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26th-28th of May 2023
Targu Mures, Romania

BOOK OF ABSTRACTS

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THE SOCIETY FOR INNOVATION, DEVELOPMENT AND MEDICAL EDUCATION – SIDEMED
GEORGE EMIL PALADE UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE, AND TECHNOLOGY OF TARGU MURES

26th-28th of May 2023, Târgu Mureș, Romania

THE PAST AND FUTURE OF PAEDIATRIC AND NON-PAEDIATRIC CARDIOVASCULAR DIAGNOSTIC METHODS

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Background: In the past, most times a visit to the cardiologist meant a treatment for a pathology of the heart and blood vessels detected due to some symptoms. In recent years, the focus has changed, from cardiovascular treatment to the prevention of pathologies, especially on risk factors, but in the current period, the focus is on prophylaxis based on screening and early detection of future diseases of the cardiovascular system.

Objective: Through our project, we want to summarize the progress of recent years and observe the past and future of diagnostic methods in paediatric and non-paediatric cardiology. This summary presents from the scientific societies point of view, which are the trends of the next years from the medical, technological but especially financial perspective.

Material and methods: We searched for results and studies in databases such as “Web of Science”, “Google Scholar”, “PubMed” using keywords such as “Cardiovascular Screening”, “Non-Invasive procedures” and “Cardiodynamicgram”. We extracted the most valuable information, and integrated it to be able to see the past, present and future, from a financial and medical point of view, of cardiovascular diagnostic methods.

Results: The latest studies show the importance of diagnostic methods both from a medical and financial point of view, but above all the attention is directed towards the patient’s quality of life because a patient with a low quality of life cannot yield and cannot be productive in modern society. For these reasons, both paediatric and non-paediatric patients are subject in some states to screening programs to detect patients with increased cardiovascular risk, and in developed states screening methods cover even neonatal patients.

Conclusions: Some medical technologies arrived late in poor or developing countries. In some states and in certain communities, an echocardiograph is still considered a new generation diagnostic tool, while it should be a basic assessment, from which other new generation investigations such as Cardiodynamicgram are started.

Keywords: non-invasive procedures, cardiodynamicgram, screening

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THE FIGHT BETWEEN MICE AND HORSES FOR THE MOST SUITABLE ATRIAL FIBRILLATION MODEL

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Background: Atrial fibrillation (AF) is one of the most frequent arrhythmias in humans, with an increased incidence of 33% in the last 20 years. The available treatment consists of antiarrhythmic medication and catheter ablation, but the exact pathological background of AF is not well known. Studies based on animal models can enhance understanding of the mechanisms leading to AF and the development of more efficient treatment.

Objective: The presentation attempts to examine the main ways of inducing AF in animal models and discuss the particularity of each species.

Material and methods: To understand the reproducibility in humans of AF experiments, we studied the medical literature and analyzed the most suitable animal model and their particularity for each proposed AF design.

Results: The primary arrhythmogenic mechanisms involved in AF pathogenesis are the ectopic electrical activity of the pulmonary vein and reentry due to atrial fibrosis and dilation. The most common AF designs imply drug induction (acetylcholine, streptozocin, beta-adrenergic agents, alcohol, pro-arrhythmic medication), inflammatory pericarditis induction, invasive intracardiac or non-invasive transesophageal stimulation, and atrial/ventricular ischemia.

Depending on the animal’s weight, AF’s duration increased, from seconds to minutes in small animals, such as mice, rats, guinea pigs, or rabbits, up to 2 weeks in medium animals like dogs, sheep, horses, and even several months in pigs. Although small animals cannot sustain AF and need permanent pacing triggering, they are more versatile for testing different substances’ effects. However, the long-term outcomes can be better analyzed on bigger models, such as horses that maintain arrhythmia longer and thereby mimic human physiopathology better.

Conclusions: Experimental AF can be performed on different animal models by various mechanisms, each more or less suitable, depending on the object. Researchers need to have a well-defined purpose for the study for a statistically significant experiment.

Keywords: AF, animal model, basic research, therapy, sustainability

THE LIPID-LOWERING PUZZLE: SOLVING IN-STENT NEOATHEROSCLEROSIS MYSTERY

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Background: With an incidence of 11.4%, neoatherosclerosis is defined as a morphopathological neointimal infiltration of stented arteries with macrophage foam cells. This occurs mostly after percutaneous cardiac intervention (PCI). Alongside symptomatic control achieved by PCI, lipid biomarkers and lipid-lowering therapy (LLT) assessment are essential for preventing and reducing the coronary artery disease burden. The latter tends to mainly reduce low-density lipoprotein cholesterol (LDLc) and major cardiac events.

Objective: The aim of this review is to identify a possible influence of LLT upon the risk of in-stent neoatherosclerosis.

Material and methods: Using Pubmed, Scopus, Web of Science, Clinicaltrials.gov, a search was formed regarding the terms: “in-stent neoatherosclerosis” , “in-stent restenosis”, “stent failure”, “target lesion revascularization”. The studies were free full text retrospective cohort studies, clinical trials, double blinded clinical trials, pilots and reanalyses from the last 5 years. Studies that did not mention the type of LLT used and the evaluation of neoatherosclerotic risk post-treatment were excluded. PRISMA guidelines have been followed, and bias risk was not assessed.

Results: The LLTs studied were statins, eicosapentaenoic acid, alirocumab and evolocumab. Studies explained the insignificant role of statin therapy in standard doses in terms of avoiding neoatherosclerotic risk, with certain studies even demonstrating a higher risk of neoatherosclerosis.

Other studies proved the role of statins and PCSK-9 inhibitors in preventing neoatherosclerosis, proving the correlation between LDLc levels reduction and patient’s atherosclerotic favorable prognosis.

Conclusions: Statins, as a LLT, are not proven to avoid the risk of neoatherosclerosis in standard dose and in monotherapy. More research is needed to assess the role of high intensity statin treatment and other LLTs, due to their potential of preventing neoatherosclerosis.

Keywords: Lipid-lowering therapy, In-stent Neoatherosclerosis, In-stent restenosis

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A HIGHER HEART RATE PRESET - IMPACT ON FUNCTIONAL CAPACITY AND QUALITY OF LIFE OF PATIENTS WITH HFPEF AND CARDIAC PACING THERAPY

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Background: Heart failure with preserved ejection fraction (HFpEF) patients lack chronotropic response. Permanent pacemakers improve chronotropic reserve and volume management.

Objective: The aim of this review is to assess the functional capacity and quality of life of HFpEF patients with cardiac pacing therapy at a higher preset heart rate.

Material and methods: A search was performed using PubMed, ScienceDirect, selecting studies from 2013 to 2023. Inclusion criteria were HFpEF patients under optimal pharmacological therapy, studies mentioning heart rate. Excluded were systematic reviews, less than 6 patients studied or less than 4 weeks follow-up. Functional status was assessed using 6-minutes walking distance test (6MWD), pacemaker-detected activity levels, N-terminal pro-brain natriuretic peptide (NT-proBNP) and quality of life by using Minnesota Living with Heart Failure Questionnaire (MLHFQ). Bias risk was not assessed and PRISMA guidelines were followed.

Results: Ten studies conformed to selection criteria. Wahlberg et al. collected data from 20 patients showing improvement at 4 weeks follow-up in MLHFQ score during 80 bpm heart rate setting and worsening at baseline, 6MWD showed a higher average distance covered at 80 bpm. Infeld et al. supervised 50 patients with personalized accelerated pacing (75 bpm) and 57 with usual heart rate set (60 bpm). At 1 year follow-up, MLHFQ score worsened at 60 bpm and improved at 75 bpm, daily activity was increased at 75 bpm and decreased at 60 bpm. At 1 month follow-up, NT-proBNP level decreased at 75 bpm and increased at 60 bpm. All data is statistically significant.

Conclusions: Lower heart rate is beneficial for patients with cardiovascular disease, it appears it might not be the case for HFpEF patients with cardiac pacing therapy, therefore further studies should be conducted in order to better assess the outcome of these patients.

Keywords: HFpEF, left ventricular diastolic dysfunction, cardiac pacing, heart rate, pacemaker

ANALYSIS OF THE IMPLANTABLE CARDIAC DEFIBRILLATOR PROGRAMMING STRATEGIES USED NATIONWIDE FOR REDUCING THE RISK OF INAPPROPRIATE THERAPIES.

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Background: The cardiac implantable defibrillator (ICD) is a groundbreaking therapy for preventing sudden cardiac death in high-risk patients. Therapies that are not delivered by the ICD for ventricular tachycardia and ventricular fibrillation are often associated with incorrect interpretation of detection electrode signals or rapid supraventricular rhythms.

Objective: This study aims to identify and address controversial programming topics, with the goal of reducing the occurrence of inappropriate therapies through a strategic programming approach.

Material and methods: This is a prospective study, based on a 20-question questionnaire, distributed to 30 cardiologists from different cardiology centers in the country, obtaining 26 responses. The physicians were selected from operators included in the National Registry of Implantable Devices. Data was collected voluntarily through digital questionnaire completion.

Results: The questionnaire results show that 42% of physicians perform between 20 and 50 ICD implants annually, while 35% perform between 50 and 100. A comparative analysis was conducted between these two groups. In primary prevention, the frequency of inappropriate therapies is lower in the group with <50 ICD implants per year (31% reporting a frequency between 5-10% vs 38% reporting a frequency between 10-25% in the second group). In secondary prevention, the frequency of inappropriate therapies is similar between the two groups. The most frequent cause of inappropriate therapies is rapid supraventricular rhythm in the group with 50 implants, both rapid supraventricular rhythm (85%) and lead fractures (15%) are reported(p=0.013). There are significant differences in detection intervals and programming of antitachycardia pacing between the two groups.

Conclusions: When higher implant volumes are performed, inappropriate therapy occurs with higher frequency choosing more aggressive settings for ventricular tachycardia detection and therapy. Also, the most common cause for inappropriate therapy is rapid supraventricular rhythm.

Keywords: ICD, programming, minimize, inappropriate, shocks

HEART FAILURE IN CHILDREN WITH CONGENITAL HEART DISEASE AND DOWN SYNDROME

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Background: Congenital heart disease is one of the major causes for pediatric heart failure, a complex syndrome that is caused by multiple structural and functional abnormalities of the heart.

Objective: The purpose of this study is to present heart failure and congenital heart diseases in children with Down Syndrome.

Material and methods: We conducted a retrospective study, in which we included all the patients with Down Syndrome, aged between 0 and 18 years old admitted to the Pediatrics department of Mures County Hospital Tirgu Mures between 2017 and 2022.

Results: Of the 19 subjects, 15 patients (79%) presented congenital heart disease. 67% had multiple cardiac defects. Atrial septal defect was the most frequent (ASD 40,8%), followed by atrioventricular septal defect (AVSD 14,8%) and ventricular septal defect (VSD 11,1%). Heart failure was found in 5 patients. Heart failure NYHA III was found in 2 cases (40%), NYHA II was found in one patient (20%), NYHA IV was found in one patient (20%) and one patient (20%) had unclassified heart failure. Most cases of heart failure were associated with AVSD (60%). The most severe case of heart failure was found in a patient with AVSD. Heart Failure NYHA II was found in a surgically corrected VSD. NYHA III was associated with ASD ostium primum and ASVD Rastelli type A.

Conclusions: Heart failure in patients with CHD involves an interaction of factors, such as structural defects of the heart and the consequences of hemodynamic changes-both compensatory and pathological. It can occur even in children with surgically repaired lesions.

Keywords: heart failure, CHD, Down Syndrome

CLASSIC EHLERS-DANLOS SYNDROME ASSOCIATED WITH MULTIPLE ARTERIOVENOUS CHANGES – A DIAGNOSTIC CHALLENGE

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Background: Ehlers-Danlos syndrome (EDS) is a group of inherited disorders that affect the synthesis of connective tissue. There is a variant of EDS, distinct from vascular EDS, associated with multifocal fibromuscular dysplasia (FMD), which has clinical features in addition to skin and joint abnormalities.

Objective: We present the case of a 54-year-old female patient with a history of an operated left internal carotid artery aneurysm and an operated genital prolapse, who presents with vertigo and intermittent headache.

Material and methods: Clinical examination reveals the joints' hyperlaxity, with thin skin and atrophic scarring with a "cigarette paper" appearance. Ultrasound of the carotid arteries reveals a dilated right common carotid artery at the origin, the right internal jugular vein (RIJV) dilated in the proximal 1/3 of the cervical region, with an arterialized appearance, suggestive of an arteriovenous fistula. Cervical angio-CT reveals marked tortuosity of the right internal carotid artery, asymmetry of the transverse sinuses and internal jugular veins, with the predominance of the right ones. The existence of an arteriovenous fistula between a horizontal branch of the right deep cervical artery and the left deep cervical vein is confirmed, but without explaining the dilatation of the RIJV. Suspicion of vascular-type EDS is raised, recommending genetic testing, following which a variant in heterozygous status is detected in the COL5A1 gene, associated with classic EDS and FMD, both with autosomal dominant transmission and phenotypic overlap.

Results: The diagnosis of classic EDS linked with FMD is established based on clinical symptoms, imaging examinations, and genetic testing.

Conclusions: Outside of the classic EDS model, COL5A1 gene variants are a potential cause of systemic vascular disease, manifested by arterial dissections, tortuosity, and dilatation of blood vessels, phenotypically mimicking vascular-type EDS, but in which the gene responsible for the clinical manifestations is COL3A1.

Keywords: Classic Ehlers-Danlos syndrome, COL5A1

ROLE OF LIFESTYLE OPTIMIZATION FOR OBESE PATIENT WITH TYPE 2 DIABETES IN PREVENTING CARDIOVASCULAR COMPLICATIONS

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Background: Type 2 diabetes and obesity are two conditions that can lead to serious complications of the cardiovascular system. Obese patients with type 2 diabetes are at increased risk of cardiovascular disease, such as coronary heart disease, stroke and heart failure. To prevent these complications, the key is to adopt a healthy lifestyle that includes a balanced diet, regular exercise and weight control.

Objective: We aimed to highlight the importance of lifestyle optimization in reducing the risk of cardiovascular complications by presenting the case of a 45-year-old obese, dyslipidemic, diabetic woman.

Material and methods: The physical examination presented a 45-year-old female patient, BP= 160/90 mmHg and HR =96 bpm. The anthropometric parameters were: height =1.56m, weight =87 kg, waist circumference =101 cm and hip circumference =99 cm. Other investigations revealed the following: blood sugar=163 mg/dL, Hb1Ac =8.29%, TGO = 39 U/L, TGP = 36 U/L, Total cholesterol =232 mg/dL, triglycerides =425 mg/dL, HDL =32 mg/dL. In order to reduce the risk of cardiovascular complications, lifestyle optimization consisted of medical nutritional therapy, physical activity and sleep programs.

Results: On 3-months follow-up, the patient presented the weight =72.50 kg, waist circumference =92 cm, hip circumference =95 cm, blood sugar =110 mg/dL, Hb1Ac =6.13%, TGO = 34 U/L, TGP = 32 U/L, Total cholesterol =190 mg/dL, triglycerides =185 mg/dL, HDL =55 mg/dL, BP = 125/75 mmHg and HR =78 bpm.

Conclusions: In our case, the patient underwent lifestyle modifications, which resulted in significant improvements in weight, blood sugar levels, lipid profile, and blood pressure. Furthermore, this case emphasizes the importance of adopting a healthy lifestyle as a preventive measure against cardiovascular complications in obese patients with type 2 diabetes. Our conclusions require farther researches on this area.

Keywords: cardiovascular complications, obesity, optimized lifestyle, type 2 diabetes

OPTICAL COHERENCE TOMOGRAPHY: AN ESSENTIAL TOOL IN THE DIAGNOSIS AND TREATMENT OF CORONARY ARTERY DISEASE?

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Background: Optical coerence tomography is a non-invasive technology that uses light waves to generate high-resolution images of the cardiovascular system, allowing clinicians to visualize the microstucture of blood vessels and diagnose conditions such as coronary artery disease and atherosclerosis.

Objective: We aim to highlight the importance of OCT in correct diagnosis of coronary diseases as they represent a major cause of morbidity and mortality and the ability to visualize and quantify their severity is critical for guiding treatment decisions.

Material and methods: We present the case of a patient known with diabetes mellitus, obesity, and smoking history, presented with a recurent episode of chest pain radiating to the jaw and shoulders associated with diaphoresis, which started approximately 5 hours prior to presentation. Electrocardiography showed sinus rhythm and ST segment elevation in anterior leads. Lab results showed a high-sensitive cardiac Troponin I of 1405 ng/l. A diagnosis of acute anterior myocardial infarction with ST segment elevation was made. Coronary angiography revealed a moderated stenosis in left anterior descending artery (LAD), minimal lesions in circumflex artery and right coronary artery free of stenoses. An optical coherence tomography (OCT) study was performed in LAD that showed an eroded plaque with a thin fibrous cap. It was decided to perform coronary angioplasty and implant a drug eluting stent in the LAD at this level, without intraprocedural complications.

Results: OCT allows clinicians to identify and quantify the thickness of plaques, assess the extent of lipid accumulation, and detect the presence of vulnerable plaques that are at high risk of rupture and subsequent thrombosis.

Conclusions: OCT is a valuable imaging for its real-time imaging capabilities that allow clinicians to visualize the inner details of coronary vessels, providing critical information for the diagnosis and treatment of cardiovascular disease.

Keywords: Optical coherence tomography, Acute myocardial infarction, Coronary artery disease

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AN UNCOMMON TYPE OF ANGINA

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Background: Epigastralgia refers to pain or discomfort in the area of the upper abdomen. It often occurs alongside other common digestive symptoms, such as heartburn, bloating and gas. It can have many causes, including GERD (gastrointestinal reflux disease) , gallstones or indigestion.

Objective: In order to raise awareness on the correlation of epigastric pain with coronary artery disease, we are presenting an interesting case with epigastralgia and belching as major symptoms of chronic coronary syndrome.

Material and methods: An 82-year-old male patient came to the hospital with a one year history of epigastric pain associated with meals and moderate exercise, relieved at rest and accompanied by frequent eructations. He also presented dyspnea on significant exertion. A gastroenterology consult confirmed a dyspeptic syndrome, but the proton pump inhibitor treatment didn't prove beneficial. The patient had a history of hypertension grade III, atrial fibrillation and flutter, obesity and cholecystectomy.

Results: The 6MWD (6-minutes walking distance test) showed a correlation between exertion and epigastralgia, the latter appearing after 4 minutes of walking, alongside diaphoresis. The accompanying EKG revealed numerous changes in the repolarization phase, suggestive for severe coronary artery disease. After 10 minutes of rest and the administration of oral nitroglycerin, the symptomatology remitted.

The coronarography showed tricoronarian lesions, with severe stenoses in the left anterior descending, circumflex and right coronary arteries. The patient refused bypass surgery, so the decision was made for serial percutaneous interventions. Statin and eventually an antiplatelet medication were added.

Conclusions: Our case reiterates the uncommon clinical expression of chronic coronary syndrome in the form of reccurent epigastralgias on exertion, mainly postprandially, in a patient with multiple risk factors for atherosclerosis, suggested by the persistent clinical pattern and a characteristic reproductibility on stress testing which were crucial to the diagnosis.

