18th edition

CONGRESSIS

International Congress

for Medical Students and Young Doctors

3rd - 7th of May

IAȘI
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2023
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CME ACREDITATION

Fundamental Sciences
Internal Medicine
Surgery
Behavioural and Social Sciences

ABSTRACT BOOK

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CONGRESSIS

3rd - 7th of May 2023

The 18th International Congress for Medical Students and Young Doctors

Iași, Romania | 03rd – 07th of May 2023

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Dear colleagues and guests,

We live in a world where the most basic things that we use every day were only a dream years ago. This is also the case of medicine, which amazes both doctors and patients each year with new possibilities, new chances, new treatments that one could only dream of in the past.

As medical students, we are indeed the future of the medical science and it is of the utmost importance that we are as involved as possible in everything that represents healthcare: innovation, continuous development, compassion, integrity, always having in mind the welfare of the human being next to us. This is just a small part of what we are eager to promote at **CONGRESSIS – The International Congress for Medical Students and Young Doctors**.

Congressis reaches this year its 18th edition. With gratitude towards the contributors and the participants, the Medical Students' Society Iași and the local Organizing Committee are delighted to invite you to the 18th edition of the International Congress for Medical Students and Young Doctors – Congressis which will be held from the 3rd to the 7th of May 2023, in Iași, Romania!

As we consider that making medicine accessible and comprehensible for everyone should be an ambition of every medical practitioner, this year's motto of Congressis is meant to inspire you to "**Unravel the Mystery of Science**".

With every edition that passes, our desire to be among the best reaches new heights, this is why we will make it our goal to continue the marvellous achievements of the past editions in order to emphasize the great impact of this event in the scientific community. By promising to offer the best in the fields of internal medicine, surgical and fundamental sciences, bioethics and behavioural studies, we invite you to be a part of the magic we will bring together at Congressis 2023!

Don't hesitate any longer and seize the opportunity of socializing with other young healthcare professionals from all over the world! Join us and let's make these 5 days of medical excellence a memory we will forever keep in our minds!

Best regards,

The Organizing Committee

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Non-Surgical

CASE REPORT
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Fundamental and Social Sciences

ORIGINAL STUDY / RESEARCH
Fundamental and Social Sciences

ORIGINAL STUDY / RESEARCH
Internal Medicine

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CASE REPORT

Neurosurgical

A case of extensive thrombosis in a cancer patient: LIVE(R) OR DIE

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Co-author/s: Andreea-Teodora Lungu
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Background:

Hepatocellular carcinoma represents one of the most common type of liver cancer. Chronic liver disease caused by cirrhosis or hepatitis virus infection has a contributing factor to its development. Although these patients are at high risk for thrombosis, the presence of a thrombus in the right cardiac chambers represents an infrequent, serious condition which requires immediate care.

Case Presentation:

We present the case of a 76-years-old woman admitted to the Cardiology Clinic of the "Saint Spiridon" Hospital Iasi with resting dyspnea, fatigue, bilateral leg swelling, increased volume of the abdomen and jaundice during the last two weeks. She is known with severe hepatic pathology and her medical history presents hepatic cirrhosis of mixed etiology(toxic and VHB), esophageal varices grade III, secondary thrombocytopenia and hepatic encephalopathy in 2018.
The clinical examination revealed collateral circulation, SaO2=86%, RR=22/min, BP=87/59mmHG, HR=105/min, a systolic murmur grade III and abdomen increased in volume due to ascites. The results from the laboratory show moderate anemia, hepatic cytolysis and increased D-dimers. A large, well-defined echogenic mass (100/30mm) in the right atrium, which consequently affected the right ventricle, is revealed through transthoracic echocardiography. Smaller fragments protruded into the pulmonary artery as well. The origin of the thromb is the inferior vena cava, as suggested by the subcostal view. There were revealed numerous heterogenous hypervascular liver nodules, suggesting the diagnosis of HCC. By highlighting the chambers of the heart, the transthoracic echocardiography also showed the blocked inflow and outflow in the right ventricle.
Although trombolysis was attempted, the evolution was unfavorable and the patient suffered sudden cardiac arrest.

Conclusions:

There are severe complications in hepatocellular carcinoma, one of them being the risk of thrombosis.
Even if uncommon, the migration of the thrombus from the inferior vena cava to the pulmonary artery should be taken in consideration.

Keywords:Thrombus,Hepatocellular carcinoma,Inferior vena cava

A case of human Dirofilaria repens: A clinical and radiological challenge

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Background:

Dirofilariosis is a vector-borne parasitosis caused by filarial nematodes of the genus Dirofilaria. In humans,who represent accidental hosts, dirofilariosis is mostly caused by Dirofilaria repens and Dirofilaria immitis. Dirofilaria repens typically causes human subcutaneous and ocular dirofilariosis, which is characterized by a migrating (pre-)adult worm that causes mild inflammatory reactions and/or nodules.

Case Presentation:

A 61-year-old female patient presented herself to the General Hospital C.F PLOIEȘTI with a mildly tender nodule of two-months duration on the right temporal side of the scalp. The patient had a history of a swelling of the right side of the temporal region, initially with the skin appearing erythematous, which subsequently subsided with the intake of antibiotics. Shortly after it was followed by the appearance of the nodule, gradually extending to the right orbital region. The primary differential diagnosis was a sebaceous cyst.

By ultrasound examination, the nodule was oval and of regular shape with well-defined but jagged and fuzzy outer contours. The inner contents of the cyst appeared hypoechoic. Inside the nodule there were clear internal echoes with linear winding hyperechoic textures with visible spontaneous writhing movement, indicating the presence of a live worm. On Color Doppler examination there was no sign of internal or polar vascularisation, the blood vessels being present at the periphery of the parasitic cyst wall. These characteristics allowed the attribution of the origin of the nodule to a helminthic origin, probably Dirofilaria.

Anti-Dirofilaria antibody levels were measured, which have proven a positive result.

Surgical removal of the parasite revealed the presence of a round worm with filiform appearance. PCR identified it as D.repens.

Conclusions:

A clinical nonspecific skin nodular lesion may conceal an unexpected and unsettling diagnosis of subcutaneous dirofilariosis. The definitive treatment of Dirofilaria infection in humans is surgical removal of the subcutaneous nodules.

Keywords: Dirofilaria repens, dirofilariosis, ultrasound examination

A convention between a viral infection and an autoimmune anemia ?

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Background:

The autoimmune nature of anemia is quite rare, but the systemic manifestations it can cause endanger in patient's life. The result of an autoimmune hemolytic anemia (AIHA) are specific antibodies to certain antigens on the surface of the red blood cells, which subsequently cause it’s destruction. The causes are not fully known even to this day, that is why we classify AIHA into primary (idiopathic) and secondary.

Case Presentation:

We present the case of a 85-year-old patient , with a personal history of cardiovascular and gastroenterological diseases focusing on the infection with hepatitis C virus (HCV) , who was sent to The Third Medical Clinic of the Saint Spiridon Hospital for dyspnea on small efforts and edema of the lower limbs. The blood count revealed a severe macrocytic hypochromic anemia with Ht = 2.2 mil/mm3 and the vitamin B12 level of 97pg/ml among increased levels of total and direct bilirubin ,which pointed to sclerotegumentary jaundice. The evaluation of a blood smear showed blast cells with anisocytosis and macrocytosis. The first intention was to carry out injectable treatments with vitamin B12 and folic acid to correct severe deficits, but they did not significantly improved the patient's condition.
Treatment failure and the presence of megaloblastic anemia leaded to the performance of a Direct Coombs Test, in which the result was positive and helped to confirm the diagnosis of AIHA.

Conclusions:

Beginning from the classic manifestations of a heart failure and with the help of paraclinical investigations, which are still in continuous evolution, it was possible to establish a definite diagnosis. The patient's personal antecedents should not be forgotten either, considering the possibility that AIHA appears as a severe manifestation of hepatitis C virus .

Keywords: autoimmune hemolytic anemia, hepatitis C virus, Coombs test

A double edged sword:Chron’s disease and cANCA associated vasculitis

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Background:

Crohn's disease is a chronic inflammation of the intestinal mucosa, which usually affects the terminal ileum and the perianal region, being included in the inflammatory bowel disease. The vasculitides are a heterogeneous group of conditions typified by their ability to cause vessel inflammation with or without necrosis. The antineutrophil cytoplasmic antibody (ANCA)-associated vasculitides (AAV) are a collection of relatively rare autoimmune diseases of unknown cause, characterised by inflammatory cell infiltration causing necrosis of blood vessels.

Case Presentation:

A 50-year-old man without relevant medical history was admitted for nasal obstruction and skin rashes. The clinical exam showed fever, maculopapular rash and oliguria. Laboratory results identified an inflammatory syndrome, impaired kidney function (creatinine=5.8 mg/dl, BUN=40 mg/dl), urinary protein excretion of 1,3 g/24 h and microscopic hematuria. The PR3-ANCA titre was 360 U/L (normal: <7U/L). Chest X-ray did not reveal pathological changes. Otolaryngological examination detected multiple ulcerations of the lingual mucosa. Renal ultrasonography was normal, but anatomopathological examination showed "crescents", but without immune deposits. Skin biopsy identified leukocytoclastic vasculitis of the small vessels with neutrophilic infiltrates. Granulomatosis with polyangiitis was diagnosed based on clinical, laboratory and histological findings. The patient was treated using Prednisolone, Cyclophosphamide and plasmapheresis. After 10 days of treatment, the patient had diffuse, persistent abdominal pain and diarrhoea stools (10-12/day); Clostridium difficile testing resulted negative. Colonoscopy was performed: anatomopathological examination confirmed the Crohn’s disease diagnosis. After 5-amino-salicyclic acid, probiotics, enteral and parenteral nutrition, the clinical and biological evolution was improved.

Conclusions:

The association between Crohn's disease and cANCA's vasculitis is rare. Interdisciplinary management represents the gold standard in approaching cases like the one presented.

Keywords: Crohn’s disease, vasculitis, cANCA

A STORY BEHIND AGEING: THROMBOLYSIS IN A SENIOR AFTER ACUTE ISCHEMIC STROKE

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Background:

Thrombolysis by intravenous administration of the tissue activator of the recombinant plasminogen is the only treatment method "in the therapeutic window" recognized in the international protocols, including Romania within the National Program for Intervention in Acute Ischemic Stroke. Alteplase is currently the only thrombolytic agent that has proven its effectiveness through international clinical trials, with a real impact on the degree of post-stroke disability or the risk of death. At the same time it is a therapeutic method that is not without risks, the main risk being the hemorrhagic one, a risk that is major in the case of elderly patients with high blood pressure, diabetes mellitus and severe stroke. The benefit-risk ratio must be evaluated in each case separately, the neurologist's decision being an individual and often a difficult one.

Case Presentation:

The authors present the case of a 98-year-old hypertensive patient, in treatment with felodipine and propranolol, who presents himself in the emergency service 30 minutes after the onset of a complete motor deficit in the left limbs, facial asymmetry and dysarthria. The craniocerebral CT rules out hemorrhage and establishes the ASPECTS score of 10. The NIHSS score at the presentation was 18. Meeting all the eligibility criteria, clinical and paraclinical, in the absence of absolute or relative contraindications and with the consent and signature of the patient's daughter, the iv thrombolysis protocol was started, which was carried out without adverse events. The NIHSS score at the end of the thrombolysis was 10 and respectively 8 at 24 hours post-thrombolysis, which was maintained as such at 7 days. The craniocerebral CT at 24 hours maintains the ASPECTS score of 10.

Conclusions:

These scores confirm the postthrombolysis favorable clinical and imagistic evolution of an elderly patient, age not being an exclusion condition for thrombolysis.

Keywords: Stroke, Thrombolysis, Elderly

A two-chambered heart's survival against all odds

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Background:

The idea of a two-chambered heart is nearly unthinkable in a human being, a complex malformation generally incompatible with life. The association of the common atrioventricular canal with a single ventricle is a rare pathophysiological entity, that calls for the coexistence of adaptative malformations in the pulmonary circulation for the survival of the patient.

Case Presentation:

We present the case of a 21 year old female patient, referred for cardiological evaluation for dyspnea. Her medical records mention a pulmonary hypertension diagnosis, confirmed through cardiac catheterization, due to a congenital heart disease. The patient was hemodynamically stable: BP=105/65 mmHg, HR=60 bpm, showing cyanosis, hypocratic fingers and an audible systolic heart murmur. She was under treatment with 125mg Bosentan b.i.d. The ECG showed signs of right heart strain. The echocardiography showed a vestigial interventricular septum, partially absent-a functional single ventricle with double ejection pathway; common atrioventricular canal, an atrioventricular valve with three cusps and severe regurgitation. A hyperechogenic structure was seen near the atrioventricular annulus. There was a significant discrepancy between the patient's good clinical condition and the underlying pathology. We concluded that the single atrium is probably the right atrium, with a tricuspid valve, and wide interventricular communication. The structure near the annulus was probably the vestigial mitral valve. We have raised the question of adding a phosphodiesterase inhibitor to the treatment, but ultimately decided against it. Given the context, we considered opportune to investigate further towards proving the current hypothesis: that stenosis is present in the pulmonary circulation, which can decelerate the disease's evolution. The patient was referred for a pulmonary computed tomography and we are currently expecting the results.

Conclusions:

Complex congenital malformations are rare entities to which early detection is essential. Besides surgical correction and optimal medical therapy, compensatory malformations seem highly significant to the patient's survival.

