma.

Material and methods: We will analyse the case of a 23-year-old woman who was riding a bycicle, got hit bya garbage truck and was directed to the Plastic-Surgery-Departament. She suffered severe injuries, including total crush injury of the right lower limb and partial skin avulsion of the left leg. Four surgical interventions were performed.

The initial procedure was conducted urgently upon the patient's arrival. It involved surgical cleansing and assessment of injuries to both lower limbs, coupled with an arteriovenous graft insertion at the right forefoot to prevent amputation.

Subsequently, complications arose, leading to the graft's thrombosis. Deliberations involving the patient and her family, led to the decision to perform a second surgery: amputation at the mid-third level of the right calf, facilitating future prosthetic fitting.

In the following days, the left lower limb developed necrosis, necessitating a third surgical intervention: necrectomy of the skin around the left knee. Following this procedure, negative pressure wound therapy was initiated in that area.

After six days of employing negative pressure therapy, granulation tissue formation around the knee enabled the execution of a fourth surgical procedure: a split-thickness-skin-graft application. By the multitude of post-avulsion complications, a hematoma formed on the outer side of the left hip, prompting another necrectomy during the same operation. Subsequently, negative pressure wound therapy was applied to the hip area as well.

Results: In addition, the patient's progress was altered by contamination with pathogenic bacteria, including E.Coli, Pseudomonas Fluorescens/Putida, and the rare Aeromonas Hydrophila. Further surgical management of the left lower limb is planned.

Conclusions: The circumstances and severity of the accident give unexpected complications and a prolonged evolution. The prognostic of these crush injury cases is reserved.

Keywords: Crush injury, Amputation, Necrosis, Graft, Complications

SUBTROCHANTERIC FRACTURES: FROM PROPER HEALING TO PSEUDOARTHROSIS SMALL MISTAKES CAN LEAD TO DISASTER

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Background: Subtrochanteric fractures, though relatively uncommon, present significant challenges in orthopedic management due to the anatomical forces that induces deformation. Among the most common issues is represented by malunion, characterized by the inability of the body to heal the fracture. Its occurrence poses diagnostic dilemmas and therapeutic uncertainties, necessitating meticulous evaluation and tailored interventions.

Objective: The purpose of this case report is to highlight the importance of preoperative planning, suitable implants, proper alignment and adequate acknowledgement of the possible complications.

Material and methods: A 75-year-old female patient is admitted to the Orthopedics and Traumatology department for an implant failure related to an operated right subtrochanteric fracture (Russel-Taylor Classification Type 1), which occurred three months before. The comorbidities include hypertension, NYHA class II congestive heart failure, coronary artery disease, permanent atrial fibrillation, mitral insufficiency, aortic insufficiency, type 2 diabetes mellitus, iron-deficiency anemia, and obesity. The issue of concern is highlighted by the occurrence of malunion. After appropriate preoperative preparation, surgery is performed, involving the removal of the intramedullary nail followed by fracture reduction via open reduction under fluoroscopic guidance and osteosynthesis using an anatomical plate, lag screws, and two cables.

Results: The postoperative evolution is favorable, with optimal wound healing, without local inflammatory signs. The pacient is subjected to periodic passive and then active mobilization at the bedside, with no weight on the operated limb, being discharged in an improved surgical condition.

Conclusions: This case highlights the importance of vigilance in post-operative surveillance, prompt recognition of complications, and judicious selection of management strategies to mitigate the sequelae of pseudoarthrosis in subtrochanteric fractures.

Keywords: Subtrochanteric Fracture, Pseudoarthrosis, Fracture Healing Complications

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IMAGISTIC CONTRASTS BASED ON MULTIPARAMETRIC MRI AND VI-RADS SCORE IN DISCLOSING MUSCLE INVASION BLADDER CANCER: A CASE REPORT.

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Background: Due to its high accuracy in bladder cancer staging, the multiparametric magnetic resonance imaging (mpMRI) has been included as an excellent tool in the newly developed Vesical Imaging Reporting and Data System (VI-RADS) from 1 to 5 score.

Objective: The aim of our case report is to expose of how the performance of the VI-RADS scoring alongside mpMRI owns its capacity to differentiate if the detrusor muscle invasion of the urothelium is likely, respectively unlikely to be present in bladder cancer patients.

Material and methods: Both of our patients with papillary urothelial carcinoma, known with a smoking heavy history and no occupational hazards experienced, referred to the Urology department with gross haematuria. T2-weighted images, diffusion-weighted images and dynamic contrast enhanced as the main components of the VI-RADS and bladder mpMRI protocol were performed to provide a precised visualization.

Results: One of the patients MRI scans revealed a 2 cm tumour formation into the intramural portion of the right ureter with an anterior projection. Intravenous contrast agent emphasizes an early enhancement of the substance into the entire inner layer with no evidence of contrast at the level of the muscularis propria, framing these typical findings to a VI-RADS 2, highly predictive of a non-muscular invasion. The second patient's MRI imaging discovered more tumoral lesions, the biggest of them with a 3,5 cm dimension at the lower bladder floor, exceeding the entire bladder wall and reaching to the extravesical fat. The restriction of diffusion as well as the interruption of the low signal intensity line is greatly suggesting the tumoral invasion of the detrusor muscle, considering these typical findings predictive for a VI-RADS 5 score.

Conclusions: The use and implications of VI-RADS in association with the high contrast accuracy of the mpMRI has a reliable advantage in evaluating the tumor spreading in the urothelial layers.

Keywords: VI-RADS, bladder cancer, detrusor muscle

BENNETT FRACTURE-A CASE REPORT.

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Background: The Bennett fracture is a basic intraarticular fracture of the first metacarpal bone , involving the base of the thumb and is accompanied by the subluxation or dissociation of the carpometacarpal joint.

Objective: This case report is about a 28-year-old woman who presented herself to the plastic and reconstructive surgery department in Targu-Mures after a trauma, complaining of pain in the left upper limb, inflammation, sensitivity to palpation, hematoma and extensive palmar and forearm ecchymosis.The objective is to find a conclusive diagnosis and an appropriate treatment for the patient.

Material and methods: Following the anamnesis and the radiological examination, the patient was diagnosed with Bennett fracture and it was decided to approach a surgical intervention to bind the fractured fragment, which consisted in implanting a percutaneous pin at its level. During the operation, an attempt was made to implant the pin, but without results because the fragment was too small, so it was decided to extract the fragment and to reestablish the position of the lateral collateral ligament.

The surgical intervention was performed with local anesthesia with a duration of around one hour and a half and the patient was hospitalized for twenty-four hours post-surgery.

Results: The surgery was simple without any complications and the patient presented mobility and flexibility at the level of the thumb at the six months medical post-operative check-up.

Conclusions: This case report highlights the importance of choosing the best surgical technique , the particularity of each case and the doctor's decision if there are complications.

Keywords: Bennett fracture, percutaneous pin, metacarpal bone;

ASSESSMENT OF QUALITY OF LIFE IN COLORECTAL CANCER PATIENTS UNDERGOING SURGICAL PROCEDURES UNDER GENERAL ANESTHESIA: A PROSPECTIVE OBSERVATIONAL STUDY

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Background: Quality of life (QoL) serves as a vital indicator of well-being, particularly in patients facing significant health challenges such as colorectal cancer. Surgical procedures under general anaesthesia are common interventions in colorectal cancer management, yet their impact on patients' QoL remains an area of investigation.

Objective: This study aimed to assess changes in quality of life among colorectal cancer patients undergoing surgical procedures under general anaesthesia.

Material and methods: This observational, prospective study included 41 patients diagnosed with colorectal cancer who underwent surgical procedures under general anaesthesia. Clinical data, encompassing physical health status, nutritional indicators, and relevant medical history, were extracted from patients' charts before surgery. Quality of life (QoL) assessment was conducted using the World Health Organization Quality of Life Brief Version (WHOQOL-BREF) questionnaire, applied both before surgery and repeated 4 weeks postoperatively. The questionnaire, structured into four sections evaluating physical health, psychological well-being, social relationships, and environmental factors, was utilized to determine QoL. Data analysis focused on comparing QoL scores before and after surgery and examining any associations with postoperative complications.

Results: Among the 41 patients initially included, one patient with an American Society of Anesthesiologists (ASA) score of 4 was excluded. Analysis revealed that the majority of patients did not experience significant changes in QoL scores before and after surgery. However, some patients exhibited differences in QoL scores postoperatively, which were associated with the occurrence of post-surgical complications.

Conclusions: While most colorectal cancer patients undergoing surgical procedures under general anaesthesia did not report significant changes in QoL over the 4-week postoperative period, variations in QoL scores were observed in some cases, particularly among those experiencing postoperative complications.

Keywords: Quality of life, colorectal cancer, surgical procedure, general anaesthesia,

EXPLORING DRUG CONSUMPTION PATTERNS AND SOCIAL IMPLICATIONS AMONG YOUNG ADULTS: A PROSPECTIVE STUDY

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Background: Addictive substances are those that, upon regular consumption, create a dependence, physical, psychological, or both. These substances alter the brain's chemical balance, leading to an irresistible urge to consume them despite adverse consequences. Prolonged use can result in tolerance, meaning higher doses are needed to achieve the desired effects.

Objective: The aim of this study is to evaluate the prevalence of drug consumption among young adults and examine the social ramifications of drug use on their lives.

Material and methods: Our ongoing prospective study utilizes a questionnaire comprising 26 anonymous questions. The questionnaire was disseminated online, via social media channels, resulting in 105 responses so far.

Results: 65 males (68,25%) and 40 females (31,75%) completed the questionnaire, with ages ranging from 18 to 25 years old. 68(71,4%) subjects reported having consumed drugs at least once, while 37(28,6%) claimed never to have done so. Our study found that the most commonly used drugs were depressants and cannabis, with stimulants, hallucinogens, and opioids being less prevalent. In terms of frequency, the majority of respondents (51%) reported occasional consumption, with most citing recreation or pleasure (43%) as the main reason for drug use.56% of participants reported experiencing negative consequences from drug use, including health, legal, and financial issues and 54% attempted to quit or reduce their drug consumption.

Conclusions: This study sheds light on the complex interplay between addictive substances and young adults, highlighting the prevalence of drug consumption and its social impacts. Despite experiencing adverse consequences, a significant portion of respondents continue to engage in drug use, reflecting the need for targeted interventions. This study serves as a crucial step towards understanding and addressing the multifaceted issue of drug dependence among young adults, emphasizing the importance of preventative measures and support systems to mitigate its social and personal repercussions.

Keywords: drug use,addiction,questionnaire

THE CONTRIBUTION OF ULTRASOUND-GUIDED BIOPSY IN THE POSITIVE DIAGNOSIS OF BREAST CANCER

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Background: Breast cancer is a real global health problem of the utmost importance and one of the main causes of death among women. Screening women at risk with imagistic methods such as mammography has an important role in early diagnosis.

Objective: To evaluate the main imagistic features of breast cancer for secondary prevention or diagnosis of malignancy.

Material and methods: The selected group of 64 female patients comprises a total of 70 biopsies taken from suspicious breast lesions for diagnostic purposes.