Keywords: Epigastralgia, 6MWD, chronic coronary syndrome, dyspnea

THE RUN TOWARDS SUCCESS MAY LEAD TO HEART SCARRING AND RECIPROCALLY - NON-SUSTAINED VENTRICULAR TACHYCARDIA AMIDST MYOCARDIAL INFARCTION IN AN ATHLETE

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Background: Premature Ventricular Contractions (PVC) are the most common type of arrhythmia caused by myocardial infarction. The implied process consists of a focal mechanism, leading to reentry at the fibrous tissue level and ventricular tachycardia apparition.

Objective: This clinical case aims to enhance the possible apparition of myocardial infarction–caused ventricular arrhythmia in a young athlete and to present suitable treatment approaches.

Material and methods: A 50-year-old athlete with a past medical history of myocardial infarction in the inferior ventricle wall presented in the cardiology department accusing dizziness and short-time recurrent palpitations with rapid regular rhythm (110 bpm) alternating with extrasystolic character palpitations.

During the clinical exam, no modifications appeared besides light hypertension (135/85 mmHg), so the doctor decided to trigger extrasystoles by ventricular stimulation in an electrophysiological study. The result was non-sustained ventricular tachycardia (NSVT), hemodynamically stable with under 10% arrhythmic events a day, and preserved ejection fraction.

The treatment included an ICD (implantable cardioverter defibrillator) and an increased dosage of beta blockers.

One year later, the patient claimed the reappearance of palpitations accompanied by dizziness that limited daily activities. The Holter ECG examination captured 68,000 isolated or coupled PVC, representing 38% of the trajectory and recurrent episodes of NSVT. As an alternative therapy of ICD, the guidelines recommended catheter ablation in symptomatic tachycardic patients with preserved ejection fraction. The procedure was guided by a fluoroscopy and mapping system and led to the normalization of the ECG.

Results: During follow-up, only 3.6% (2,200 PVC) appeared on Holter ECG, non-accompanied by any symptoms. Therefore, the treatment was efficient, and the patient was discharged with beta-blockers, aspirin, and statins prescription.

Conclusions: The particularity of this case relies upon the young age of the patient and the various procedures that had to be performed for a successful diagnosis and treatment.

Keywords: NSVT, Holter ECG, PVC, catheter ablation, young age

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MEDICATION DOESN'T WORK IN PATIENTS WHO DON'T TAKE IT:A CASE REPORT

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Background: Patients with severe hypertrophic obstructive cardiomyopathy (HOCM) and refractory symptoms to maximal pharmacological approach require catheter-based alcohol septal ablation or myectomy.

Objective: The aim of this case presentation is to outline the impact of adherence to treatment on patients' clinical outcome.

Material and methods: We present a female aged 67, with HOCM and persistent symptomatology (dyspnea, angina, and exertional fatigue), despite maximal pharmacological treatment. Also diagnosed with bilateral carotid atherosclerosis and dyslipidemia, she is admitted for a re-evaluation for myectomy. Physical examination revealed a grade III/VI systolic murmur at the mitral site, with axillar radiation. The 6-minute walk test (6MWT) performed on admission showed low effort tolerance (77% of predicted value) and inadequate blood pressure response. Echocardiography identified preserved systolic function with left ventricle (LV) ejection fraction of 60%, LV outflow tract gradient of 90 mmHg after Valsalva, moderate mitral regurgitation with systolic anterior movement of the anterior mitral leaflet. Coronarography showed septal milking, a muscular bridge with 30% compression of segment II of interventricular artery (IVA), and ruled out the ischemic etiology of persistent symptoms (30% stenosis of IVA distal to the muscular bridge).

Results: During hospitalization, a major decrease in brain natriuretic peptide values (2649pg/ml->398pg/ml), and improved effort tolerance on the 6MWT (84% of predicted value) were objectified, thanks to treatment monitoring. A thorough medical history outlined the habit of skipping medication at home. Having discussed with the patient the importance of correct and complete administration of medication, avoidance of dehydration, and activity restriction, pharmacological therapy was maintained and myectomy temporized. Considering the 1,64 % 5-year risk of sudden cardiac death, implantation of an intracardiac defibrillator wasn't necessary. Clopidogrel was prescribed for carotid and coronary atherosclerosis.

Conclusions: In the case of our patient, hospitalization increased patient's adherence to pharmacological treatment and improved symptomatology.

Keywords: Keywords:HOCM,myectomy, adherence to treatment

CLASSIC DIAGNOSTIC TRAPS - WHAT LIES BEHIND DYSPNEA

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Background: Dilated cardiomyopathy is a myocardial pathology clinically characterized by left ventricular dilation, accompanied by contractile dysfunction. A probable etiology is myocarditis, which represents myocardial inflammation. In this case, it is important to emphasize the inflammatory mechanism's significance in the progression towards heart failure.

Objective: A 48-year-old male patient, a non-smoker but with exposure to occupational toxins for 30 years, presents with dyspnea on moderate-to-low exertion. The symptoms have worsened in recent months. From the patient's medical history, we mention an episode of respiratory infection six months ago, resulting in worsening dyspnea to rest dyspnea with orthopnea. From the patient's past medical history, we mention essential arterial hypertension grade 2 with very high risk and GOLD stage III COPD (Chronic Obstructive Pulmonary Disease).

Material and methods: Physical examination on admission did not reveal any pathological changes.

Spirometry performed on an outpatient basis revealed severe obstructive ventilatory dysfunction. An echocardiogram detected diffuse severe hypokinesis in dilated cardiomyopathy, together with mitral and aortic regurgitation. Electrocardiographically, a truncated R wave was observed in V1, and negative T waves in DII and DIII. Blood tests revealed an increase in fibrinogen levels. Based on these considerations, the diagnosis of heart failure with reduced ejection fraction was established, on a background of dilated cardiomyopathy with a possible cause of myocarditis.

For the detected pathology, the patient was treated with a loop diuretic and aldosterone antagonist, antiplatelet, proton pump inhibitor, sacubitril/valsartan, beta-blocker, statin, and trimetazidine.

Results: Subsequently, the patient had a favorable evolution, being discharged with an improved state.

Conclusions: What is particular about this case is the relatively rare etiology of dilated cardiomyopathy, represented by myocarditis. Additionally, we observe the significant role of the patient's environment in cardiovascular pathology.

Keywords: Dilated Cardiomyopathy, Myocarditis, Dyspnea

UNEXPECTED INTRACARDIAC MIGRATION OF A CENTRAL VENOUS CATHETER FRAGMENT AT A PATIENT WITH BOURNEVILLE DISEASE – CLINICAL CASE

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Background: The central venous catheter is frequently used in patients undergoing hemodialysis treatment. Fracture of the catheter with subsequent migration is a rare but potentially serious complication, with the most predictable migration sites located in the right atrium, right ventricle, inferior vena cava, and pulmonary arteries.

Objective: We present the case of a 22-year-old male patient, who is attending to a cardiological consultation with complaints of marked fatigue, mild leg edema, and headaches. Also, the patient has multiple diagnoses, including Bourneville's disease, chronic kidney disease at stage G5 under renal replacement therapy, left nephrectomy, and secondary renal hypertension.

Material and methods: The ECG examination revealed sinus rhythm and left ventricular hypertrophy (LVH). Echocardiography shows dilated LV with mild concentric hypertrophy, with preserved systolic function, a normally inserted tricuspid valve, and a formation of unknown origin crossing towards the apex of the right ventricle, also visible in the right atrium originating from the superior vena cava (SVC), tricuspid regurgitation grade III/IV and LVEF 60%. Ultimately, in order to accurately detect the nature and location of the formation, further investigations are carried out. The native chest CT describes a double-lumen tunnelled central venous catheter with the arterial end located just below the confluence of the SVC into the right atrium and the venous end situated in the right atrium adjacent to the tricuspid valve, slightly migrated distally.

Results: The patient underwent a surgical procedure to remove the dialysis catheter from the right atrium, which was performed using extracorporeal circulation.

Conclusions: The migration of a central venous catheter fragment is a very rare complication, and in this case, the association with Bourneville disease requires differential diagnosis with the presence of a benign intracardiac tumor.

Keywords: migration of a central venous catheter fragment, Bourneville disease, hypertension

RESYNCHRONIZATION THERAPY IN HEART FAILURE WITH SEVERELY REDUCED EJECTION FRACTION- STOP AND START OVER

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Background: Heart failure with reduced ejection fraction is frequently determined by ischemic heart disease and represents the only group of patients for whom treatment therapies have been proven to reduce morbidity and mortality.

Objective: The aim of this paper is to discuss the importance of monitoring patients with heart failure, in order to change the therapeutic behavior if necessary.

Material and methods: We approached the case of a 70-year-old patient, admitted to the hospital with the worsening of dyspnea, fatigue and left ventricular failure phenomena. Personal pathological history includes: stage II essential hypertension, replacement of the ascending aorta (Bentall procedure), metal prosthesis in the aortic position, for severe aortic regurgitation and aneurysm of the ascending aorta, complicated with total postoperative atrioventricular block for which a permanent pacemaker type VVI was implanted. Physical examination reveals: BP=130/90 mmHg bilaterally, metallic systolic click at the aortic focus, without other pathological findings. Laboratory tests show only a low HDL cholesterol value, along with high BNP values. The ECG detected an electroentraining ventricular rhythm with left bundle branch block morphology and atrioventricular dissociation. Echocardiography emphasise severely impaired systolic function (FE 28%), with mild intraprosthetic aortic regurgitation and stationary transvalvular gradient.

Results: Considering the reduced ejection fraction, it was decided to upgrade the pacemaker to a CRT-P triple-chamber device, with the positioning of a quadripolar probe at the level of a posterior vein tributary to the coronary sinus. Afterwards, there was an improvement in dyspnea and exercise capacity, with an increase in the ejection fraction by 10% one week after the procedure.

Conclusions: Cardiac resynchronization is a revolutionary method for patients with severe heart failure unresponsive to the correct medication and it is important to closely monitor their evolution, the best approach being a multidisciplinary team.

Keywords: resynchronization, heart failure, aortic regurgitation

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PACEMAKER IMPLANTATION IN PATIENT WITH SINUS NODE DYSFUNCTION-CLINICAL CASE

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Background: Sinus node disfunction also known as sick sinus syndrome, is a disease characterised by an abnormal conduction and propagation of electrical impulses at the sinoatrial node. It includes symptoms and ECG fidings such as: sinus bradycardia, sinus pauses or arrest, sinus exit blocks, and can also be associated with atrial tachycardia, as a component of the tachycardia-bradycardia syndrome.

Objective: We present a case of a 67-year-old female patient, known with sinus node dysfunction with sinus pauses, major right bundle branch block (RBBB), aortic dissection type A with prosthetic replacement of the ascending aorta and aortic arch, paroxysmal atrial fibrillation, type 2 diabetes, left surgically solitary kidney, who has been admitted to County Clinical Emergency Hospital of Sibiu for multiple syncopal episodes.

Material and methods: The ECG examination showed sinus bradycardia with sinus pauses, HR= 40 bpm, normal QRS axis, first-degree atrioventricular block, major RBBB. Subsequently, a 24-hour Holter monitoring was performed, which detected sinus pauses with a maximum duration of 4 seconds. Echocardiography shows mild concentric left ventricular hypertrophy, with left ventricular ejection fraction (LVEF) 50%, calcification of posterior mitral annulus, mild mitral regurgitation, aortic valve with degenerative changes, and mild aortic regurgitation.

Results: Secondary to the results of 24-hour Holter monitoring and repeated syncopal episodes, we decided to implant a dual-chamber cardiac pacemaker by puncturing the left subclavian vein, with insertion of the first pacing lead with active fixation at the mid-apical interventricular septum of the right ventricle and a second lead in the atrial cavity.

Conclusions: In this case, the decision of using a permanent pacemaker was motivated by the presence of bradyarrhythmya manifested by multiple syncopal episodes, which represent a Class I indication with Level of Evidence B in the ESC guidelines for cardiac pacing.

Keywords: sinus node disfunction, syncope, pacemaker

SEVERE ARTERIAL HYPERTENSION IN A YOUNG FEMALE PATIENT. CAN IT BE A CHALLENGE? - CLINICAL CASE

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Background: Fibromuscular dysplasia is a non-atherosclerotic, non-inflammatory vasculopathy that can involve the renal, carotid, vertebral arteries and rarely the iliac and mesenteric arteries. It is characterized by fibrodysplasia of the tunica media with involvement of the distal two-thirds of the renal arteries, which results in multiple stenoses associated with a characteristic appearance of multiple, small aneurysms arranged in a string-of-beads pattern.

Objective: We present a case of a 23-year-old female patient, who is attending to a cardiological consultation, in order to find the cause of high blood pressure values, accusing severe occipital headache and dizziness.

Material and methods: At presentation, by measuring blood pressure, a systolic BP of 190 mmHg and a diastolic BP of 120 mmHg were recorded. Rest ECG showed: sinus rhythm, HR= 100 bpm, normal QRS axis, flattened T wave in aVL, and large T wave in V2-V4. Given the young age of the patient, suspicion of a secondary cause of hypertension was raised. In order to identify a possible renal cause, an CT angiography was performed. CT angiogram revealed significant stenoses at the right renal artery, with a maximum value of 70%, and multiple saccular aneurysmal dilatations. CT appearence is characteristic for fibromuscular dysplasia. At the level of the left renal artery, a mild to moderate stenosis was identified. The kidneys were asymmetric in size, with the right one being smaller than the left one.

Results: Based on the result obtained from the CT angiography, a percutaneous transluminal angioplasty was performed with stent placement at the right renal artery. The postprocedural evolution was favorable, with the improvement of the patient's clinical condition.

Conclusions: Fibromuscular dysplasia is a rare cause of secondary hypertension which can be associated with a series of complications such as dissections, thromboses, and renal artery occlusions.

Keywords: fibromuscular dysplasia, stenoses, aneurysm, hypertention

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RESTORING CARDIAC RHYTHM: A CLINICAL CASE OF LBBP PACING FOR INFRANODAL AV BLOCK

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Background: Left bundle branch pacing (LBBP) involves capturing the left bundle trunk or its proximal fascicles, in combination with septal myocardium capture, at low output. When implanting the lead intraseptally, fixation beats of QR/rSR' morphology are often observed ,which indicates that the LBB area was reached.

Objective: Our aim is to show that the proximal LBB run through the left ventricle septum and fan out to form a wider target for pacing compared to the His bundle.

Material and methods: A 64-year-old woman with hypertension grade II, type 2 diabetes mellitus , dyslipidaemia, obesity, chronic kidney disease and a known history of left bundle branch block (LBBB), admitted for symptoms of heart failure NYHA III class, bradycardia, LBBB and a long QRS (160 ms) in V6 lead. The transthoracic ecocardiography suggested a light apical rocking of LV, hypokinesia,left ventricle ejection fraction(LVEF) of 45 %,mild valves regurgitations and a non-dilated right ventricle with preserved systolic function. The MRI revealed a LVEF 40% caused by diffuse hypokinesia .She was also diagnosed with nonischemic,non-dilated,hypokinetic cardiomyopathy.

Doctors performed a bicameral pacemaker implant to stimulate the conduction area of LBB and remarked on ECG a progressive morphology from LBBB to right bundle branch block at the time of septum penetration with 'W' pattern in V1 and discordant QRS in leads II, III.

LBB automaticity was restored while fixing the lead deep into the septum during temporary pacing from the right ventricle apex in a patient with complete heart block.

Results: The final result demonstrated a narrowing of QRS complex and after screwing, in V1 initial notch became r', stationary pacing parameters and a near normal NTproBNP.

Conclusions: LBBP was successful in restoring the normal conduction of electrical impulses in the heart .

Keywords: bicameral pacemaker implant , temporary pacing, complete heart block , LBBP

STEP BY STEP AFTER A MYOCARDIAL INFARCTION

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Background: Myocardial infarction is well known among the world's population, being responsible for over 15% of deaths each year. It is caused by a decreased blood supply to the heart muscle and its severity and symptoms depend on the affected portion.

Objective: The objective of this paper is to present the management of a patient with myocardial infarction and the importance of trying to investigate the blood flow status in order to improve the patient's condition and to avoid another ischemic incident.

Material and methods: We present the case of a 80 years old woman known with hypertiroidism and cronic kidney disease who presented to the cardiology department with dyspnea on minimal effort, burning retrosternal chest pain radiating in the epigastric area and in the base of the neck, paraesthesia in the left arm, that started approximately two weeks before presentation.

The ECG showed sinus rhythm, poor R wave progession in DIII, aVF, V2-V4 and a 1 mm ST-segment elevation in V3-V4, suggesting a STEMI anterior myocardial infarction. The angiocoronarography showed a bivascular coronary disease: the occlusion of the anterior descending artery and a 50-75% stenosis of the diagonal artery.

Echocardiography revealed a dilated left ventricle with a severely reduced ejection fraction (12%), moderate mitral regurgitation and severe tricuspid regurgitation.

The patient agrees to a myocardial perfusion scintigraphy in order to find out more about the blood flow and the tissue viability even for a possible revascularization.

Results: The myocardial scintigraphy showed a severe myocardial perfusion disorder suggesting the absence of viability, so the revascularization was not an option.

Conclusions: Patients affected by a myocardial infarction, who presented late to the doctor, require detailed investigations in order to evaluate the damage and to take the best therapeutic decision, trying to avoid an unnecessary revascularization.

Keywords: myocardial infarction, myocardial scintigraphy

SYNCING THE HEART LEFT BUNDLE BRANCH PACING IN DILATED CARDIOMYOPATHY WITH CHALLENGING VENOUS ACCESS-CASE REPORT

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Background: Cardiac resynchronization therapy (CRT) should be considered for symptomatic patients with heart failure (HF) in sinus rhythm (SR) with left ventricular ejection fraction (LVEF) ≤ 35%, a QRS duration of 130-149 ms and left bundle branch block (LBBB) QRS morphology. Left bundle branch pacing (LBBP) should be considered as a treatment option for CRT candidates in whom coronary sinus lead implantation is unsuccessful.

Objective: Our aim is to show that LBBP can be a viable alternative approach even with remarkable outcomes.

Material and methods: We report a case of a 52-year-old female admitted to the hospital for dyspnea on mild effort, her personal history revealed: second-degree hypertension, non-ischemic dilated cardiomyopathy (DCM) with severe left ventricle (LV) systolic dysfunction (LVEF=25%), NYHA class II HF, LBBB, dyslipidemia. Echocardiography presents dilated LV, left ventricular internal dimension at end-diastole(LVIDd)=59mm, LVEF=25%, LV dyschronism with apical rocking and diffuse hypokinesis. ECG shows SR, LBBB. Angiography exhibits permeable epicardial coronary arteries. During the implantation of a three-chamber device, a difficult venous access was discovered therefore a defibrillator with CRT implant (CRT-D) and deep septal LV pacing were performed.

Results: The patient evaluation after 6 months demonstrated very good tolerance to effort, non-dilated LV, LVEF improved from 25% to 50%, LVIDd=50mm, also a superresponse to CRT-D with a significant improvement in LVEF and QRS duration.

Conclusions: LBBP is feasible, effective, and most important, physiological pacing procedure for achieving cardiac resynchronisation, besides narrower paced QRS duration, also provides resultant improvements in left ventricular structure and function with better clinical outcomes.