Keywords: Congenital malformation, Pulmonary hypertension, Interventricular septum

Alcohol vs. endoscopic variceal ligation in chronic alcoholic patients with decompensated cirrhosis

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Background:

Esophageal varices are enlarged veins in the submucosa of the esophagus due to increased portal hypertension, the most common manifestation of decompensated cirrhosis. These veins may rupture and produce significant refractory upper digestive hemorrhages. Because stopping the bleeding is the goal of treatment, endoscopic variceal ligation (EVL) is the first choice for these patients.

Case Presentation:

We present the case of a 55-year-old man diagnosed with alcoholic cirrhosis in 2021 after an episode of upper gastrointestinal bleeding (UGIB) manifested by severe hematemesis. According to his medical history, he was chronically dependent on alcohol. An endoscopic examination revealed bleeding from the esophageal varices. Therefore, EVL was performed, with favorable evolution during hospitalization. However, despite the doctors' recommendations, one month into the treatment, the patient gave up medication and returned to his old habits of drinking alcohol. Over the course of the last two years after his diagnosis, he had four episodes of UGIB, each followed by another EVL procedure, with the bleeding intervals getting shorter with each episode. The recurrent bleeding episodes were thus caused by non-adherence to treatment and resumption of alcohol consumption.

Conclusions:

Patient adherence to treatment after ligation is critical to prevent recurrence of UGIB. If the patient does not adhere to the treatment plan, the situation will develop to his disadvantage and the complications caused by liver decompensation will worsen, and even cause life-threatening consequences.

Keywords: Esophageal variceal bleeding, Endoscopic variceal ligation, alcoholic cirrhosis

Alport Syndrome – One family and three outcomes

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Background:

Alport syndrome (Haemorrhagic Familial Nephritis) is a rare X-linked disease caused by the COL4A5 gene mutations. Typically, the patients present with hematuria, progressive renal failure, sensorineural hearing loss and ocular abnormalities. However, due to its genetic variability and multiple symptoms, it is often diagnosed by chance and/or too late.

Case Presentation:

We present the cases of three siblings: a 23 year old young man, a 17 year old boy and a 12 year old girl. The patients have a strong family history of renal disease. The older brother presented at the Emergency room with acute headache and hypertension, having a fortuitous discovery of Chronic Kidney Disease (CKD) stage 5, starting hemodialysis immediately at the age of 22. The younger boy showed an impure nephrotic syndrome (persistent hematuria). The kidney biopsy showed Focal Segmental Glomerulosclerosis with IgA deposits and he started corticotherapy, with partial response, which in evolution required the association of cyclosporine and cyclophosphamide. The girl showed persistent microscopic hematuria. Her kidney biopsy showed Minimal Change Glomerulopathy. The younger siblings were classified as stage 1 of CKD. After genetic testing, the COL4A5 gene mutations have been confirmed in the three patients and the extended family.

Conclusions:

All the patients have Alport syndrome, but presented with different symptoms. COL4A5 gene mutations have phenotypic heterogeneity and genetic testing should be considered in patients with a positive family history for progressive renal failure for accurate diagnosis and appropriate treatment.

Keywords: Alport Syndrome, COL4A5 gene mutations, Chronic Kidney Disease

An atypic case of coronary vasospasm

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Background:

Coronary vasospasm is defined as a transitory decrease in the lumen diameter of an epicardial coronary artery large enough to generate objective evidence of myocardial ischemia in the absence of any significant increase in blood pressure or hearth rate. It is the most common diagnosis among ischemia with no obstructive coronary artery disease, regardless of genetic and geographic variations. However, this pathology is not always easily diagnosed.

Case Presentation:

We present a case of a 67-year-old male who was transferred from a pneumology clinic to a cardiology clinic for additional investigation and treatment. His complaints were atypic anterior chest pain, progressive dyspnea, chills with fever and cough with muco-purulent expectoration.
On admission to the cardiology clinic the pacient was already diagnosed with interstitial pneumonia, atrial fibrillation, cronic hearth failure and cronic smoking. The relevant information discovered in the history were that this brother died of a cardiovascular condition and that he is a cronic smoker with no other documented pathological antecedents.
On primary survey, his general condition was altered, hearth rate of 70 bpm with a blood pressure of 130/80 mmHg and non-pulsatile peripheral arteries, although hemodynamically stable. The pacient had an ECG done with negative T waves present in all derivations except aVR with the ones in the precordial derivations of an amplitute of 1,6mV below the normal axis. The ecocardiogram showed a possible pressence of chronic pericarditis.
On secondary survey, taking both the clinical and the paraclinical investigations into account, the suspicions were: stroke, myocarditis, pericarditis and Takotsubo cardiomyopathy. To exclude the stroke, the patient did a coronarography and the diagnosis was coronary vasospasm in the anterior descending artery teritory.

Conclusions:

This case illustrates the importance of a thorough differential diagnosis starting with the most commun and widely used investigation of the cardiovascular system, the ECG.

Keywords: coronary vasospasm, progressive dyspnea, negative T waves

An unusual cause for an elevated CA 19-9 marker

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Background:

Pulmonary cancer has the highest mortality rate trough neoplasia worldwide but until now there is no serum biomarker recommended to be tested. Carbohydrate antigen CA 19-9 is a mucin glycoprotein antigen, isolated for the first time in 1979 from colorectal carcinoma. High levels are found in approximately 70-80% cases of pancreatic cancer but it can also be used for the diagnosis of other malignancies

Case Presentation:

We present the case of a 75-year-old patient with recent medical addresses for weight loss and dry cough with an onset of approximately 3 years ago. These symptoms have been investigated by a pulmonary computer tomography which did not reveal any potentially malignant lesions. Biochemically, an inflamatory syndrom and high levels of CA 19-9 were detected. For this reason, a digestive neoplasm was suspected but the investigations revealed lithiasis and vesicular adenomyosis. Laparoscopic cholecystectomy was performed but after two months the patient complained of right hemithorax pain and the CA19-9 levels were still elevated. The pulmonary CT was repeated, revealing diffuse condensations and osteolysis of 7th right rib. A right thoracotomy was performed with rib resection and lung biopsy revealing an infiltrate with tumor cells suggestive for large cell lung adenocarcinoma

Conclusions:

The presented case confirms the fact that CA 19-9 marker can indicate not only a digestive neoplasia but also the presence of a broncho-pulmonary cancer, therefore the clinician should not limit the investigations only to the bilio-digestive level but thoroughly and completely in correlation with the clinical picture of the patient.

Keywords: CA 19-9 biomarker, pulmonary cancer, cell lung adenocarcinoma

Ashman’s Phenomenon or Ventricular Ectopic Beats?- The significance of differential diagnosis

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Background:

Ashman’s phenomenon is an aberrancy of conduction of the ventricle that follows a short R-R interval preceded by a long R-R interval. The origin of the QRS complex is above the atrioventricular node and not in the ventricular myocardium that being the reason why it looks like a left or right bundle branch block. The cause is the refractory period of the ventricular myocardium, which is directly related to the length of the prior R-R interval.

Case Presentation:

A 67-year-old female known with grade 1 essential hypertension, permanent atrial fibrillation and without any chronic medication was presented to the emergency room with the following complaints: productive cough, palpitations, fatigability, and severe dyspnea starting with 3 days prior. Clinical examination revealed irregular cardiac sounds, rales on both pulmonary areas at the basal level, with an oxygen saturation of 93%. A complete blood count and a biochemical profile indicated an inflammatory process, severe hypokalemia, hyperglycemia and hyperuricemia. The chest X-ray displays interstitial pneumonia and mild pleurisy in the costophrenic angle. The transthoracic echocardiogram reveals that all four chambers of the heart were dilated, with abnormal regional kinetics. On the electrocardiogram, atrial fibrillation was diagnosed; in addition, two QRS complexes imposed a complex differential diagnosis between ventricular ectopic beats and Ashman’s Phenomenon. In this case, an appropriate diagnosis was made. Therefore, the proper treatment was indicated. Treatment with digital is not indicated in patients with ventricular ectopic beats due to the bathmotropic effect of this drug.

Conclusions:

Frequently, patients are subjected to unnecessary additional investigations because of diagnostic errors based on the surface electrocardiogram. This case report emphasizes the importance of differential diagnosis between Ashman’s Phenomenon and intraventricular conduction disturbances or ventricular ectopic beats that are commonly present among patients and which imply a different therapeutical approach.

Keywords: Ashman’s phenomenon, conduction disturbances, ventricular extrasystole

Atrial Fibrillation in the Presence of Congenital Heart Disease: Diagnosis and Treatment

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Background:

Atrial fibrillation (AF) is the most common type of cardiac arrhythmia. The classic symptoms include fatigue, shortness of breath, palpitations, dizziness, chest pain, or in some cases it can be asymptomatic. The association of this condition with other cardiovascular diseases is very frequent.

Case Presentation:

A 48-years-old woman with a history of moderate aortic regurgitation was admitted for high blood pressure values, fatigue on exertion and palpitations. Clinical exam revealed arrhythmic cardiac sounds, presence of a systolic heart murmur in intercostal space IV-VI with irradiation at the carotid arteries, non-palpable femoral arteries bilaterally, blood pressure value of 195/130 mmHg and ankle brachial index value of 0,54 for the right limb and 0,46 for the left limb. ECG performed in emergency room showed AF with rapid ventricular response which decreased after administration of 5 mg of metoprolol iv. Thoracic x-ray stood out for rib notching. Transthoracic echocardiogram showed biatrial dilatation, bicuspid aortic valve which associated calcifications and stenosis, severe aortic regurgitation and ascending aortic ectasia. Coronarography demonstrated the presence of normal coronary arteries and the aortography showed a blockage of the contrast substance at the level of the ascending aorta. 3D thoracic computed tomography established the diagnose of coarctation of the aorta. The therapeutic management involved anticoagulants, antihypertensive medication and surgical evaluation.

Conclusions:

The association between AF and congenital heart diseases (CHD) involves increased risk of thromboembolic events. Surgical treatment was required to correct congenital defects and to improve symptoms.
Life expectancy in patients with CHD increased in the last years because evolution of diagnostic methods and treatments. Still there is an increased number of patients diagnosed in late adulthood with congenital defects that can be surgically corrected.

Keywords: atrial fibrillation , CHD, anticoagulants

BIG HEART, ALWAYS A BIG PROBLEM

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Background:

Hypertrophic cardiomyopathy is defined by the presence of increased left ventricular wall thickness that is not solely explained by abnormal loading conditions and it is most often caused by mutations in sarcomere genes. Hypertrophic cardiomyopathy often goes undiagnosed because many people with the disease have few, if any, symptoms and sudden cardiac death is the most devastating manifestation.

Case Presentation:

We present the case of a 66-year-old female who has addressed to Institute of Cardiovascular Diseases Iași for progressively aggravated dyspnea and fatigue while exertion associated with chest pain. Her personal pathological history included mild hypertension, and her family history revealed a first-degree relative with sudden cardiac death.
The clinical examination identified pluriorificial systolic murmur grade IV/VI, without signs of pulmonary or systemic congestion. Paraclinical investigations discovered an elevated NTproBNP and creatinine serum levels. The electrocardiogram revealed signs of left ventricular hypertrophy, with a Sokolov Lyon index of 50, R wave in aVL lead of 17 and QS complexes in V1-V2 with ST-segment elevation of 2 mm. The transthoracic echocardiography illustrated a concentric thickened left ventricle with preserved ejection fraction, with severe obstruction of the outflow tract and severe mitral regurgitation with systolic anterior movement, suggestive for hypertrophic cardiomyopathy. The diagnosis was completed by a transesophageal echocardiography, and the coronary angiography showed coronary and peripheral arteries stenosis.
Under diuretic, beta-blocker and antiplatelet treatment, the evolution was favourable, without resumption of symptomatology. The patient was addressed for cardiovascular surgery for Ao-coronary bypass, septal myectomy and mitral valve plasty.

Conclusions:

The particularity of this case derives from the fortuitous discovery of an important cardiac pathology (hypertrophic obstructive cardiomyopathy complicated with severe mitral regurgitation, that associate significant coronary lesions) on a patient in apparent good health. Assessment of the risk of sudden cardiac death is of paramount importance, being a major challenge for the managing physicians.

Keywords: OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY, SUDDEN CARDIAC DEATH, SEPTAL MYECTOMY

Binodal Dysfunction in a Patient with Possible Lev-Lenègre Disease

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Background:

Binodal dysfunction (binodal disease) is a condition characterized by the simultaneous presence of SND and atrioventricular conduction disturbances. Mutations in the SCN5A gene, which encodes the alpha subunit forming the pore of the cardiac sodium channel (Nav1.5), have been found to underlie multiple inherited arrhythmic syndromes, including long QT syndrome, Brugada syndrome, SND, and Lev-Lenègre disease. The role of SCN5A mutations in progressive cardiac conduction disease or Lev-Lenègre disease is clearer, given the important role of Nav1.5 in the specialized cardiac conduction system.

Case Presentation:

A 58-year-old patient without any medical history complained of repeated syncope, palpitations, and fatigue. Transthoracic echocardiography did not reveal any pathological findings; the electrocardiogram showed sinus bradycardia and bifascicular block (right bundle branch and left anterior hemiblock). Therefore, a 24-hour Holter ECG examination in seven leads was performed. It showed paroxysmal atrial fibrillation with a predominantly rapid ventricular rate during the active period, alternating with junctional rhythm and sinus bradycardia with first-degree AV block during the passive period. Additionally, monomorphic ventricular extrasystoles with a bigeminy rhythm on a bradycardic background were registered.