Results: The overall average age is 59,3 ± 16,8 years. Most of the patients (74,3%) were investigated with 2 methods: mammography and ecography. The most frequent localization of the lesions was the right breast (approximately 53%) and the upper-outer quadrant (UOQ)-34.3% . The majority of the lesions (92.8%) were assigned to a Breast Imaging Reporting and Database System (BI-RADS) of 4, 5 and 6. The features of the margins and contour of the lesions that were imagistically identified showed a significant association with the results of the ultrasound elastography examination (p=0.011), with the BI-RADS score (p=0.006) and the benign or malignant result according to the histopathological examination (p<0.001). Older patients were more prone to develop breast cancer (p<0.001) and to present posterior shadowing (p=0.03). From the biopsied lesions, 74,3% were malignant, the most frequent being the invasive ductal carcinoma no special type (NST) with 54.2%. Further tests revealed the presence of estrogen receptors (74,2%), progesterone receptors (71,4%) and the Ki-67 index (71,4%). HER-2/neu was present only in 25% of the cases in which it was tested.

Conclusions: Radiological findings can help us determine whether the lesions are benign or malignant, but only the histological investigation will provide an accurate diagnosis.

Keywords: upper-outer quadrant (UOQ), mammography, BI-RADS, NST

ROLE OF L-ARGININE IN TREATMENT OF CHRONIC LEG ULCERS - A REVIEW

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Background: The aging population with chronic wounds has a significant burden on health care systems and can cause long-term disability. Chronic wounds can have profound effects on their quality of life. Wound healing gets slow and impaired with age and accompanying health conditions. Moreover, poor nutrition can cause delayed inflammatory response, slower healing, slower tissue proliferation and remodeling. Therefore, early nutritional intervention allows faster healing, improved prognosis and rapid recovery thus promoting improved quality of life. Arginine is an important essential amino acid; it helps to build muscle and tissues. It acts as a precursor for Nitric oxide which acts as a powerful vasodilator thus improving blood flow to ischemic tissues and plays an essential role in antibacterial mechanisms.

Objective: The aim of this review was to evaluate potential wound healing effects of (ONS) oral Nutritional supplements (L-Arginine) ARGINAID in elderly patients with Chronic leg ulcers.

Material and methods: This study evaluated the effectiveness of daily Arginaid nutritional supplements to the diet of elderly with chronic legs ulcer at a residential aged care facility. In total 9 residents were chosen for the study and 6 were commenced on ARGINAID, twice weekly nursing team collected wound management and quality data (size, tissue type, discharge, odor, etiology) which was recorded in wound management record book. Wound care was presented during weekly clinical handovers to attending GP.

Results: All the residents with similar baselines (age, gender, type of wound, wound dressing regimes) were seen twice a week over a period of about two and a half months. Five residents demonstrated significant reduction in size of ulcer, reduced exudate and faster healing compared to four residents that were not given Arginine supplements. Two residents also reported reduced pain in the affected leg. Towards the end of about two and a half months, out of 6 (arginine supplement group) 2 Ulcers healed, 3 demonstrated faster healing and reduced inflammation, 1 ulcer showed slight reduction in size, she was commenced on antibiotics during the process.

Conclusions: The study showed promising results and benefits of arginine supplements in wound healing and could potentially be used as adjuvant therapy by GPs , Plastics surgeons in treating chronic wounds.

Keywords: Chronic wounds, Ulcers, Arginine supplements

CLINICAL-BIOLOGICAL CHARACTERISTICS AND TREATMENT OUTCOMES IN IMMUNE THROMBOCYTOPENIC PURPURA

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Background: Immune thrombocytopenic purpura (ITP) is a serious condition that reduces patients' health- related quality of life. Understanding its epidemiology and clinical course can outstandingly improve the diagnosis process and individualized treatment strategies.

Objective: The aim of this study is to describe demographical, biological features and clinical outcomes of adult patients with ITP.

Material and methods: We performed a retrospective descriptive study that included all the patients with ITP admitted to the Hematology department of County Hospital Targu-Mures over a period of 5 years (october 2018-march 2023).

Results: Out of the total number of patients (n=46; 61% women; 31% men; mean age 56), we identified a percentage of 89% as having bleeding symptoms. Among these, 31% presented purpura and petechiae, 22% ecchymosis, 11% gingival bleeding, 10% epistaxis, including 3% intracranial bleedings. The mean platelet count was 19 x 10^9/L, 91% having severe thrombocytopenia. A direct correlation between the platelet count and severity of bleeding was not demonstrated (p=0.375; r=0.134). 50% had secondary ITP, hepatitis B being the most constant possible ethiology. 50% were newly-diagnosed cases, persistency and chronicity rates were 43% and 7%, respectively. Most prescribed treatments were corticosteroids (81%) as first-line therapy,thrombopoietin-receptor agonists (TPO-Ras) (10%) as second line-therapy, with splenectomy infrequently selected (3%) and immunosuppressive agents (4%) as third-line therapy. 24% of patients had a partial response and 50% achieved a complete response. A correlation between corticosteroid resistance and severity of the disease has been observed (p=0.02). Drug-induced complications including diabetes mellitus (n=8), osteoporosis (n=4) and sepsis (n=4) have been reported in 35% of cases. Throughout the course of ITP, 9% of patients died, only one patient with bleeding related ITP.

Conclusions: Our results are consistent with published literature confirming the heterogenity of this blood disorder. The occurance of bleeding symptoms regardless of the platelet count demonstrates the unpredictable clinical outcome of ITP.

Keywords: immune thrombocytopenia, bleeding, corticosteroids

HOW CREDIBLE, COMPLETE AND ACCURATE IS THE INFORMATION ABOUT ENDOMETRIAL CANCER PRESENTED TO PATIENTS ON ROMANIAN AND ENGLISH WEBSITES?

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Background: Endometrial cancer is a real problem worldwide, being the fourth most common type of cancer. In the modern world, online information is an important documentation source due to its extensive accessibility. Checking the quality of medical information has become a necessity due to the influence it exerts on readers' decisions to consult a specialist and undergo treatment.

Objective: The objective of the study was to assess the health-related online information about endometrial cancer.

Material and methods: The study was designed as an observational, cross-sectional investigation and included 50 websites, half Romanian and half English, obtained after searching on Google using 'cancer endometrial' and 'endometrial cancer' as search terms. Each website was rated for credibility, completeness, and accuracy by two independent evaluators. Credibility, completeness and accuracy scores were reported on a 0 to 10-point scale.

Results: Credibility scores were 4.2 and 5.1 for Romanian and English websites, respectively (p=0.1451). The completeness scores were 4.8 and 5.8 respectively (p=0.0639) and the accuracy scores were 4.8 and 5.2 respectively (p=0.3334). The credibility score was correlated with the accuracy score only for Romanian-language sites (r=0.6317; p=0.0007). The results of the other correlation tests did not reach the statistical materiality threshold.

Conclusions: Overall, English and Romanian-language websites about endometrial cancer were insufficiently complete and accurate. English-language sites were not statistically superior to Romanian-language sites. Credibility could be used as a reliable indicator of the quality of Romanian-language sites about endometrial cancer.

Keywords: endometrial cancer, health-related information, internet, infodemiology, medical information hygiene

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UNDER THE MICROSCOPE OF BRIEF DISCERN: DERMATOLOGICAL INTERNET - A CROSS-SECTIONAL STUDY ON THE QUALITY OF INFORMATION REGARDING THERAPEUTIC OPTIONS

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Background: Melanoma, acne, and psoriasis are amongst the most frequent dermatological diseases worldwide. Internet documentation has become an important criterion for patients when making health-related decisions. Therefore, assessing the quality and reliability of medical information available online is essential.

Objective: To investigate the quality of Romanian and English language websites about melanoma, acne, and psoriasis using the Brief DISCERN instrument.

Material and methods: The observational, cross-sectional study included 25 Romanian and 25 English language websites for each topic. Website credibility and information quality (completeness and accuracy) were previously investigated using specific quality benchmarks. The websites were evaluated using the six-item Brief DISCERN tool. Comparisons between the Romanian and English language samples were studied using the Mann-Whitney or Student's t-tests. Correlations between Brief DISCERN scores and credibility, completeness, and accuracy scores were tested using the Pearson or Spearman tests.

Results: Brief DISCERN scores of Romanian language melanoma, acne, and psoriasis websites were 9.0±2.6, 9.9±3.1, and 10.3±3.3, respectively. English language websites' scores were 15.6±4.3, 13.3±4.2, and 14.2±4.7, respectively. English language websites obtained significantly higher Brief DISCERN scores regarding each topic (melanoma, p<0.0001; acne, p=0.0021; psoriasis, p=0.0038). In the Romanian sample, significant correlations were identified in melanoma websites (with credibility and completeness) and acne websites (with credibility, completeness, and accuracy), whereas in the English sample, Brief DISCERN scores correlated with completeness in melanoma websites, accuracy in acne websites, and credibility in psoriasis websites.

Conclusions: English websites proved to have much better information quality for all subjects. The Brief DISCERN tool did not consistently indicate website credibility and informational content quality in the studied sample.

Keywords: melanoma, acne, psoriasis, internet, online information quality

PHOSPHOCALCIC METABOLISM IN AUTOIMMUNE THYROID DISEASES

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Background: Autoimmune thyroid diseases are complex pathologies influenced by both genetic predisposition and environmental factors. Hashimoto's thyroiditis and Basedow-Graves disease may be seen as opposite ends of the autoimmune thyroid disease spectrum but, in reality, there is an overlap between the two. Thyroid hormones play an important role in phosphocalcic metabolism and have a direct effect on bone turnover.

Objective: The study aims to evaluate phosphocalcic metabolism parameters in autoimmune thyroid disease patients and assess their correlation with thyroid function and antibodies.

Material and methods: This study consists of a group of 196 patients with autoimmune thyroid diseases, who were referred to the Endocrinology Clinic of Mures County Hospital between January 2022 and April 2023. Autoimmune thyroid disease is evidenced by the presence of increased anti-thyroid peroxidase antibodies (TPOAb) and thyrotropin receptor antibodies (TRAb) levels. The patients were assessed for thyroid function, anti-thyroid antibodies and phosphocalcic metabolism parameters.

Results: A total of 158 patients with Hashimoto's thyroiditis and 38 patients with Graves' disease were included. Statistical analysis of the studied parameters revealed significant differences between the two groups. Specifically, mean values of corrected calcium ($p = 0.0120$) and alkaline phosphatase ($p < 0.001$) were significantly higher in patients with Graves' disease. In both patient groups, vitamin D correlates linearly positive with FT4 (Hashimoto's: $R = 0.2053$, $R2 = 0.0421$, $p = 0.0201$; Graves': $R = 0.4341$, $R2 = 0.1884$, $p = 0.0092$). Further classification of patients based on age and menopausal status yielded additional insights. A negative correlation between corrected calcium levels and TPOAb levels was observed in postmenopausal females ($\rho = -0.3794$, $p = 0.0353$) and in patients aged over 65 ($\rho = -0.6485$, $p = 0.0425$).

Conclusions: The results confirm the influence of thyroid hormones on phosphocalcic metabolism, highlighting its importance in managing autoimmune thyroid diseases.

Keywords: vitamin D, phosphocalcic metabolism, autoimmune thyroid disorders

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THE ROLE OF KINETOTHERAPY IN THE PREVENTION AND TREATMENT OF OSTEOPOROSIS AND ITS COMPLICATIONS

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Background: Osteoporosis is a condition with a significant impact on bone health, characterised by reduced bone mass, leading to fragility and increased risk of fractures.

Objective: The aim of this study is to analyse the role of kinesitherapy in the treatment and prevention of osteoporosis.

Material and methods: We followed a total of 31 patients from the Rheumatology Department of the Târgu Mureș Hospital and Reszana Center Clinic in Târgu Mureș, diagnosed with osteoporosis or osteopenia. They were divided into 2 groups, those diagnosed with osteoporosis, versus the control group, with osteopenia.