Keywords: LBBP, cardiac resynchronization therapy, dilated cardiomyopathy

SURVIVING THE SHOCK: A WPW PATIENT'S JOURNEY THROUGH RESSUSCITATION AND HEART ABLATION

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Background: Wolff-Parkinson-White (WPW) syndrome is a heart conduction system disorder consisting of existence of an electrical accessory pathway. It is characterized by a short PR interval, a widened QRS complex and a positive or negative delta wave on the ECG. The accessory pathway is represented by the bundle of Kent, structure situated in the atrioventricular fibrous septum.

Objective: Our aim is to showcase the medical management and outcome of a patient with WPW syndrome, multiple comorbidities, and a resuscitated cardiac arrest at Elias Emergency University Hospital.

Material and methods: A 67-year-old overweight patient with type 2 diabetes mellitus, hepatic cirrhosis, and a known history of WPW, suffered a cardiac arrest due to ventricular fibrillation, successfully resuscitated without neurological sequelae. An electrophysiological study was performed to evaluate the patient's electrical activity using an electroanatomical system called Carto 3. Furthermore, radiofrequency ablation was performed using a transeptal approach and was successful in targeting and modifying the postero-lateral accessory pathway.

Results: Upon re-evaluation of the patient's ECG, it was found that the patient was in sinus rhythm with no evidence of a delta wave or repolarization changes.

The results of the holter EKG showed that the patient was in sinus rhythm and had a first-degree AV (atrioventricular) block and absence of any significant arrhythmias or high-grade AV block.

Conclusions: This suggests that the radiofrequency ablation procedure targeting the accessory pathway responsible for the WPW syndrome was successful in restoring the normal conduction of electrical impulses in the heart. Overall, this case study demonstrates the importance of prompt diagnosis, appropriate management, and close follow-up in the management of complex cardiac conditions with multiple comorbidities.

Keywords: WPW, cardiac arrest, electrophysiological study, ablation

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AMIODARONE INDUCED ACUTE PULMONARY TOXICITY. A CASE REPORT.

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Background: Amiodarone is a class III antiarrhythmic drug used in the treatment of supraventricular and ventricular arrhythmias. Because of its high lipid solubility, amiodarone tends to concentrate in adipose tissue and high perfusion organs such as the lungs.

Objective: To showcase the beneficial/detrimental effects of amiodarone use.

Material and methods: We present the case of a 55 years old male, alcohol and tobacco abuser, who was admitted to our clinic accusing newly onset dyspnea, tachypnea, thoracic and abdominal pain. Transthoracic echocardiography revealed a reduced left ventricular ejection fraction (LVEF: 15%) due to global hypokinesia, as well as mitral and tricuspid moderate regurgitation. Other investigations were performed, such as thoracic radiography which revealed interstitial pneumonia and a NT-proBNP value of 23293pg/ml. Based on these findings, intravenous antibiotics and diuretics were initiated.

Results: After 3 days of treatment, a sudden episode of atrial flutter occurred, for which the medical team decided that continuous infusion of amiodarone was suitable. Conversion to sinus rhythm succeeded. However, during the next hour, while infusion continued, the patient developed signs of acute respiratory distress syndrome (ARDS), such as severe dyspnea, hypoxemia, and cyanotic extremities. The administration of intravenous amiodarone was ceased, and oral amiodarone was initiated. After the administration of oral amiodarone at a total daily dose of 1.2g per day, the patient experienced generalized cutaneous eruptions. The amiodarone dosage was decreased at 600mg per day administrated orally, with the complete remission of the cutaneous eruptions, and no respiratory complaints. Upon discharge, the patient LVEF increased to 30%, with no new records of recurrent supraventricular arrhythmias.

Conclusions: Although amiodarone is one of the best antiarrhythmic drugs available, it can trigger acute pulmonary side effects that can threaten the patient's life. The acute possible side effects of amiodarone usage have to be rapidly recognized.

Keywords: amiodarone, atrial flutter, acute respiratory distress syndrome

AN UNUSUAL LOCALIZATION OF A GIGANTIC CARDIAC RHABDOMYOMA: A PAEDIATRIC CASE REPORT

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Background: Cardiac rhabdomyoma, with an incidence reported as high as 80%, is the most common paediatric heart tumor and can be diagnosed antenatally and postnatally by echocardiography. It is a benign mesenchymal tumor of striated muscle origin, often associated with tuberous sclerosis. Most cardiac rhabdomyoma are multiple and located in the ventricular chambers and on the atrioventricular valves. Rhabdomyomas tend to regress spontaneously, usually, the surgical resection is not advisable. The indications for surgery include hemodynamic compromise, risk of embolization, and cardiac arrhythmias.

Objective: We report a neonate with a gigantic right atrial rhabdomyoma who developed typical cardiovascular signs of right heart failure due to obstruction in the inflow of the right ventricle.

Material and methods: An asymptomatic male neonate was born at 39-weeks of gestation with birth weight of 3880g. The prenatal echocardiographic examination in antenatal 22th week revealed a huge right atrial tumor. Postnatally, echocardiography showed an isolated, gigantic echodense mass involving the right atrium, with the largest diameter of 12mm. Sinus rhythm was present, and no tachycardia occurred in the preoperative period. In the follow-up he developed cardiac failure by obstruction in blood flow. 4-weeks after birth he underwent open cardiac surgery to resect the tumor.

Results: Complete excision of the tumor was performed with no postoperative complications.

Macroscopically, the tumor appeared as a gray-tan solid, nodular, 11x9x6mm, mass. Microscopically, a characteristic “spider cell” was seen. Histology of the tumor was compatible with cardiac rhabdomyoma. Postoperative evaluation has not revealed tuberous sclerosis. Sixteen-months after surgery, the patient remains asymptomatic.

Conclusions: The present study reports a case of rare cardiac rhabdomyoma located in the right atrium which determined hemodynamic compromise requiring surgical excision in neonatal period. Echocardiographic examination is the imaging modality of choice. The prognosis of patients with rhabdomyomas is mostly determined by the size and location of the lesion.

Keywords: cardiac rhabdomyoma, echocardiography, children

EVALUATION OF THE LINK BETWEEN THE VOLUME OF SOFT PLAQUES, DETERMINED BY CORONARY ANGIOCT AND THE EVOLUTION OF THE PATIENT WITH CARDIOVASCULAR PATHOLOGY

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Background: Coronary angiography CT is a very useful diagnostic tool in patients with suspected coronary artery disease and a low or intermediate pre-test probability. Various approaches, such as quantifying the coronary calcium score and plaque volume, have been proposed to estimate the burden of coronary disease and future risk of cardiovascular events, with consistent evidence showing that the greater the plaque burden, the higher the risk of subsequent cardiovascular events.

Objective: The aim of the present study is to determine if there is any relationship between the volume of soft plaques in the coronary arteries, determined by coronary CT angiography, and the subsequent cardiovascular risk represented by patient readmission.

Material and methods: I performed a retrospective study, in which we included from the database of coronary angioCT examinations of the Emergency Institute for Cardiovascular Diseases and Transplant Targu Mures a number of 100 consecutive examinations, starting on July 1, 2021.

Results: The overall average age is 59.55 ± 10.90 years, with 52% female and 48% male patients. Comparing the mean total volumes of soft plaque for the three coronary arteries in patients with/without readmission, using the Mann-Whitney test, the following values were obtained: ADA [396.24/302.08 (with/without readmission), p= 0.034], ACx [394.56/319.20 (with/without readmission), p=0.015], ACD [371.71/26.12 (with/without readmission), p=0.039]. Performing a comparison of means/medians between the CP volume groups with/without readmission, using the Mann-Whitney test for each coronary artery, the following values were obtained: ADA (with/without readmission: 55.13/20.18; p= 0.0013), ACx (with/without readmission: 26.29/6.45; p= 0.0213) and ACD (with/without readmission: 51.94/6.32; p= 0.025).

Conclusions: Overall, the results of this study suggest that the total volume of atherosclerotic soft plaque (TPV) and calcified plaque volume (CPV), determined by coronary CT angiography, can be a useful predictor for the progression of cardiovascular disease in patients.

Keywords: coronary CT angiography, total volume of soft plaque, calcified plaque volume, readmission, cardiovascular disease.

A 15-YEAR-OLD PATIENT WITH THORACO-ABDOMINAL AORTITIS

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Background: Aortitis is the inflammation of the aortic wall, which can be caused by infectious or non-infectious factors. Non-infectious aortitis is often associated with inflammatory vasculitis, such as giant cell arteritis and Takayasu arteritis, as well as other inflammatory diseases.

Objective: The aim of this study is to present a case of aortitis in a 15-year-old female patient and to highlight the importance of early recognition of aortitis to prevent further cardiovascular complications.

Material and methods: We report the case of a 15-year-old female patient who presented with severe hypertension and was diagnosed with abdominal aortitis, which was suspected to be type IV Takayasu disease based on CT examination. A cardiothoracic angio-CT examination with ECG gating was performed to observe the extent of the aortitis and its effect on nearby structures.

Results: The results of the examination showed circumferential thickening of the thoracic aorta, reaching 7mm in several places, and a reduction of the calibre of the aorta up to 3 mm due to superimposed stenoses. The patient's left renal artery was blocked at the origin, causing collateral vascularization of the kidney.

Conclusions: This study highlights the importance of early recognition of aortitis in preventing further cardiovascular complications. It also presents a rare case of aortitis in a young patient and emphasizes the need for an age-appropriate lifestyle, balanced diet, and low sodium intake to manage the condition.

Keywords: Aortitis, Takayasu arteritis, thoraco-abdominal aorta, hypertension, renal hypoplasia

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CONCOMITANT TRICUSPID VALVULOPLASTY IN PATIENTS UNDERGOING MITRAL VALVE SURGERY: A RISK-BENEFIT ANALYSIS

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Background: Isolated tricuspid valve pathologies are rare in the general population, as they are usually associated with mitral valve diseases, both in primary and secondary forms. Consequently, tricuspid valve repair performed as part of mitral valve surgery has become a reasonable therapeutic option for most patients with chronic mitral valve diseases who develop secondary tricuspid regurgitation requiring surgical treatment.

Objective: The aim of this study was to compare the therapeutic efficacy of isolated left-sided valve operations with combined techniques of mitral valve replacement/repair and tricuspid valve repair.

Material and methods: Between 2017 and 2021, 140 patients (mean age 64 years) underwent primary mitral surgery at the Cardiovascular Surgery Department of The Emergency Institute for Cardiovascular Diseases and Transplant from Targu Mures. Ninety (64%) of these patients underwent concomitant tricuspid valve repair for mean, moderate, or severe TR, and 27 (19%) underwent additional aortic valve replacement. Clinical and echocardiographic data were collected preoperatively, intraoperatively, and early postoperatively. The only exclusion criteria were previous coronary artery bypass grafting procedures.

Results: The isolated left-sided valve surgery (non-TVR) group and the additional tricuspid valve repair (TVR) group showed no statistically significant differences in early mortality, morbidity, or permanent pacemaker requirement. Both groups showed significant improvements in postoperative ejection fraction ($p=0.001$), systolic pulmonary artery pressure ($p<0.001$), and left atrial reverse-remodelling ($p=0.007$). The TVR group was correlated with a longer ICU stay, proportional to operation time and the higher incidence of preoperative cardiac comorbidities (atrial fibrillation, arterial hypertension).

Conclusions: In patients with moderate and severe tricuspid regurgitation, concomitant tricuspid annuloplasty was associated with fewer neurological and bleeding postoperative complications, while isolated left heart surgery was correlated with higher left ventricular reverse remodelling and significantly lower major adverse valve-related events. Both surgical procedures prove optimal efficiency when they are performed according to patients' individual characteristics.

Keywords: concomitant tricuspid valvuloplasty, mitral valve surgery, postoperative complications

OPEN-HEART SURGERY FOR RIGHT HEART EMBEDDED CATHETER IN A YOUNG PATIENT WITH BOURNEVILLE'S DISEASE

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Background: Open-heart surgery refers to a surgical procedure in which the chest is incised, and surgical intervention is conducted on the heart's arteries, valves, or muscle. This type of procedure may also be required in special situations, such as the presence of embedded catheters or foreign bodies within the heart.

Objective: The main objective is to highlight the indications for open-heart surgery in particular situations when this seems to be the only reasonable solution, but it must be considered the risks and the benefits.

Material and methods: This case report presents a 22-year-old male diagnosed with Bourneville's tuberous sclerosis, causes neurological disorders and benign tumors especially within the kidneys, leading to renal failure and chronic hemodialysis. The patient is currently on the waiting list for a kidney transplant, having previously undergone a total nephrectomy and the implantation of a central venous catheter in the right subclavicular vein for hemodialysis. After three years, severe tricuspid insufficiency appeared, caused by the embedding of the catheter in the right heart. Due to the kidney failure and high creatinine levels, the only possible investigation was a native CT scan, which showed the catheter in the right heart and a myxoma-like formation. On-pump open-heart surgery was performed to remove the catheter and repair the tricuspid valve, supported by a cardiopulmonary bypass with distal ascending aorta cannulation. Two particularities of this surgery were the central cannulation instead of the peripheric one, preserving the femoral vessels, and the requirement that any blood transfusions must be of the same blood group, Rh and extended phenotype; both being essential conditions for the pending kidney transplant.

Results: After the surgery, the patient's pre-existent anemia worsens and necessitated blood transfusions. Notwithstanding this complication, the procedure was successful.

Conclusions: Taking into consideration the associated comorbidities, the only way to remove the catheter and repair the TV was thought open-heart surgery.

Keywords: Bourneville's disease, open-heart surgery, tricuspid insufficiency

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MINIMALLY INVASIVE AORTIC VALVE REPLACEMENT VIA DIRECT VISION APPROACH: A CASE REPORT

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Background: Aortic valve replacement (AVR) is a surgical procedure that entails the removal and replacement of a damaged aortic valve. The "direct vision" minimally invasive technique enables the surgeon to visualize the aortic valve directly through a 10 cm intercostal incision, without the need of the classical median sternotomy approach.

Objective: We aim to present the case of a patient with severe aortic stenosis who underwent minimally invasive AVR via direct vision approach.

Material and methods: We present the case of a 68-year-old male patient with severe aortic stenosis, cardiac insufficiency (NYHA III) and hypercholesterolemia. He presented in the cardiovascular surgery department with dyspnea, fatiguability and history of syncope. The transthoracic and transeophageal echocardiography revealed severe degenerative aortic stenosis, the leaflets presenting important calcifications and moderate regurgitation with central jet. Transvalvular gradient being 70/42mmHg, 60% ejection fraction and 21mm aortic annulus diameter. Preoperative assessment of the EKG, thoracic radiography, carotid arteries doppler ultrasound and coronarography revealed no significant changes. Taking all into consideration, the surgical team proceeded with aortic valve replacement using Saint Jude Medical Epic biological prosthesis with extracorporeal circulation through a minimally invasive direct vision approach.

Results: Postoperative echocardiography revealed a normofunctional aortic biological prosthesis, transvalvular gradient of 37/20 mmHg, no transvalvular regurgitation or paravalvular leak. The patient's recovery was favorable, being discharged without any postoperative complications.

Conclusions: Compared to traditional open-heart surgery, minimally invasive AVR presents numerous benefits such as smaller incisions, less pain, quicker recovery time, less blood loss, and lower risk of infections and complications. Furthermore, patients undergoing this procedure generally experience a shorter hospital stay and faster recovery time overall.

Keywords: Aortic valve replacement, minimally invasive surgery, direct vision approach

SAVED BY THE BELL: MOBILE RIGHT ATRIUM THROMBUS OF A YOUNG PATIENT - CARDIAC SURGICAL EMERGENCY

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Background: Underdiagnosed and asymptomatic, atria masses' incidence remains unknown. Diagnosed by transthoracic or transesophageal echocardiography, CT or IRM, the mortality rate is up to 80%, if untreated. It is treated by surgical excision or, not as efficiently, by using anticoagulants and thrombolytics. Complications such as hypoxia or cardiac arrest may occur.

Objective: The purpose of this case report is to present the surgical excision of a thrombus located in the right atrium of a young patient diagnosed by mistake during a routine cardiological examination.

Material and methods: A 39-year-old female patient presented for surgical treatment of a pseudotumoral formation in the right atrium floating through the tricuspid valve. Smoker of 3rd grade obesity (BMI=41,52 kg/m2) with a history of monomorphic ventricular extrasystoles with the aspect of a left bundle branch block, menometrorrhagia, simple ovarian cyst, intrauterine clots, chronic gastritis and irritable bowel syndrome.

The echocardiography showed an ovalar mass of 22 mm located in the right atrium, mobile through the tricuspidian valve, no vegetations or pericardic fluid, with normal ejection fraction and systolic function.

Clinical observation sheet, echocardiographic images and intraoperative pictures of the surgical process were provided by the Clinical Emergency Hospital of Bucharest, Romania.

Results: Diagnosis was pseudotumoral formation in the right atrium floating through the tricuspidian valve. An emergency median sternotomy has been performed, followed by the excision of the benign tumor by opening the right atrium under extracorporeal circulatory support. Postoperative evolution was favorable, and the patient was discharged after 7 days.

Conclusions: Right atrium thrombus is a life threatening pathology, almost impossible to diagnose, making it a "happy accident" when found and treated in time.

Keywords: right atrium thrombus, sternotomy, benign heart tumor

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STERNAL CHONDROSARCOMA RESECTION WITH CHEST WALL RECONSTRUCTION – CASE REPORT

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Background: Tumors of the shoulder girdle, ribs and sternum represent 5% of all bone tumors, and the sternum is affected in 10% of these. The most frequently occurring tumor is chondrosarcoma, representing 20% of primary malignant bone cancers and about 70% of all neoplasia in the anterior thoracic wall.

Objective: The aim of this report is to introduce the case of a primary sternal chondrosarcoma in a female with vast pathological personal history until the moment of diagnosis.

Material and methods: A 50-year-old female patient presented with cardiac tamponade. She is known for a history of operated breast adenocarcinoma, for which she underwent radio- and chemotherapy, cardiac tamponade and pleurisy. CT scan showed a large sternal tumor with cutaneous invasion. Biopsies were taken, but the patient refused surgical intervention until local bleeding occurred.

Clinical observation sheets, CT scans, histopathological results and pictures of the surgical process were provided by Clinical Emergency Hospital of Bucharest, Romania.

Results: The final diagnosis was sternal chondrosarcoma, established after full histopathological report. Two multidisciplinary teams of cardiovascular, thoracic and plastic surgeons operated bilaterally and removed the affected parts of the sternum, the anterior margins of the first three pairs of ribs, the muscular tissue and the invaded skin layers. No major bleeding occurred.

The chest wall reconstruction was made using titanium plates and methyl methacrylate mesh. The parietal defect was fixed using the pectoral muscles and the cutaneous defect was repaired with a skin graft and a breast lift.

Conclusions: The particularity of the case is that the patient developed this condition after being treated for breast cancer, but it was not secondary to the first malignancy. The patient had a favorable postoperative evolution and was discharged 7 days later, and should return for follow-up every 6 months.

Keywords: sternal chondrosarcoma, primary malignant bone cancer, chest wall reconstruction

MINIMALLY INVASIVE TECHNIQUE: A BETTER APPROACH FOR SEVERE MITRAL INSUFFICIENCY IN INFECTIVE ENDOCARDITIS?

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Background: A minimally invasive procedure is an advantageous and safer strategy for surgical treatment of severe mitral valve regurgitation with infective endocarditis (IE).