The repeated episodes of atrial fibrillation accompanied by periods of sinus bradycardia, sinus pauses, junctional escape rhythm, bifascicular block (indicative of Lev-Lenègre syndrome), and intraventricular conduction disturbances suggest binodal disease. Considering the patient's repeated syncope and binodal dysfunction, it was decided to implant a permanent DDDR cardiac pacemaker with an adaptive rate (Class IB indication).

Conclusions:

The particularity of this case lies in the absence of cardiovascular risk factors and cardiotoxic medication that could have caused binodal dysfunction, suggesting that a possible diagnosis is congenital degenerative Lev-Lenègre disease. This cardiac conduction disease manifests as progressive slowing of electrical conduction through the atria, atrioventricular node, Hiss bundle, Purkinje fibers, and ventricles, accompanied by an age-related degenerative process, in which fibrosis affects only the cardiac conduction system.

Keywords: Sinus node disease, Binodal disease, Syncope

Blue Rubber Bleb Nevus Syndrome: A Diagnostic and Therapeutic Challenge-Case Report

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Background:

Blue rubber bleb nevus syndrome (BRBNS), a rare genetic condition, causes the development of abnormal blue blood vessels (blebs) in various organs, including the skin and gastrointestinal tract. It is caused by a fetal genetic mutation, usually diagnosed in childhood, but also occurs in adulthood.

Case Presentation:

This case features a 46-year-old male recently diagnosed with BRBNS. At the age of 4, his mother accidentally injured his angiomata in the oral cavity, causing fulminant bleeding, resulting in two surgical attempts of hemostasis before successful treatment. In his 40s, the patient wanted to undergo a rhinoplasty procedure, but during the preoperative check-up, he was informed he couldn't be intubated, due to a high risk of injuring the angiomata oral cavity. The patient had iron deficiency anemia with a positive obscure bleed test and after a colonoscopy examination, small lesions were found in the transverse colon. However, the first clinical sign leading to the suspicion of BRBN syndrome was the nevi on the dorsal surface of his palms and soles, interpreted by a dermatologist as Kaposi. A panendoscopy with PillCam COLON 2 video-capsule and a complete examination of the digestive tract was performed, revealing oropharyngeal lesions, and multiple gastric and small intestine blue lesions. There were signs of bleeding in the gastric and jejunal regions. Based on the tests performed and the physician's prior experience, a diagnosis of BRBNS was established, and confirmed by cutaneous biopsy.

Conclusions:

BRBNS is a rare disorder with various clinical features, including bleeding, anemia, and skin lesions.
Diagnosing BRBNS is demanding, requiring a high level of suspicion. Early detection and proper management are critical to prevent life-threatening complications, such as massive bleeding and organ damage.

Keywords: Blue rubber bleb nevus syndrome, vascular malformations, gastrointestinal bleeding

Budd Chiari Syndrome -a challenge in the differential diagnosis of classical cirrhosis

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Background:

Occlusion of the hepatic outflow tract(inferior vena cava(IVC) and hepatic veins) is a defining feature of the rare, potentially fatal condition known as Budd-Chiari syndrome (BCS). A myeloproliferative disorder is the most frequent underlying prothrombotic risk factor. Due to the fact that it is a relatively uncommon entity in medical practice and shares symptoms with classic cirrhosis, diagnosing errors are likely to appear.

Case Presentation:

We present the case of a 41 years old female with no history of ethanol consumption and a non-smoker. She was complaining of diffuse abdominal pain that was worse in her upper abdomen, increase of abdominal volume, hyperchromic urine and important physical weakness. Clinical examination indicated jaundice, ascites and hepatomegaly. Laboratory investigations revealed increased values of direct and total bilirubin, GGT, ALT/AST, AF and platelets. Peritoneal fluid analysis identified an increased amount of proteins and glucose, Rivalta test positive and negative Koch bacillus culture. Imaging explorations showed specific changes in cirrhosis. The diagnosis was decompensated hepatic cirrhosis. But some questions remained unsolved, including the etiology, the reason for the increased number of platelets, the explanation for the positive Rivalta test, and the cause for the high proteins in the ascites fluid. Hemochromatosis, Wilson's disease, hepatitis B as well as autoimmune diseases were excluded as etiologies following specific investigations.
The patient was prescribed low sodium diet, diuretics and hepatoprotective drugs, but evolution in time was not favorable.
Following a CT scan and a Doppler ultrasound, IVC thrombosis was found so the correct diagnosis could be made. Anticoagulant therapy was unsuccessful, necessitating surgical intervention including venous shunt and liver transplant.

Conclusions:

In BCS, clinical and biological non-specific factors might lead to delayed or incorrect diagnoses and treatment. Once the diagnosis is established, the administration of an appropriate treatment (surgical or radiological) can have a relatively good prognosis.

Keywords: Budd Chiari Syndrome, liver cirrhosis, thrombosis

Can it get any worse? The other face of the treatment in systemic lupus erythematosus

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Background:

Systemic lupus erythematosus (SLE) is a chronic autoimmune disease with multisystem involvement that causes inflammation in connective tissues. Despite its unknown etiology, several factors play a crucial part in the etiopathogenesis of this ruthless condition. Numerous pathogenic autoantibodies have been identified, but regardless of this and the clinical symptoms, the diagnosis of SLE can be problematic. The management of this disease is settled by the organ involved and despite several agents that are proven efficacious, the treatment does not lead entirely to a decrease in morbidity and mortality risk.

Case Presentation:

A14-years old female patient, known with SLE presents to the ”Sfânta Maria” Hospital Iași with intense pruritus on post-herpes-zoster lesions, some of them healed and some covered with hemorrhagic crusts, distributed on dermatomes C2-C5. Clinically, we identify Cushingoid facies, multiple purple stretch marks on both flanks, and also on the breasts, and Raynaud’s phenomenon on both hands. We performed investigations and the complete blood analysis displayed microcytic hypochromic anemia, fraction C3 and C4 of the complement slightly reduced and anti DNA ds IgG antibodies positive. Further, we objectify the absence of the inflammatory reaction and hepato-renal function within normal limits. In this context, we managed to diagnose her with herpes zoster in the right cervical-brachial region, SLE without renal suffering, iatrogenic Cushing syndrome, and deficiency anemia. The treatment consisted of Acyclovir oral and local applications, Sideral active, Liv52, and continuation of chronic treatment for the underlying disease with Prednisone, Imuran, Omeprazole, and Calcium lactic.

Conclusions:

The complications of SLE are defined by the disease itself and by those due to the treatment, which will support infection with trivial or opportunistic germs. If decades ago the prognosis was reserved, nowadays not only is the diagnosis established earlier, but also the new therapeutic possibilities give the hope that the disease can be contained.

Keywords: Systemic lupus erythematosus, Herpes-Zoster, Iatrogenic Cushing Syndrome

Cancer follows no rules: the challenge of a bilateral breast carcinoma

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Background:

Breast cancer is the most common cancer among women, representing 24.5% of all tumors. The molecular diversity divides breast cancer into four main subtypes: luminal A, luminal B, basal-like and HER2-positive. As the presence of HER2 leads to a higher risk of metastatic disease, the HER2-positive subtype is considered to be a more agressive form compared to the luminal B subtype with HR-positive/HER2-negative, which spreads slower.

Case Presentation:

A 73-years-old female presented to the Regional Institute of Oncology with bilateral breast tumors and suspicious bone lesions. CT scan showed tumor masses in both breasts and bilateral axillary lymph-nodes, as well as multiple lesions in the bones. The pathological examination revealed two different types of carcinoma: luminal B-like/HER2-negative (right breast) and HR-negative/HER2-positive (left breast). A bone scintigraphy and a bone biopsy confirmed the bone metastases and their origin: the HR-positive/HER2-negative carcinoma in the right breast. Due to the fact that the more aggressive subtype was locally advanced, she underwent neoadjuvant chemotherapy with anti-HER2 treatment with pathological complete response in the left breast and residual disease in the right breast, bilateral modified radical mastectomy, palliative external radiation therapy. Currently she is continuing anti-HER2 treatment and endocrine therapy.

Conclusions:

Two biologically different tumors developed simultaneously is rare and the presence of metastatic lesion strongly recommends biopsy in order to correctly stage the disease and decide the treatment course for both tumors.

Keywords: bilateral breast cancer, luminal B, HER2-positive

Celiac disease and Hashimoto's thyroiditis – late onset of a rare autoimmune association

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Background:

Autoimmune thyroiditis (AIT) may be associated with several other autoimmune determinations like pernicious anemia or vitiligo, which are more frequent and well defined; however, there is less data on the association with the celiac disease (CD). In absence of typical clinical symptoms this association may be overlooked, as in the case we present.

Case Presentation:

Female pacient, aged 64, with three recent episodes of persistent diarrhea and weight loss, having negative bacteriologic and imagistic investigations (gastric endoscopy with antral biopsy, colonoscopy, and abdominal CT). The pacient was oriented to the Endocrine Department for hypothyroidism associated with severe dyselectrolyemia. On admission she presented asthenia, hypoanabolic syndrome (BMI pf 17.5 kg/m2) and inferior limb edema. Biological data confirmed autoimmune thyroiditis with hypothyroidism (TSH=27 µUI/ml, fT4=0.7 ng/dl, ATPO >1000 UI/ml, and ATg >3000 UI/ml), inflammatory syndrome, severe vitamin D deficiency (<3 ng/ml), and severe metabolic disturbances (hypoalbuminemia, hypokalemia, hyponatremia, hypocalcemia, and acidosis). Markers for digestive neoplasia and NET were negative. Other investigations revealed osteoporosis and profound venous thrombosis with decreased tolerance to cumarinic anticoagulants (INR 7.32) which imposed heparin therapy. Celiac disease was suspected, sustained by positive antigliadin antibodies. Patient refused duodenal biopsy. Substitutive LT4 treatment, vitamin D supplementation and gluten-free diet was started, with rapid and persistent improvement of the general status and biological data.

Conclusions:

Undiagnosed CD associated with AIT may determine severe metabolic disturbances due to the vicious circle of malabsorption. Low LT4 absorption impose attentive substitution dosage. Most guidelined do not recommend systematic search of CD in patients with AIT however, since, as in our patient, CD may be paucisymptomatic and/or with late manifestation, making it useful to search in patients with metabolic disturbances.

Keywords: Autoimmune thyroiditis, Osteoporosis, Venous trombosis

Cerebral Metastasis in a Triple Negative Breast Cancer

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Background:

Triple-negative breast cancer (TNBC) is an aggressive subtype of breast cancer that accounts for approximately 10-20% of all breast cancer cases. It is characterized by the absence of three receptors, estrogen receptor (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER2), which limits treatment options. TNBC is not responsive to hormone therapies or drugs that target HER2, leaving chemotherapy as the mainstay of treatment.

Case Presentation:

We present the case of a 39-year-old woman who was admitted to the hospital with a personal history of uterine fibroids. She was diagnosed with a neoplasm of the right breast based on clinical examination, imaging and biopsy.
The ultrasonography and CT imaging revealed clear signs of a right malignant tumor mass in the patient's right breast, along with multiple adenopathies. Further core biopsy confirmed the presence of an invasive carcinoma with a Nottingham grade of 3. Subsequent histochemistry testing led to the diagnosis of triple-negative breast cancer. The patient underwent neoadjuvant chemotherapy for a period of 5 months followed by surgical intervention in the form of a radical mastectomy. In the excision piece, metastases of the invasive carcinoma were observed and the radiotherapy was quickly started.
After undergoing an MRI examination, the presence of cerebral metastases was confirmed, and the patient was treated with cerebral SBRT, resulting in a partial response. Palliative chemotherapy was initiated, and WBRT was recommended. However, after 6 months, the patient returned to the clinic with symptoms of cranial hypertension caused by carcinomatous meningitis. The patient was treated symptomatically to relieve cerebral edema and palliative medication was continued.

Conclusions:

This case emphasizes the tumor heterogeneity and aggressive behaviour of triple negative breast cancer. Although complete response is associated with a better outcome, some tumor clones have primary resistance, associated with rapid tumor progression.

Keywords: TNBC, Cerebral Metastasis, Carcinomatous Meningitis

Challenges in the Management of Relapsed Mantle Cell Lymphoma

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Background:

Mantle cell lymphoma (MCL) is an aggressive form of non-Hodgkin's lymphoma that arises from mature B cells. Despite advances in treatment, MCL remains a difficult disease to manage due to its unique genetic and molecular profile that can make it resistant to both conventional chemotherapy and novel treatments

Case Presentation:

We present the case of a 73-year-old male in a second relapse of a stage IVB mantle cell lymphoma. After being diagnosed at the age of 69, the patient administered chemoimmunotherapy by the Nordic protocol, maintaining the response for two years, when he initiated indefinite treatment with the Bruton kinase inhibitor Ibrutinib. He relapsed again and initiated third line treatment with Lenalidomide, which he administered for five days. He presented to the emergency room and was admitted due to altered general condition, oliguria and dehydration. Laboratory tests indicated leucocytosis with lymphocytosis, moderate anemia and thrombocytopenia, dyselectrolytemia, an increased value of creatinine, lactate dehydrogenase and uric acid. The initial evolution was favourable under aggressive hydration, alcalinization, diuretics, allopurinol, supportive measures. Given that one of the suppositions raised was of an acute renal tubular necrosis by direct toxic mechanism, the patient was also given corticotherapy. Later the patient developed pancytopenia and inflammatory syndrome. Despite use of Filgrastim, specific antimicrobial prophylaxis, the patient developed acute mixed pulmonary edema and succumbed.