Results: 31 female patients were enrolled in the study, with an average age of 68.6 years. They had a T-score between -0.5 and -4.1, 10 (32.25%) were diagnosed with osteopenia and 21 (67.74%) were diagnosed with osteoporosis. In the quality-of-life questionnaires, initially, 10 patients (47.61%) in the first group encountered difficulties with bathing and none in the control group. 18 patients from the osteoporosis group had difficulties standing up from a seated position (85.41%) compared to 7 in the osteopenia group (70%) and 16 in the first group (76.19%) versus 3 in the second group (30%) struggled with self-feeding. 19 subjects with osteoporosis (90.47%) versus 7 with osteopenia (70%) had problems in performing household activities. All patients reported suffering from anxiety or depression. After 10 sessions of kinetotherapy an improvement in self-care was observed (5 patients in the first group (23.80%) could bath without difficulties, 5 with osteopenia could stand up more readily (50%), 6 (28.57%) in the first group and 7 (70%) in the second group could feed themselves more easily). All subjects have noticed improvements in anxiety or depressive states.

Conclusions: There is an increase in the quality of life after a relatively small number of sessions. Management of osteoporosis requires a multidisciplinary approach involving non-pharmacological techniques.

Keywords: Osteoporosis, Osteopenia, Kinetotherapy, Quality of life.

THE EFFECTS ASSOCIATED WITH ASTHMA ON QUALITY OF LIFE

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Background: Asthma has become a very common condition, and the increase of the number of cases worldwide makes this a crucial public health issue. The National Institute of Statistics informs us that in Romania, 900,000 suffer from asthma.

Objective: The objective of this study was to find out the impact of diagnosing asthma on the quality of life of patients.

Material and methods: The study is retrospective, observational type, making a descriptive and associative statistics of the answers. It included 254 volunteers who answered questions from a questionnaire.

Results: The first key question of the study is „Do you think that asthmatic crises generate psycho-emotional problems?", and the subjects answered in the number of 170 that yes, and 84 that do not. On question „If the answer is YES to the previous question, what feelings did you develop? ", the major percentage of 53.7% shows that fear and worry are prevalent in the lives of patients, 44.7% developed nervousness, and no less than 16.5% went into depression. It is statistically significant (p=0,02) that people who have had a life-threatening exacerbation have psycho-emotional problems. (p=0,02).

Conclusions: The asthma is a simple disease and does not consist of multisystemic organic damage, but after the study, we note that it has enormous significance on the mental health of the patient because of diagnosing with a disease labeled as „chronic", has a special pressure at the time of diagnosis. All this daily struggle with allergens and asthmatic crises, the need to be constantly organized in connection with the administration of treatment, , the adverse effects of medication, lead to the emergence of states of fear, nervousness and even depression.

Keywords: Asthma, quality of life, psycho-emotional problems, fear, nervousness

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IRON DEFICIENCY SYMPTOMS IN YOUNG WOMEN VERSUS MENOPAUSAL WOMEN IN RELATION TO THE PRESENCE OF GASTROENTEROLOGICAL CANCERS

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Background: Iron deficiency anemia (IDA) in women aged 20-49 can arise from various underlying conditions, including common causes such as menstruation or inadequate dietary intake. However, in menopausal women, neoplasia typically emerges as the primary cause. Endoscopy is crucial as gastroenterological cancers rank among the most prevalent cancers in women and may manifest with symptoms suggestive of iron deficiency anemia.

Objective: The aim of this study is assessing the range of symptoms experienced by patients with iron deficiency anemia in correlation with the occurrence of different types of cancers in women, both pre- and post-menopause.

Material and methods: Data collected over an 8-year period yielded a sample of 202 women meeting the required criteria, comprising 129 menopausal women, 73 women of menstruating age. Statistical analysis was conducted on the sample data to assess the disparities and commonalities between the two groups concerning symptoms experienced and existing pathologies at the time of examination.

Results: Within the menopausal group, 86 individuals (66.66%) experienced associated symptoms, with 87 (68.5%) undergoing endoscopy. Neoplasia was detected in 24 cases (18.6%), out of which one esophageal (0.77%), one rectal (0,77%), 9 colon (6,97%) and 13 (10,07%) gastric cancers. Among the premenopausal group, 45 females (61.64%) experienced symptoms, 39 (53.42%) were referred for endoscopy leading to 21 (28.76%) non-cancerous diagnoses of IDA and one precancerous colonic lesion. Spearman's rank applied to the pre-menopausal women group highlights a positive correlation between Barrett's esophagus and colonic polyps ($r=0,34$, $p<0,01$). In the menopausal women group, diabetes and dyspepsia showed a moderate correlation ($r=0.57$, $p<0.001$), while esophagitis and dysphagia exhibited a strong correlation ($r=0.65$, $p<0.001$).

Conclusions: Gastroenterological cancer is exceptionally rare among premenopausal women, irrespective of their anemic status. Conversely, in menopausal women, an equal number of cancers were detected with fewer procedures, as symptoms rather than IDA served as indicators for endoscopy

Keywords: iron deficiency anemia, neoplasia, gastroenterology

THE RELATIONSHIP BETWEEN THE PREHOSPITAL INDEX AND 24 HOUR ICU TRAUMA SCORE

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Background: The prehospital index and 24 hour intensive care unit trauma score are tools used to rapidly evaluate the severity of trauma and predict the progression of each patient. These scores are crucial for quickly assessing trauma severity, prioritizing treatment, allocating resources, predicting outcomes and enhancing trauma care through clinical research.

Objective: The goal of the study is to examine the correlation between the prehospital index and the 24 hour ICU trauma score and to determine their role in mortality prediction rate in trauma patients.

Material and methods: The study is an observational, retrosepective case series that analyzed passively collected data from observation sheets for 158 patients over three years(2020, 2021 and 2022) and calculate their trauma scores. Statistical analyses were performed on collected data.

Results: Of the 158 patients, a significant majority were men(81,64%), compared to women(18,35%). Road accidents were the most frequent cause, affecting 72 patients, predominatly young individuals, while falls, ranking second in frequency, were more common among the elderly. For both scores, the mortality rate increases in direct proportion to the score and the relationship between the prehospital index and the 24 hour intensive care unit trauma score is acceptable/reasonable, with the Pearson coefficient having a value of 0,36. The evolution of patients, dependent on traumatic injuries, showed that 10 patients were discharged(6,32%), 84 patients were transferred to their wards(53,16%) and 64 patients died(40,50%).

Conclusions: The relationship between the two scores is positive indicating that as the prehospital index rises, the 24-hour ICU trauma score also increases, leading to a decrease in the patient's chances of survival.

Keywords: Trauma, Prehospital, ICU, Scores

COMPARISON OF THE EVOLUTION OF LUNG CANCER ACROSS THE YEARS 2018, 2020, AND 2022 WITHIN MUREȘ COUNTY

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Background: Lung cancer poses a significant threat as one of the most prevalent and severe forms of cancer. Survival rates vary widely, emphasizing the importance of early diagnosis. Unfortunately, symptoms typically go unnoticed until the cancer has already advanced.

Objective: The study sought to track the evolution of lung cancer in Mureș County, focusing on the years 2018, 2020, and 2022.

Material and methods: I collected and analyzed data from the Mureș County oncology clinic, examining incidence rates, gender distribution, age distribution and geographic origins. Survival rates were charted over 24 months for 2018 and 2020 and over 12 months for 2022.

Results: In 2018, there were 123 reported cases, decreasing to 63 in 2020, and slightly rising to 64 in 2022. Women accounted for 28% of cases in 2018, and around 34% in both 2020 and 2022. Urban areas saw a similar trend, representing 28% of cases in 2018, increasing to 34% in 2020, and further to 41% in 2022. The highest incidence occurred in the 61-70 age group across all years and for both genders, reaching a peak of 37.5% in 2022 for women and 48.99% in 2020 for men. Survival rates improved over time, with a minimum of 56% at 6 months in 2018, increasing to a maximum of 70.53% in 2022. At 12 months, they ranged from a minimum of 44.72% in 2018 to a maximum of 70.31% in 2022. And at 24 months, they were 21.14% in 2018 and 38.10% in 2020.

Conclusions: Over the studied three-year period, number of cases decreased while survival rates increased, with the introduction of molecular targeted therapy with osimertinib playing a significant role. Women comprised about one-third of cases. Despite rarity, cases occurred among younger individuals, including one aged 21-30 and three aged 31-40.

Keywords: Lung cancer, Survival rates, molecular targeted therapy

RECTAL CANCER IN THE YEARS 2018, 2020, 2022 IN MURES.

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Background: Rectal cancer remains a significant health concern worldwide. Despite advances in medical science, understanding its epidemiology is crucial for effective prevention and treatment strategies.

Objective: Our objective was to conduct a comprehensive analysis spanning three years to discern the trajectory of this particular cancer.

Material and methods: We meticulously compiled data on incidence, demographic distribution, and gender representation, drawing from records at the Mures County Clinical Hospital. Survival rates were plotted over 24 months for 2018 and 2020, and over 12 months for 2022, with data analysis conducted using Excel

Results: In 2018, there were 64 reported cases, contrasting sharply with the 31 cases in 2022.

Incidence rates begin to rise notably after the age of 50, with the most pronounced impact observed in the 61-70 age bracket in 2018. In 2020, individuals over 71 years old constituted 37.73%, while in 2022, we noted 10 cases among those aged 51-60 and >71.

For women, the age group >71 years emerged as the most affected in two out of three years, while for men, the 61-70 age group dominated in 2018.

Survival rates varied, with a peak of 92.45% at 6 months in 2020 and a nadir of 87.09% in 2022. At 12 months, survival rates peaked at 85.93% in 2018 and reached a low of 83.87% in 2022, while at 24 months, survival rates were 76.56% in 2018 and 73.58% in 2020.

Conclusions: The incidence of rectal cancer displays a declining trend, notably in urban areas where dietary awareness is higher. Men constitute the majority of cases.

In women, the prevalence of cases is highest among those over 70 years old, likely due to heightened dietary consciousness. Overall, survival rates at two years are promising, standing at 75%.

Keywords: Rectal cancer, demographic analysis.

IRON DEFICIENCY ANEMIA: PARTICULARITIES IN HEMATOLOGY AMBULATORY PRACTICE

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Background: Iron deficiency anemia is usually managed in interdisciplinary teams. Part of these patients are referred for evaluation to a hematologist.

Objective: The aim of this study is to analyze particularities of patients with iron-deficiency anemia, evaluated in Hematology Ambulatory, by: gender, age groups, anemia severity, investigations frequently used for positive, differential and etiologic diagnosis and the treatment that was used.

Material and methods: A retrospective, qualitative, cohort study was performed. It included 285 patients evaluated for iron-defficiency anemia in S.C.J.U Targu Mures Hematology Ambulatory (59 male, 226 female), during 2021-2023. For positive and differential diagnosis of anemia, the following tests were completed: hemoglobin, peripheral blood smear, reticulocyte count, serum iron, ferritin, transferrin saturation rate, B12 vitamin level and serum folate level. In specific cases, more ivestigations were requested, for instance, biochemistry parameters, hemoglobin electrophoresis and celiac disease testing. For etiological purposes, 280 general ultrasonography, 195 gastroscopies, 114 colonoscopies and several CT scans were ordered.

Results: The highest prevalence of mild and moderate anemia was observed in the female subjects. The most encountered causes were gynecological (77 cases) and gastrointestinal pathologies (54 cases). Some medications were suspected to be the main cause (57 cases). Unconcluted etiology noted in only 12 cases. The average age was 51 and 62 years for female and respectively male patients.