A venous ulcer is an open sore on the skin caused by chronic venous insufficiency and high blood pressure in the leg veins, through which bacteria such as Staphylococcus aureus can cause ulcer infections. If bacteria enter the bloodstream, they can colonize the heart lining, a heart valve, or a blood vessel, resulting in IE.

Objective: 37-year-old man with deep vein thrombosis on his right leg, post-thrombotic syndrome, and ulcerated varicose vein on his right calf. The patient presented in our ambulatory for investigation and surgical treatment revealing: staphylococcus aureus on ulcerated varicose vein, mitral valve infective endocarditis with severe regurgitation caused by anterior valve perforation. Video-assisted minimally invasive complex mitral valve repair using heterologous pericardial patch and mitral annuloplasty were chosen as surgical options.

Material and methods: Anterior mitral valve perforations are frequently caused by underlying infective endocarditis, which can result in severe mitral valve regurgitation. The case is approached using a minimally invasive heart surgery due to the patient's significant risk of infection. The right minithoracotomy is the most widely used incision for minimally invasive mitral valve surgery. Multiple retrospective studies have evaluated outcomes following mitral valve surgery via right minithoracotomy, with reported benefits including a better view of the valve and subvalvular apparatus, a lower risk of infection due to the well-vascularized overlying pectoralis muscle and avoidance stenotomy, a shorter hospital length of stay, less postoperative bleeding and pain.

Results: The minimally invasive procedure was successful with no residual regurgitation and the patient recovered quickly without any postoperative complications.

Conclusions: We believe that a minimally invasive strategy is more effective and safer for patients with severe mitral insufficiency after endocarditis.

Keywords: endocarditis, minithoracomy, venous ulceration, staphylococcus aureus

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DEMOGRAPHIC BACKGROUND AND TYPES OF TREATMENT AMONG PACIENTS WITH PHIMOSIS

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Background: Phimosis is a very common disease in pediatric surgery. It is characterized by the impossibility of retraction of the foreskin over the gland's penis.The main types are congenital or pathological, due to inflammation, trauma, and poor hygiene. Primary therapeutic methods are preputioplasty, circumcision and steroid ointments.

Objective: The aim of this study was to assess the demographics and treatments of patients diagnosed with Phimosis over the last 6 years.

Material and methods: This study is observational and retrospective. All patients registered during 2017-2022 with phimosis in the County Hospital Târgul Mureș, department of pediatric surgery and orthopedics were assessed. Data has been processed in Excel and EpiInfo 7.

Results: A total of 602 patients with phimosis as a primary diagnosis were initially included in the study, of which 555 of them were eligible after applying the exclusion criteria (pathologies with the same diagnostic code). The age interval was between 6 months and 17 years with an average of 6 years. Categorized by age group (infants, children, adolescents) the majority consist of children (n=500).

We observed a 47% drop in the number of cases in 2020 compared to 2019 due to the Corona Virus pandemy and a 126% increase in 2021.

The analysis of the data revealed 3 types of diagnosis: phimosis, congenital phimosis, and scarring phimosis, the first representing 85%. Out of 555 patients,417 were treated by preputioplasty, 116 by circumcision and 22 exclusively by separation of preputial adhesions. Out of 64 patients with the scarring phimosis, 50 were cured by circumcision.

Conclusions: The main treatment for phimosis and congenital phimosis is preputioplasty. In the case of scarring, circumcision is the primary solution. Corona pandemic significantly decreased the number of cases.

Keywords: phimosis, preputioplasty, circumcision

CONGENITAL CLUBFOOT: DEMOGRAPHIC DATA AND CORRELATION BETWEEN GENDER AND AFFECTED EXTREMITIES

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Background: Congenital equinovarus clubfoot is one of the most common congenital malformations. With an incidence of one to two cases per 1000 population. Early treatment is necessary to correct the malformation and achieve a plantigrade and functional foot. The most commonly used method of treatment is the Ponseti method.

Objective: The aim of this paper is to track and evaluate the demographics of patients diagnosed with Congenital equinovarus clubfoot over the past 5 years and demonstrate the causal relationship between patient gender and laterality of injury (bilateral, unilateral).

Material and methods: This paper includes a descriptive, retrospective study. All cases of congenital clubfoot registered during 2018-2022 in the County Hospital Târgul Mureș, department of pediatric surgery and orthopedics were evaluated. All statistical analyses were performed in IBM SPSS Statistics (Statistical Package for the Social Sciences) version 20.

Results: A total of 50 pediatric patients have been diagnosed with Varus Equin congenital clubfoot in the last 5 years of which 22 females and 28 males. Of these, bilateral involvement was predominantly targeted, regardless of patient gender, a category followed percentage-wise by left unilateral involvement among female patients (36.36%) and right unilateral for male patients (32.14%).

Conclusions: No causal relationship was detected between gender and unilateral or bilateral impairment in children diagnosed with congenital clubfoot Varus Equin.

Keywords: clubfoot, laterality, Varus Equin

EXPLORING THE PERCEPTIONS OF FEMALE MEDICAL STUDENTS ON HPV INFECTION

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Background: Human papillomavirus (HPV) is a common sexually transmitted infection that can lead to serious health complications. Despite the availability of vaccines, uptake remains low in many countries. Female medical students may have unique perspectives on HPV, making it important to explore their knowledge, attitudes, and experiences.

Objective: This study aims to investigate the perceptions of female medical students on HPV infection, which may inform medical education and improve healthcare providers' ability to address the challenges associated with HPV.

Material and methods: The study recruited a total of 213 female medical students from three different faculties: 87 participants from the Faculty of General Medicine, 82 participants from the Faculty of Dental Medicine, and 43 participants from the Faculty of Pharmacology. Data were collected using an online questionnaire. The questionnaire was designed to assess the participants' knowledge of HPV infection and their attitudes towards HPV vaccination.

Results: Female students from the faculty of general medicine were more inclined to choose barrier contraceptive methods to prevent HPV infection (OR=2.03; 95% CI 1.12-3.68; P=0.01) compared to other options such as vaccination or periodic control. Regarding the appropriate time for vaccination against HPV, dental students considered „the beginnning of the sexual life" as the appropriate answer (OR=2.75; 95% CI 1.56-4.95; P=0.0005). Other differences between the groups referred to the correct method of diagnosis, the level of information possessed according to their own opinion and the sources of information.

Conclusions: Female medical students from different faculties showed varying levels of knowledge, attitudes, and experiences related to HPV infection. These findings suggest the need for tailored educational interventions to address gaps in knowledge and promote positive attitudes towards HPV vaccination, which may ultimately improve healthcare providers' ability to prevent and manage HPV-related health complications.

Keywords: HPV, Questionnaire, Vaccination

MANAGEMENT OF GROIN HERNIA IN THE EMERGENCY

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Background: Groin hernia repair is a common surgical procedure performed in both elective and emergency settings. While patients who undergo elective hernia repair tend to have better outcomes compared to those who undergo emergency repair, the factors that influence these outcomes are not well understood.

Objective: In this study, we aimed to compare the demographic characteristics, clinical factors, and outcomes of patients who underwent elective and emergency groin hernia repair and identify risk factors for poor outcomes.

Material and methods: This was a retrospective study conducted on 140 patients admitted between 2018-2022 in the surgical ward of the Emergency County Hospital of Targu Mures for groin hernia repair. The patients were classified into two groups based on the emergency status of their hernia: elective and emergency. The group of elective patients was randomly selected from a total of 700 cases.Demographic, clinical, and paraclinical data were compared between the two groups.

Results: Of the 140 patients who met the inclusion criteria, 70 underwent elective surgery, and 70 underwent emergency surgery. Our analysis showed several significant differences between the two groups. Patients who underwent emergency surgery had longer ICU stays ($p=0.018$) and were more likely to live in rural areas ($p<0.001$). Furthermore, patients who underwent emergency surgery were less likely to receive mesh ($p<0.001$) and more likely to undergo open surgery ($p=0.003$). Finally, patients who underwent emercency surgery had a higher ASA score ($p=0.005$).

Conclusions: Our study showed that patients who undergo nemergency groin hernia repair have a higher risk of postoperative complications compared to those who undergo elective surgery, and several clinical and surgical factors were associated with poorer outcomes. These findings highlight the importance of careful patient selection and timely intervention to optimize outcomes in patients undergoing groin hernia repair.

Keywords: Groin hernia repair, Elective surgery, Emergency surgery, Postoperative complications, ASA score

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CORRELATION BETWEEN THE PRESENCE OF LYMPH NODE METASTASES AND SOME HISTOPATHOLOGICAL PARAMETERS STUDIED IN PATIENTS WITH SURGICAL TREATMENT FOR NON-SMALL CELL LUNG CANCER

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Background: Due to its increasing prevalence and high mortality, lung cancer is a significant threat to public health. The histopathological evaluation of all patients diagnosed with non-small cell lung cancer had an essential role in diagnosing the type of tumor as early as possible, this investigation has an increased sensitivity and specificity.

Objective: The aim of the present study was to evaluate the existence of correlations between the presence of lymph node metastases and some histopathological parameters studied.

Material and methods: This retrospective descriptive study was carried out on 104 patients diagnosed with non-small cell lung cancer from the General Surgery clinical section of SCJU in Târgu Mureș. In all patients included in the study, we analyzed the results of the histopathological reports as well as their patient records.

Results: From the selected batch, an average of 7.83 ± 8.62 lymph nodes were removed, the range of values being between a minimum of 0 nodes and a maximum of 42 nodes, and the average number of invaded nodes was 0.97 ± 2.04 nodes with a minimum of 0 nodes and a maximum of 12 nodes. In patients enrolled in the study, we observe a statistically significant correlation between the number of removed nodes and tumor grading (Sig (2-Tailed) = .003) and visceral pleural invasion (Sig (2-Tailed) = .001). In the case of invaded lymph nodes, the study reveals a significant correlation with lymphovascular spread (Sig (2-Tailed) = .000) and spreading through air spaces (Sig (2-Tailed) = .022).

Conclusions: In patients with non-small cell lung cancer, the number of metastatic nodes correlates with visceral pleural invasion (Sig (2-Tailed) = .040) as well as lymphovascular invasion (Sig (2-Tailed) = .003) only in stage IA of disease.

Keywords: non-small cell lung cancer, metastatic lymph nodes, surgical treatment

THE CONTRIBUTION OF ASSISTED REPRODUCTIVE TECHNOLOGIES TO THE INCIDENCE OF MULTIPLE PREGNANCIES

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Background: A multiple pregnancy increases the risk of both maternal and fetal complications; medicine aims to prevent or detect them in early stages, in order to reduce the prematurity and perinatal morbidity and mortality rate.

Objective: The evaluation of the twin pregnancies incidence according to the obtaining method.

Material and methods: This is a retrospective study based on data collection between 01.01.2017-31.12.2021 that includes 126 female patients of reproductive age diagnosed with twin pregnancy. We evaluated the pregnancy obtaining method and had two groups: IVF and spontaneous pregnancies. We assessed maternal age, complications, gestational age, route of delivery, neonatal viability, birth weight, APGAR score and congenital malformations.

Results: Out of the 126 patients included in the study, 29(23%) achieved pregnancy through IVF, of which 21(72.41%) were between 18-35 years old and 8(27.59%) over 35 years old. 19(65.51%) of the IVF pregnancies and 79(81.44%) of the spontaneous ones associated complications. Regarding the birth route, 28(96.55%) of the IVF group comparing to 79(81.44%) of the spontaneous one delivered via caesarean-section; prematurity concerned 20(68.97%) of IVF pregnancies versus 61(62.89%) of spontaneous pregnancies. 2(3.45%) out of 58 post-IVF newborns died peripartum comparing to 5(2.58%) out of 194 spontaneously obtained ones. Regarding the birth weight, 23(39.65%) of the post-IVF newborns weighed more than 2500g at birth and 5(8.62%) of them, under 1000g. An APGAR score of 8 or more was assigned to 41(70.69%) of the IVF group newborns versus 153(78.86%) of the second group ones. Congenital malformations affected 6(8.63%) of the IVF group newborns and 3(1.55%) of the second group ones.

Conclusions: The twinning incidence is higher among spontaneous pregnancies compared to IVF ones. The study showed that there aren't significant differences regarding the risk of prematurity, low birth weight and perinatal mortality between spontaneous and IVF pregnancies. Newborns from IVF pregnancies are more susceptible to developing congenital malformations.

Keywords: multiple pregnancy, IVF, ART

BLADDER CANCER INCIDENCE AMONG YOUNG PATIENTS

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Background: Bladder cancer represents a global disease, due to potential morbidity and highly recidivant aspect, even in young patients. In epidemiologic studies on risk factors for bladder cancer, the most representative one is smoking and there is a higher prevalence for men. Also, we should distinguish the low-grade tumors from high-grade carcinoma.

Objective: The aim of this study is to investigate the incidence of bladder cancer in patients aged under 55. Besides, we would like to consider the histopathological staging, smoker/nonsmoker type and the associated comorbidities, such as: high blood pressure, diabetes and UTI.

Material and methods: A retrospective, descriptive study was conducted during January-December 2022, on a sample of 440 patients(100%), aged between 26 and 86 years old, from the Targu Mures Urology Clinic, who underwent TURB.

Results: In our study, 32 patients(7.27%) were under the age of 55, out of whom we had 8 women(25%) and 24 males(75%), considering that the main comorbidity is represented by high blood pressure (43.75%: 6.25% females, 37.5% males). Recurrent UTI should be considered, as 18.75% suffered of UTI (6.25% females and 12.5% males); also, 12.5% associated diabetes. The most common histopathological bladder cancer type was G2pT1 (34.37%), while only 3.12% suffered from invasive cancer affecting healthy surrounding tissues. Smoking remains one of the principal risk factors, accounting 28.12% of cases.

Conclusions: Bladder cancer confers a significant disease worldwide, being mostly three times higher among men than women. The main risk factor is smoking, while the most common associated comorbidity during our study was high blood pressure. Patients mostly presented non-muscle-invasive disease and 3.12% (1 out of 32) showed aggressive bladder cancer, without other associated comorbidities, so cancer may be partly explained by a higher prevalence of variant histology.

Keywords: bladder cancer, TURB, young, high blood pressure, smoking

THE PANDEMIC INFLUENCE ON THE PATIENTS ADDRESSABILITY TO THE FAMILY PLANNING OFFICE

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Background: In December a coronavirus identified as 2019 as SARS-CoV-2, in Wuhan, China has caused a pandemic of respiratory illness, called COVID-19. Due to this pandemic some essential health services have suffered because of the restrictions imposed. Among all this services also the Family Planning services suffered. The duty of family planning services is to enhance pregnancy planning and spacing, and avoid unplanned pregnancy.

Objective: To assess the situation regarding patients request to the family planning office during the COVID-19 pandemic.

Material and methods: This retrospective study was conducted in the Family Planning Office of the Clinical County Emergency Hospital in Târgu Mureş between March and June of the year of 2019 and 2020. It is based on a data collection contemplating 74 female patients of different ages who presented at the doctor's office for different reproductive health issues. We selected the patient based of the following criteria:

contraceptive counseling or following up, abortion request or post abortive care and also other reproductive health issues as infertility, pregnancy following, preconceptive counseling.

Results: Out of the 42 patients presented in 2019 between March and June, 29% were presented for abortion, 26% for contraceptive counseling, 17% for post-abortive care, 19% for other reproductive health issues and 9% for following-up the contraception.

Of the 32 females presented in 2020 among the months of March till June a percentage of 66% were presented for contraception following-up, 16% for contraceptive counseling and 18% for other reproductive health issues.

Conclusions: The months corresponding the pandemic present a decrease of patients access and presentation at the doctor's office compared with the pre-pandemic period. Also it is notable the fact that between these 2 years exists a difference also between the patients' needs for medical advice.

Keywords: COVID-19 pandemic, family planning, consequences, influence, contraception, abortion

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SYSTEMIC INFLAMMATORY MARKERS AND THE PREDICTIVE VALUE OF POOR OUTCOME IN ACUTE LIMB ISCHEMIA: A SYSTEMATIC REVIEW

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Background: Acute limb ischemia is defined as a sudden decrease in lower limb blood flow due to the embolic or thrombolytic occlusion of peripheral arteries which will ultimately lead to amputation.

Objective: To gather relevant information, Google Scholar and PubMed were the main search engines. After the establishment of the key words, exclusion, and inclusion criterias nine articles were found to be in accordance with the chosen topic.

Material and methods: The systematic review aims to schematize the inflammatory markers that show high predictive value for the prognosis and mortality of acute limb ischemia.

Results: Out of the nine studies, two analysed neutrophil-to-lymphocyte ratio(NLR), three analysed both neutrophil-to-lymphocyte ratio and platelet-to-lymphocyte ratio(PLR), one study used C-reactive protein to albumin ratio(CAR), one study analysed mean platelet level(MPL) and C-reactive protein(CRP), one analysed metalloproteinases(MMP) and neutrophil gelatinase-associated lipocalin(NGAL) and only one study analysed oxidative stress markers: malondialdehyde(MDA), ascorbic acid(AA), dehydroascorbic acid(DHA) and total ascorbic acid(TAA) and blood inflammatory markers(such as tumor necrosis factor, interleukin-6). The cut- off values were linked to mortality, amputation, or both. For NLR, the cut-off value for amputation ranged between 4.23 and 6.66 and for mortality between 4.33 and 5.57. A value higher than 136.69 for PLR was found for amputation and higher than 143.34 for mortality. Regarding CAR, the cut-off value was 3.81 for amputation. For CRP and MPV, a cut off value of 12.2 mg/dl and 9.6 fL were reported for amputation. The study regarding oxidative stress markers and inflammatory markers concluded that none of the markers showed significant changes. MMP and NAGL were found to have a time-dependent pattern with a normalisation.

Conclusions: Despite the emergence of these inflammatory markes with high predictive value, extensive studies are required to find optimal cut off values.

Keywords: Acute limb ischemia, inflammatory, markers, outcome

HETEROAGGRESSION TRAUMA IN 66-YEAR-OLD PATIENT

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Background: Heteroaggression is characterized by the fact that is directed towards external elements and it is often synonymous with an extremely painful trauma consisting of several wounds.

Objective: The following case shall seek to emphasize the rigorous care of a patient who suffered a heteroaggression trauma.

Material and methods: Surgical intervention is performed and: reduction of the right external tibial plateau fracture in a closed focus under TV X-ray control and internal osteosynthesis with 1 screw and washer; temporary fixation of the proximal epi-meta-diaphyseal fracture of the right tibia with an external fixator, lavage, suture in stratigraphic planes, sterile dressing, immobilization in a postoperative femoral-foot plaster splint. After, the removal of the external fixation device under intravenous analgesia and dressing patient's wound was performed. 3 days after, the osteosynthesis material of the right external tibial plateau was extracted, was performed the reduction of the proximal epi-meta-diaphyseal fracture of the right tibia in an open focus through an antero-lateral approach and internal osteosynthesis with a dedicated plate in "L", washing, stratigraphic suture, sterile dressings's change; immobilization postoperatively.

Results: At discharge, general condition good, patient afebrile, hemodynamically and respiratory stable, with spontaneous, physiological micturitions, with intestinal transit present, and locally without pain complaints, without local Celsius signs.