Conclusions:

The management of patients with mantle cell lymphoma remains challenging. Clinicians must carefully balance the benefits and risks of these treatments and closely monitor patients for toxicity. Treatment with Lenalidomide in relapsed/refractory patients imposes great risks as it is associated with severe complications that may have similar clinical and biological features. Acute kidney injury may be caused by a direct mechanism but may also more frequently be the manifestation of a life-threatening tumor lysis syndrome which necessitates prompt and intensive treatment.

Keywords: mantle cell lymphoma, Lenalidomide, acute kidney injury

Clinical and Surgical Limitations of CHDs in an underdeveloped country

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Background:

Double-Outlet Right Ventricle (DORV) with pulmonary atresia is a rare and complex Congenital Heart Defect (CHD), in which both the aorta and the pulmonary artery exit through the right ventricle, but the pulmonary artery is completely blocked (atresia). This leads to serious health complications due to inadequate oxygenation of blood. In this type of pathological association, underdeveloped countries can show surgical and clinical limitations when it comes to treating the patient and finding the exact cause of the pathology.

Case Presentation:

We present the case of a late preterm newborn with intrauterine growth restriction, with a prenatal suspicion of complex CHD and hypoplasia of the corpus callosum. Postpartum the confirmation of DORV and pulmonary atresia were confirmed using echocardiography and CT angiography, followed by the initiation of prostaglandin E1 treatment needed to keep the ductus arteriosus open. Cranial ultrasonography confirms the intrauterine suspicion of hypoplasia of the corpus callosum and highlights the existence of grade I/II intraventricular hemorrhage in cystic resorption associated with hydrocephalus. Dysmorphic features presented by the patient (microcephaly, narrow forehead, short neck with pterygium colli, bilateral clinodactyly and symmetric syndactyly for the second and third digits) in association with CHD raised the suspicion of a genetic syndrome. Multiplex Ligation-dependent Probe Amplification (MLPA) was performed on our patient for copy number changes (CNCs) of 41 subtelomeric regions using SALSA MLPA P070 Subtelomerase Mix 2B probemix, the results being normal, resulting in the need for a more thorough genetic test. Thus, the patient needed to be kept and cared for in the NICU until the clinical and nutritional status was optimal for the surgical procedure.

Conclusions:

DORV and pulmonary atresia is a rare and complex pathology, have many clinical and surgical limitations in an underdeveloped country, due to the unavailability of a right-sized shunt and the lack of sensitive genetic testing.

Keywords: DORV, Pulmonary Atresia, MLPA

Complete Obstruction of the Brachiocephalic Trunk in Takayasu's Arteritis

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Background:

Takayasu's arteritis is a rare form of vasculitis, predominantly affecting the aorta and its main branches. It implies a possible loss of circulatory supply to the extremities and critical organs, as vessel wall inflammation can lead to thickening, fibrosis, stenosis, and thrombus formation.

Case Presentation:

A 55-years-old female with cardiovascular risks (dyslipidaemia and chronic smoking), known with neurological pathologies (epilepsy under treatment since 2007, non-progressive cerebral meningioma of the 4th ventricle), was recently diagnosed with Takayasu's arteritis in an active form, treated with Prednisone and Azathioprine. CT confirmed a complete occlusion of the brachiocephalic trunk at its origin and a moderately-severe stenosis of left subclavian artery (60-70%). The patient was admitted to the Cardiovascular Institute of Iasi with rapid and irregular heartbeats, paraesthesia of the upper limbs and decreased tolerance to effort with anterior thoracic pain, non-anginal characteristics (onset 1 year ago, progressively worsening in the last 6 months).

The patient was hemodynamically stable with a good general state. 150/100 mmHg and 115/80 mmHg of the left and respectively right arm, with no abnormal heart or lung sounds, a systolic murmur of the left subclavian artery. A palpable pulse in all areas of interest, with a pulse wave delay felt on the right hand, compared to the left, with no leg oedema or varices. The laboratory parameters were suggestive of dyslipidaemia. Non-invasive investigations displayed normal parameters. Coronarography showed no significant lesions. A percutaneous transluminal angioplasty was performed to place a pharmacologically active stent at the level of the left subclavian artery with good results.

Conclusions:

The patient's circulatory supply of the brain and right upper limb is entirely done by the left-sided branches of the aortic arch. Efforts were made to maintain and support the existing circulation and regular follow-ups were recommended to observe the evolution of Takayasu's disease.

Keywords: Takayasu arteritis, Vasculitis, Percutaneous Transluminal Angioplasty

Diagnostic and treatment challenges in a rare pathology of the pediatric patient

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Background:

Argininosuccinic aciduria is a rare genetic disorder defined by deficiency of argininosuccinate lyase (ASL), one of the enzymes of the urea cycle, leading to excessive accumulation of nitrogen compounds in the form of hyperammonemia. The central nervous system is mainly affected in this inherited autosomal recessive disease, the symptoms including vomiting, eating refusal and a progressive state of lethargy which may eventually evolve to coma.

Case Presentation:

We report the case of a child aged 3 years and 7 months admitted to the hospital with severe hypokalemia and hypophosphatemia. The clinical exam revealed pale skin, brittle hair, systolic heart murmur 2/6, but no signs of hyperammonemia; she had feeding difficulties with prolonged meal times (around 1 hour) and small portions accepted. Her medical history includes argininosuccinic aciduria diagnosed at the age of 6 months, protein calorie malnutrition, structural epilepsy and mild intellectual disability.

Given the context of hypokalemia, the electrocardiogram indicated ST segment depression. The immediate approach consisted in administration of intravenous Potassium chloride, Magnesium sulfate and Glycophos after which the EKG and the potassium levels have returned to normal. Afterwards, the patient underwent a consultation for a gastrostomy.

Hypokalemia and metabolic acidosis may be associated with argininosuccinic aciduria without an apparent cause or as a side effect of the chronic administered medication, in this case the ammonia-scavenging drug Sodium benzoate and Topiramate. For following therapeutic recommendations, the patient will adress the hepatic transplantation department.

Conclusions:

At the moment, taking into consideration the metabolic and neurologic impairment, the available treatment options are limited. Argininosuccinic aciduria has to be approached in a multidisciplinary manner, this rare genetic disease respresenting a challenge in the management of the pediatric patient.

Keywords: argininosuccinic aciduria, hypokalemia, ammonia-scavenging drug

Diagnostic Criteria and Challenges in Identifying Haissaguerre Syndrome: Clinical Perspective

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Background:

Early repolarization (ERP) is a commonly finding in medical practice, typically with a benign character and no clinical significance. However, certain forms of ERP can lead to malignant ventricular tachyarrhythmias with fatal potential, and this association is also known as Haissaguerre Syndrome. Idiopathic ventricular fibrillation in a young patient with a structurally normal heart represents a challenge in terms of diagnosing the underlying cause of this manifestation.

Case Presentation:

A 29-year-old patient, with no significant personal medical history, suffered an episode of hemodynamically intolerant ventricular fibrillation that was successfully converted to sinus rhythm by external electrical shock. The patient was referred to the Institute of Cardiovascular Diseases from Iași for diagnostic and specialized treatment. The patient's family history did not include cases of sudden cardiac death. Clinical examination of the patient indicated the presence of short episodes of palpitations. Surface ECG showed the presence of a J wave in the inferior and lateral leads, accompanied by ST segment elevations. 24-hour Holter ECG monitoring captured rare ventricular and supraventricular extrasystoles. Underlying cardiac diseases were ruled out by echocardiography, coronarography and cardiac MRI. During exercise testing, a decrease in J wave amplitude was observed with increasing heart rate. Electrophysiological study was performed, but no tachyarrhythmias were induced following programmed atrial and ventricular stimulation. Flecainide challenge test resulted in a decrease in J wave amplitude with the appearance of ventricular extrasystoles with an R/T phenomenon. A cardiac defibrillator was implanted for secondary prevention purposes. Genetic testing were recommended.

Conclusions:

The findings made in this patient's case are suggestive for Haissaguerre Syndrome. The chances of a life-threatening ventricular tachyarrhythmia occurring in the context of ERP are very low. Patients who survive an episode of idiopathic ventricular fibrillation are at risk of recurrent events throughout their lives, which is why secondary prevention plays an essential role.

Keywords: Haissaguerre Syndrome, Early repolarization, Idiopathic ventricular fibrillation

Disseminated intravascular coagulation in acute promyelocytic leukemia: a need for fast treatment initiation

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Background:

Acute promyelocytic leukemia (APL) is an aggressive and rare subtype of acute myeloblastic leukemia characterized by the t(15;17)(q22;q12) translocation, an abnormality that fuses the PML gene with the alpha-retinoic acid receptor (RARA). The abnormal PML-RARA gene results in maturation blockade of affected cells at the promyelocyte stage. The onset is usually life-threatening, with disseminated intravascular coagulation (DIC) and hemorrhagic syndrome.

Case Presentation:

We present the case of an 18-year-old male patient, without pathological history, who presented to the Iasi ER, in March 2023, with significant gingivorrhagia, extensive ecchymosis at chest level and macroscopic hematuria, over 3 days. Complete blood count describes variable pancytopenia (moderate leukopenia, mild anemia and severe thrombocytopenia). Peripheral blood smear shows a percentage of 40% immature cells, with blast features. The patient, suspected of acute leukemia, was referred to the hematology department of Iasi RIO. The coagulation profile performed in the ER showed prolonged clotting time, decreased fibrinogen and increased D-dimers, indicating DIC. The urgently initiated substitution therapy included platelet concentrate, fresh frozen plasma, cryoprecipitate and hemostatic treatment, with partially favorable results. Bone marrow aspiration, immunophenotyping and molecular biology tests show 76% infiltration with atypical promyelocytes presenting PML-RARA mutation, thus diagnosing APL. The patient benefited from AIDA protocol, a combination of ATRA (alpha-trans-retinoic acid) and Idarubicin. During therapy, the patient developed intermittent headaches, relieved by analgesics, but with favorable evolution and correction of DIC and pancytopenia. Following induction, the patient completed 3 AIDA consolidation cycles, achieving complete remission and negativity of the PML-RARA gene.

Conclusions:

There is an imperious need for a fast diagnosis and treatment initiation in APL due to the rapid onset of DIC and severe bleeding disorders that can quickly develop into a life-threatening condition. However, the long-term prognosis is favorable with immediate initiation of pathogenic and supportive therapy, with 80% of patients achieving complete remission.

Keywords: Acute promyelocytic leukemia, PML-RARA gene, disseminated intravascular coagulation

Endoscopic retrograde cholangiopancreatography (ERCP) in a patient with Sars- CoV-2 infection and obstructive jaundice

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Background:

Pancreatic cancer is a malignant tumor with a very poor prognostic, presenting a median survival time of only 6 months. The majority of patients are diagnosed in the advanced stages, presenting either with locally advanced disease or other organ metastasis. Therefore, appropriate palliation for the main symptoms, such as obstructive jaundice, duodenal obstruction, and pain is of paramount importance.

Case Presentation:

We report the case of a 70 years -old female patient, who was admitted at the gastroenterology institute accusing fever, chills, right upper quadrant abdominal pain for three days, sclero-tegumentary jaundice and weight loss manifesting 30 days prior to admission. Six months before the admission, she had been diagnosed with type 2 diabetes, undergoing insulin treatment. An infection with SARS-CoV-2 was also detected. Abdominal MRI and abdominal ultrasound revealed a pancreatic head mass suggestive of malignancy and secondary liver lesions. The management of the case required chemotherapy after the confirmation of malignancy and the resolution of jaundice. A decision was taken to perform endoscopic ultrasound and fine needle biopsy (FNB) of the primary tumor for confirmation and subsequent chemotherapy guidance. The pathology report showed pancreatic ductal adenocarcinoma. As the tumor was deemed unresectable, she underwent endoscopic retrograde cholangiopancreatography (ERCP) with the placement of a partially covered metal biliary stent. After the procedure, the bilirubin levels descended towards normal levels the following days .

Conclusions:

Before considering systemic chemotherapy in metastatic pancreatic cancer, the main focus is improving patient's symptoms, namely jaundice. The recommended decompression method in the case of malignant extrahepatic biliary obstruction is via ERCP. The particularities of the case consist in the fact that type 2 diabetes diagnosed 6 months before could have been considered a warning sign for pancreatic neoplasm; also the presence of SARS COV2 infection did not represent an impediment for the treatment of this patient.

Keywords: obstructive jaundice, pancreatic cancer, ERCP

Etiology of cardio-respiratory arrest in the context of an inflammatory syndrome

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Background:

Cardio-respiratory arrest occurs when the patient's heart and breathing stop at the same time.