Conclusions: Patients with iron deficiency anemia are extensively evaluated for proper positive and differential diagnosis, with special regard for precise etiologic clarification. Laborious follow-up of the evolution and adequate guideline therapy is a permanent and perpetual practice.

Keywords: iron-deficiency, anemia, hematology ambulatory

THE ROLE OF RADIOMIC ANALYSIS IN COLORECTAL CANCER

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Background: Colorectal cancer ranks third on the list of malignancies, being a significant global health issue.

Objective: The main objective of the study represents the imperative need for optimized preoperative staging, using imagistic methods to identify and remove both the main tumor and the positive lymphnodules that radically influence the prognosis among patients, with a strong impact on survival rates.

Material and methods: The study is a retrospective one, conducted through the significant collaboration of the Radiology and Medical Imaging Clinic, General Surgery Clinic 1, and the Pathological Anatomy Service within SCJU Tg Mures. The study included patients diagnosed and operated on at General Surgery Clinic 1 between 2019 and 2023 who underwent computed tomography before surgical intervention. Patients with pathologies that could influence inflammatory status were excluded from the study, such as systemic inflammatory diseases, autoimmune diseases, recent trauma within the last 6 months, hematological diseases, other surgical interventions within the last 6 months, synchronous tumors, and septic conditions. Paraclinical investigations required for the research included imaging examinations (CT scans), histopathological reports, laboratory analyses, and surgical protocol.

Results: Using machine learning software that allows the analysis of radiomic parameters extracted from CT scans, which incorporates three types of variables: segmented tumors, histopathologic subtypes, and TNM classification, a diagnosis algorithm can be developed with sufficiently good predictive capabilities and widespread applicability.As such, radiomics could serve as an additional tool in identifying, staging, and prognosis of the colorectal cancer patients.

Conclusions: By integrating anatomical-imaging data into the multidisciplinary management of patients with colorectal cancer, the study aims to emphasize the importance of synergy among various medical specialties in improving clinical outcomes and increasing survival rates.

Keywords: colorectal cancer, radiomics, computed tomography, machine learning, diagnostic algorithm

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THE ROLE AND PLACE OF SOCIAL NETWORKS IN FIRST-YEAR STUDENT ADAPTATION TO THE ACADEMIC ENVIRONMENT

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Background: In the context of continuous changes in educational paradigms and social interaction modes, this article explores the role of social networks in first-year students adaptation to the academic environment.

Objective: The purpose of this study is to examine the integrative role of these platforms in facilitating social connections and promoting communication between students and teachers. Simultaneously, it aims to investigate the challenges associated with the use of social networks in the academic environment.

Material and methods: We carried out an observational study, which included measurements performed at a single moment,during the months of September, October and November 2023. Information was collected using a standardized questionnaire. Formulated in a clear and concise manner, highly relevant to the research's purpose. The study population consisted of 101 randomly selected students, aged between 18 and 27 years.

Results: The study revealed an intensive use of social networks, with an average of 2-4 hours per day during the week and about 4-6, even more on weekends. Regarding the impact on interpersonal relationships, social networks positively influenced the respondents' relationships, strengthening ties with friends and family. From an academic performance perspective, there is a significant correlation between time spent on social media and lower academic performance, as evident from the respondents' answers.

Conclusions: The findings highlighted that social networks facilitate communication between students and teachers, contributing to a more open academic environment and increased collaboration possibilities . Additionally, we identified challenges associated with the social networks use in an academic context, such as distractions and risks of decreased academic performance due to excessive or inappropriate use.

Keywords: social networks, medical students, communication, interpersonal relationships

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

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Background: Cervical cancer is a form of cancer commonly found worldwide, but in Romania the incidence is higher than in the rest of the European countries. Our country ranks first in the European Union in cervical cancer mortality, with a rate four times higher than the EU average. Ensuring that the primary information source for the population, the Internet, contains accurate and comprehensive information, is of utmost importance.

Objective: The primary objective of the study was to evaluate the accuracy and comprehensiveness of cervical cancer information available on websites intended for non-medical audiences. Additionally, it sought to compare the quality of websites presenting this information in both Romanian and English. Furthermore, the study aimed to determine whether Google's ranking of websites correlates with their quality and reliability.

Material and methods: Fifty websites, half Romanian and half English were selected according to inclusion and exclusion criteria. For each site, the following were evaluated: site characteristics, credibility level (based on eEurope 2002 credibility criteria), completeness and accuracy of information, according to a predetermined scale. Finally, the results obtained for the two languages were compared and the correlations between completeness/accuracy – and credibility/Google rank were tested. Student-t and Mann-Whitney tests were applied for numerical variables and the Chi-square test was used for categorical variables. The threshold for statistical significance was set at 0.05.

Results: The completeness and accuracy scores for Romanian websites were 5.3 and 8.1, respectively, while for English websites, they were 7.0 and 7.9. Notably, the scores were higher in the English subset compared to the Romanian subset, with significant differences observed in completeness (7.0 vs. 5.3, p=0.0014) but not in accuracy (7.9 vs. 8.1, p=0.7619).

Conclusions: Both Romanian and English websites provide incomplete and unreliable information regarding cervical cancer, underscoring the importance of seeking medical consultation for comprehensive guidance. The credibility of these websites and their Google ranking appear inconsistently related to content quality, suggesting they may not be reliable indicators of information validity.

Keywords: cervical cancer, infodemiology, accuracy, completeness

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THE QUALITY OF INFORMATION ABOUT BREAST CANCER ON THE ROMANIAN AND ENGLISH WEB

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Background: Breast cancer is the most common form of cancer in women. The disease is triggered when some cells in the structure of the mammary gland begin to multiply uncontrollably, eventually forming a tumor. It is very important that the main source of information of the population – the Internet – contains complete and correct information.

Objective: First, the study aimed to assess the quality of breast cancer information on websites for people without medical training and to compare the quality of websites in Romanian and English, respectively. Another objective was to assess the relevance of Google's rank to the quality of a particular site.

Material and methods: Fifty websites, half Romanian and half English were selected according to inclusion and exclusion criteria. For each site, the following were evaluated: site characteristics, credibility level (based on eEurope 2002 credibility criteria), completeness and accuracy of information, according to a predetermined scale. Finally, the results obtained for the two languages were compared and the correlations between completeness/accuracy – and credibility/Google rank were tested. Student-t and Mann-Whitney tests were applied for numerical variables and the Chi-square test was used for categorical variables. The threshold for statistical significance was set at 0.05.

Results: : The completeness and accuracy scores were 5.8 and 8.1 for the Romanian websites and 7.0 and 8.4 for the English websites. While English websites had higher scores, the differences were not statistically significant (completeness: 7.0 vs 5.8, p=0.0661; accuracy: 8.4 vs 8.1 p=0.1515).The results of correlation tests were inconsistent. For the Romanian language, there was a positive correlation between credibility and accuracy, but not between credibility and completeness, respectively no correlation at Google rank. For English, lack of correlations to credibility-completeness, credibility-accuracy, negative correlation to rank Google-completeness, positive correlation to rank-Google-accuracy.

Conclusions: Both Romanian and English websites contain incomplete and unreliable information regarding breast cancer, which is why it is absolutely necessary to complete the information through a medical consultation. The websites' credibility and Google ranking seem inconsistently related to content quality and probably are not reliable as indicators of information validity.

Keywords: breast cancer, infodemiology, accuracy, completeness

PROSTATE CANCER IN MURES COUNTY DURING 2022

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Background: Globally, prostate cancer is a significant disease that impacts men's health.

Objective: We decided to evaluate the position of prostate cancer among oncological pathologies in Mures County during 2022.

Material and methods: We used data collected from the county oncology department regarding incidence, mortality, age grouping, origin environments and for 44 cases, informations referring to staging, Gleason score and treatments performed.

Results: In 2022 there were 107 cases of which 65(60.74%) were from rural areas. A total of 8(7.47%) deaths were recorded, all in rural areas. The highest incidence was between 71-80 years old(41.12%) followed by 61-70 years old(34.57%). There were no reports under 50 years old. The highest prevalence in rural areas was between the ages of 71-80(41.53%), followed by 61-70(33.84%), and in urban areas between 71-80(40.47%), followed by 61-70(35.71%). In urban areas we had no cases under age of 60. We collected data about 44 patients, 27(61.36%) from rural areas. Gleason scores were between 7 and 8 for 33 out of 44 cases(75%) and ≤6 for 4 cases(9%). In rural areas, 33% of cases were stage III, 30% stage IV and 30% stage II. In urban areas, 35% were stage III, 24% stage IV and 23% stage II. Monotherapy, either as surgery, hormone therapy, radiotherapy, chemotherapy, was done in 34 cases(77.27%) while combination therapies were used in 9 cases(20,45%). Prostatectomy was done in 16 cases(36.36%) and hormone therapy in 26 cases(59.09%).

Conclusions: The incidence of prostate cancer is high over the age of 70 and occurs at older ages in rural than in urban areas. The higher mortality rate in rural areas is explained by the advanced stage of detection. The most common Gleason score is intermediate. The main treatments include hormone therapy and prostatectomy at younger ages, with chemotherapy and radiotherapy playing a less important role.

Keywords: hormone therapy, Gleason score, prostatectomy

PSYCHOACTIVE SUBSTANCES: FORENSIC MEDICINE PERSPECTIVES AND IMPLICATIONS FOR PUBLIC HEALTH

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Background: This study investigates the pivotal role of forensic toxicology in detecting drug abuse, focusing on drivers subjected to anti-drug testing during routine checks, accidents with or without casualties, or other circumstances.

Objective: Findings from this study serve to facilitate the identification of individuals engaging in drug consumption sensitivity of anti-drug tests in detecting drug use, comparison of test results with biological samples (blood and urine), thereby mitigating risks to both themselves and their surroundings.

Material and methods: Data were retrieved from the archives of the Institute of Forensic Medicine Târgu Mureș, encompassing documentation pertaining to the collection of biological samples, objective examination records, and toxicological analyses for 72 selected subjects identified as having produced positive results when subjected to a rapid anti-drug test.We studied demographic trends regarding age and gender susceptibility to drug use, contextual backgrounds of subjects, temporal patterns of identification, prevalent drug categories, potential alcohol-drug combinations, and key signs and symptoms observed during objective examinations.

Results: Among the 72 subject, 67 were detected during standard roadside checks. All members of this group are male, and their ages fall within the range of 18 to 55 years, the majority of consumers being between 26 and 35 years old. The majority of subjects, a total of 31, were identified during the time frame of 03:00 to 06:00. The majority had ingested cannabis or methamphetamine. Signs and symptoms in individuals who have ingested drugs encompass restlessness, agitation, hostility, motor incoordination, hyperemic or pale face, mydriasis or miosis, nystagmus, decrease in the photomotor or accommodation-convergence reflex, and narrowing of the palpebral fissure.

Conclusions: These insights offer valuable support to authorities in devising strategies for prevention and protection against illicit substance abuse.

Keywords: forensic toxicology, drugs, anti-drug device, symptoms

BREAST CANCER IN MURES COUNTY, 2022

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Background: According to IARC breast cancer is the most diagnosed form of cancer worldwide and it is the number one cause of deaths among women, therefore it represents a global health issue.

Objective: I have analysed breast cancer pathology evolution dignosed in 2022 in Mures county.

Material and methods: I have collected data from Oncology unit Mures County Hospital in terms of incidence, mortality rate, age and backgrounds, and for 40 cases I had acces for more complex data as staging group, cancer's grade and applied treatments.