Conclusions: The patient was recommended the following: functional rest with the right lower limb in elevation; mobilization without support on the right lower limb, assisted by a walking frame or two crutches–10 weeks; the "hinged" knee brace will be kept in a fixed position (0°flexion amplitude) up to 5 weeks postoperatively; subsequently, the flexion amplitude will be increased every 10 days with an increment of 30°; thus obtaining at 8-10 weeks postoperatively a flexion amplitude of approximately 90°; calcium Nadroparin 0.6 ml 1 syringe/day-throughout the immobilization period (10 weeks); gastroprotective treatment with proton pump inhibitors, antialgic and anti-inflammatory treatment; periodic sterile dressings, removal of sutures 12-14 days postoperatively.

Keywords: heteroaggression trauma ,stratigraphic sutures ,internal osteosynthesis

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SYNCHRONOUS GIANT MESENTERIC SARCOMA AND CLEAR CELL RENAL CELL CARCINOMA

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Background: Giant mesenteric-colic space sarcoma associated with clear cell renal cell carcinoma(ccRCC). Sarcoma is a rare type of malignant tumor that develops from connective tissues.

Objective: We present a case of synchronous tumors (retroperitoneal sarcoma and right renal tumor) considered inoperable, with an indication of palliative treatment and resectable with the help of a multidisciplinary team.

Material and methods: A 60-year-old patient is referred to us from a radiology ward with a giant tumor formation occupying the entire left hypochondrium, the center of the abdomen, and the lower abdominal compartment, without organ appartenance, surrounding 280 degrees of the superior mesenteric artery, right and left colon, right ureter with grade 4 ureteral-hydronephrosis.

Ablation of the tumor formation was performed in one movement together with extended ileum resection, right hemicolectomy, descendent-recto-sigmoid resection, right nephrectomy, left adnexectomy, and cholecystectomy. Tumor size exceeds 30 cm and 9 kg.

Results: Postoperative evolution was favorable with 48 h stay in ICU and discharge on postoperative day 6, normal creatinine, and transit on cholesteatoma. Histopathological examination revealed a spindle cell sarcoma at the large tumor formation and a clear cell renal carcinoma at the nephrectomy specimen. The patient will start oncological treatment about 4 weeks postoperatively.

Conclusions: We emphasize the importance of surgical exploration in multidisciplinary teams (oncological surgery, cardiovascular surgery) of bulky retroperitoneal sarcomas, even those having contact with vital blood vessels (superior mesenteric artery, aortic artery, vena cava) since sarcomas are generally well-encapsulated tumors that allow the detachment from essential structures without sacrificing them. Surgical treatment remains the most important therapeutic link in sarcomas, sometimes being life-saving interventions in giant sarcomas that have no chance of responding to oncological treatment (radio-chemotherapy).

Keywords: Retroperitoneal sarcoma, ccRCC, multidisciplinary teams

CASE REPORT: LEVONORGESTREL INTRAUTERINE SYSTEM FOR TREATMENT OF ATYPICAL ENDOMETRIAL HYPERPLASIA

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Background: Over the past 30 years, high quality clinical studies have proven the efficiency of Levonorgestrel Intrauterine System (LNG – IUS), also known as Mirena device. There is solid evidence regarding the safety and efficiency of this method, as it is the only hormone releasing IUD that is FDA and EMA-approved that can also be used as treatment for heavy menstrual bleeding in endometrial hyperplasia and low-risk endometrial cancer.

Objective: The aim is to describe the natural history of the conservative treatment of endometrial atypical hyperplasia using LNG – IUS, for a future childbearing attempt.

Material and methods: We present the case of a 34 years old female patient with history of heavy menstrual bleeding, who was diagnosed after an endometrial biopsy with atypical endometrial hyperplasia. Total hysterectomy was indicated, but the patient declined surgery, as she was considering childbearing in the future. A Mirena IUD with 52mg Levonorgestrel was installed for 14 months.

Results: Bi-annual pelvic ultrasound was used during the follow-up and 3 months after removal a hysteroscopy was performed, revealing an abnormal endometrium with solid areas, highly suspicious for malignancy. Sharp curettage was performed in order to provide material for the histopathologic diagnosis.

Conclusions: The conservative approach for the management of endometrial atypical hyperplasia in women of childbearing age with LNG – IUS should be used with caution, because the serious rate of failure to protect against progression towards endometrial malignancy.

Keywords: Atypical endometrial hyperplasia, Hysterectomy, Levonorgestrel intrauterine system

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TOTAL KNEE ARTHOPLASTY IN SEVERE GENU VALGUM OSTEOARTHRITIS-CASE REPORT

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Background: Valgum knee deformity is a common pathology in the orthopedic sphere, representing an axial deviation of the knee in the frontal plane. It is usually classified by the degree of severity and reductibility of the deformity.

Objective: This report aims to highlight the most common causes of genu valgum in elderly patients which are trauma and deformities

Material and methods: We report the case of a 72 year old female patient who has a pathological history of a high energy trauma which led to a tibial plateau fracture. Although she underwent surgery and the fracture was submitted to internal fixation and osteosynthesis, the evolution was unfavorable towards osteoarthritis due to genu valgum. The X-ray imaging revealed a grade III valgum deformity being represented by an axial deviation greater than 20 degrees. The surgical approach for this patient consisted in total knee arthroplasty, a cemented constrained hinged prothesis having been implanted.

Results: Complete joint stability was achieved after the surgical intervention. Postoperative the patient was immobilized with a plaster cast. She presented mild pain and limited range of motion . A rehabilitation regime including physical therapy, rest and pain management drugs was prescribed.

Conclusions: Because of the severity of the deformation, adding the fact that this was an elderly patient, the recovery process was prolonged but our results showed significantly improved knee range of motion and physical ability after following the rehabilitation process.

Keywords: knee arthroplasty, genu valgum, osteoarthritis

A HIDDEN SOURCE OF ALDOSTERONE IN A PATIENT WITH SECONDARY ARTERIAL HYPERTENSION- CASE PRESENTATION

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Background: Primary aldosteronism is a curable cause of secondary hypertension occurring in 8-10% of the cases.

Objective: The purpose of this presentation is to emphasize that there are cases where the growth rate of adrenal adenomas can exceed 3mm/year. Most aldosterone-producing adenomas are less than 20 mm in diameter.

Material and methods: We present the case of 74-year-old woman with total thyroidectomy for multinodular goiter in 2016, currently in levothyroxine replacement treatment, osteopenia, hypertensive for 19 years in actual treatment with 4 conventional antihypertensive drugs. The patient is also known with moderate mitral regurgitation, dyslipidemia and overweight. In 2018, she presented for hypokalaemia (K=3,2 mmol/l) after which a CT was performed in showing normal adrenal glands.In 2020, laboratory tests showed increased levels of plasma renin (0,95 uUI/ml), serum aldosterone (41,8 ng/dl), and an increased aldosterone-renin ratio (44) without antialdosterone treatment. In 2021, a CT is performed and showed normal adrenal glands. Because of the persistence of hypokalaemia, a treatment with spironolactone 50mg/day is introduced, which normalizes the serum potassium levels. In March 2023, she presented to an evaluation accusing paresthesia in the lower limbs. Potassium levels are normal with spironolactone 100mg/day. During the admission, a CT was performed that showed a 1.2/1.5cm adenoma in the right adrenal gland and another 0.9/1.4 cm adenoma in the left adrenal gland. Further to confirm the source of aldosterone secretion, it would have been necessary to perform adrenal vein catheterization, unfortunately impossible to achieve in our country.

Results: Given the primary hyperaldosteronism with bilateral adrenal adenomas, the optimal control of hypertension, potassium, age and comorbidities of the patient and the impossibility of performing adrenal vein catheterization, we consider for conservative drug treatment with spironolactone and the monitoring of potassium levels.

Conclusions: CT of adrenal glands has some limits. Adrenal microadenomas cannot be observed at a certain size.

Keywords: Adrenal adenomas, hypokalaemia, hyperaldosteronism

THE SEROUS OVARIAN CARCINOMA, ENCOURAGING PROSPECTS OF TREATMENT - CASE PRESENTATION

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Background: Ovarian cancer constitutes the 7th most common type of cancer and the 7th most frequent cause of death in women world-wide, therefore representing a prime global health issue. Approximately 90% of primary ovarian tumors are of epithelial nature, namely ovarian carcinomas.

Objective: The aim of this presentation is to highlight the importance of correctly diagnosing ovarian carcinoma, as today's diagnostic and treatment options allow for close to perfect recovery and quality of life.

Material and methods: We present the case of a 63-year-old female patient whose MRI investigations depict peritoneal carcinomatosis with invasion of the ovaries and the appendix, ascites and nonspecific splenic nodular lesions. These findings called for an exploratory laparoscopy, that confirmed the presence of peritoneal carcinomatosis and carcinomatous epiploitis, the procedure including the drainage of the ascitic liquid and bioptic sampling for further investigations. As the suspicion of the presence of a high-grade serous ovarian carcinoma arose, the patient underwent chemotherapy that subsequently allowed for a second surgical intervention. A radical abdominal hysterectomy with bilateral adnexectomy was performed, along with adhesiolysis, omentectomy and extensive lymphadenectomy (iliac, obturatory and interaortocaval) with a favorable postoperative recovery.

Results: The final histopathological examination confirmed the diagnosis of high-grade serous ovarian carcinoma, BRCA 1 positive, stage III C (FIGO 2014). The patient has been recommended further imagistic and serologic testing, as well as PARP inhibitors treatment. The evolution of the disease has been highly appeasing, as no further complications have occurred, the MRI and CT investigations showed no metastases and no recurrences. The patient is currently alive and free of the disease. The particularity of this case is the presence of a previous malignancy, specifically breast cancer, treated in 2012.

Conclusions: The serous ovarian carcinoma represents a treatable pathology if investigated and treated properly and promptly.

Keywords: High-Grade Serous Carcinoma, Ovarian Cancer, Epithelial tumor, Gynaecological cancer

CASE REPORT: EMERGENCY SURGICAL MANAGEMENT OF UMBILICAL COMPLETE EVISCERATION WITH ABDOMINAL WALL HEMATOMA

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Background: Umbilical hernia evisceration is a rare but potentially life-threatening complication that can occur after umbilical hernia repair surgery. It requires immediate emergency management to prevent further complications and minimize mortality risk.

Objective: Our paper aims to present the surgical management of a complete umbilical evisceration in a 53-year-old male patient.

Material and methods: The patient presented at the emergency department with a complete evisceration in the umbilical region following bronchopneumonia that caused intense coughing and was admitted to Surgical Department I Tg.Mures Emergency County Hospital. The patient was surgically treated with an umbilical hernia two weeks ago. Emergency surgical treatment involved reducing the ileum content of the evisceration with no lesions present with hematoma evacuation. Abdominoplasty was performed retro-muscular with a polypropylene hernia mesh.

Results: On postoperative day seven, the patient presented a reactive secretion at the surgical incision. Surgical reintervention required the removal of the reacted and infected tissue and hernia mesh. On postoperative day six, a Vino Tech negative pressure device was applied with secondary suturing. The patient was discharged with no further complications present.

Conclusions: With prompt and appropriate treatment, the prognosis for umbilical hernia evisceration is generally reasonable. The risk of umbilical hernia evisceration can be minimized by ensuring proper closure of the hernia defect during surgery, avoiding tension on the suture line, and addressing any underlying conditions, such as obesity or chronic coughing, that may increase the risk of hernia recurrence.

Keywords: umbilical, evisceration, emergency surgery

POST-BURN SCAR MANAGEMENT ON A PEDIATRIC PATIENT : CASE REPORT

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Background: Post-burn hypertrophic scars in pediatric patients are associated with multiple complications such as limiting growth and mobility, decreased quality of life and significant psychosocial problems.

Objective: The aim of this report is to present the surgical management of post-burn scars acquired following a suicide attempt on a pediatric patient.

Material and methods: A 16-yeard-old girl, with multiple surgical interventions for burn injuries in the past, is brought to the Emergency room complaining of severe pain in her left thigh. After clinical and paraclinical evaluation, final diagnosis was : left thigh abscess accompanied by skin necrosis also at this level and multiple post-burn keloid scars on approximately 70% of body surface. Due to the hydro-electrolytic disorder and complexity of the injuries, the patient was admitted to the Pediatric Surgery Department for special treatment. In the first phase, the medical team opted for a surgical debridement followed by lavage and necrectomy at the level of left thigh in order to quickly treat the abscess. Due to the massive defect left after these procedures, a Vivano negative pressure kit was used to promote the early appearance of a smooth granulation tissue bed and improve the process of healing. Next, the wound was covered with a full-thickness skin graft harvested from the left calf over which a dressing was applied.

Results: For almost a month, the patient benefited from several interventions of excisional debridement and toileting of the post-burn wounds in order to obtain a proper healing and a decent aesthetic appearance.

Conclusions: Rehabilitation from a burn injury is a lengthy process that requires a dedicated multidisciplinary team and good cooperation of the patients. While the path is not always easy, with good support and right surgical interventions, the patients can reach their maximum physical and functional outcome.

Keywords: post-burn management, keloid scars, pediatrics

RAPUNZEL SYNDROME: CASE REPORT

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Background: Trichobezoar, also known as Rapunzel Syndrome, represents the accumulation in the stomach of various materials that are partially digested or are impossible to digest.It is a condition encountered in young patients who suffer from certain mental disorders such as trichotillomania

Objective: The purpose is to present the management of a patient that complains with digestive symptoms.

Material and methods: In this case presentation, we will discuss about 16-year-old patient who is complaining of abdominal pain, early satiety, dysphagia, dyspepsia, nausea, vomiting. During the objective examination, of the abdomen, by palpation, the presence of a large tumoral formation in the epigastric region is noted. Later, an abdominal ultrasound was performed and a stomach full of dense, compact content was noticed. To establish a diagnosis concretely, the endoscopy was performed, which highlighted the trichobezoar. An attempt was made to remove this formation of hair and various textile materials through endoscopy, but without success due to its size and consistency and the decision to remove the content surgically was made. A median laparotomy intervention began, followed by a gastrotomy and evacuation of the 10 cm long trichobezoar that had taken the shape of the stomach and extended to the duodenal level.

Results: Following the surgical intervention, the patient had a recovery period without complications and was referred to the neuropsychiatry for additional investigations.

Conclusions: The method of removal of the trichobezoar differs according to its size and consistency. If the size of the trichobezoar allows, it is removed by means of endoscopy, but in the case of an increased consistency and size of the formation, it is performed through median laparotomy and gastrotomy. Early removal of the bezoar is essential because it can produce various long-term complications that can endanger the patient's life.

Keywords: trichobezoar, gastrotomy, median laparotomy

BILATERAL NIPPLE RECONSTRUCTION AFTER MASTECTOMY

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Background: Nipple reconstruction is the last stage when it comes to breast reconstruction. The "top-hat" flap technique for reconstruction is one of the most used due to the results obtained without other complications.

Objective: The objective of the intervention is to restore the natural appearance of the breasts after mastectomy.

Material and methods: In the presented case we talk about a 46-years old patient who presented a left breast tumor formation which was debuted 4 years ago. A biopsy tru-cut is performed and shows the diagnosis of left breast neoplasm and left axillary adenopathy. After the patient underwent oncological treatment, surgery is performed through bilateral mastectomy and left axillary lymphadenectomy. The breast reconstruction was performed with a breast implant with latissimus dorsi flap and later the areola-nipple complex reconstruction was performed. For the nipple reconstruction, the "top-hat" flap technique was used, and 3 locally rotated flaps were raised. The remaining areolar defects were covered with the PTG graft harvested from the sub-umbilical level.

Results: After the intervention, the general condition of the patient was good, the results are with minimal signs of suffering, the wound is clean without inflammatory signs in the process of healing and the flap is viable.

Conclusions: By using the "top-hat" flap technique to reconstruct the nipple and take the graft for correction, a favorable result was reached to restore the breast's natural appearance.

Keywords: Breast neoplasm, Mastectomy, Nipple reconstruction, Flap technique

CHALLENGES IN TREATMENT OF ATRIAL FIBRILLATION IN CONTEXT OF AMIODARONE-INDUCED THYROTOXICOSIS: A CASE REPORT

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Background: Patients requiring amiodarone for cardiac arrhythmias can rarely develop Amiodarone-Induced thyrotoxicosis (AIT). The dysfunction can lead to serious life-threatening cardiac manifestations, up to 10% occurring in iodine-deficient regions.

Objective: We discussed the case of a 69-year-old male with history of three percutaneous interventions for coronary artery disease (CAD), and persistent atrial fibrillation (AF) who was under treatment with amiodarone for the past 3 years.

Material and methods: The patient presented in our ambulatory complaining about exertional dyspnea, palpitations, hyperhidrosis and anxiety with severe weight loss of 20 kg in the last 3 months. The examination shows that he had erythematous, hyperpigmented emaciated skin with bilateral ankle edema, peripheral pulmonary rales and irregular heart rhythm with a heart rate ranging between 130-170 mmHg. Blood test revealed increased triiodothyronine (T3)/thyroxine (T4) with a suppressed thyrostimulating hormone (TSH). In order to confirm the diagnosis, the thyroid ultrasonography reveals a hypertrophic thyroid gland.

Results: Heart rate was successfully managed with high dose of beta-blockers and diltiazem. Fortunately, despite the presence of CAD, the patient did not develop tachycardiomyopathy and was discharged without any evidence of congestion.

Conclusions: AIT is a condition associated with significant morbidity and mortality, especially in heart failure patients and management of cardiac effects can be quite challenging in these cases.

Keywords: Amiodarone, thyrotoxicosis, coronary artery disease, tahycardiomyopathy

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ELDERLY PACIENT WITH RUPTURED AAA: TIME IS OF THE ESSENCE - CASE REPORT

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Background: Abdominal aortic aneurysm (AAA) is a vascular disease discovered mostly in elderly patients. Common risk factors include smoking, hypertension, male gender, advanced age and hypercholesterolemia. The silent nature of unruptured AAAs and the absence of screening programmes cause them to rarely be detected in their early stages. In the absence of a correct diagnosis and treatment, the rupture of an AAA can result in a catastrophic emergency with a mortality rate of nearly 100%.

Objective: This case report aims to describe the successful surgical treatment of an infrarenal ruptured AAA in an elderly patient.

Material and methods: We present the case of a 70-year-old male patient who was admitted to the emergency department (ER) in Sibiu suffering from intense abdominal pain with sudden onset. A CT-angiography was performed and the patient was transferred to the ER of SCJU Târgu Mureș for further evaluation and treatment. The patient was found to have a blood pressure of 122/84 mmHg, a heart rate of 100 bpm and a decreasing Hb of 13,7 mg/dl. The CT-angiography was repeated and revealed a left-sided paraaortic high-density free fluid collection related to a breach in the posterior side of the infrarenal aortic wall, consistent with a retroperitoneal haemorrhage. The AAA was confirmed intraoperatively and the surgical team performed an exclusion of the AAA with an aorto-aortic bypass with a Dacron prosthesis. Postoperatively the patient was transferred to the Intensive Care Unit for the first 48 hours.

Results: In the postoperative period the patient had an uneventful recovery and was discharged on the 7th day following surgery.

Conclusions: Outside of a national screening programme, immediate transfer to a Vascular Surgery Department and prompt surgical intervention is the only option for increasing the chances of survival for patients with ruptured AAAs.