Case Presentation:

We present the case of a 56-year-old patient hospitalized with chronic conditions in the Neurology department, who presented with headache, dizziness, walking and balance disorders. From their personal history we know that the patient has been a smoker for 25years, is a chronic ethanol user, and has been suffering from a depressive syndrome, with onset 3 years ago, and chronic obstructive bronchopneumopathy grade 2 class B Gold, diagnosed 3 weeks ago; in chronic treatment with Spiolto Respimat 2 puffs/day, Veloxafarin 75mg/day, Mirzaten 15mg/day. The neurological symptoms began a few weeks before admission. Upon admission, the patient was afebrile, with pale skin, blood pressure = 130/70 mmHg, O2 saturation of 92%, vestibular syndrome, ataxic syndrome, neurasthenia. Paraclinical investigations revealed an anemic syndrome (hemoglobin=8.1 g/dL) and a non-specific inflammatory syndrome. 24 hours after admission, the patient presented cardio-respiratory arrest, was resuscitated and transferred to the ICU department, in serious condition, with fixed mydriasis. 24 hours after resuscitation, the patient is conscious, without focal deficit. The native CT scan of the skull-thorax-abdomen-pelvis shows a large amount of free and occluded fluid in the right hemithorax, pneumothorax, flares of condensation on the upper right and middle lobes. Right pleural empyema with bronchopneumonia were diagnosed, and the right pleurotomy evacuated 500 ml of purulent fluid.
The microbacteriological examination revealed gram-positive moniliform bacilli of the Nocardia/Actinomyces type. The MULTIPLEX examination UPPER RESPIRATORY PCR did not highlight pathogenic flora.

Conclusions:

3 weeks after discharge from the pulmonology hospital, the 56-year-old patient presented signs of neurasthenia followed by a cardio-respiratory arrest resuscitated in the context of bronchopneumonia with pleural empyema. Antero-posterior chest radiography performed 3 weeks before the cardio-arrest -respiratory showed vascular hili increased in volume. The causes of this immunodepressive syndrome were not revealed.

Keywords: inflammatory syndrome, cardio-respiratory arrest, pleural empyema

Familial Pulmonary Hypertension: Is a normal life possible?

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Background:

Familial Pulmonary Hypertension (FPH) is a rare autosomal dominant disorder, characterized by lesions in the walls of the pulmonary arterioles. These lesions are caused by the monoclonal proliferation of endothelial cells, leading to plexiform lesions, determining elevated pulmonary artery pressures, and leading to hemodynamic consequences on the right ventricle, failure of the right ventricle and dilatation of the right atrium.

Case Presentation:

We present an ongoing case of a mother-daughter pair who were diagnosed with FPH within 18 months of each other, the mother being the first to be diagnosed. At the time of diagnosis, the mother was 50 years old and the daughter 24. Both patients are responding favorably to the treatment consisting of bosentan, sildenafil and acenocoumarol. In addition, the mother is on anti-hypertension medication consisting of furosemide, diltiazem and spironolactone. Both patients present characteristic modifications of the right atrium and ventricle, the mother having a more pronounced dilatation of the atrium, hypertrophy of the ventricle and accumulation of pericardial fluid posterior to the left ventricle.

Conclusions:

What makes this case particular is the advanced age of the mother at the onset of symptoms, given the fact that on average, the symptoms onset occurs around the age of 36. Both patients lead an active lifestyle, with no need for any respiratory support. The data collected during this case study suggests that, regardless of age at the onset of symptoms, immediate medical treatment, offers signifcant chances for the patient to lead a normal life.

Keywords: pulmonary hypertension, autosomal dominant disorder, ventricular failure

Gender-affirming hormone therapy- a story of courage and transitioning

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Background:

Transgender patients experience both social and psychological issues on a regular basis. Gender-affirming hormone therapy(GAHT) is a groundbreaking medical tool that helps patients who wish to transition, achieve a physical appearance that they feel connected with. It has been proven by numerous studies that patients who receive such therapy, experience a significant reduction in depressive episodes and anxiety. In spite of this, hormone therapy must be administered under medical supervision. Precautions have to be taken, in order to ensure a safe transition and to lower the risk of possible side effects, such as cardiovascular issues or metabolic disturbances. Hormone therapy is not widely accessible in Romania, which deeply affects trans patients, especially on a psychological level.

Case Presentation:

The patient is a young adult that has been struggling with their body image since childhood. They have been through a psychiatric evaluation, which is mandatory in order to start hormone therapy. The patient is undergoing gender-affirming hormone therapy. The changes, both physical and psychological are documented. Their blood tests are being periodically evaluated in order to ensure there are no long-term health risks. Upon further evaluation, there is a decrease in depressive symptoms and the patient appears to be feeling more in connection with their physical appearance.

Conclusions:

Gender-affirming therapy must be accessible for all trans people who wish to take this step. Together with a good treatment plan, constant monitoring and psychological therapy, GAHT can save lives. The few side effects do not constitute a reason to take away the psychological benefits of the aforementioned therapy.

Keywords: Hormone therapy , Gender-affirming therapy , Trans patients

Great resistance isn’t always battle-winning- A low-grade serous ovarian carcinoma case

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Background:

Having to deal with a low-grade serous ovarian carcinoma (LGSOC) it’s particularly challenging, as this rare histotype presents itself with unique molecular, genetic, and pathogenic features, compared to its counterpart, the high-grade serous ovarian carcinoma (HGSOC). Whether it arises de novo or on a serous borderline tumor’s framework, the critical key points of this carcinoma’s treatment are determined by the demonstrated relative chemoresistance and clinically demanding course.

Case Presentation:

A 50-year-old female patient is diagnosed with a pelvic tumor. Following a total hysterectomy with bilateral adnexectomy and total omentectomy, the pathological examination reveals a bilateral, low-grade serous ovarian carcinoma (LGSOC), developed on a background of a serous borderline tumor. The patient undergoes five months of adjuvant chemotherapy with Carboplatin and Paclitaxel and presents a good tolerance to side effects. Five years later, the CT evaluation reveals numerous lesions of calcified peritoneal carcinomatosis and a dimensionally evolving para pericardial calcified lesion. She undergoes another five months of chemotherapy with Carboplatin and Paclitaxel, maintained by hormone therapy with Tamoxifen. Later that same year, multiple conglomerated peritoneal nodules on the lateral extremities of the inter vesico-rectal space are identified. The MRI exam shows adherent loops to the thickened peritoneum, a distal ileal loop pulled by a nodule complex, 1st-degree ureter-hydronephrosis caused by the compression of another nodule complex and widening of the post-operative scar on the midline. Considering the chemoresistance to platinum and the progression of the carcinoma in less than six months from the last chemotherapy session, it has been decided to resume palliative chemotherapy with Caelyx. Currently, this patient’s therapeutical scheme is completed by the administration of Bevacizumab.

Conclusions:

Considering the particular characteristics revealed in the presented case of a low-grade serous ovarian carcinoma, the focus on investigating more targeted and tailored therapies for chemoresistance is of great importance for future treatment schemes.

Keywords: Ovarian cancer, Low-grade serous carcinoma, Peritoneal carcinomatosis

HIV- what lies behind the STD label?

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Background:

Human Immunodeficiency Virus (HIV) infection affects approximatively 38 million people in the world. Besides being a STD (Sexually Transmitted Disease), HIV goes way beyond that, having a multi-level impact on the human body. The relation between HIV infection and cardiovascular disease is particularly complex, as it stands at the intersection between traditional risk factors (smoking, hypertension, diabetes etc.) and some new ones, HIV-related: viral infection direct cellular mechanisms , ART (anti-retroviral therapy) side effects, access and compliance to treatment.

Case Presentation:

Pacient C.G., 46 years old, presents to the ER (emergency room) for intense retrosternal pain and altered general state. He is a smoker (30 pack-years). He denies any substance usage and denies drinking in the past 10 years; prior to that, he used to drink 1-1,5 L of beer almost every day. He has been diagnosed with HIV infection of unknown source in 2014 and has been on ART ever since. He is not hypertensive or diabetic. The ECG performed in the ER shows STEMI in multiple territories: inferior, posterior and right ventricle. He is immediately admitted in the Cardiology department and undergoes percutaneous coronary intervention (PCI) that shows acute thrombotic occlusion of the right coronary artery, where a stent is placed, and chronic occlusion on the proximal segment of left anterior descendent artery.

Conclusions:

Faced with such a case, where both traditional (smoking) and HIV-related risks are present, the practitioner faces the insufficient research on how to treat cardiovascular disease specifically in HIV patients, adapted to their needs. The patient’s relatively young age and the absence of overt traditional risk factors (hypertension or obesity) suggests the HIV infection’s contribution to the accelerated development of atherosclerosis.
This case's purpose is to raise awareness of the complexity of HIV, highlighting the need of introducing guidelines adapted for this category of patients.

Keywords: Human Immunodeficiency Virus (HIV), cardiovascular disease , Anti-retroviral therapy (ART)

Immediate and late post-operative complications of aortic valve replacement

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Background:

Bicuspid aortic valve (BAV) is a common congenital cardiac anomaly, affecting up to 1-2% of the general population. In many cases, it can show an asymptomatic evolution for several years. Once diagnosed, the disease requires close medical monitoring and ultimately proper surgical corrective measures that imply aortic valve replacement procedures, most often with a mechanical prosthetic valve. Even following successful operations, patients can experience multiple immediate postoperative complications, namely arrhythmias and conduction disorders. Moreover, for a long period of time, patients with mechanical heart valves are at increased risk for multiple cardioembolic events hence the INR target recommended in evidence-based guidelines for most oral anticoagulants indications is currently 2.5, with a range of 2.5 to 3.5.

Case Presentation:

We are reporting the case of a 29 year-old male patient diagnosed with a severe aortic disease that suffered a vast array of complications after undergoing a Bentall surgical intervention, mostly due to long-term uncontrolled INR values. These have included an ischemic stroke which left permanent sequelae and has since required close monitoring of INR values and permanent adjustment of the anticoagulant treatment schedule.

Conclusions:

The particularity of the case consists of the wide spectrum of complications occurring as a result of uncontrolled INR values in a patient with mechanical prosthetic valve and the constant need to adjust the chronic anticoagulant therapeutic dosing.

Keywords: bicuspid aortic valve, mechanical prosthetic valve, chronic anticoagulant therapy

Instead of getting home...

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Background:

Sudden cardiac arrest (SCA) is the third cause of death in Europe. Factors associated with survival are the initial rhythm, the place of arrest and the degree of monitoring at the time of collapse. Resuscitation team members should have skills and knowledge to manage a cardiac arrest including defibrillation, advanced airway management, intravenous/intraosseous access ,identifying and treating reversible causes.

Case Presentation:

A 35-year-old male presents to the Emergency Department with rash, myalgia, fever, chills and low extremity edema after consuming fast food within 24 hours prior to presentation. The patient smokes ,works as a truck driver, states high daily intake of energy drinks but has no personal medical history, denying use of recreational drugs. On presentation, the patient was conscious, with hyperthermia and thermodynamically stable. He received symptomatic treatment for fever and rash, and a cardiology consult for undiagnosed atrial fibrillation. While getting up, he became anxious stating loss of visual acuity, muscle weakness and loss of sensitivity in lower extremities. Muscle weakness evolved to upper extremities, he became agitated, with nausea and vomiting, that was followed by a syncopal episode with a heart rate of 27 bpm. ECG showed a third-degree heart block, followed by atrial fibrillation with bigeminal ventricular complexes and cardiac arrest shortly after. ABG shows severe hypokalemia (K = 1.2 mEq/L). The patient was intubated, central venous line installed and adequate post resuscitation care with diagnosis and treatment of underlying causes before being admitted to Cardiac Intensive Care Unit. CT revealed a 30.5/26/22 mm mass on the right lobe of the thyroid.

Conclusions:

Although not as common, thyrotoxic crisis still presents with high mortality. This case presentation highlights the importance of clinical diagnosis and monitoring of patients in Emergency Department, with early intervention for in-hospital cardiac arrest and treatment of reversible causes as hypokalemia.

Keywords: Thyrotoxicosis, hypokalemia, arryhtmia

Intestinal Obstruction Syndrome - a mirage between Ulcerative Colitis and Neoplastic Formation

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Background:

Intestinal occlusion is a clinical syndrome characterized by the presence of a blockage in the small or large intestine, which leads to the partial or complete cessation of the passage of intestinal contents. The cessation of transit can be caused by a mechanical obstruction, as well as a dynamic obstruction due to functional disorders of the intestinal muscles. There are a variety of factors that can lead to intestinal occlusion such as hernia, tumor or inflammatory bowel disease.

Case Presentation:

A 66-year-old patient, hypertensive, appendectomized, without pathological personal history in the gastroenterological field, presented to the emergency room on the evening of March 13, complaining of absence of intestinal transit for faecal matter for 3 days, lower abdominal pain accompanied by nausea and vomiting. Previously, the patient had presented with stoolwith blood and mucus. On the rectal examination, which was difficult due to pain, the rectal ampulla was found to be empty, without signs of bleeding and internal hemorrhoids. Following an abdominal-pelvic CT examination, suspicion was raised of rectocolitis with the development of a right perirectal abscess, without excluding a tumoral rectal lesion. A rectosigmoidoscopy was performed, identifying a large vegetative, stenotic, ulcerated lesion with bleeding that did not allow the investigation to continue. The final diagnosis was stenotic rectal neoplasm and Intestinal Obstruction Syndrome, and the patient was transferred to the General Surgery department for specialized treatment (a life-saving colostoma was performed). Than the patient was addressed for oncological treatment.

Conclusions:

The multiple etiopathologies of intestinal obstruction make patient management difficult. The suggestive clinical picture, along with the imaging and laboratory tests, leads to a precise diagnosis and allows the establishment of treatment depending on the cause and severity of the obstruction. If not intervened in a timely manner, life-threating complications such as perforation, peritonitis and sepsis can develop.