Results: There were 129 new cases of breast cancer in 2022, which 85 from rural areas (65.89%) and 44 from urban (34.10%). Mortality rate was 12 cases from 129 total, of which 3 from urban (6.81%) and 9 from rural area (10.58%). Unfortunately, there were and 2 cases of breast cancer among 21-30 years old women. I have had access to more complex data for 40 patients of which the most frequent histological type was invasive ductal carcinoma, 34 from 40 (85%). Most frequent stage was IIB in rural communities patients and IIA in patient from urban. There were 4 urban cases in stage I and 2 cases of stage of advanced cancer, stage IV. The applied therapy was combined in 32 of 40 cases. 82.5% underwnt hormone therapy, 62.10%-surgery, 17,5% - radiotherapy.

Conclusions: High breast cancer incidence is seen in elderly patients. In rural area patients are diagnosed at advanced age and at the same time with advanced stage carcinoma by comparison with those from urban area. The most frequent histological type was invasive ductal carinoma, most of them expressing estrogen and progesteron receptors. Survival rate is relatively good, better in urban area by comparison with rural area, due to early stage diagnosis.

Keywords: breast cancer, incidence, mortality

PARENTS' KNOWLEDGE OF THE SYMPTOMATOLOGY OF THE RESPIRATORY SYNCYTIAL VIRUS

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Background: The respiratory syncytial virus (RSV) is a common and extremely contagious pathogen in children and adults, which causes infections of the respiratory tract. This virus is responsible for thousands of visits to the emergency room or hospitalization. From its discovery in 1956, the RSV is known to be the leading cause of morbidity and mortality for infants under 6 months old. The symptomatology of the RSV can evolve from mild infections of the superior respiratory tract to severe lower respiratory tract involvements. The most frequent symptoms or infection signs include sneezing, rhinorrhea, coughing, throat pain, wheezing, dyspnea and fever. The main complications that can occur are respiratory failure, bronchiolitis, pneumonia, otitis media and asthma.

Objective: The main objective was to find the level of awareness of the parents regarding the symptomatology of the RSV.

Material and methods: A prospective study was put through, involving 1037 participants, with data collected via an online questionnaire consisting of 35 questions. The criteria of inclusion were Romanians of all ages, both male and female, with at least one child.

Results: When asked about the potential symptoms of the RSV only 19,86% reported rhinorrhea and nasal congestion, 29,31% reported wheezing, 49,95% reported sneezing, 50,53% encountered throat pain and 68,75% accused coughing. Regarding the appearance and possible complications for the RSV infection, parents reported that they encountered otitis media in 16,39% of cases, asthma in 32,01%, bronchiolitis in 44,06%, pneumonia in 63,64% and respiratory insufficiency in 65,09% of cases.

Conclusions: Summarizing based on the gathered information we can conclude that the level of knowledge of the respondents is not satisfying. More than half of them are uninformed about the different appearances and main complications of the RSV infection.

Keywords: Respiratory Syncytial Virus (RSV), symptoms, complications, parents, knowledge.

COPING AND THE PATIENT-DOCTOR RELATIONSHIP, A HOLISTIC PERSPECTIVE

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Background: The term coping and the patient-doctor relationship show us how the quality of the connection between the patient and the doctor influences the patient's approach when faced with the diagnosis.

Objective: The subject highlights the patient's condition when he found out that he was sick, as well as how he felt when he had to call the doctor for help.

Material and methods: The group consisted of 100 people from Romania, aged between 12-62 years. The gender distribution was approximately equal. The people belong to both urban and rural areas. The research method was the questionnaire starting from the understanding of the word coping which represents the process by which an individual manages and deals with stressful situations in their life; the data were extracted and analyzed afterwards.

Results: After interpreting the data, 57% of the participants claimed that they don't know what the term "coping" means. A proportion of 60% turn to their family doctor when faced with a medical problem and the majority (51%) claimed that they felt tense and nervous in their presence. During the time they were sick, 71% of them claimed that they had low morale and did not feel well at all.

Conclusions: Most of the people who took part in the study don't know the concept of coping. Also, we learned that during the period when they felt sick, the patients were pessimistic, which shows us that we need to offer understanding and be patient with the sick in order to get through the illness more easily. Although they could ask for specialist help, depending on the pathology they suffer from, patients decide to go to the family doctor first, so we understand how important the family doctor is in their healing.

Keywords: coping, doctor, patient, relationship, holistic

CONCEPT OF HEALTH AS A PHYSICAL-EMOTIONAL DIMENSION

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Background: The actual concept of health is extended beyond the physical dimension and it enhances a holistic approach, combining physical, mental and social aspects in one unity. Beyond the absence of illness and infirmity, true health means balance and fulfilment, where people prosper along with their own values and with the environment they belong to.

Objective: This study researches the multifaced nature of health, bringing to light the interconnectivity of the diverse aspects and encourage people to be aware and to prioritize their health status.

Material and methods: The group was formed of 53 individuals, both sexes being in a relatively equal proportion, aged between 21 and 34. The research method was the questionnaire, followed by the data analysis.

Results: After interpreting the extracted data, we can observe the predominance of the physical (36%) and emotional (31%) dimension. The physical dimension assures the well-functioning of the body, allowing the individuals to engage in different types of activities. The emotional dimension influences the way in which the individuals view and relate to stress and how they experience and express emotions. A pivotal factor in maintaining an optimal health is coping with stress, individuals requesting help from their family and friends (71.7%) or deciding to cope with stress on their own (54.7%). These people are aware of their health status and they find themselves in a continuous try to improve it. However, the population, unfortunately, relate poorly with the health system (42%).

Conclusions: Individuals prioritize mind-body-soul relation, therefore the importance of physical and emotional dimension. Even if the health-population relationship finds itself at low rates, individuals are aware of their overall status and they emphasize it by approaching different healthy habits, while abandoning the toxic ones.

Keywords: health balance stress physical-emotional dimension

CHILDHOOD OBESITY - CLINICAL AND THERAPEUTIC CHARACTERISTICS

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Background: Childhood obesity is a significant public health concern worldwide. According to growth charts, in children aged 2 to 19 years, obesity is defined as a BMI above the 95th percentile for age and sex. The factors contributing to childhood obesity include diet, genetics, socioeconomic and psychological factors.

Objective: The objective of this study is to investigate obese patients who were hospitalized betweeen 2021-2023, as well as the number of patients with morbid obesity. Another objective is to identify some of the causes of obesity.

Material and methods: This study is a retrospective study, carried out over a period of 3 years (2021-2023) in which all patients admitted to the Pediatric Clinic of the Mureș County Clinical Hospital with a diagnosis of obesity were included. We selected the patients from the computer system, Hospital H3 Application, using the code for obesity (E65- E68) as a search filter, in all medical records. All patients with this diagnosis were included in the study, regardless of whether it was given as a primary or secondary diagnosis.

Results: 42 patients who met the conditions for inclusion in the study, of which 60% were men and 40% were women. 52.38% come from the urban environment, and 47.62% from the rural environment. 7% of the patients were diagnosed with hypertension. 29% of patients have morbid obesity. The average Z score for under 1 year is 2,5, for 1- 5 years is 2,58, for 6- 10 years is 2,31, for 11- 15 years is 2,09 and for 16- 19 years is 1,76.

Conclusions: Obesity is increasing, the main cause being an unbalanced diet. Only one patient was diagnosed with obesity due to steroid treatment, the rest of the cases being due to inadequate nutrition.

Keywords: obesity, Z score, hypertension

THE INFLUENCE OF AGE ON INFANTS AND YOUNG CHILDREN REGARDING PNEUMONIA

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Background: Pneumonia is an acute respiratory infection of pulmonary parenchyma that can be caused by microbial pathogens such as bacteria, viruses, or fungi. The pulmonary alveoli are full of fluids and pus, and this results in clinical symptoms such as difficulty breathing, cough, and altered status.

Objective: Analyze age-related differences in the clinical presentation of pneumonia. Notice the influence of age on the hospital admission status. Identify age-specific risk factors predisposing infants and young children to pneumonia, including prematurity, comorbidities, and environmental background.

Material and methods: This study is retrospective and observational, including all patients diagnosed with pneumonia who were admitted at the Pediatrics 1 Clinic of the County Emergency Hospital Targu Mures between 2018 and 2020, aged between 1 month and 3 years. The research included collecting data from the medical record, background, and personal data such as gender, current age, and gestational age.

Results: In this study, 131 patients with a mean age of 12.66 months were enrolled. Of these, 60 patients (45.80%), were young children while 71 patients (54.20%) were infants. Among the young children group, 33 (25.19%) were born prematurely, while in the infants group only 23 (17.56%). The hospital admission status was influenced by age ($p=0.0119$) resulting in more young children (31.30%) with an altered status than infants (25.19%), this category representing 74 patients out of the entire cohort (56.49%). Regarding the clinical symptoms, there was a difference between the productive cough ($p=0.0043$) and dry cough ($p<0.0001$), the first one being more common for young children while the second one being more common for infants.

Conclusions: This study highlights significant age-related differences in clinical presentation, hospital admission status, and prematurity rates among infants and young children.

Keywords: pneumonia, infants, young children

PREVALENCE OF MALNUTRITION AND ASSOCIATED FACTORS AMONG PEDIATRIC PATIENTS

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Background: Malnutrition is described as the cellular imbalance between nutrient and energy intake and the demand of the body for growth and maintenance of specific functions. Malnutrition is also known as undernutrition and is characterised by stunting, cachexia and underweight gain.

Objective: The aim of this study was to highlight the prevalence of malnutrition and the implicated risk factors in its occurrence among pediatric patients hospitalized in the Pediatric Clinic I of the Târgu Mureș County Emergency Clinical Hospital.

Material and methods: We conducted a retrospective, descriptive study from January to December 2023, including children aged between 1 month and 18 years, who were admitted to the Pediatric Clinic 1 of the Târgu Mureș County Emergency Clinical Hospital, with protein-energy malnutrition as main or secondary diagnosis. Parameters analysed were: age, gender, ethnicity, age of parents, main diagnosis, associated diseases, previous diseases, vaccination, nutrition in the first 6 months, number of children in the family, type of environment, living conditions, birth, diversification and chronic medication.

Results: Among the 140 patients, 56% are girls, 44% are boys; 45% are Romanian, 35% Roma, 20% Hungarian; 66% come from rural areas and 34% from urban areas; 69% have good living conditions and 31% have poor living conditions; 89% had associated diseases and 61% had previous diseases; 62% were fed in the first 6 months naturally, 33% with powdered milk and 5% with cow milk; 67% were fully vaccinated, 16% incompletely vaccinated and 17% not vaccinated; 54% were correctly diversified, 32% incorrectly diversified and the remaining 14% not diversified.

Conclusions: Statistical analysis showed that associations between living conditions, ethnicity, number of children in the family, vaccination, diversification, birth, nutrition in the first 6 months and previous diseases have a significant impact on the occurrence of malnutrition in paediatric patients.

Keywords: Malnutrition, Pediatric, Associated factors, Nutrition

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VENTILATOR-ASSOCIATED PNEUMONIA

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Background: Mechanical ventilation is a life-saving technique, a “necessary evil”, which despite efforts to adapt it to physiological breathing, can cause adverse effects. The physical, cognitive, and mental health of long-term intubated patients can suffer. After 48-72 hours of initiating mechanical ventilation, there is a risk of developing ventilator-associated pneumonia (VAP).

Objective: The aim of the study is to determine the incidence of iatrogenic pneumonia in patients undergoing mechanical ventilation. Another objective is to analyze associated risk factors for better prevention and management.