Keywords: abdominal aortic aneurysm, aorto-aortic bypass

PREDICTING MAXIMAL DIAMETER INCREASE IN ABDOMINAL AORTIC ANEURYSM THROUGH GEOMETRIC ANALYSIS

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Background: Abdominal aortic aneurysm (AAA) represents a permanent widening of the abdominal aorta, commonly localised at the infrarenal portion of aorta. Because of the high mortality rate among people with undiagnosed AAA, there is a marked need of identifying all the people at risk, diagnose them, keep them under observation and make certain measurements of the aneurysm, in order to prevent the rupture of the AAA.

Objective: The purpose of this study is to identify diagnostic tools that are correlated with higher maximal diameter and predict AAA progression, by analyzing the AAA geometry.

Material and methods: We conducted a retrospective study where we enrolled 62 patients diagnosed with AAA at computer tomography angiography (CTA) from Vascular Surgery Clinic base data. At CTA we quantified the common iliac bifurcation, maximal diameter of AAA, diameter of AAA neck, the length of AAA neck, as well as the angle of deviation from the median line.

Results: The mean value of maximal diameter of AAA was 6.82 cm, with mean value of common iliac bifurcation angle of 62.21, of antero-posterior deviation angle of 27.49, and an angle of deviation from the median line of 42.12. At Spearman correlation, we registered a positive correlation between the common iliac bifurcation angle and maximal diameter of AAA ($r=0.797$, $p<0.001$). Moreover, the angle of deviation from the median line are strongly correlated with maximal diameter of AAA ($r=0.633$, $p<0.001$).

Conclusions: Our results suggest that the geometry of the AAA could predict, alone or together, progression of maximal diameter, as well as the risk of rupture.

Keywords: Abdominal Aortic Aneurysm, AAA, Geometry, Neck Morphology.

SYSTEMIC INFLAMMATORY BIOMARKERS AS PREDICTOR OF ARTERIOVENOUS FISTULA FAILURE IN DIALYSIS PATIENTS

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Background: The number of patients who suffer from chronic kidney disease has increased. More and more arteriovenous fistulae (AVF) are being created for adequate hemodialysis. Unfortunately, not all of them manage to mature in order to provide a good vascular access.

Objective: The aim of this systematic review was to asseess the prognostic role of systemic inflammatory markers in AVF failure.

Material and methods: We conducted a comprehensive electronic literature search through Medline, PubMed, Embase, Google Scholar and selected the proper articles from 2010 until 2023. Studies were included if they met the criteria of evaluating a potential association between the systemic inflammatory biomarkers and the prediction of AVF failure. The relevant outcomes were considered the AVF stenosis or thrombosis, outcomes related to patency loss or all cause mortality.

Results: Forty six studies comprising a total of 266478 patients were selected. These studies collectively investigated 26 inflammatory markers. Neutrophil-to-lymphocyte ratio (NLR), Platelet-to-lymphocyte ratio (PLR), C-reactive Protein (CRP), albumin and fibrinogen were the most adressed among them. They were analysed separately or combined in 24 studies. The median cut-off values for non-maturation and AVF failure are: NLR- 4.45 , PLR-190.5 , CRP ranged from 2.07 to 14.3, albumin- 3.15 and fibrinogen- 490.5 . For thrombosis median cut-off values for NLR was 4.9 and for PLR- from 68 to 181.72. Cut-off values were also established for the worst outcome- Cardiovascular and all-cause mortality: NLR- the lowest value was 2.52 and the highest 5.83; PLR between 130.4 and 212.89 and for CRP- 2.15 .

Conclusions: Our results suggest that assessed inflammatory biomarkers could predict, alone or together, poor outcomes regarding patients undergoing Arteriovenous Fistula for Hemodialysis. These results could change the approach in treatment of AVF and further patient management.

Keywords: Arteriovenous fistula, Hemodialysis, Systemic Inflammatory Biomarkers, Arteriovenous Fistula Failure

SYSTEMIC INFLAMMATORY BIOMARKERS AS PREDICTOR OF RUPTURE RISK AND MORTALITY IN PATIENTS WITH ABDOMINAL AORTIC ANEURYSM

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Background: Abdominal Aortic Aneurysm (AAA) is a potentially life-threatening condition, characterized by the weakening and dilatation of the aortic wall, which untreated can lead to rupture and internal bleeding. Emerging evidence suggests that inflammatory biomarkers can be predictors for a poor outcome of the AAA.

Objective: The main objective of the study was to determine the predictive role of systemic inflammatory biomarkers in the outcome of patients with AAA.

Material and methods: This study is designed as a systematic review. We conducted a literature search through the PubMed and Google Scholar and selected from 2010 until 2023. Only studies that met the criteria of evaluating the association between the systemic inflammatory markers and infrarenal AAA were included. The relevant outcomes of the AAA were considered rupture, mortality, AAA progression and major adverse cardiovascular events (MACE).

Results: A total of 29 studies comprising a number of 14255 patients were selected. They evaluated the neutrophil-to-lymphocyte-ratio (NLR), platelet-to-lymphocyte-ratio (PLR), C-reactive-protein (CRP), D-dimers, N-BNP, Thrombin-antithrombin-complexes (TAT). The cutoff values were related to mortality or aneurysm progression or rupture or MACE.

For NLR the mean cut-off values for rupture are 5,8 and for mortality 5,33 with values higher highly predictive for a poor outcome. For PLR the mean cut-off value for mortality is 167,94. For CRP a value higher than 3 is associated with MACE and the mean value of D-dimers 1020.27 corelates with aneurysm growth. Single studies pointed out the values of N-BNP 67 pg/ml, TAT 7.5 µg/l, total bilirubin 8.53 µmol/l are associated with progression.

Conclusions: The forementioned biomarkers can be of high value in choosing the right clinical approach and prognostic in patients with AAA, especially in the case of NLR and PLR. The other biomarkers should be further studied.

Keywords: Abdominal Aortic Aneurysm, Open Repair, EVAR, Mortality, Systemic Inflammatory Markers

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IN-VIVO ANALYSIS OF NERVE REGENERATION USING 3D PRINTING TECHNOLOGY AND ADIPOSE SETEM CELLS AFTER SCIATIC NERVE INJURY IN RAT MODEL

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Background: Peripheral nerve injury is a common problem that can lead to long-term disability. One potential solution is the use of stem cells to promote nerve regeneration.

Objective: Our goal is to answer one question: Can nerve regeneration be obtained in 1 cm defects on the sciatic nerve in rat model? We created a biocompatible 3D printed tube made of polylactic acid (PLA) to act as a guide for nerve growth and filled it with stem cells obtained from rat adipose tissue.

Material and methods: We surgically excised 1 cm of the sciatic nerve in 20 rats and replaced the defect with a 3D-printed tube as a guide injected with rat adipose stem cells. After 12 weeks we harvested de nerve with the guide for histological examination.

Results: On the examined sections normal nervous tissue was observed inside the 3D-printed guide, surrounded by inflammatory cells (foreign body reaction) and edema.

Conclusions: Nerve regeneration represents a challenging aspect in modern medicine, and the histological aspects present in our experiment are an optimistic sign in the treatment of nerve defects with a huge potential for the future of peripheral nerve surgery.

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Keywords: Nerve regeneration, 3d printed guide, stem cell

PREVALENCE AND ADVERSE EFFECTS OF NONSTEROIDAL ANTI-INFLAMMATORY DRUG USE AMONG STUDENTS IN ROMANIA

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Background: Nonsteroidal anti-inflammatory drugs (NSAIDs) are widely used in the treatment of pain and inflammation. Some of these are over-the-counter drugs, with well-known adverse effects. There is limited information about the prevalence and utilization pattern of these drugs among students.

Objective: To explore the NSAID use among students in Romania evaluating the frequency, doses, type of NSAIDs, and adverse reaction frequency.

Material and methods: Data regarding NSAID use and lifestyle (physical activity, stress levels and alcohol consumption) both for faculty and vacation periods were collected using an online, questionnaire-based method. The questionnaire consisted of 42 items and was distributed to fellow students on social media to different student groups.

Results: 556 females (75.44 %) and 181 males (24.56 %) completed the questionnaire. The median age was 22, with an interquartile range 18 to 24 years for both genders. The ratio of urban and rural living subjects was 651 vs. 86. Most important reason for taking NSAIDs was headaches both in females (81.11%) and males (71.82%). The prevalence of adverse effects was similar in the two genders (28.77% vs. 29.83%, p=0.78), the most important being related to the gastrointestinal system (90% and 87.03% in females and males respectively). Although not statistically significant, the prevalence of adverse effects that led to stopping the treatment was considerably higher în the case of females, compared to male subjects (14.38% vs. 9.94%; p=0.13).

Conclusions: NSAIDs were used by the majority of students in our sample. Although these were generally well tolerated, a higher incidence of adverse effects that led to stopping the treatment was observed in female responders. Our results emphasize the role and urge the implementation of educational actions to limit self-medication in order to reduce misuse among students.

Keywords: NSAIDs, students, self-medication, adverse effects

ACUTE DIARRHEAL DISEASE IN CHILDREN: ASSOCIATIONS BETWEEN THE ETIOLOGY AND THE INFLAMMATORY STATUS

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Background: Present in all regions and populations of the globe, diarrheal disease is a worldwise problem, being one of the most common diseases and an important cause of death in children. The etiology of acute diarrheal disease is varied, the most frequently encountered being viral.

Objective: The main objective of this study is to identify the correlations between the viral or bacterial etiology and inflammatory status in children with acute diarrheal disease.

Material and methods: We performed a retrospective study with 108 children, aged between 9 days and 8 years, admitted to Pediatric Department of the County Clinical Hospital in Targu Mures between May 2018 and May 2022. The patients were divided according to etiology into two groups: 86 children presenting viral etiology and 22 children presenting bacterial etiology. We evaluated the correlation between the etiology and the inflammatory parameters: C-reactive protein (CRP), lymphocytes, monocytes, neutrophils, platelets, neutrophil–lymphocyte ratio (NLR), monocyte-to-lymphocyte ratio (MLR), platelet-to-lymphocyte ratio (PLR), systemic immune-inflammation index (SII), systemic inflammation response index (SIRI), aggregate index of systemic inflammation (AISI).

Results: We found that the CRP , neutrophils, monocytes, NLR, MLR, SII, SIRI, AISI were significantly higher in the bacterial group etiology ($p = 0.0002$, $p = 0.01$, $p = 0.005$, $p=0.02$, $p=0.02$, $p=0.03$, $p=0.009$, $p=0.007$). No statistically significant differences were observed between the two groups in terms of lymphocytes, platelets, PLR ($p>0.05$). Also, the study shows that the predominant etiology is viral (79.62%), while the bacterial etiology represents approximately 20.37%. Rotavirus is present in half of all subjects.

Conclusions: Given the fact that the levels of the inflammatory markers are higher regarding the patients with acute diarrheal disease of bacterial etiology, we can conclude that the inflammatory status is related to the etiology of this condition.

Keywords: acute diarrheal disease; children; etiology; inflammatory status

ASSESSMENT OF DIFFERENCES BETWEEN FEBRILE SEIZURES ASSOCIATED WITH VIRAL AND BACTERIAL INFECTIONS

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Background: Febrile seizures (FS) are the most common benign neurological disorders found in the pediatric population. It affects 2-5% of children aged 6-60 months in the United States and Western Europe, with a peak incidence between 12-18 months.

Febrile seizures occur in children, accompanied by fever ≥38°C, without being the consequence of an inflammatory disease of the central nervous system imbalance.

Objective: We aimed to evaluate the clinical and paraclinical status of patients with FS, based on etiology.

Material and methods: We performed a retrospective study over 4 years (October 2018 - October 2022), on a population of 70 pediatric patients, aged between 0-11 years, with the main diagnosis at discharge of febrile seizures. Based on the etiology, the patients were divided into two groups: the bacterial febrile seizures (BFS) including patients with febrile seizures of bacterial etiology (N=44), respectively the viral febrile seizures group (VFS) including patients with febrile seizures of viral etiology (N=26).

Results: No Significant associations were found between FS etiology, sex (p=0.46), and environment of origin respectively (p=0.79).

The BFS group represented 63.85% of all patients included in the study, with an average age of 27.5±20.07 months, while the VFS group represented 36.15%, with an average age of 26±14.75 months (p=0.0436).

In the BFS group, an absolute leukocyte value of (12.64±4.26 vs. 9.62±2.37, p=0.018) was observed, respectively percentage of neutrophils (67.85±14.29 vs. 54.74±18.93, p=0.0025) significantly increased compared to VFS. Likewise, the value of percentage lymphocytes was increased in the VFS group compared to BFS (29±19.11 vs 16.2±9.71, p=0.0007). Regarding viral markers, no differences were observed in CRP levels (p=0.11) and ESR (p=0.8).

Conclusions: A significantly increased value of leukocytes and neutrophils was observed among the BFS group compared to the VFS group, where the value of lymphocytes was predominantly higher.

Keywords: Febrile seizures, etiology, pediatric

THE IMPACT OF PREMATURITY ON THE CLINICAL EVOLUTION OF RESPIRATORY INFECTIONS

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Background: Worldwide, prematurity is considered to be the most significant determinant of morbidity and mortality among children under 5 years of age hospitalized for respiratory infections.

Objective: The aim of this study was to observe the incidence of respiratory infections in a group of prematurely born children and if there was an association between different degrees of prematurity, comorbidities, the clinical evolution and respiratory complications.

Material and methods: This is a retrospective, observational study in which were included 125 former prematures with respiratory infections , hospitalized between January 1st 2016 and December 31st 2022 in the Pediatrics 1 Department of the Emergency County Hospital of Targu Mures.

Results: Among the 125 pacients, 14% were classified in the category of extreme prematurity (under 28 gestational weeks), 36% in moderate prematurity (between 28 and 32 weeeks) and 50% in the category of late prematurity (over 32 and under 37 weeks). Of the extreme and moderate prematures, over 60% were diagnosed with pneumonia and over 20% with acute bronchiolitis. They were hospitalized mainly in a moderate and altered general condition, with pronounced functional respiratory syndrome characterized by tachypnea, intercostal retractions, dyspnea, decreased oxygen saturation and associated especially with extreme prematures (p=0,0036) known with pulmonary pathological antecedents (p=0,0038). In contrast, the late preterms were mostly hospitalized (43%) in a slightly affected general state, with the absence in 52% of cases of severe acute respiratory failure.

Conclusions: Children born at an extremely low gestational age (under 28 weeks) are exposed to the greatest risk of respiratory infections and further complications.

Keywords: prematurity, respiratory infections, extreme preterm, functional respiratory syndrome

THE PREVALENCE OF DEPRESION IN PATIENTS WITH CRONIC ILLNESS

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Background: Depression is a mood disorder that can cause a persistent feeling of sadness and the loss of interest. The common characteristics of all depressive disorders are: feelings of sadness, a feeling of inner emptiness and irritable mood. Those characteristics are accompanied by somatic and cognitive changes that can significantly affect the individual's capability to function in society. The relationship between depression and chronic illnesses is bidirectional, which means that both of them can affect each other.

Objective: The purpose of this study is to highlight some associations between chronic diseases and depression. At the same time, we wanted to use the Hamilton scale of depression to observe the existence of depression in undiagnosed patients and evaluate its degree.

Material and methods: A cross-sectional study was conducted. The study sample consists of a number of 304 people. One of the inclusion criteria was the presence of a chronic illness. Following the application of the exclusion criteria, 280 people were eligible for the study. The demographic data and the clinical particularities were recorded in a "Google Forms" type form that included 35 questions. We assessed the presence or absence of depression using the Hamilton Depression Scale.

Results: After conducting the study 91% of respondents are depressed, while only 9% of them do not show any degree of depression. The largest share of results belong to severe depression (26% of respondents). 24% of the results are classified as very severe depression, while 23% are classified as moderate depression. Only 18% of the results are classified as mild depression.

Conclusions: We concluded that the vast majority out of the 280 respondents suffer some form of depression.

Keywords: depression, Hamilton Scale, chronic diseases

THE MENTAL HEALTH OF MEDICAL STUDENTS. A COMPARISON BETWEEN MODULAR AND CLASSICAL EDUCATION

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Background: Depression, stress and anxiety are increasingly common problems in the lives of individuals, especially medical students. A causative factor is represented by the administrative changes coming from the university management, and the students having to actively adapt to them. The biggest change in recent years was the transition from classical to modular education, which overlapped with the COVID-19 pandemic.

Objective: The purpose of the study is to highlight the impact of administrative changes in the structure of the educational system, on the mental health of students and to correlate it with the level of depression, stress and anxiety using the DASS-21 scale.

Material and methods: The objective of this paper was achieved through a cross-sectional study. A questionnaire consisting of 37 questions was formulated and shared online via social media, resulting in 221 responses. The selection of questions included: demographic data, the impact of changes in the regulations on the mental health and academic performance and the DASS-21 scale. The questionnaire was completed by the students of UMFST from years III-VI, but also graduates, these being the university population that experienced both classical and modular education.

Results: After using the Chi squared test, the study has found correlations between the seven-week modules and the levels of depression ($p=0.006$), stress ($p=0.023$) and anxiety ($p=0.0001$), resulting in a preference for classical education. An association between depression levels and the sumative examination is indicated by a $p=0.004$.

Conclusions: The administrative changes come with an impact on students' mental health, resulting in higher levels of anxiety, stress and especially depression in comparison to the classical type of education. However, not all the changes were negatively received by the students as we may take in regard that all changes are difficult to cope with.

Keywords: Modular education, depression, anxiety, stress

MULTIPLE MYELOMA ADJUVANT TREATMENT

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Background: Multiple myeloma is a plasma cell disorder defined by a clonal proliferation of plasma cells resulting in the production of monoclonal antibodies and end-organ damage. The excessive accumulation can lead to various complications, such as anemia, kidney disease, weakened bones and increased risk of infection. Bisphosphonates or erythropoietin-stimulating agents (ESAs) may be used to manage bone disease symptoms or anemia. Plasmapheresis and dialysis may be used to manage kidney disease.

Objective: The aim of this study is to analyze the parameters of secondary diseases and the adjuvant treatment of multiple myeloma in patients diagnosed in the last 10 years in Department of Hematology in Targu Mures Clinical County Clinical Emergency Hospital.

Material and methods: This is a retrospective, transversal-observational study, on a group of 61 patients with multiple myeloma, diagnosed in Internal Medicine Clinic, Department of Hematology, between August 2013 and March 2023. The data was collected retrospectively from the existing documentation. We evaluated the risk factors, the treatments applied and the correlations between the values of the parameters before and after the treatment.

Results: Out of the total number of patients, 52% are women, 48% men, mean age of diagnosis was 66 years, mean overall survival was 40 months. At the time of diagnosis, 55% of the patients had IgG secretory myeloma, 18% IgA type, 11% kappa light chains, 11% lambda light chains and 5% non-secretory. 30% benefited from autologous stem cell transplant, 18% had dialysis, 39% blood transfusions, 57% received bisphosphonates and 70% antibiotic treatment. We analyzed and demonstrated the effectiveness of the treatment for anemia ($p=0.0149$, $r=0.1367$) and for the calcium level ($p=0.0463$, $r=0.3030$).

Conclusions: The statistical results confirm an improvement of the studied parameters.

With the advent of new therapies, life expectancy in multiple myeloma patients is continuously increasing, making the adjuvant therapy vital in the management of patients.