Keywords: Intestinal Obstruction Syndrome, Neoplasm, Rectocolitis

INTRAHEPATIC CHOLESTASIS OF PREGNANCY IN TWIN PREGNANCY

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Background:

Intrahepatic cholestasis of pregnancy is a liver disorder in the late second and early third trimester of pregnancy and is characterized by pruritus with increased serum bile acids and other liver function tests. It is more common in multifetal pregnancies and is associated with significant genetic influence, so its incidence varies by population. Untreated, it may lead to preterm birth, fetal distress, respiratory distress syndrome, fetal death.

Case Presentation:

We present the case of a 30-year-old women, 33 weeks pregnant (twin pregnancy), who presented at the hospital with pruritus, hypogastric and low back pain of moderate intensity. The laboratory exam showed increased bile acids (23,5 µmol/L) and increased alkaline phosphatase (439 U/L). The pacient was admitted for further investigations and treatment. The treatment consisted of Ursofalk 250mg (2 pills every 12 hours). For the next two weeks bile acids were tracked, varing between 20 and 40 µmol/L. Fetuses were monitored by ultrasound and cardiotocography. At 36 weeks, caesarean section was performed, both fetuses were in breech presentation, weighting 2300g and 2500g respectively, with good adaptation to extrauterine life.

Conclusions:

This case illustrates the prompt and accurate diagnosis and treatment of obstetrical cholestasis leading to optimal patient outcome and no neonatal complications. Its particularity stems from the fact that it occured in a twin pregnancy.

Keywords: cholestasis, twin pregnancy, bile acids

Kaposi's Sarcoma in HIV-infected person in republic of Moldova

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Background:

Kaposi's sarcoma (KS) is an angioproliferative viral disorder of the vascular endothelium, associated with advanced HIV-infection. The most affected site are skin (painless lesions as macules, papules and nodules of red, purple, violaceous, and dark brown or black color), mucosal surfaces, respiratory tract, and lymph nodes.

Case Presentation:

A 37-year-old man, reported with fatigue, multiple violaceous papules and nodules on his trunk, arms and legs, productive cough, fever, 10-15 kg weigh loss for 2 months. Patient was HIV positive since 2014, by unprotected heterosexual exposure, no history of blood transfusion, injection drug use, or needle sharing, without antiretroviral treatment (ART) before. On examination, the patient was severe, alert, oriented but emaciated, lung examination: diminished breath sounds bilaterally with no other alterations, SaO2-97%. The lab results: hemoglobin 71g/L, WBC 6,200/uL, lymphocytopenia 1100/uL, ESR 68mm/h, CD4-36 cells/mm3, ARN HIV–789000 copies/mm3, normal renal function, no cytocolestase (total bilirubin 3.5mmol/L, ALT-15,4U/L, AST-61,8 U/L), Western Blot for syphilis – positive. Chest X-ray: hypotransparency bilateral, predominant of the right lower lobe. KS diagnosis was confirmed by skin biopsy. Patient was hospitalized for 2 months; ART was started with TDF+FTC+EFV and symptomatic treatment, but without an effective response, with worsening of the general condition, followed by death. Pathomorphological diagnosis was KS with polyorgan failure.

Conclusions:

The late presentation and detection of HIV infection and delaying the initiation of ART leads to the advancement of immunodepression, with the association of AIDS indicator diseases, such as KS, with the progression to death.

Keywords: HIV, AIDS, Kaposi's sarcoma

LIFE FINDS A WAY: SUCCESSFUL PREGNANCY WITH INVASIVE CERVICAL CANCER

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Background:

Detection of invasive cervical cancer during pregnancy is rare, with reported incidence rates ranging from 0.05%-0.1%. However, cervical cancer is ranked as the fourth most common oncological disease among women, with a peak incidence in the younger population—between 35-45 years of age.

Case Presentation:

A 34-year-old pregnant woman presented to the Emergency Room at 29 weeks of gestational age with a history of severe metrorrhagia, for which she received appropriate symptomatic treatment. Within two days, the patient experienced another episode of hemorrhage and a cervical tumoral formation was revealed during a vaginal examination. She was admitted to the hospital for further investigations. Comprehensive medical evaluation was conducted, including cervical biopsy, vaginal examination, and pelvic MRI, to determine the nature and extent of the condition. Based on the histopathological results and pelvic MRI findings, a specialized Oncology consultation was sought from IRO Iasi. The final diagnosis was confirmed as invasive squamous cell carcinoma associated with HPV infection. Due to the advanced stage of pregnancy at 30 weeks gestation, additional complementary investigations for cancer staging could not be pursued. The case was thoroughly discussed in the Oncology Commission, and a multidisciplinary decision was made. The recommended course of action included neoadjuvant chemotherapy, close fetal monitoring, planned caesarean section followed by radical hysterectomy, and adjuvant treatment, resulting in a favourable outcome.

Conclusions:

When managing cervical cancer in pregnant women, it is crucial to take an individualized approach. If chemotherapy is considered necessary, the choice of regimen should be tailored based on tumor type, pharmacokinetics, and toxicity, with mandatory obstetrical monitoring throughout the treatment.

Keywords: cervical cancer, pregnancy, HPV

Long QT syndrome after myocardial revascularization

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Background:

On a standard electrocardiogram (ECG), QT represents the duration of the normal ventricular action potential which involves depolarization and repolarization. Long QT is an ereditary or acquired pathology and its symptoms may consist of cardiac events or fatal arrhytmias.

Case Presentation:

We present the case of a 57-year-old male in evidence with chronic coronary syndrome, anterior myocardial infarction and class II NYHA heart failure with reduced ejection fraction. The first ECG showed sinus bradycardia, ST segment elevation in V2-V4 with negative T waves in DI, aVL, V3-V6. The cardiac ultrasound revealed reduced ejection fraction (24%) of the left ventricle with akinesia of the interventricular septum, apex and anterior wall. The coronary angiography showed two-vessel occlusion, and an angioplasty with drug-eluting stent of the left anterior descending artery was performed. After the revascularization, the ejection fraction increased (almost 40%), but the ECG showed a long QT (600ms, QTcorrected +45%). A Holter monitoring (5 days post-angioplasty) revealed numerous ventricular and supraventricular extrasystoles and episodes of torsade de pointes. At this point all medical treatment was stopped except for the antiplatelet agents and statins and the QT decreased progressively, reaching a normal value 7 more days later

Conclusions:

A successful procedure of revascularization of a coronary artery occlusion, together with the standard medical therapy (betablockers, sacubitril/valsartan, sodium-glucose transporter inhibitors, spironolactone) is a rare cause of long QT on the ECG generating potentially malignant arrhythmias.

Keywords: long QT, revascularization, malignant arrhythmias

Management challenges of elderly patient with Heyde’s syndrome following aortic valve replacement

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Background:

Heyde's syndrome is a well-known condition which is characterized by combination of gastrointestinal (GI) angiodysplasia and aortic stenosis (AoS). This condition has been linked to potentially fatal GI bleeding. In most cases, the complete aortic valve replacement cures the GI angiodysplasia.

Case Presentation:

The patient is an 85-year-elderly woman, who has a long history of significant cardiovascular (hypertension, chronic coronary syndrome, severe AoS with aortic valve replacement), gastrointestinal (intestinal angiodysplasia), and hematological (normocytic normochromic anemia) history and receives chronic treatment at home. In 2019 patient was diagnosed with severe AoS and GI angiodysplasia, reason for which it was underwent aortic valve replacement. Anticoagulant treatment with acenocoumarol was recommended. Latest presentation in Emergency Department notes in March 2023, when she was presented urgently due to physical asthenia, diffuse abdominal pain accompanied by melena stools. Blood tests showed a severe normocytic normochromic anemia (hemoglobin up to 5.9 g/dL) and elevated INR (8.72). Upper GI endoscopy did not identify any significant modifications. Abdominal and pelvic computed tomography angiography scan detected rectal wall thickening which was highly suggestive for malignancy features. Colonoscopy showed colonic angiodysplasias, a series of biopsies were taken that disproved malignancy. At echocardiography, normofunctional aortic prosthesis was noticed.

Conclusions:

According to literature data, the persistence of angiodysplasias after aortic valve replacement in a patient with Heyde's syndrome is very rare and at the moment one of the several cases was reported. As in the presented clinical case, patients with Heyde's syndrome after aortic valve replacement have a difficult therapeutic approach: on the one hand, the patient needs mandatory anticoagulant therapy with vitamin K antagonists for mechanical valve, and on the other hand, the patient has bleeding GI angiodysplasias. As was practiced in our patient, endoscopic electrocoagulation remains the safest and most practical therapeutic approach in these clinical cases.

Keywords: Heyde’s syndrome, angiodysplasia, aortic stenosis

Moschcowitz Syndrome in a COVID-19 Paediatric Patient

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Background:

Moschcowitz syndrome or thrombotic thrombocytopenic purpura (TTP) is a rare disorder, especially in children, characterized by a microangiopathic hemolytic anemia with thrombocytopenia, neurologic symptoms and renal disease. The pathophysiology of the disease is based on a severe functional deficiency- that may be either acquired or congenital- of ADAMTS13, the specific von Willebrand factor (VWF)-cleavage protease.

Case Presentation:

We present the case of a 16-year-old female, admitted in the emergency room with dysphagia, odynophagia and fever. Her blood tests showed severe regenerative hemolytic anemia (Hb=4,7 g/dl, reticulocytosis=14,23%) and serious thrombocytopenia (PLT=4000mcL). In order to find the cause of the haematologic abnormalities, more investigations were conducted, that showed inflammatory syndrome, schistocytes on the blood smear and a COVID-19 antibody titer(IgG) of 887,9 U/ml (very high), suggestive for a recent infection. ADAMTS13 value was close to 0 and its activity was depressed, which confirmed the diagnosis of TTP, with secondary hemolytic anemia. The patient underwent six plasmapheresis rounds in association with erythrocyte concentrate transfusions, antibiotherapy and corticotherapy, which she tolerated well. She was discharged after one month, when her blood test results normalised, with the recommendation to continue the Methylprednisolone treatment at home and to return for further check-ups.

Conclusions:

Child-onset thrombotic thrombocytopenic purpura is an unusual entity of thrombotic microangiopathy, defined by a distinctive hematologic panel and most frequently associated with a clinical context, in this case, the COVID-19 infection. The evaluation of ADAMTS13's activity is mandatory to confirm the diagnosis, and the clinicians should be aware of the association between COVID-19 and TTP, for prompt recognition and timely treatment.

Keywords: thrombocytopenia, ADAMTS13, plasmapheresis

Multiple myeloma with splenomegaly, bone marrow fibrosis, and myeloid reaction

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Background:

Multiple myeloma is a malignancy of late-stage B cells that mature principally into neoplastic plasma cells found in the bone marrow. In most cases, those malignant cells produce a complete and/or partial monoclonal immunoglobulin protein.

Case Presentation:

A.M. 49 yo patient without any relevant medical history, presents herself to Sf. Spiridon Hospital for asthenia and 4 kg weight loss. The clinical examination revealed splenomegaly 5 cm under the costal rim and skin pallor. Her complete blood count indicated anemia and her electrophoresis revealed a monoclonal gammopathy by presenting an M peak. Thus she was addressed to the hematology clinic of IRO Iasi. The hemogram was repeated and the results were: leucocytosis (19.800/mmc) with myeloid reaction and anemia. The patient had hyperproteinemia. Quantitative determination of immunoglobulin shows a major IgG component and reduced IgA and IgM. The analysis of urine shows positive presence of Bence Jones protein in urine: 1.31 g/L. The paraclinical exams led to two possible diagnoses: Multiple myeloma with associated myeloid reaction or two neoplasms at the same time (Multiple myeloma and a Myeloproliferative neoplasm). For differential diagnosis bone marrow biopsy was performed. The results were: total infiltration of plasma cells in association with marrow fibrosis. The computer tomography showed osteolytic bone lesions, hepatomegaly, and splenomegaly. Her diagnosis was Multiple Myeloma stage III A Salmon Durie with associated myeloid reaction and bone marrow fibrosis. The proposed treatment protocol was chemotherapy VRD high dose Melphalan, bone marrow autotransplant, and for maintenance treatment: Lenalidomide. The patient responded well to the treatment, her complete blood count and the bone marrow biopsy normalized and her splenomegaly and hepatomegaly resolved.

Conclusions:

This is an extremely rare case of multiple myeloma because it is associated with myeloid reaction, bone marrow fibrosis, and splenomegaly.
Although it is an incurable disease, today's treatments increase the overall survival.

Keywords: multiple myeloma, myeloid reaction, splenomegaly

Nodular lymphocyte predominant Hodgkin lymphoma – a rare pearl in diagnostic pathology

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Background:

Hodgkin's lymphoma is a rare disease with a frequently poor prognosis, but can achieve cure rates of up to 80-90% when treatment is appropriately matched to the stage of the disease. The vast majority of cases are represented by the classic forms of this pathology. However, very rarely a so-called "non-classical" form may occur. This form is characterised microscopically by large cells with a multi-lobed nucleus, which has earned it the name 'popcorn cells'. Immunohistochemical markers are also revealing, with CD19 and CD20 being positive, rather than CD15 and CD30 as in a classic form of Hodgkin lymphoma. Non-classical lymphoma often has an excellent prognosis, with cure rates of 90-100% with appropriate treatment.

Case Presentation:

Patient DL, female, 13 years old, has an enlarged left latero-cervical lymph node removed and is referred to the pathology laboratory for microscopic diagnosis. The lymph node is processed and is stained with standard staining (haematoxylin-eosin) and immunohistochemical markers (CD15, CD20, CD30), as there is a high suspicion of Hodgkin's lymphoma. However, on microscopic examination of the specimens, the two stains that are usually positive in classical Hodgkin's lymphoma, CD15 and CD30, are found to be negative, whereas the CD20 marker is positive. This was initially blamed on a staining defect in the pieces, so the pieces were sent for re-staining, but the results were the same. At this point the focus was on the differential diagnosis, concluding that the patient had a very rare form, namely the nodular form with lymphocytic predominance.