Material and methods: This study is a descriptive retrospective one, including 122 patients diagnosed with pneumonia following prolonged intubation in the ICU of SCJM between April 1, 2021, and April 1, 2023. Demographic data (age, gender, origin), history of SARS-CoV-2 infection, Carmeli score, comorbidities, duration of hospitalization, invasive devices used, and laboratory data (leukocytes, platelets, fibrinogen, PCR, procalcitonin, LDH, albumin, creatinine, CK-MB) were analyzed. Bacteriological analysis and antibiotic treatment administered to hospitalized patients were also included in the study.

Results: COVID-19 infection occurred mainly in patients from the Infectious Diseases department (23 cases) ($p=0.007$). The maximum value (3 points) of the Carmeli score was reached by 52.5% of patients, with a subsequent increase in the death rate ($p=0.007$) and ventilation period ($p=0.038$), while lower values (1, 2 points) correlated with antifungal and oxazolidinone antibiotic therapy ($p=0.008$). Bacteriological examinations predominantly revealed: Acinetobacter baumannii (6.28%), Pseudomonas aeruginosa (4.10%), and Staphylococcus aureus (2.19%). The proportion of patients hospitalized for a longer period was higher among those treated with carbapenems (36.89%), third-generation cephalosporins (35.25%), fluoroquinolones (19.67%), and polymyxins (14.75%) ($p<0.05$). A significant correlation was also identified between invasive ventilation and the development of VAP ($p=0.021$). 65.6% of patients diagnosed with VAP died ($p=0.033$).

Conclusions: Prolonged invasive mechanical ventilation increases the risk of lung damage, which carries a negative prognosis. These results support the importance of early clinical suspicion and limiting antibiotic consumption.

Keywords: Pneumonia, Mechanical Ventilation, VAP, COVID-19

CLINICAL, PARACLINICAL AND EVOLUTIONARY TRENDS OF ACUTE LARYNGITIS IN CHILDREN

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Background: Infections affecting the upper respiratory tract stand out as the prevailing acute infectious during childhood. Acute laryngitis, a pressing pediatric concern, manifests acutely, marked by a barking cough, stridor, dysphonia, and respiratory distress stemming from obstruction of the upper airway.

Objective: The aim of this study is to reveal the most common clinical features of acute laryngitis in children, the laboratory findings and treatment.

Material and methods: We performed an observational, retrospective study on children with acute laryngitis admitted to the Pediatrics Clinic of the Emergency Clinical County Hospital Târgu Mureș, from October 2021 to October 2023. The data was processed using Microsoft Excel 365, GraphPad and EpiInfo 7.2.

Results: Among the total of 121 pediatric cases of acute laryngitis analyzed, 77 cases were boys, representing 64% of the sample, with a p-value of less than 0.0001, indicating statistical significance. Clinically, the predominant symptom observed was a barking cough, present in 86.78% of cases, followed by fever in 73.55% of cases, and dysphonia in 56.20% of cases. Furthermore, a statistically significant increase in the levels of leukocytes, neutrophils, and lymphocytes was observed in correlation with some of the clinical manifestations of acute laryngitis. Nebulized epinephrine was administered to 91.74% of the patients enrolled in this study, while 83.47% received antipyretics, and 80.99% were prescribed corticosteroids.

Conclusions: This study revealed that a predominant proportion of children diagnosed with acute laryngitis were male under the age of 1 year. Additionally, a significant number of patients presented in their medical history evidence of other respiratory tract infections. Notably, the primary symptom observed was a barking cough, and the prognosis for pediatric patients was generally favorable.

Keywords: acute laryngitis, pediatric, barking cough, respiratory distress

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PEDIATRIC ABDOMINAL PUZZLES: COMMON CAUSES OF ABDOMINAL PAIN IN CHILDREN AND ADOLESCENTS

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Background: Abdominal pain is a commonly encountered issue in children and adolescents, often posing a diagnostic challenge due to the diverse range of potential underlying causes. Given its high prevalence, understanding these causes is essential for prompt diagnosis and appropriate management.

Objective: The purpose of this study is to identify the primary etiologies of abdominal pain in the pediatric population, while stratifying them by age groups and the affected organ system. Additionally, the study aims to discern critical warning signs that may endanger the child's well-being.

Material and methods: In this descriptive retrospective study, the observation records of 117 children admitted to the County Emergency Clinical Hospital of Târgu Mureș, on the pediatric ward, complaining of abdominal pain were evaluated. Demographic data, medical history, laboratory and paraclinical test results were collected and processed.

Results: We categorized the participants into five age groups: newborns, <2 years, 2-5 years, 5-14 years, and 14-18 years. Among these, the 5-14 age group exhibited the highest prevalence of abdominal pain (47.01%, n=55). Females constituted the majority in our study population, including 61.54% (n=72) of the participants. Gastrointestinal etiologies emerged as the predominant cause of abdominal pain (71.79%, n=84), with gastritis being the most prevalent gastrointestinal condition observed (31%, n=26), followed by gastroenteritis (13%, n=11) and constipation (10%, n=8). Other etiologies for the pain that were observed were, in order of frequency: hepatobiliary and pancreatic (11.11%, n=13), genitourinary (5.98%, n=7), hematological, respiratory, and toxic causes.

Conclusions: The study's findings underscored a notable incidence of abdominal pain in the 5-14 age bracket, primarily attributed to gastrointestinal disorders, with gastritis being particularly prominent. Additionally, the study revealed a predominance of female participants. Noteworthy was the presence of gastroenteritis and constipation as significant contributors to abdominal discomfort in pediatric patients. These insights emphasize the importance of thorough evaluation and management of abdominal pain in this demographic.

Keywords: abdominal pain, children, causes, pediatrics

THE IMPACT OF EXTENDED SCREEN TIME ON THE COGNITIVE AND BEHAVIOURAL DEVELOPMENT OF CHILDREN

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Background: With the advent of the internet and digitalization, a new challenge has emerged: the increasing amount of screen time in the early stages of life. This can be a significant problem that can have numerous adverse effects on children's normal development.

Objective: This study aims to investigate the amount of screen time and digital exposure in children and to observe the relationship between screen time and behavioural changes.

Material and methods: The study involved 308 children from different age groups. The data was collected through an online survey using Google Forms, which the parents had to complete for their children. The survey consisted of 30 questions aimed at identifying data related to demographics, exposure to screens and effects of the exposure. The data was then analysed using Microsoft Office Excel 2021 and SPSS applying the Pearson-R.

Results: Most of the children, 251 out of 308 (81.5%), were from urban areas, while 57 (18.5%) were from rural areas. Mothers tend to be better educated than fathers. Specifically, 226 mothers (73.3%) had completed higher education (college, master's degree, or doctorate), whereas only 176 fathers (57%) had done so. Only 35.4% (109) of parents used parental control software on their children's devices. Additionally, 64.3% (198) tended to copy the behaviour seen in the digital environment. Most parents (73.7%) want to reduce the amount of screen time their children consume. Statistically significant correlations were found between native environment (urban or rural) and the amount of daily screen-time (r=0,172; p=0,002).

Conclusions: Children from rural areas were more prone to a increased screen exposure. The issue of excessive screen time for children is a concern that many parents are well aware of.

Keywords: screen-time, children, development.

"DIABETIC KETOACIDOSIS IN CHILDREN, AN EMERGENCY IN PEDIATRICS"

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Background: Diabetic ketoacidosis (DKA) represents a pediatric emergency associated with type 1 diabetes mellitus in children. Characterized by severe hyperglycemia, ketonemia, and metabolic acidosis, it requires prompt medical intervention to reduce the risk of severe complications and death among children with diabetes mellitus.

Objective: Thie aim of this study is to investigate crucial aspects of DKA, including frequency, demographic and clinical characteristics, associated risk factors, and treatment protocols effectiveness.

Material and methods: The retrospective study analyzed pediatric DKA cases from Pediatric Department I of Târgu Mureș County Emergency Clinical Hospital, between April 8, 2019, and September 23, 2022. Data included patients aged from 0-18 years diagnosed with type 1 diabetes and DKA. Exclusion criteria were other diabetes forms, age >18, incomplete investigations. Two groups were studied: inaugural and recurrent diabetic ketoacidosis.

Results: Mann-Whitney U test showed a significant difference in age distribution ($p = 0.006$). Polyuria and polydipsia were associated with inaugural DKA ($p = 0.001$), while nausea and vomiting were more common in recurrent DKA ($p = 0.001$). Higher HbA1c levels were found in inaugural DKA ($p = 0.02$), and lower C-peptide levels were observed in younger children ($p = 0.021$). Main causes of recurrent DKA were infections (52.4%), insulin treatment neglect (94.12%), and non-compliance dietery.(94.12%).

Conclusions: The incidence of inaugural DKA is higher in males and in the age group of 6-11 years, while recurrent DKA is more common in females and in the 12-18 age group. Recurrent cases are often caused by infections, insulin treatment neglect, and non-compliance dietery. The predominant symptoms include polyuria, polydipsia, and weight loss in inaugural DKA, and nausea and vomiting in recurrent DKA. Higher HbA1c levels are found in inaugural DKA, while lower levels of peptide C are encountered in younger patients.

Keywords: pediatrics, metabolic ketoacidosis, type 1 diabetes

NONINVASIVE MARKERS FOR NONALCOHOLIC FATTY LIVER DISEASE IN CHRONIC KIDNEY DISEASE

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Background: Chronic kidney disease is globally recognized as a significant health problem due to its pandemic dimensions and high mortality rate. Nonalcoholic fatty liver disease (NAFLD) is the primary chronic liver condition, with a proposed connection to chronic kidney disease due to common pathophysiological mechanisms.

Objective: The aim of our study was to evaluate the relationship between the stage of chronic kidney disease and a series of noninvasive markers of hepatic fibrosis in patients with chronic kidney disease.

Material and methods: Our analysis was conducted retrospectively on patients admitted to the Nephrology Department of Mures County Clinical Hospital between January 1st and December 31st, 2022. Exclusion criteria included acknowledged alcohol consumption, positivity for hepatitis B or C viruses, autoimmune liver diseases, and lack of laboratory data for calculating noninvasive indices. The staging of chronic kidney disease was performed according to the KDIGO guidelines. The diagnosis of NAFLD was confirmed through ultrasound or computer tomography examination.Triglyceride-glucose index, NAFLD fibrosis score, BARD score, aspartate aminotransferase/alanine aminotransferase ratio, and hepatic steatosis index were calculated.

Results: We studied 158 patients (77 females and 81 males) with chronic kidney disease in various stages. 31 had imaging confirmation of hepatic steatosis. In the studied patients, we did not demonstrate a correlation between any of the studied noninvasive markers and the stage of chronic kidney disease ($p \geq 0.05$).

Conclusions: In the studied patients, there was no correlation between noninvasive markers for NAFLD and the stage of kidney disease. The study results should be interpreted with caution due to the small number of patients with hepatic steatosis.

Keywords: NONALCOHOLIC FATTY LIVER DISEASE, CHRONIC KIDNEY DISEASE

LACTATE DEHYDROGENASE`S ELEVATION AND ITS PROGNOSTIC VALUE IN ACUTE PANCREATITIS DEPENDING ON THE ENZYMATIC CRITERION OF DIAGNOSTIC

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Background: Acute pancreatitis is described as a sudden and reversible inflammatory lession of the pancreatic and peripancreatic tissues. Lactate dehydrogenase(LDH) is one of the five parameters at admission included in Ranson`s criteria.

Objective: The primary objective of this study is to compare LDH`s elevation at admission between the patients divided into 2 groups: with and without positive enzymatic criterion of diagnostic(serum pancreatic enzymes 3x>normal values). The secondary objective focusses on assessing the prognostic value of LDH depending on the presence of the enzymatic criterion.