Keywords: multiple myeloma, adjuvant treatment, autologous stem cell transplant, anemia

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FEAR OF CONTACTING ANY DISEASE AMONG STUDENTS

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Background: Throughout the years of studies, in which we learn about different pathologies, we come across the question: do I also have this pathology? Because many of us, either because of stress, or because of lack of sleep, or because of meals taken on the run, we develop certain symptoms that more or less correspond to certain pathologies.

Objective: The objectives of this study are to see the impact of certain disciplines and pathologies on the students and to see if they have developed a fear of disease during the years of study.

Material and methods: The study was carried out based on the completion of a questionnaire by students wishing to participate in the study from years 5th and 6th. The questions are multiple choice and short answer type.

Results: The analysis of the answers to the questionnaire showed that the disciplines with major impact on the students are: infectious diseases, oncology, cardiology, dermatology and neurology. The answers also showed that most are afraid of not contacting infectious-contagious diseases (56% of the answers), of not getting cancer (50%), neurological pathologies (40%) or mental illnesses (34%). Also, 18% of those who answered stated that they are not afraid of contacting any disease.

Conclusions: Considering the information presented above, the study showed that among medical students, in the 5th and 6th years of study, while a small percentage of students say that they are not afraid of contacting any disease, the vast majority say that there is this fear.

Keywords: Disciplines, fear, disease.

COMPARATIVE EVALUATION OF PATIENTS WITH ADVANCED PARKINSON'S DISEASE INITIATED ON LEVODOPA-CARBIDOPA INTESTINAL GEL THERAPY IN TWO NEUROLOGY CENTERS IN ROMANIA AND SPAIN

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Background: Parkinson's disease is a complex progressive neurodegenerative pathology. In the advanced stages of Parkinson's disease, patients are no longer independent in the execution of activities of daily life, being characterized by the presence of motor fluctuations, prominent postural instability, severe disability and the presence of symptoms refractory to levodopa therapy. LCIG (levodopa-carbidopa intestinal gel) has shown a significant improvement in motor complications in the advanced stages of the disease.

Objective: The aim of the present study was to characterize and compare the profile of patients with advanced Parkinson's disease of different nationalities before initiation of LCIG therapy, at the time of initiation as well as after LCIG therapy.

Material and methods: In this retrospective study, we analyzed the demographic and clinical characteristics of a total of 177 patients with advanced Parkinson's disease who were initiated on LCIG therapy in two different neurology centers with high patient turnover: Romania (150 patients) and Spain (27 patients).

Results: The average age of initiation of LCIG therapy in the Romanian group was 63.97 ± 8.16 years and in the Spanish group it was 71.74 ± 7.85 years, with a highly statistically significant difference ($p < 0.0001$). There was also a significant difference between the mean duration of the disease until initiation of LCIG: 10.95 ± 4.43 years (Romania) and 12.89 ± 4.44 years (Spain). Comparatively, there was a statistically significant difference between the theoretical doses of LCIG (Romania, 1308.58 ± 321.41 mg vs. Spain, 1129.6 ± 514.28 mg; $p < 0.02$) and between the real doses of LCIG (Romania, 1877.44 ± 768.76 mg vs. Spain, 1268.1 ± 469.56 mg; $p < 0.001$).

Conclusions: Statistically significant differences were observed between the two groups of patients regarding LCIG therapy, these being explained by the fact that in Romania, LCIG therapy represents the first and only advanced therapeutic option, since DBS is not available or has a low availability.

Keywords: advanced Parkinson's disease, levodopa-carbidopa intestinal gel, motor complications, comparative evaluation

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INVOLVEMENT OF THE DIGESTIVE SYSTEM IN SARS-COV-2 INFECTION: MANIFESTATIONS, EVOLUTION AND PROGNOSIS

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Background: Exploring and understanding digestive damage in the context of SARS-CoV-2 infection can significantly improve the clinical diagnosis process, treatment, but also the measures to prevent and control the spread of infection.

Objective: The aim of this study was to describe the digestive manifestations of the infection caused by SARS-CoV-2 virus and to assess their influence upon the evolution of the disease.

Material and methods: We performed a retrospective study that included clinical data of 109 patients with confirmed SARS-CoV-2 infection over a period of 2 years and 5 months (April 2020 – August 2022).

Results: From a total of 109 patients (median age 64.1; 62.4% male; 37.6% female) we identified a percentage of 32.1% (35) patients as having digestive manifestations. Among these, 22.9% (8) presented symptoms such as nausea, vomiting, abdominal pain, diarrhea, 80% (28) hepatocytolysis syndrome, 31.4% (11) cholestasis, 22.8% (8) hyperbilirubinemia and 14.3% (5) pancreatitis. There were no statistically significant differences between the group of patients with digestive manifestations and the group without in terms of age ($p=0.84$) and gender ($p=0.84$). The presence of digestive manifestations was associated with a more severe form of the disease, defined by the need for ICU admission (OR: 8.15; $p<0.001$), mechanical ventilation (OR: 18.78; $p<0.001$) and death (OR: 10.34; $p< 0.001$), statistically significant. Patients with digestive manifestations had higher levels of transaminases ($p=0.0001$), ferritin ($p=0.023$), lactate dehydrogenase ($p=0.0001$) and interleukin 6 ($p=0.017$).

Conclusions: Infection due to severe acute respiratory syndrome coronavirus 2 might manifest itself through digestive damage and the presence of digestive manifestations represents an unfavorable prognostic factor.

Keywords: SARS-CoV-2, digestive manifestations, pancreatitis, intensive care unit

CORRELATION BETWEEN HISTOPATHOLOGICAL AND ENDOSCOPIC ASPECTS OF COLONIC POLYPS IN PATIENTS WITH LOWER DIGESTIVE HEMORRHAGE

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Background: Colonic polyps are a common medical condition describing a proliferation of the colonic mucosa, creating pedunculated or sessile outgrowths, that protrude inside the colonic lumen. Modern histology classifies these lesions, according to growth pattern, as serrated or adenomatous polyps (adenomas), further subdividing adenomas into tubular, villous, tubulovillous, and serrated polyps into hyperplastic polyps, sessile serrated polyps or traditional serrated adenomas. Although most polyps are benign and do not cause any symptoms or health problems, some may develop into cancer over time.

Objective: The purpose of the presented study is represented by the research on colonic polyps, which we want to analyze from a histological and endoscopic point of view.

Material and methods: This is a retrospective, observational, and descriptive study in which we enrolled patients with colonic polyps diagnosed during 2020 in the Gastroenterology department of the SCJU Targu Mures.

Results: In the current work, we have a number of 149 patients (51-women; 98-men). The mean age was 63.03 ± 12.25 years (19-86). The seat of the polyps was mainly represented by the sigmoid colon in 50 patients (33.6%), rectal follow-up in 33 patients (22.1%), descendent colon in 26 patients (17.4%), transversal colon in 20 patients (13.4%) and, finally, ascendant colon in 19 patients (12.8%). According to the histopathology classification, 81 polyps were tubular adenomas (54.36%), 19 polyps were hyperplastic (12.75%) and 9 polyps were sessile serrated (6.04%). A total of 88.6% of the patients had only one polyp. Twelve patients (8.1%) had 2 polyps and five patients (3.4%) had 3 polyps.

Conclusions: Endoscopic inspection using the NBI (narrow band imaging) technique of the colonic polyps can help us determine whether they are benign or malignant, but only a thorough histological investigation can provide an accurate diagnosis.

Keywords: polyps, colon, colonoscopy

ASSESSMENT OF MEDICATION ADHERENCE USING THE ROMANIAN VERSION OF THE MARS QUESTIONNAIRE

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Background: Although no gold standard instrument is currently acknowledged to estimate adherence to medication, Medication Adherence Rating Scale (MARS) is a questionnaire whose primary benefit lies in its simplicity of use and interpretation, which makes it a valuable tool for healthcare professionals.

Objective: We aimed to assess the level of adherence to medication using the Romanian version of the MARS questionnaire.

Material and methods: A cross-sectional observational study was performed. Responses to the MARS questionnaire were collected from 123 patients receiving chronic heart disease medication therapy enrolled at a family physician office.

Results: The median score of the MARS was 8 ± 2, with no significant difference between male and female patients (p=0.64). Less than half of the subjects ever forgot to take their prescribed medication (35%). However, only 25.2% considered themselves careless about medication (n=31). A relatively small, yet not insignificant percentage of patients stopped taking the medication when they felt better or worse (17.9% and 21.1%), and as few as 10 patients (8.1%) admitted taking the medication only when they were sick. Nearly 90% of the participants (n=110) agreed that adhering to medication could prevent illness. Only 7.3% of the subjects felt weird, like a 'zombie' on medication, and, additionally, medication made 19 of them feel tired and sluggish (15.4%). Even though one third of the respondents considered it unnatural for their minds and bodies to be controlled by medication, almost half of them had clearer thoughts on medication.

Conclusions: We consider the Romanian version of the MARS a reliable instrument to evaluate the extent to which patients adhere to their chronic drug regimen. Our findings suggest that patients had an overall satisfactory attitude towards adhering to their treatment plan. However, active measures are still needed to further improve medication adherence and health outcomes.

Keywords: medication, adherence, Medication Adherence Rating Scale, MARS

PHYSICAL ACTIVITIES AND THE REASONS INVOCATED OF REALIZING THEM

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Background: The physical activities are very important physically and mentally and that is why we must allocate time as much as we can from our life because we all wish to be healthy. Some of us are more hard workers and others less but what divides us about this subject is the motivation that makes us battle for doing it.

Objective: The objectives of this study are to see if the students do physical activities, what is their motivation to do them and what are their favorite sports/exercises.

Material and methods: The study is based on a questionnaire that includes 65 students from the 5-6 year of the University of Medicine and Farmacy George Emil Palade from Targu Mures. The questions are with multiple choices that are fitting for every kind of people.

Results: After analyzing the responses of the questionnaire the reasons why they exercise are: 84.6% to have a good state of mind, 70.8% for their health, 63.1% to maintain their shape, 41.5% to ease stressful times, 26.2% for maintaining the posture, 24.6% for lowering back pain, 15.4% for socialization. The exercises they do are: 29.2% running, 26.2% going to the gym, 16.9% aerobic, 13.8% going outside with the bicycle, 12.3% swimming, 9.2% practicing yoga, 4.6% dancing, 4.6% football and 4.6% are not making any physical activities.

Conclusions: Most of the students do physical activities and the reasons are varied, depending on the need of each one from the point of view of physical and mental health. There is also a small percentage who admitted that they never do any physical activity.

Keywords: physical activities, mind, body, health

PHYLLODES TUMOR AS A RARE FIBROEPITHELIAL LESION- HISTOPATHOLOGY IN TREATMENT APPROACH

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Background: The classification of breast tumors is continually changing as new knowledge from research is applied in clinical settings.

Objective: The purpose of the case presentation is to establish the histopathological criteria for differentiating various biphasic breast tumor types and the aggressiveness criteria for phyllodes tumors in particular.

Material and methods: We present the case of a 40-year-old female patient with a nodular lesion in the left breast's upper outer cadran. Ultrasound examination revealed the nodular mass, measuring 32/27 mm, and a lobulated appearance without satellite axillary adenopathies, BIRADS 4a. The breast biopsy showed alterations consistent with a biphasic, epithelial and mesenchymal lesion, with enhanced stromal cellularity. Surgical excision was advised.

Results: A nodular, well-defined, white, solid tumor measuring 27x24x25 mm is present on the surgically removed segment of breast tissue, which measures 45x30x30 mm. The microscopic appearance is represented by a pushing-type tumor mass with well-defined edges and biphasic epithelial and mesenchymal architecture, with minimal abnormalities at the border with normal breast tissue. It resembles a biphasic tumor, with the epithelial component being represented by numerous, elongated, partially dilated ducts with a branching, irregular lumen, delimited by two layers of epithelial and myoepithelial cells, without cytonuclear atypia. The mesenchymal component has a slightly increased cellularity, fusiform cells, somewhat overlapping but uniform nuclei, and a regulated nuclear membrane. No atypical mitoses were identified. There was a complete excision of the structure and the final diagnosis is: Benign Phyllodes Tumor.

Conclusions: The pre-operative evaluation of the lesions based on the biopsy are key components in the treatment of patients with biphasic breast cancers. To establish the final diagnosis and as the preferred course of treatment in challenging instances, surgical excision is advised.

Keywords: breast tumors, phyllodes tumor, histopathology

FROM PERNICIOUS ANEMIA TO GASTRIC ADENOMA, A JOURNEY THROUGH CARCINOGENESIS STAGES

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Background: Gastric adenomas are neoplastic polyps that usually arise in the stomach on a background of chronic and/or atrophic gastritis, which can be caused by either Helicobacter pylori or autoimmune factors.

Objective: This study aims to highlight the importance of complex evaluation of signs and symptoms suggestive for gastric neoplasia in order to avoid severe local or systemic complications and for a better understanding of the gastric carcinogenetic cascade.

Material and methods: We present the case of an 87-year-old male who presented at the hospital with bilateral lower limb edema, dyspnoea on minimal exertion, fatigue, palpitations, and sleep disorders. Initially, the patient presented with a neurological disorder, with a decreased level of B12 vitamin that improved after correction with intravenous administration, leading to a suspicion of pernicious anemia. For diagnosis, a gastroscopy with biopsy sampling was performed.

Results: At the antral level, a 0.5 cm peripyloric polypoid formation with an abnormal appearance of covering mucosa was observed at the gastroscopy. A small healing ulcer, several mucosal defects, and atrophic antro-junctional mucosa were present. The gastric body exhibited indistinct folds and pale mucosa.

The pathological evaluation showed inactive chronic corporeal gastritis associated with complete and incomplete intestinal metaplasia, neuroendocrine cell hyperplasia, and gastric atrophy. Furthermore, the results for Helicobacter pylori were negative. At the antral level, reactive foveolar hyperplasia was detected. Fragments of gastric mucosa from the pyloric junction showed neoplastic tubular epithelial proliferation, involving both the surface and the chorion. Hyperchromatic, enlarged nuclei with high mitotic activity and preserved cellular polarity were described, indicating a low-grade adenomatous dysplasia.

Laboratory tests revealed low levels of hemoglobin (8.5 g/dL), anisocytosis with anisochromia, frequent macroovalocytes, and discrete polychromasia, indicating severe anemia.

Conclusions: Gastric carcinogenesis progresses through chronic gastritis, atrophy, intestinal metaplasia, and adenomatous dysplasia. The first clinical evaluation for atrophic autoimmune gastritis may be for neurological symptoms associated to pernicious anemia. Prompt diagnostic and adequate surveillance may avoid polymorph complications of the disease.

Keywords: gastroscopy, gastric adenomas, dysplasia

A PERILOUS CASCADE: CHRONIC ALCOHOLISM, HEPATOCELLULAR CARCINOMA, AND PORTAL VEIN THROMBOSIS

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Background: Hepatocellular carcinoma is a type of cancer that typically arises in individuals with pre-existing chronic liver disease and cirrhosis. It is a significant global health challenge, with an expected incidence of over 1 million cases by 2025. One of the major risk factors for this disease is excessive alcohol consumption.

Objective: The main objective is to highlight the importance of imaging and biological surveillance in cases of advanced chronic liver disease for the early detection of complications. It is also important to emphasize the difficulties of managing cases that involve the association of hepatocellular carcinoma and portal vein thrombosis.

Material and methods: This case report presents a 59-year-old man with a significant history of chronic alcohol consumption. In February 2023, the patient presented ascites, hypoalbuminemia, anemia, bilateral leg edema, skin and scleral jaundice, and mild abdominal pain. A CT scan in March 2023 revealed an enlarged liver with a nodular contour, and multiple subcapsular nodules invading the normal tissue, leading to the diagnosis of hepatocellular carcinoma (HCC). Additionally, osteolytic lesions were observed. The patient was found to have portal vein thrombosis due to a hypercoagulable state and altered dynamics of blood flow in the portal vein, along with periportal cavernoma and esophageal varices. The patient had repermeabilization of the umbilical vein and an enlarged spleen measuring 180/55 mm due to portal hypertension. He was promptly started on oncologic therapy with sorafenib, which is the standard of care for advanced unresectable HCC.

Results: The patient is currently receiving treatment in the hospital, which includes the administration of sorafenib, diuretics, albumin, and other medications aimed at improving his condition.

Conclusions: Patients with liver conditions that have been evolving for many decades are frequently diagnosed too late, at the stage of multiple complications in a pathological cascade, which is associated with a poor prognosis, decreased quality of life, and high mortality.

Keywords: portal vein thrombosis, hepatocellular carcinoma, sorafenib

A CASE OF MYIASIS DUE TO DERMATOBIA HOMINIS

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Background: Dermatobia Hominis, also known as The human botfly is part of the Oestridae family, that lives in tropical areas, being mostly found in Africa and South America. Adults of the species lay eggs on the body of different types of blood-sucking arthropods, using a sticky secretion for adherence. Dermatobia larvae grow within the eggs and infect the host through mosquito stings or through hair follicles. The infection is called Myiasis and can be treated with Ivermectin and Moxidectin after the surgical removal of the larvae.

Objective: This paper aims to present the case of an unexpected infection with Dermatobia hominis.

Material and methods: After a business trip to Brazil, a 54-year-old male was admitted to the hospital, seeking medical advice for two furuncle-like lesions on his abdomen, that did not subside to local antibiotic treatment. The patient presented with the following associated symptoms: redness, pain, and itching sensation over the swelled areas, and two episodes of fever. After the lesions were examined, he underwent minimally invasive surgery, for what was suspected to be a lipoma. During surgery, a 5-millimeter incision was made, and two larvae were discovered, removed, and sent to the laboratory for identification. The laboratory report provided data about the two larvae extracted, which were identified as Dermatobia Hominis.

Results: The patient was diagnosed with furuncular myiasis. After the surgical removal of the larvae, he received additional treatment with Ivermectin.

The posttreatment evolution was favorable and occurred without any further complications.

Conclusions: All being said, the paper attempts to highlight the need for certain precautions when travelling to different regions of the globe.

Keywords: Dermatobia Hominis, myiasis, infection, parasite, tropical

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BORRMANN TYPE IV GASTRIC CANCER IN YOUNG ADULT - A RARE CASE REPORT

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Background: Gastric carcinoma is one of the leading causes of cancer deaths worldwide. Depending on the macroscopic aspect, Borrmann classified the gastric carcinoma into 4 types: I-polypoid, II-fungating, III-ulcerated, IV-infiltrative. B-IV type represent 10-20% of gastric cancers, it is mostly seen in man over 60 years old and has a poor prognosis.

Objective: This paper aims to highlight a rare case of a young adult who presents B-IV gastric cancer.

Material and methods: We present the case of a 32 years old male, former smoker and alcoholic, admitted to the emergency department accusing symptoms of malignant tumors manifested by weight loss (15kg in the last months), epigastric pain, heartburn and reccurent episodes of vomiting. Physical examination reveals malaise, cachexia, pale and dehydrated skin and epigastric abdominal tenderness. Labor analysis: dyselectrolytemia, high AST and GGT, hypercholesterolemia, hypertriglyceridemia, high CA 19-9. Chest-abdomen-pelvis CT shows pulmonary thromboembolism, inferior vena cava thrombosis and iliac vein thrombosis; gastrointestinal mucosal changes, mild ascites and peritoneal carcinomatosis aspect. Doppler ultrasound detected DVT; upper endoscopy: edematiated, atrophic mucosa with atypical appearance for tumor infiltration; colonoscopy: nothing relevant. Gastric biopsy expose the presence of giant discohesive epithelial cells that invaded the chorion, positive for CK7, CK AE1/AE3 and high Ki67 expression. The patient discharged without undergoing an oncological treatment. 3 months later he presented to the hospital with aggravated symptoms, he received chemoteraphy treatment, but after 2 weeks he died due to a COVID-19 infection that exacerbated his condition and caused cardiopulmonary arrest.