Conclusions:

Non-classical Hodgkin's lymphoma is a form that can be easily overlooked in the absence of appropriate immunohistochemical staining, and due to its rarity and excellent prognosis, it can be said to be a rare pearl in diagnostic pathology.

Keywords: Non-classic lymphoma, Popcorn cells, Lymphocyte predominant

Optic Neuritis: An Uncommon Presentation of a Common Disease

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Background:

The term optic neuritis refers to inflammation of the optic nerve. It has many causes: demyelination causes, both idiopathic and multiple sclerosis, autoimmune diseases (sarcoidosis, systemic lupus erythematosus, Sjogren's syndrome), infectious causes (bacterial - Lyme disease, syphilis, tuberculosis, toxoplasmosis, viral - Influenza, Herpes simplex, Herpes zoster, Cytomegalovirus and fungal), tumors or ischemic diseases. However, the pathogenesis is not well understood. Optic neuritis is characterized by subacute unilateral loss of vision, periocular pain and impaired colour vision, patients typically presenting with this triad. A few cases of optic neuritis caused by influenza infection have been reported - most of them in children, both eyes being affected.

Case Presentation:

We present the case of a 51 years old woman that came with a sudden decrease in visual acuity after a history of flu, two weeks prior to the hospital admission, when she received treatment with acetaminophen and ibuprofen. The fundus of left eye showed optic nerve edema. Based on the medical history, the fundus aspect, the optical coherence tomography, visual field and the paraclinical investigations (magnetic resonance imaging, blood tests), the diagnosis of unilateral optic neuritis associated with influenza was established. The patient started corticosteroid therapy, responding well to it.

Conclusions:

We described a rare case of unilateral optic neuritis associated with influenza A infection in an adult patient. It triggers a signal for taking into consideration the unusual association between systemic infection and optic nerve inflammation.

Keywords: optic neuritis, influenza, corticotherapy

OSTIUM SECUNDUM ATRIAL SEPTAL DEFECT - A LIFELONG EVOLUTION

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Background:

Ostium secundum atrial septal defect (ASD) represents a communication between the atrial chambers involving the oval fossa. With a prevalence of 5–10% among congenital heart defects, it is more frequently diagnosed in women.

Case Presentation:

S.A., a 77-year old female patient who previously refused surgery for an ostium secundum ASD, was transferred to the Internal Medicine Clinic at "Saint Spiridon'' Clinical Hospital in March 2022 for signs of right cardiac decompensation. The symptoms included jugular venous distention, lower limb edema, enlarged abdomen due to ascites and diffuse abdominal pain. NT-proBNP was elevated (6900 pg/ml), as well as D-dimers, with a low hemoglobin. Chest X-Ray showed cardiomegaly and aortic atherosclerosis. ECG revealed atrial fibrillation. Echocardiographically, ostium secundum ASD was confirmed. Under treatment with dopamine, albumin, diuretics and anticoagulants, the clinical evolution was slightly favorable, partially affected by an infection with Clostridium difficile and altered kidney function, requiring a 1-month hospital stay.
After 10 other hospitalizations, the patient was admitted in March 2023 with a severely altered general condition, dyspnea at rest, orthopnea, anasarca, severe anemia, creatinine clearance corresponding to 4th grade chronic kidney disease and reduced hepatic synthesis. Paracenteses were performed and high-dose diuretics, anticoagulants, beta-blockers and albumin were administered. Evolution associated a poor reduction in symptomatology, with progression towards exitus.

Conclusions:

Surgery is the only treatment that prevents the natural progression of the disease. For an improvement of the quality of life, the patient should agree to perform it before the symptoms worsen.

Keywords: congenital heart defects, ostium secundum, atrial septal defect

Out of Thin Air: Respiratory Complications in a Langerhans Cell Histiocytosis Patient

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Background:

With a wide variation in clinical presentation, complications, and still unknown etiology, Langerhans cell histiocytosis presents a challenge in diagnosis and treatment. This condition, more frequent in children, yet still a rare entity with a prevalence of 4-9 per million per year, is characterized by the proliferation of abnormal CD1a + CD207+ histiocytes, causing a different degree of organ involvement in each patient. Pulmonary complications manifest in about 20% of presentations with multisystemic form.

Case Presentation:

A seven months old patient presents with a history of multiple skin lesions, consistent with chronic dermatitis, unresponsive to topical treatment for the past six months. She undergoes a cutaneous biopsy, results describing monocyte infiltration, focal parakeratosis, CD1a, and S100 positive histiocytes. The clinical findings, paired with the histological data and laboratory findings established the diagnosis of Langerhans cell Histiocytosis. She is admitted to Saint Mary Emergency Children Hospital Iasi for further investigations and chemotherapy with vinblastine and prednisone. In the second month of treatment, she tests positive for SARS-CoV-2 infection, mild form, with no complications. During one of her admission periods, in August, at 11 months old, she develops tension pneumothorax in the right lung, for which she received surgical treatment. Her condition is stable for the rest of the chemotherapy sessions, but a CT done in November showed a cystic lesion in the left inferior segment of the left lung, and a partial cystectomy with conversion to thoracotomy was performed.

Conclusions:

Early onset of cutaneous manifestation is one of the most common presentations of Langerhans cell Histiocytosis, but it can mimic a common dermatological condition. This case illustrates the importance of accurate diagnosis, followed by close monitoring of the patients during the treatment period, given the fact that rare complications, such as spontaneous pneumothorax can occur.

Keywords: Langerhans Cell Histiocytosis, Tension Pneumothorax, Aeric Cyst

Ovarian Cancer & Brain metastasis – against the odds?

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Background:

Mucinous ovarian cancer is a rare subtype of ovarian cancer. About 2-3% of new ovarian cancers are mucinous. Ovarian Brenner tumors are rare epithelial tumors and account for 1%–2% of all ovarian neoplasms. Usually both are diagnosed in an advanced stage due to lack of symptoms. They both spread to the gastrointestinal tract, liver, pancreas and bones, rarely to other parts of the body.

Case Presentation:

We report the case of a 53 years old female who was admitted with diffused lower abdominal pain for the past year. The pelvic CT showed a pelvic tumoral block, predominantly on the left side, with dimensions of 105/65/80 mm. The pelvic tumoral block has contact with anatomical structures: uterus, the sigmoid, ileal loops and the external iliac vascular bundle. Lumbo-aortic adenopathies present . No thoracic, abdominal and bone metastases.
A laparoscopic biopsy followed, and was diagnosed with ovarian mucinous adenocarcinoma. The patient underwent 6 cures of chemotherapy with Carboplatin and Paclitaxel, which led to reduction of the pelvic mass, allowing surgery. A total hysterectomy was performed, along with bilateral adnexectomy, infragastric epiploonectomy, pelvic peritonectomy and pelvic lymphadenectomy stages I-IV. After the biopsy of the operatory piece, the diagnosis changed to ovarian mucinous adenocarcinoma associated with ovarian malignant Brenner tumor.
5 months after surgery, she is admitted to the neurosurgical hospital with headache and hemiparesis on the right side of the body. Cranial CT showed 9 metastatic masses, followed by whole brain radiotherapy.

Conclusions:

Although is very uncommon for ovarian cancers to metastasize in the brain, and might be a sign of a bad prognosis, the patient undergoes cures with different chemotherapic agents, ensuring her survival.

Keywords: metastatic mucinous carcinoma, Brenner tumor, brain metastasis

Overcoming the odds: A Stage IV HER2-Positive Breast Cancer Journey

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Background:

Human epidermal growth factor receptor 2 (HER2) is overexpressed in approximately 20% of all breast cancers. Prior to the occurrence of HER2-directed monoclonal antibodies, HER2-positive breast cancer had a rather poor prognosis. Pertuzumab and trastuzumab are more active in combination than alone because of the more comprehensive signaling blockade.

Case Presentation:

A previously well 44-year-old woman, premenopausal, was diagnosed in 2019 with stage IV breast cancer liver metastasis. The core-biopsy revealed invasive carcinoma, no specific type, G3, ER and HER-2 positive. MRI of liver exposed a formation of 24mm and confirmed of mammary origin.
Chemotherapy with docetaxel, trastuzumab and pertuzumab was initiated with good clinical tolerance.The liver lesion responded completely to the treatment. After the disappearance of the liver injury, radical mastectomy and axillary lymphadenectomy were performed. The patient received post-surgery external radiotherapy and continued treatment with pertuzumab and trastuzumab.
After numerous investigations, the patient's condition became stationary with ECOG performance status 0. During the treatment, the only adverse effects suffered were the increase of liver enzymes and the appearance of a cutaneous erythema on the antebrachium. The last treatment administered was zoladex followed by letrozol.

Conclusions:

Even though studies show that median survival from liver metastases secondary to breast cancer is only a few months, with very rare 5-year survival, we presented the case of a woman who fought to overcome these figures. Progress in systemic treatment of HER2-positive metastatic disease may lead to long-term survival, even in stage 4.

Keywords: HER2-Positive, metastatic breast cancer, trastuzumab

Pediatric Uveitis and Optic Neuritis: The Diagnostic Odyssey of Ocular Inflammation

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Background:

Uveitis occurs when the middle layer of the eyeball gets inflamed. There are 3 types of inflammation based on which part of the uvea is affected. Anterior uveitis starts suddenly and symptoms can last many weeks. Some forms are ongoing, while others go away but keep coming back. Uveitis can damage vital eye tissue, leading to: glaucoma, cataracts, optic nerve damage and many more.

Case Presentation:

A 14-year-old female patient, has been followed for a first episode of acute bilateral anterior uveitis, but optic neuritis was subsequently detected. Patient history revealed an episode of SARS-COV-2 infection 3 months prior to the initial presentation, followed by vaccination against SARS-COV-2 and an episode of painful red eye spontaneously remitted 1 month before the initial presentation . In terms of etiology, most cases of pediatric uveitis are idiopathic, but they can occur in autoimmune or infectious systemic disorders. The patient was evaluated by specialists in the field of OMF, Dermatology, Neurology, Rheumatology and Endocrinology to exclude pathologies with extraocular or systemic localization that may have ocular manifestations. The differential diagnosis was made by linking the ocular manifestations with the results of the following clinical and paraclinical investigations: blood tests, nasopharyngeal exudate analysis, visual field examination, OCT examination, contrast head MRI, chest X-ray and X-ray of the sacroiliac joints and analysis of the visually evoked potential. These investigations confirmed the diagnosis of juxtabular optic neuritis and ruled out the presence of active autoimmune, infectious pathologies and expansive intracranial processes.

Conclusions:

This case highlights the complexity of dealing with ocular inflamation that occurs in pediatric patients. Is is of the utmost importance to reduce the risk of sight-threatening complications from the uncontrolled ocular inflammation, and to avoid the impact of lifelong burden of visual loss on the child and their family.

Keywords: SARS-COV 2 infection, pediatric uveitis, bilateral optic neuritis

Rare association of Turner and X-linked Kabuki Syndromes in a paedriatic patient

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Background:

Kabuki syndrome (KS) is a rare inherited malformation syndrome caused by pathogenic variants of KMT2D gene, resulting in an autosomal dominant KS type 1, or of KDM6A gene, resulting in an X-linked KS type 2. The phenotype can be highly variable, and can include various degrees of growth and intellectual retardation, hypotonia, facial and skeletal dysmorphic features, congenital heart defects and renal anomalies. Patients may also present with autoimmune and endocrine-related disorders (growth hormone deficiency, hyperinsulinemia, precocious puberty).

Case Presentation:

We present a 4-year-old female patient, born at a gestational age of 32 weeks via caesearian section, with a birth weight of 2300g. She has a history of developemental delay, infantile hypotonia, astigmatism, right renal hypoplasia and medullary nephrocalcinosis, currently being treated with Hydrochlorothiazide. On admission, she presented specific phenotypical features: proeminent low-set ears, long palpebral fissures, depressed nasal tip, enlarged thorax base and short stature at -3.04 SD according to Romanian synthetic growth charts, and at -2.08 SD compared to the target height. She also presented with a healthy weight, in the 11th percentile and now a normal neuro-psychomotor development. The karyotype revealed a Turner mosaicism 46,X,i(X)(q10)/45,X/46,XX[17]/[14][1] and genetic testing showed a heterozygous complete deletion of the coding regions of KDM6A gene. IGF-1 levels were normal, however growth hormone secretion was not stimulated during the glucagon test.

Conclusions:

The association of Turner and Kabuki syndrome is rare and can manifest as overlapping characteristics of both pathologies such as: short stature, hyperinsulinemia, congenital heart defects and endocrine-related disorders. In this case, Turner Syndrome represents a clear indication for treatment with rh-GH (recombinant human growth hormone), which can improve the overall prognosis of the patient.

Keywords: Kabuki syndrome, Turner syndrome, rh-GH treatment

Sepsis in the extreme elderly: A case report of a 99-year-old patient

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Background:

Sepsis is a systemic inflammatory response to infection that can lead to multi-organ dysfunction and death. This case report presents a patient with multiple comorbidities, extended hospitalizations, impaired immunity, and complications of aging itself, illustrating the importance of elderly care.