Material and methods: Our retrospective, observational study included 340 patients diagnosed with acute pancreatitis between 2020-2022, at the Emergency Clinical Hospital Tîrgu Mureș. The data were analyzed in Microsoft Excel 2021 and GraphPad softwares, using Chi-square Test.

Results: This study found a highly statistically significant association between positive enzymatic criterion and the elevation of LDH($p<0,0001$), with a positive association between these elevated parameters(RR=1,814, 95% CI, 1,339 to 2,458). As well, in the group of patients with positive enzymatic criterion, the association between elevated LDH and the severe form of acute pancreatitis was highly statistically significant($p=0,0003$), resulting in a positive association between elevated LDH and severe acute pancreatitis(RR=2,883, 95% CI, 1,517 to 5,292). In contrast, in the group of patients with negative enzymatic criterion, there was no statistically significant association between elevated LDH and the occurence of severe acute pancreatitis($p=0,3602$).

Conclusions: The patients admitted with positive enzymatic criterion of diagnostic are more likely to associate elevated LDH at the onset of acute pancreatitis, compared to those with negative enzymatic criterion. Also, for these patients, elevated LDH marks a valuable prognostic factor, associating an almost three-fold increased risk of developing severe acute pancreatitis, compared to cases with normal lactate dehydrogenase`s results. For the patients admitted with negative enzymatic criterion of diagnostic, elevated LDH lost its prognostic value.

Keywords: acute pancreatitis, lactate dehydrogenase, enzymatic criterion, severity

RISK FACTOR ANALYSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE AND METABOLIC SYNDROME: OUR CENTER EXPERIENCE

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Background: Non-alcoholic fatty liver disease (NAFLD) and metabolic syndrome (MetS) are two closely related diseases, that consist mainly in excess fat accumulation in the liver. They share many risk factors and pathophysiological mechanisms. Metabolic risk factors include obesity, altered glucose metabolism, hypertension and dyslipidemia.

Objective: The aim of the study was to compare risk factors of metabolic syndrome and non- alcoholic fatty liver disease in our clinic.

Material and methods: A retrospective observational study was performed, including 60 patients diagnosed with NAFLD. The patients were admitted to the gastroenterology department of the “Mures County Clinical Hospital” in Targu Mures, Romania, from January 2023 to December 2023. Included were patients with a secured NAFLD diagnosis above the age of eighteen. The patients were grouped into two study groups: positive for NAFLD and positive for NAFLD and MetS. Excel and Jamovi were used for the statistical analysis.

Results: No statistically significant differences were found in the demographic comparison of the study groups (age, gender, environment). The presence of metabolic risk factors was significantly higher in the group including MetS diagnosis, compared to the NAFLD only group: overweight/obesity (92,9% vs 58,7%, p=0.01), diabetes mellitus (78,6% vs 4,3%) or impaired fasting glucose (21,4% vs 4,3%) with p<0.001 and hypertension (100% vs 58,7%, p<0.01). Patients with NAFLD and metabolic syndrome either had three (57,1%) or all four (42,9%) of the risk variables listed (p=<0.001). 8,7% of the NAFLD group showed three risk factors, 45,7% showed two, 34,8% showed one, and 10,9% showed no metabolic risk factor (p<0.001). No significant differences were found in the analysis of various laboratory values and when comparing pulmonary, renal, neurological, oncological comorbidities.

Conclusions: In addition to having an impact on the diagnosis of MetS, metabolic risk factors also typically influence, albeit to a lower degree, the development of NAFLD.

Keywords: Non-alcoholic fatty liver disease, Metabolic syndrome, Hepatic steatosis

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CASE REPORT: OVERVIEW OF METASTATIC TESTICULAR CHORIOCARCINOMA POST-ORCHIECTOMY

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Background: Testicular cancer, while rare, is the most prevalent cancer in men aged 18 to 39. Advanced diagnostics and treatments make it highly treatable. Germ cell tumours are the most common type, with choriocarcinoma being a rare and aggressive subtype that spreads through the bloodstream, bleeding from metastatic sites being a characteristic feature.

Objective: The aim is to showcase the medical management and outcomes of a patient treated for testicular cancer, encompassing the latest evidence regarding diagnosis, treatment, and progression using chest radiography, computed tomography, ultrasound, and blood tests.

Material and methods: We present a 37-year-old male patient with persistent symptoms including marked fatigue, asthenia, loss of appetite, diffuse abdominal pain, and low hemoglobin levels. He is diagnosed with stage cT2N1M1B testicular cancer, having undergone left inguinal orchiectomy one month earlier. Full blood count reveals a hemoglobin level of 6.8 g/dl. Thoracic radiography shows multiple large, well-circumscribed pulmonary metastases (Cannonball metastases), with dimensions up to 41 mm, indicating secondary lung neoplasms. Lymph node enlargement with necrosis is observed in all mediastinal compartments and pericardial fat, measuring up to 36 mm, suggestive of lymphangitic carcinomatosis. Chest-abdomen-pelvis CT with IV contrast reveals secondary pulmonary, hepatic, and lymphatic involvement, along with multiple retroperitoneal lymphadenopathies, grade IV/V left ureterohydronephrosis, and inferior vena cava thrombosis. Additionally, a large mass with central necrosis in the left paramedian lower abdominal region, measuring 126/181/151 mm, exerts mass effect on adjacent structures.

Results: The surgical consultation revealed peritoneal carcinomatosis. Blood tests displayed severe normocytic hypochromic secondary anemia. Based on the CT examination showing multiple hepatic and pulmonary metastases, the patient does not qualify for surgical treatment, the case being beyond surgical intervention.

Conclusions: Due to the advanced stage of cancer, multiple metastases and despite undergoing surgical treatment, the patient will be symptomatically treated and subsequently evaluated to determine the appropriate management.

Keywords: Choriocarcinoma, testicular cancer, carcinomatosis.

ASSESING SEVERITY OF IRRITABLE BOWEL SYNDROME AMONG MEDICAL STUDENTS

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Background: Irritable bowel syndrome's (IBS) incidence is increasing worldwide. Among medical students, this diagnosis could be even more frequent, given the high level of work and requirements at medical universities. IBS can seriously affect the quality of life and academic performance of pupils.

Objective: The present study focuses on identifying the prevalence and severity of IBS, including students from medical universities in Romania.

Material and methods: A cross- sectional study was conducted using a questionnaire consisted in simple and multiple- choice answers. Diagnosis of IBS was established using ROMA IV criteria.

Results: The study is still ongoing, until the present moment there are 75 participants, 83,27% aged between 23-27 years old, with a majority of female respondents (66,7%). Results showed a significant percentage of students experiencing abdominal pain (44%), most of them in the upper abdominal quadrant as well as changes in bowel movements (47,6%), distension and gas (80%), abdominal cramps (60,3%), constipation (38,2%), diarrhea (30,9%).

Conclusions: Stress, burnout and high academic requirements can be strongly correlated with the presence of IBS. Our study shows that medical students experience a high prevalence of IBS. The study will continue to explore how this altered bowel habbits affect the quality of the students lives. It is important for physicians to keep in mind IBS diagnosis when medical students present with digestive symptoms such as abdominal pain, cramps, bloating, constipation and diarrhea, and have an appropirate therapeutic approach.

Keywords: stress, IBS, medical students, digestive symptoms

CACHEXIA AS A RESULT OF ALCOHOLISM AND ITS SEVERE IMPACT ON HEPATIC AND PANCREATIC FUNCTION

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Background: Pancreatic insufficiency occurs when the pancreas fails to produce enough enzymes necessary for digestion, leading to malabsorption and nutritional deficiencies. Chronic hepatopathy encompasses a range of liver disorders that disrupt its function, potentially causing systemic and neurological complications.

Objective: The purpose of this study is to highlight the complex pathological impacts of chronic smoking and alcohol consumption, stressing the importance of detecting signs of pancreatic insufficiency and chronic hepatopathy.

Material and methods: We detail the case of a 70-year-old female patient with multiple comorbidities and hospitalizations. Through medical history, clinical examination, and paraclinical and laboratory tests, we traced the development of her diagnoses and their complications related to her lifestyle choices, specifically smoking and alcohol consumption.

Results: The patient's medical history revealed consistent alcohol consumption and smoking. She underwent a partial pancreatectomy with duodenectomy in 2012 after acute pancreatitis, which led to multiple pancreatic cysts and resulted in exocrine pancreatic insufficiency. Additional records from June 2022 indicated chronic cholestatic hepatopathy, previous cholecystectomy, and hemorrhoidal disease with rectal bleeding. Between late 2022 and early 2024, she showed neurological decline with cortical atrophy observed on CT scans. Diagnoses included dementia and early-stage Alzheimer's disease, without excluding the influence of portal encephalopathy on her neuropsychiatric condition. By 2024, symptoms of hepatic disease had progressed to cirrhosis-related hepatic insufficiency, portal hypertension, and encephalopathy due to systemic hyperammonemia. Severe hepatic dysfunction and exocrine pancreatic insufficiency contributed to peripheral edema, ascites, pleurisy due to hypoalbuminemia, various deficiencies, cachexia, and coagulation disorders. Distinguishing Alzheimer's disease signs from hepatic encephalopathy symptoms and titrating medication posed significant challenges.

Conclusions: Chronic alcohol consumption has led to severe hepatic and pancreatic dysfunction, both causing multiple deficiencies and specific clinical signs. This case underscores the critical need for comprehensive management of alcohol-related diseases.

Keywords: cachexia, alcohol consumption, hepatic cirrhosis, pancreatic insufficiency.

IMPAIRED QUALITY OF LIFE IN A COMPLICATED CASE OF ACROMEGALY DESPITE BIOCHEMICAL CONTROL: A CASE STUDY

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Background: Acromegaly is a rare progressive chronic disease characterized by hypersecretion of growth hormone (GH) and elevated levels of insulin-like growth factor 1 (IGF-1), primarily caused by a GH-secreting pituitary adenoma. Patients suffering from this disease frequently have an impaired Quality of Life (QoL) which may persist despite biochemical control on the IGF-1. The Acromegaly Quality of Life Questionnaire (AcroQoL) is a useful tool to asses QoL in these patients.

Objective: We aimed to present the QoL evolution in a complex case of aggressive acromegaly which required multiple interventions (2 surgeries, radiotherapy and multimodal pharmacological treatment) to achieve biochemical control.

Material and methods: We present a 33-year-old male patient with a history of active acromegaly with an aggressive GH-secreting pituitary macroadenoma operated twice, with significant tumor remnant that required gamma-knife radiotherapy. The patient is currently on combined treatment with Pegvisomant and Cabergoline maximum dose due to resistance to first generation somatostatin analogs. Biochemical control was achieved after a long history of poor control. We applied the AcroQoL questionnaire at two different times during the patients evolution.

Results: In the prior investigation, the patient exhibited a QoL score of 97,72p, with minimal physical compromise (93,75p), while other facets remained unaltered. He was partially biochemically controlled at that time. However, in the current examination, despite the achievement of biochemical control, his QoL score declined to 87,5p. Notably, physical well-being decreased to 87,5p, alongside a decrease in psychological and appearance- dimensions.

Conclusions: Through effective treatment and meticulous control of the disease after a long history of multiple therapies, this patient's quality of life remained altered and decreased in comparison to the previous evaluation, revealing the difficulties in successfully managing an aggressive case of GH producing pituitary macroadenoma.