Results: The DVP is interpreted to be in paraneoplastic context. The results of the biopsy claimed the diagnosis of poorly cohesive gastric carcinoma stage 4, B-IV, with peritoneal carcinomatosis and transverse colon infiltration.

Conclusions: Gastric carcinoma B-IV is very aggressive and has a high rate of metastasis. The paraneoplastic syndroms can cause alarm symptoms and can reveal the presence of the neoplasm.

Keywords: gastric cancer,B-IV,paraneoplastic syndroms

THE DIFFICULTIES OF MONITORING CHRONIC KIDNEY DISEASE PATIENT- CASE PRESENTATION

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Background: Chronic kidney disease (CKD) is a progressive medical condition characterized by a gradual loss of renal function toward end-stage renal disease where renal replacement therapy is needed. The basic treatment for CKD focuses on slowing the progression of kidney damage, and with proper medical care and appropriate compliance and adherence of the patient the onset of end-stage renal disease can be greatly delayed.

Objective: This paper aims to present the case of a 20-year-old male patient hospitalized at the Nephrology Department of Mures County Emergency Hospital with neglected CKD and multiple complications.

Material and methods: The patient's past medical history revealed a congenital urogenital condition, with multiple interventions and right-side nephrectomy during early childhood and pediatric nephrology follow-up for CKD until 18 years old (eGFR 49 ml/min/1.73 m2, stage G3A, serum creatinine 2 mg/dl) at that moment. The following two years he did not benefit from any medical care until he presented at the Emergency Unit with severe asthenia, fatigue, and oligoanuria. The laboratory findings revealed highly altered kidney function (eGFR 3 ml/min/1.73 m2, stage G5, serum creatinine 21.15 mg/dl, serum urea 448 mg/dl) with all the possible complications - severe anemia (Hgb 3.8 g/dl), hyperpotassemia, metabolic acidosis, calcium phosphorus disorders, and hypoproteinemia.

Results: After correcting the acute imbalances and excluding digestive hemorrhage, renal replacement therapy (hemodialysis) was started on a temporary dialysis catheter, the patient being in a chronic hemodialysis program since then.

Conclusions: The patient's attitude and the patient-physician partnership are the cornerstones of the appropriate management of chronic disease patients. It is important to identify those factors (socio-demographic, therapy, and healthcare service related) that can lead to low adherence to therapy and non-compliance to avoid situations where the patient presents in a serious condition with a poor prognosis.

Keywords: chronic kidney disease, complications, adherence, compliance

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MULTIPLE MYELOMA: AN UNEXPECTED CAUSE OF ACUTE KIDNEY INJURY

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Background: Multiple myeloma (MM) is a hematological malignancy that consists in the monoclonal proliferation of plasma cells and the overproduction of monoclonal immunoglobulins or light chains. The involvement of the kidney in MM is very likely, at the time of diagnosis about 40- 50% of the patients have renal complications, and 20% of them may develop end-stage renal disease.

Objective: This paper aims to present the case of a 61-year-old female patient hospitalized at the Nephrology Department of Mures County Emergency Hospital with acute kidney injury (eGFR 4.14 ml/min/1,73) and the algorithm which led to the final diagnosis.

Material and methods: Previously with normal renal function, and with NSAID consumption for back pain as the only nephrotoxic factor, initially we considered this case as acute tubulointerstitial nephritis after NSAID use and specific treatment (hemodialysis) was started. The evolution of this patient was not as expected so other possible causes were investigated. The laboratory findings showed hypoproteinemia with severe proteinuria, mild anemia, and large kidney dimensions on ultrasonographic (US) scan. Completed with the chronic back pain and the age of the patient the possibility of MM was raised. Immunogram, pelvic and cranial X-Ray, serum protein electrophoresis were performed, and finally, the bone marrow examination confirmed the diagnosis.

Results: After the final diagnosis was elucidated the patient was transferred to the Hematology Department for specific treatment.

Conclusions: The onset of renal involvement in MM as severe acute kidney injury is rare, usually the kidney function deteriorates gradually. The classic laboratory findings of MM (hypercalcemia, hyperproteinemia, severe anemia) can be missing in some cases, but the age, osteo-articular pain, and large kidneys on US scan are highly suggestive.

Keywords: multiple myeloma, kidney involvement, diagnosis

ANOTHER TYPE OF BROKEN HEART: HISTOPATHOLOGICAL FEATURES IN A CASE OF PENETRATING CARDIAC INJURY.

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Background: Less than 300 grams of muscle provide the necessary blood flow for the entire body for the whole duration of our lives. Even after suffering ischemic events a big portion of the heart can remain viable and supply enough blood to the key organs and can even self-regulate to protect every part of our body.

Objective: We present the case of a 28-year-old male patient who was admitted to the IUBCvT with a 3 cm stab wound under his left nipple. Unfortunately, during the surgery, the patient presented severe hypotension and cardiac arrest, and he was unresponsive to resuscitation. The aim of our presentation was to highlight the histopathological features in a case of penetrating cardiac injury

Material and methods: A full autopsy was performed at the Institute of Forensic Medicine Târgu Mureș, Romania.

Results: The gross examination revealed a stab wound in the chest wall with o corresponding area on the pericardium, a transmural wound on the anterior wall of the right ventricle and a haemorrhagic area on the inner part of the posterior wall of the same ventricle. Microscopically, the transmural discontinuity area of the right ventricle was covered by fibrin, acute inflammation and was surrounded by wavy myocardial fibers, with exclusion of an iatrogenic postmortem dissection. The examination of the posterior wall of right ventricle revealed focal areas of haemorrhage between myocardial fibers, suggestive for a myocardial contusion. The cause of death was the haemorrhagic shock due to a penetrating cardiac injury of the right ventricle.

Conclusions: Despite its strength, while providing everything needed to survive, the heart remains vulnerable to certain factors, both internal and external, and once injured, the weight of the effects will lead us to a road with no way back.

Keywords: stab wound, cardiac injury, right ventricle

ACUTE PERITONITIS DUE TO AN EXTENSIVE INTESTINAL TUBERCULOSIS: AUTOPSY FINDINGS

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Background: Tuberculosis (TB) is still a major public health issue in developing countries. Although its main localization is the lungs, 12% of cases are extrapulmonary. Intestinal tuberculosis can be primary, caused by ingestion of M. bovis from unpasteurized milk, but most often secondary to an advanced pulmonary disease and swallowing of infected sputum.

Objective: Our aim was to highlight the histopathological features in a case of acute peritonitis due to an extensive intestinal tuberculosis.

Material and methods: A full autopsy was performed at the Institute of Forensic Medicine Târgu Mureș, Romania.

Results: We present the case of a 57-year-old female patient, with a diagnosis of pulmonary tuberculosis since 2000, who suddenly died from intestinal perforation. At gross examination, the lungs consisted of multiple scattered tan granulomas, some of the larger ones with central necrosis. An ileal perforation was found associated with diffuse grey-white structures on the intestinal serosa. Microscopically, the examination of the lung tissue revealed granulomatous inflammation consisting of nodular structures with characteristic caseous necrosis in the center, surrounded by epithelioid macrophages, lymphocytes, plasma cells and rare Langhans giant cells. The examination of the intestinal wall also revealed an extensive granulomatous inflammation with the same appearance as in the lungs. The inflammation was found throughout the entire thickness of the intestinal wall and was associated with areas of necrosis, and abundant acute inflammation on the surface of the serosa. The final diagnosis was acute peritonitis due to intestinal TB and extensive pulmonary TB.

Conclusions: Intestinal TB is quite a rare entity that can appear within or without context of pulmonary TB. Untreated aggressive pulmonary TB can lead to intestinal disease which can evolve towards obstruction, strictures, and perforation. It's important to raise awareness of the condition as it appears clinically with non-specific symptoms and can easily mimic other intestinal pathologies like Crohn's disease and carcinoma.

Keywords: acute peritonitis, intestinal tuberculosis, ileal perforation

CUSHING'S SYNDROME IN A PATIENT WITH RATHKE CLEFT CYST-A CASE REPORT

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Background: A Rathke Cleft Cyst (RCC) is a rare congenital benign intrasellar mass, that usually develops in the early stages of fetal growth, believed to have its origins in the residual structure of Rathke's pouch. Due to its location, RCC has a compressive effect on the pituitary gland, thus, being able to affect the patient's hormonal levels.

Objective: The primary objective of this case report is to underline that, even if asymptomatic in most cases, RCC can sometimes be associated with accentuated ACTH secretion, generating symptoms which might hinder the correct diagnosis.

Material and methods: We report the case of a 44-year-old patient who complained of the typical signs and symptoms of ACTH hypersecretion: weight gain with thin arms and legs, a round, "moon-like" face with increased fat at the base of the neck, and several hypertensive episodes as well as hirsutism. The patient was diagnosed with Cushing's syndrome after various endocrinological assessments. Additional investigations revealed no abnormal activity or morphological changes in the adrenal glands. After a severe headache, a cranio-cervical MRI revealed an 8 mm cystic mass in the anterior lobe of the pituitary gland, which confirmed the diagnosis of a Rathke cleft cyst, rather than a pituitary adenoma.

Results: After the draining and excision of the cyst, the patient's condition improved radically, the resection succeeding in ameliorating most symptoms.

Conclusions: When dealing with a Rathke cleft cyst, the symptoms may be misleading and the route to diagnosis an intricate one. Thus, when handling a patient with symptoms related to the adrenal glands, but with no apparent success in identifying them, a cranio-cervical MRI should be considered in order to rule out the existence of a pituitary mass.

Keywords: Rathke cleft cyst, MRI, Cushing's syndrome

MANAGEMENT OF SEPTIC STATE IN A PATIENT WITH SPINA BIFIDA

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Background: In most cases, people who suffer from spina bifida develop motor disorders and must undergo timely rehabilitation, while recurring infections are also extremely common.

Objective: We present the case of a 68-year-old female patient, known with spina bifida, and a history of aortic valve replacement, left coxarthrosis, transtibial left leg amputation due to gangrene and amputation of all right leg toes. Furthermore, she had to undergo supra trigonal cystectomy with augmentation cystoplasty and artificial urinary sphincter implantation, resorting to self-catheterization 5 to 6 times a day.

Material and methods: She presented to the emergency room, measuring a fever of T = 38°C, visible signs of inflammation in the right amputation stump, a small circular infected wound, with purulent discharge. Blood and wound culture tests were performed, and the patient was then admitted to the Internal Medicine ward, where she was put on antibiotic treatment with Amoxicillin 4g/day. Lab results came out representative for the infective syndrome, with a CRP of 202, and severe leukocytosis. Moreover, the blood and wound cultures both tested positive for the same germ: S. Agalactiae, Amoxicillin sensitive. Infectiology consult recommended 12g/day of Amoxicillin through syringe pump, deciding the lesion on the surface of the abutment was the point of entry. Meanwhile, Amoxicillin blood levels were kept under surveillance. Upper leg X-ray showed no signs of osteitis or osteomyelitis, while the CT scan excluded any sign of arteriopathy, but showed a deep wound collection, thus orthopaedic surgery decides to transfer the patient for wound dressing, and evacuation of the collection. Cardiology concluded an ECG within normal parameters, except for a major left bundle branch block; doppler echocardiography revealed a mild interventricular septal dyskinesia, with preserved global systolic function, while transesophageal echocardiography ruled out endocarditis.

Results: Accordingly, the patient was cleared for transfer to the Orthopaedic Surgery ward for intervention.

Conclusions: Although the evolution was favourable, achieving the reduction of the inflammatory syndrome under antibiotic therapy, the wound collection would have persisted, had she not been sent in for surgery, increasing the risk of endocarditis and further complications.

Keywords: spina bifida, sepsis, inflammatory syndrome

CAROTID BODY TUMOR - A RARE TUMOR IN A RARE LOCATION. A CASE REPORT

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Background: Paragangliomas of the carotid body are rare neuroendocrine neoplasms arising from the chief cells of the carotid body. Along with glomus jugulare paraganglioma, carotid body tumors represent 80% of head and neck paragangliomas.

Objective: We present the case of a 65-year-old female with a history of aorto-coronary by-pass accusing dyspnea and fatigue at medium efforts, vertigo, and pain in the left cervical region, who was diagnosed with a paraganglioma of the left carotid body.

Material and methods: After the tumor was characterized by using ultrasound and computed-tomography techniques, it was surgically removed. Prior to the intervention, the patient signed the informed consent. Consecutively, the specimen was sent to Pathology Department. After the specimen was macroscopically described, it was processed using standard histological and immunohistochemical techniques.

Results: Macroscopic assessment revealed a 31x23x20 mm nodular mass with elastic-firm texture, on cut-section with yellowish, homogeneous aspect. Microscopic analysis showed a partially encapsulated tumor with variable architecture and biphenotypic aspect: the dominant cell population was composed by round-ovoid cells organized in islands or nests with variable shapes and sizes, bordered by fibrous septae with variable thickness. The second, minor population was represented by sustentacular cells, located at the periphery of the nests and islands. Immunohistochemically, tumor cells expressed neuroendocrine markers (synaptophysin, chromogranin, neuron-specific enolase and CD56), but they were negative for pankeratin, tyrosine-transcription factor, thyroglobulin and calcitonin, and Ki67 index was approximately 1%. Sustentacular origin of the second population was confirmed by positivity for S100 protein.

Conclusions: Even though it is a rare tumor, carotid body paragangliomas can be relatively easily diagnosed. If the risk for local recurrence can be established depending on the integrity of the resection, tumor malignancy can only be established once the tumor is proved as metastatic. While most of these tumors remain benign, a small percentage develop metastases to lymph nodes, bones and lung.

Keywords: Paraganglioma, Carotid body tumor, Biphenotypic tumor

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IMPACT OF CROHN'S DISEASE ON A YOUNG PATIENT'S QUALITY OF LIFE

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Background: Crohn's disease is an inflammatory bowel disease (IBD), which can affect any part of the gastrointestinal tract, with increasing incidence worldwide. Perianal fistulizing Crohn's is an aggressive disease phenotype that can have a substantial impact on patients' quality of life.

Objective: Our aim is to highlight Crohn's disease complexity of manifestations, comorbidities and complications.

Material and methods: We present the case of a 18-years old male patient, diagnosed with Crohn's disease since childhood. He was refered to the Gastroenterology department complaining about multiple watery stools per day and significant weight loss. During the hospitalization, several tests were made in order to establish the progression of the disease. Blood tests revealed hypochromic microcytic anemia (Hb 9 g/dl). Upper digestive endoscopy revealed hiatal hernia of 5 cm and reflux esophagitis class A Los Angeles. Inferior digestive endoscopy highlighted aphthoid ulcerations, stenosis of the bowel at splenic flexure level and a perianal fistula. A sample was collected in order to perform the bacteriology exam, later confirming presence of Escherichia Coli and Proteus mirabilis. An IV contrast CT-scan was performed, pointing significantly swollen terminal ileum, descending, sigmoid colon and rectum. The scan also showed stenotic strictures at the level of the sigmoid colon and the rectosigmoid junction . The patient was under biological treatment with Adalimumab.

Results: The anemic syndrome appeared because of chronic bleedings due to the ulcers and fissures present on the colon mucosa. The abscess-complicated fistula was provoked by the inflammation that can spread through all the layers in the bowel wall.

Conclusions: Crohn's disease is a very complex and challenging pathology to treat. Despite the fact that there are international treatment guidelines for IBD, therapy should be patient-centered. It is important to keep in mind that complications might occur and therapy should be adjusted according to treatment response.

Keywords: Crohn's disease,perianal fistula, hypochromic microcytic anemia

IDENTIFYING THE CAUSE OF A COMMON ANTERIOR CERVICAL DISCOMFORT SENSATION

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Background: Primary hyperparathyroidism is most frequently caused by parathyroid adenoma (PTA), which usually affects women and is characterized by hypercalcemia.

Objective: We present the case of a 64-year-old female patient who complains of mild compressive sensation in the anterior cervical region, dyspnea and fatigue.

Material and methods: The patient is known to have nephrolithiasis and essential arterial hypertension. The routine blood tests indicate euthyroidism, elevated level of calcium (12.4 mg/dl), low level of phosphate (2.6 mg/dl) and alkaline phosphatase level above the normal (231U/l). The determination of PTH level indicated increased value (309.4 pg/ml) and a low-normal level of 25OHvitD. Thyroid ultrasonography revealed in the left lobe an oval, nodular, hypoechoic mass (1.26/1.26/4.38 cm) surrounded by a hypoechoic halo, with peri- and intranodular vascular signal, that scintigraphically (99mTc) corresponds to a metabolically active parathyroid adenoma. DXA measurement of the forearm noticed a T-score of -4.6 SD and -2.5 SD at the spine.

Results: The patient undergoes an upper left parathyroidectomy. The histopathological report reveals a large parathyroid gland of 8 g. Predominant chief cell proliferation with minimal pleomorphism, confirms the diagnosis of PTA. The postoperative evolution was favorable.

Conclusions: There are several possible causes of neck discomfort sensation and a parathyroid pathology should not be missed when evaluating the patient.

Keywords: parathyroid adenoma, parathyroidectomy, neck discomfort

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THE KNOWLEDGE LEVEL OF LAY PEOPLE IN PROVIDING FIRST AID IN EMERGENCY SITUATIONS

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Background: First aid is a crucial skill that everyone should possess, regardless of their age or occupation. By providing immediate treatment it can save lives, prevent further injury and maintain basic life support.

Objective: We conducted a questionnaire-based cross sectional study on people without medical studies. The questionnaire contained 32 items of which 19 were first aid-based with two to five choices and one correct answer. The first aid items included: CPR, unconscious patient, upper airway obstruction, hemorrhages, fractures, burns and rescuer safety. A total of 172 people responded. 75% (n=129) were females and 33% (n= 56) attended at least one first aid course. The majority were aged 18 – 24 (31%, n=53).

Material and methods: Based on the first aid items we calculated the scores for each participant. The highest score obtained was 79% (15 of 19 correct answers) and the mean was 49,33% (SD=12.38). 87% (n=150) of participants knew the purpose of an AED, 71% (n=122) knew how to assess the consciousness state, and 78% (n=134) knew how to manage an unconscious breathing patient. Only 10% (n=17) knew how to correctly recognize a cardiac arrest, 15% (n=26) how to manage a non-breahing patient with upper airway obstruction, and 23% (n=39) how to manage a life-threatening bleeding. As expected, those who attended at least one first aid course scored higher compared to the others (p=0.0002).

Results: The knowledge level of lay people in providing first aid is low. A better understanding of this topic could help prevent serious injuries or death in emergencies, therefore there is an urgent need for implementing educational actions.

Conclusions: The knowledge level of lay people in providing first aid is low. A better understanding of this topic could help prevent serious injuries or death in emergencies, therefore there is an urgent need for implementing educational actions.

Keywords: lay people, first aid, emergencies

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