Keywords: acromegaly, quality of life, pituitary

ACUTE MUSCLE TOXICITY FOLLOWING AN OLANZAPINE OVERDOSE: A CASE REPORT

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Background: Olanzapine is a frequently prescribed atypical antipsychotic drug and a common cause of voluntary intoxications. Acute muscle toxicity, also known as rhabdomyolysis, is a severe muscle injury resulting in muscle pain and necrosis, myoglobinuria and elevated serum creatin kinase levels.

Objective: The aim of this study is to raise awareness on rare medical findings, such as acute muscle toxicity associated with olanzapine overdose.

Material and methods: We present the case of a 31 year old female with prior history of depression who was admitted to the Emergency Department after being found lethargic, on her knees by her family, allegedly after ingesting 30 Olanzapine pills. Upon arrival, she was evaluated to GCS 8, her labs showed: CK=16.905(U/L), GFR=82,42(ml/min), GOT=215U/L) and after being evaluated, she was transferred to the ICU , where additional pathological discoveries were found: she had hyperchrome, highly concentrated urine and pressure injuries on both her knees and calves. Her labs displayed: CK=79.115(U/L), GFR=103,72(ml/min), GOT=1.156(U/L), for which she was given fluid therapy and a loop diuretic. The next day her labs elevated even further: CK=85.340(U/L), GOT= 2.066(U/L), and her left leg was edematous, thus a compartment syndrome suspicion was raised.

Results: Immediately, continuous renal replacement therapy was initiated and eventually fasciotomy was successfully avoided. The postprocedural evolution was favorable and 10 days later her labs were within normal limits.

Conclusions: Olanzapine overdose is in itself a rather difficult to manage intoxication and if associated with acute muscle toxicity, the treatment becomes even more challenging. In our case, continuous renal replacement therapy, although invasive and complex, was required for a proper outcome.

Keywords: olanzapine, acute intoxication, overdose, acute muscle toxicity, rhabdomyolysis

UNTANGLING THE NEXUS OF TRAUMA, SCHIZOPHRENIA, AND MEDICATION REFUSAL: A CASE ANALYSIS

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Background: Paranoid schizophrenia is characterized by prominent delusions and hallucinations, often with themes of persecution or grandiosity. Individuals with this subtype may have difficulty distinguishing between what is real and what is not, and they may exhibit unusual or bizarre behavior. Emotional trauma has been identified as a potential trigger for the onset of schizophrenia.

This case study explores the management of a psychiatric patient, whose patology has been precipitated by intense emotional traumas, who has refused to take medication, thus experiencing a relapse with positive symptoms.

Objective: The objectives for treating schizophrenia include: symptom stabilization, improvement of quality of life, treatment adherence, enhancement of cognitive functioning, reduction of the risk of violent or self-harming behavior and patient and family education.

Material and methods: The patient was hospitalized, and following a detailed psychiatric history and thorough objective examination, paranoid schizophrenia with a relapse featuring positive symptoms (delusions, disorganized thoughts and speech, hallucinations), restlessness, and motor agitation were diagnosed. An integrated approach is chosen, combining medication treatment with psychological counseling.

Since the patient initially resisted admission, Diazepam and Haloperidol (potent neuroleptic and antipsychotic) were administered intramuscularly. Subsequently, after stabilization and compliance, the baseline medication regimen consists of Olanzapine (antipsychotic) and Clonazepam (benzodiazepine).

Results: A profound improvement in both psychological and physical symptoms is noted, with the patient being calm and relaxed. The results are thus satisfactory, with the patient remaining under supervision.

Conclusions: Psychological traumas can lead to mental illnesses that can significantly impact our lives, which is why it's important to be gentle with our own minds and those of others.

Schizophrenic patients can exhibit unpredictable and chaotic behaviors, so an integrated and personalized approach to treating schizophrenia is crucial for supporting the long-term recovery of patients, particularly those who are non-compliant with treatment.

Keywords: Schizophrenia, Trauma, Medication, Improvement

ON THE ROAD TO RECOVERY: NAVIGATING THE CHALLENGES OF DEPRESSION

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Background: A 32-year-old patient with documented psychiatric history spanning several years, who has partially adhered to treatment, with multiple previous hospitalizations and a history of traumatic brain injury, presents with a referral letter from the general practitioner. The patient exhibits a psychopathological picture dominated by: depressive mood, low frustration tolerance, irritability, emotional lability, episodes of psychomotor restlessness, unpredictable behavior, substance use tendency (alcohol), depressive micromanifestations of incapacity, worthlessness, easy crying, and mixed insomnia. The patient is admitted to Psychiatry Clinic I for specialized investigation and treatment.

Objective: The primary objective of treatment is to alleviate symptoms and improve the individual's quality of life. Treatment aims to help the patient improve his mood, restore sleep and appetite, and reduce the risk of future depressive episodes.

Material and methods: The most effective approach to treating depression involves a combination of psychotherapy, medication (Venlafaxine, Levomepromazine, Sodium Valproate, Zopiclone, Silymarin, Disulfiram), and social support.

Results: The patient is calm, cooperative, with intact self and allopsychic awareness, experiencing restful sleep induced by medication, exhibiting coherent ideo-verbal flow, and maintaining stable hemodynamic and respiratory status, with preserved appetite. The patient will continue medication treatment and is scheduled for discharge.

Conclusions: Although depression is a condition that is relatively easy to treat, the success of treatment and the patient's progress depend significantly on the individual. While the accident has impacted the patient's lifestyle and daily activities, no connection has been established between the trauma experienced and depression. The patient shows signs of improvement as long as they adhere to their home-based treatment, with symptoms recurring in cases of inconsistent adherence to the prescribed protocol.

Keywords: depression, insomnia, relapse, TBI

MASSIVE HEPATIC HYDROTHORAX AND HEPATO-PULMONARY SYNDROME IN A PATIENT WITH DECOMPENSATED ALCOHOLIC HEPATIC CIRRHOSIS: CLINICAL APPROACH

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Background: Hepatic hydrothorax (HH) is traditionally defined as a transudate presenting in 5-10% of patients with liver cirrhosis without cardiopulmonary disease, independent of pre-existing pulmonary diseases. HH is classically located in the right pleural cavity. It carries higher morbidity and mortality compared to ascites, with a median survival of 8-12 months. Hepato-pulmonary syndrome (HPS) occurs in 5-32% of end-stage liver disease patients, leading to poor arterial oxygenation due to intrapulmonary vascular dilation in pulmonary arteriovenous shunts, advanced liver disease or portal hypertension.

Objective: We aim to emphasize the importance of accurate diagnosis and patient care for HH and HPS.

Material and methods: Herein, we present the case of a 69-year-old male with massive HH and HPS following decompensated hepatic cirrhosis (DHC). The patient, experiencing dyspnea, was admitted to the Internal Medicine Department, Reghin Municipal Hospital, Romania. Clinical presentation included muco-integumentary icterus, scleral icterus, ascites, anasarca and Hippocratic fingers. Previously, he received diagnoses of the following conditions: portal hypertension, gastroesophageal reflux disease, cerebral atherosclerosis, DHC, hepatic encephalopathy (grade II) and umbilical enterocutaneous fistula.

Results: Thoracic imaging unveiled substantial left pleural effusion, complete pulmonary collapse and atelectasis, prompting concerns of pulmonary empyema and malignancy. Ultrasound-guided thoracocentesis yielded drainage volumes of 300mL and 1100mL respectively, with negative bacterial culture and positive Rivalta test results. The patient's oxygen saturation is 90% on ambient air. Significant lab findings include leukopenia, transaminitis, hyperbilirubinemia, hemocytopenia, anaemia, coagulopathy, hypoproteinemia, and hypofibrinogenemia. C-reactive protein levels were negative. Current medications include ornithine, aspartate, essential phospholipid supplements, albumin, furosemide, spironolactone, propranolol, rifaximin, lactulose, and iron sucrose. Diuresis exceeds 3000mL/day, and strict alcohol abstinence and a low-sodium diet was strongly advised.

Conclusions: The exact pathophysiological mechanism of HH remains unclear. However, it is crucial to exclude extrahepatic cardiopulmonary conditions due to differing therapeutic options. Pulmonary complication such as HH and HPS may necessitate liver transplantation.

Keywords: Hepatic Hydrothorax, Hepato-Pulmonary Syndrome

SPONTANEOUS FETAL DEMISE AND ACUTE PLACENTAL ABRUPTION: A CASE REPORT

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Background: Placental abruption represents the premature separation of the placenta from its uterine attachment before the delivery of the fetus. It is a pregnancy related complication occurring in 0.6-1.2% of cases.

Objective: The aim of the present paper was to report the case of an acute placental abruption in a spontaneous antepartum demise.

Material and methods: We report the case of a 34 year old patient in her 38th week of pregnancy who presented to the Emergency Department accusing the absence of fetal movement. No significant risk factors, namely preeclampsia, smoking, drug use or vaginal hemorrhage were encountered. Emergency cesarean section was performed. The female stillborn with umbilical cord entangled around the neck and the placenta were sent to Pathology Department

Results: The autopsy report revealed primary pulmonary atelectasis and multiple autolyzed organs (liver, spleen and kidneys). The histopathologic examination of the placenta showed visible signs of passive fetal vascular involution with thrombosis due to acute placental abruption. Meconium staining of the fetal membranes indicated previously fetal distress

Conclusions: Placental abruption continues to be an important cause of perinatal mortality and morbidity. The outcome is heavily influenced by the severity and the timing, whether acute or chronic, of the placental separation. Despite the accuracy of medical technology in preventing stillbirth, it still represents a clinical challenge.

Keywords: stillbirth, placental abruption, pregnancy, autopsy

LESS FREQUENT COMPLICATIONS THAT MAY ARISE FOLLOWING CHEMOTHERAPY IN A PEDIATRIC PATIENT WITH ACUTE LYMPHOBLASTIC LEUKEMIA - CASE REPORT

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Background: Acute lymphoblastic leukemia (ALL) is a common malignant pathology, accounting for approximately 25% of pediatric cancers. The prognosis is favorable, with over 90% of cases being curable with treatment.

Objective: The purpose of this report is to showcase the less common complications of chemotherapy treatment in a pediatric patient with ALL.

Material and methods: A 12-year-old patient is admitted to the Pediatric Clinic, guided by the Emergency Medical Service for additional investigations, presenting with thigh pain and fever.Laboratory analyses reveal pancytopenia, with 41% lymphoblasts observed on peripheral blood smear, and bone marrow examination presenting the appearance of acute lymphoblastic leukemia with hematopoietic dislocation, pre-B cell immunophenotypic profile, and aberrant expression of myeloid marker (CD 13). Based on these investigations, a diagnosis of pre-B acute lymphoblastic leukemia with myeloid markers is established, and treatment is initiated according to the ALL IC-BFM 2009 Protocol. Approximately three and a half months after starting treatment, the patient's condition deteriorates, complaining of pain in the right abdominal flank accompanied by nausea and repeated vomiting unresponsive to analgesic, antiemetic, and antispasmodic treatment. Abdominal ultrasound and surgical consultation are performed, resulting in a diagnosis of right renal colic, right renal lithiasis, secondary grade II hydronephrosis of the right kidney, and acute cystitis.

Results: Two days after consultation and treatment, the patient passes two calculi approximately 3-4 mm in size, with a high content of uric acid. Abdominal colic subsides, and microscopic hematuria appears. After four months of chemotherapy treatment, a bone marrow examination is repeated, revealing a normocellular, variably cellular bone marrow with all marrow series present.

Conclusions: ALL is a frequently encountered malignant pathology in children, which, with appropriate treatment, carries a good prognosis but can be associated with complications.

Keywords: ALL, bone marrow examination, renal lithiasis

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