Case Presentation:

A 99-year-old patient was admitted for fever, chills, anorexia, and asthenia, with a past medical history consisting of 42 infections treated with 70 antibiotics in the span of 17 years, 35 medications taken each month and 33 chronic comorbidities such as mitral, tricuspid, aortic and pulmonary regurgitation, heart failure NYHA III, coronary artery disease, ischemic stroke, organic dementia, and immobility. Physical examination shows altered general condition, confusion, pallor and dehydrated skin, sacral grade III pressure ulcer, phimosis, and a scrotal necrotic lesion with signs of local infection, and the presence of a permanent urinary catheter. Laboratory tests showed inflammatory syndrome as well as kidney and liver dysfunction. Urinalysis showed leukocyturia and hematuria. Urine culture revealed Proteus Mirabilis. A diagnosis of sepsis was made, originating from the urinary tract and skin. Treatment with ciprofloxacin, rifaximin, ceftriaxone, amoxicillin and clavulanic acid was started, alongside skin lesion management. The patient was discharged after 10 days with significant symptomatic relief and improved biological parameters.

Conclusions:

This case underscores the importance of a multidisciplinary approach to managing complex medical conditions in the elderly, with a focus on timely diagnosis, appropriate treatment, meticulous wound care to prevent complications, and highlights the complexities and challenges of managing multiple chronic comorbidities and severe infections in the elderly population. Despite a history of numerous severe disorders, the treatment with multiple antibiotics and wound care resulted in significant symptomatic relief and improved biological parameters.

Keywords: Extreme age, Sepsis, Infection

Severe osteoporosis in breast cancer patient hiding a secondary cause – Primary hyperparathyroidism.

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Background:

Women who have had breast cancer treatment may have an increased risk of osteoporosis and fracture. Moreover, breast cancer might have complications like distant metastases accompanied by hypercalcemia, but hyperparathyroidism is not commonly considered in the differential diagnosis.

Case Presentation:

We present the case of a 62-year-old female, with medical history of breast cancer (2013, right breast conservatory surgery, subsequent radiotherapy and 5 years of hormonal treatment with Tamoxifen), with no tumor recurrence detectable at yearly oncology assessments, is referred to an endocrinology consult due to persistent elevated alkaline phosphatase and severe osteoporosis with lowest bone mineral density (BMD) at distal radius level (T-score of -4SD), compared to lumbar spine (T-score L1-L4 of -2.7SD) and hip (T-score femoral neck of -2.7SD). Causes of secondary osteoporosis were investigated detecting elevated PTH (104pg/ml, N:10-69), normal 25-OH-vitamin D (64.1ng/ml, N>30, under adequate vitamin D supplementation 4000-5000IU/day), mild hypercalcemia (10.33mg/dl, N:8.5-10.3), hypercalciuria (398.4mg/24h, N<250), normal phosphatemia (3.67mg/dl, N:2.6-4.5). Considering vitamin D was above 40-50ng/ml, and PTH is its end-activator (by renal hydroxylation) potentially increasing hypercalcemia, we decided to stop vitamin D supplementation until investigations were completed. Cervical ultrasound identified normal thyroid gland, but a small hypoechoic nodule 6.3mm localized in the lower pole of the left thyroid lobe confirmed a parathyroid adenoma by parathyroid scintigraphy. The functional and imaging data confirmed the diagnosis of primary hyperparathyroidism, and a 3-month biological follow-up spontaneous improvement was observed: PTH of 83.32pg/ml, 25-OH-vitamin D maintained within normal range 31.56ng/ml, normal calcium levels (total calcium of 9.8mg/dl), normal phosphatemia.

Conclusions:

We presented the case of a woman diagnosed with severe osteoporosis seven years after a breast cancer diagnosis, associating persistent elevated alkaline phosphatase levels in the absence of detectable local or distal tumor recurrence, which proved to be in the context of primary hyperparathyroidism.

Keywords: osteoporosis, breat cancer, primary hyperparathyroidism

Sudden Exacerbation of Stable Atherosclerosis in Lower Limb: A Challenging Case

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Background:

Peripheral arterial disease (PAD) is a progressive condition caused by the slow growth of atherosclerotic plaques in the arteries of the lower limbs. The sudden onset of the signs of acute ischemia occurs in the context of embolism or acute thrombosis due to complicated atherosclerotic plaques. Plaque instability may be triggered by acute systemic inflammation.

Case Presentation:

We present the case of a 76-year-old diabetic male with cardiovascular history: myocardial infarction, aortocoronary bypass, the evolution towards dilated cardiomyopathy with severely reduced left ventricular ejection fraction, atrial fibrillation, ventricular extrasystoles, and implanted cardiac defibrillator. In 2019 he was diagnosed with stage IIA (Fontaine) PAD. Arterial Doppler at that time showed diffuse atherosclerotic stenoses of less than 50% in both legs, with a maximum of 50% stenosis in the left popliteal artery. He was admitted in 2023 for disabling claudication in the left leg with severe resting signs of ischemia (cold, mottled local skin, and positive Buerger's test). Leg pain and ischemia signs suddenly onset four weeks before, while the patient was hospitalized for sepsis with C. difficile, with fever, diarrhea, and high levels of inflammatory blood parameters. We mention that the patient was taking daily oral anticoagulant (standard dose of Apixaban) for systemic embolism prevention.
Angio-CT examination revealed occlusion of the left popliteal artery and arteries of the left leg. Vasodilator treatment (Alprostadil) was initiated, and subsequent improvement in local signs (hyperemic skin, warm, and decreased vascular refill time) was observed. Conservative treatment measures were recommended, including continued use of Alprostadil for four weeks and statin to maintain LDL-cholesterol levels below 55 mg/dL.

Conclusions:

The case we presented is a clinical example of the fact that inflammation links to acute complications of atherosclerosis in the lower limbs arteries. The sudden aggravation of the stable PAD was most likely caused by the inflammatory-infectious syndrome.

Keywords: Peripheral arterial disease, Systemic inflammation, Unstable plaque

Syncope in the elderly patient with neurological diseases

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Background:

Syncope is defined in the ESC guide as a transient loss of consciousness caused by global cerebral hypoperfusion (decreased cerebral flow), characterized by rapid onset, short duration and complete spontaneous recovery.

Case Presentation:

We present the case of an 83-year-old patient who presented to the emergency room for falls, with a frequency of one or two falls per week occurring for approximately 2 weeks. The patient is known to have atrial fibrillation with a medium rhythm, Parkinson's disease, lacunar vascular accidents being treated with NOAC-Xarelto 15 mg/day and Isicom ½ 3 times a day. The general clinical examination revealed blood pressure 120/60 mmHg, average heart rate 80 beats/minute, rest tremor of the hands, vestibular syndrome, extrapyramidal syndrome. The diagnosis of syncope of possible neurological etiology (transient ischemic stroke, drops-attacks, absence, falls in the context of Parkinson's disease) or cardiac-heart rhythm disorders, orthostatic hypotension was concluded. The EKG showed chronic atrial fibrillation with an average heart rate of 83/minute, hypovoltage QRS complexes, and paraclinical examinations revealed an inflammatory syndrome.The cranio-cerebral CT examination revealed cerebral atheromatosis, chronic lacunarism, cortico-cerebral atrophy. The thoracic CT examination revealed an important pericardial effusion with liquid densities, with a maximum thickness of 60 mm at the top of the heart. As well as a predominantly basal pleural effusion left with minimal underlying subsegmental lung collapse.

Conclusions:

Cardiac tamponade is a serious cardiac condition with a poor prognosis that can begin with syncope, but most often it is accompanied by signs of cardiac and respiratory failure, Bek's triad (low blood pressure, muffled heart sounds, jugular vein distension).The pericardial puncture highlighted a hemorrhagic pericarditis in the context of chronic anticoagulant treatment. The detailed clinical examination, paraclinical explorations, systematic evaluation of the results confers the precision of the diagnosis.

Keywords: Syncope, NOAC, Parkinson

Synovial pleural sarcoma in a teenage patient: A case report

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Background:

A soft tissue sarcoma of variable differentiation, synovial sarcoma (SS) is a very uncommon cancer that typically affects teens and young adults. Although many SS originate from structures near joints, the name is a misnomer, in that these lesions do not develop from intra-articular synovium, but from primitive mesenchymal cells. Primary SS of the pleura are rare malignant tumors comprising < 1% of all primary lung malignancies.

Case Presentation:

We present the case of a 16 year old male patient admitted into “Sf. Maria” Childrens’ Hospital with symptoms suggesting a pleural effusion, following a pneumonic episode in February 2023. The clinical examination revealed generalised paleness of the skin and a right-sided abolished vesicular murmur, while the lab results showed thrombocytosis, inflammatory syndrome and elevated GPT, GOT, GGT. Following a negative thoracentesis, the patient was forwarded to undergo a CT scan which disclosed a large tumoral mass in the right hemithorax (18/19.8/21 cm) that exerted an important mass effect on the right hemidiaphragm, mediastinum and the descending aorta. A biopsy was later performed and the pathology department confirmed the presence of stage IV synovial pleural sarcoma.
A multidisciplinary team consisting of a radiotherapist, surgeon and paediatrician decided, after obtaining consent from the patient’s mother, that chemotherapy is the best approach due to the large tumoral mass. The therapeutic scheme involves the ARST-0332 protocol, consisting of Ifosfamide and Doxorubicin. The patient tolerated the first cycle well, accusing only moderate nausea and vomiting, while the lab results indicated the normalisation of the transaminase levels.

Conclusions:

The particularity of this case is represented by the near lack of clinical features given the large tumoral mass described. The patient remains under observation and will continue the chemotherapy sessions according to the therapeutical scheme.

Keywords: synovial sarcoma, pleura, ARST-0332

The challenging diagnosis of malignant peripheral nerve sheath tumor -case report-

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Background:

Malignant peripheral nerve sheath tumors (MPNST) can accumulate in the brachial plexus and share symptoms with brachial plexopathy (BP), which may hinder the differential diagnosis between BP caused by radiation or metastases, and MPNST-derived BP, in patients with a history of breast cancer and radiation exposure. MPNST are rare and highly aggressive soft-tissue tumors.

Case Presentation:

A 51-year-old patient, diagnosed with breast neoplasm, having already undergone chemo and radio treatment, as well as lumpectomy (2000) with axillary lymphadenectomy, comes in due to pain, apparently of mechanical nature at cervical level, radiating to arm and forearm, accompanied by a burning sensation at the level of her right hand dorsally.
After the native MRI-check up at the cervical column, it was excluded any radicular compression at this level.
The patient is therefore transferred to the department of Rheumatology, where she is prescribed and administered anti-inflammatory treatment. There is partial improvement, with pain returning and progressively surging, especially at night.
Following the clinical tests run in the General Hospital C.F. PLOIESTI, department of Physical and Rehabilitation Medicine, there arises the suspicion of nerve compression at axillary level.
In February 2022, the MRI of the right brachial plexus revealed a tumor-like lesion at the level of the junction between the middle and lower trunk.
The PET-CT scan run in 2022 confirmed a metabolically active right axillary adenopathy. The patient is subjected to a biopsy of the tumor, which receives an encouraging initial anatomopathological diagnosis – as Schwannoma, which was later contradicted by the Immunochemistry result, which raises the suspicion of a low grade MPNST.
The tumor was surgically extirpated in the Elias Hospital.

Conclusions:

A detailed clinical examination followed by proper imagistic explorations of the brachial plexus unravel the unsettling diagnosis of MPNST. Complete local surgical resection can prolong survival of patients with MPNST and improve treatment prognosis.

Keywords: Brachial plexopathy, MPNST, MRI of the brachial plexus

The diabetic patient and the constellation of multivascular comorbidities

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Background:

The multitude of complications accompanying diabetes mellitus make it one of the most severe health concerns worldwide. Particularly worrisome are the cardiovascular comorbidities which can become life threatening without proper prevention or treatment intervention.

Case Presentation:

We are presenting the case of a 73-year-old female patient, who has been enrolled for 10 years in a cardiovascular rehabilitation program following a non-ST elevation myocardial infarction which required a triple aorto-coronary bypass surgery. The diagnosis of type 2 diabetes mellitus was also confirmed with the recommendation for oral antidiabetic medication, togheter with peripheral artery disease with a firm indication for surgical revascularization, however delayed due to personal reasons. Following the positive results for myocardial ischemia during stress tests, a coronary angio-CT was performed which showed the obstruction of both native coronary arteries, as well as the coronary bypass grafts. The recomandation was to repeat the coronarography with a possible myocordial revascularization. Given the patient's profile as well as overall cardiovascular risk, SGLT-2 inhibitors were added to her treatment schedule. This indication was justified, representing a suitable therapeutic option.

Conclusions:

Current guidelines offer key recommendations for patient management, even those with multiple cardiovascular comorbidities and a complex pathological profile. Newer pharmacological options are showing promising results, however in more advanced cases interventional or surgical therapies remain the only viable options.

Keywords: diabetes mellitus, cardiovascular comorbidities, rehabilitation program

THE DISEASE WITH MANY FACES: INTERSTITIAL PNEUMONIA OR PULMONARY ABSCESS?

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Background:

Despite dramatic advances in human health that have occurred during the 20th century, Acute respiratory infections cause four and a half million deaths among children every year, the overwhelming majority occurring in developing countries with high child mortality rates. Respiratory infections occupy an important place among child's pathology because of their increased frequency in medical practice, but also due to the associated morbidity and mortality in infants and young children. Although signs and symptoms of different pathologies overlap or remain unspecific, proper diagnosis and quick instauration of therapy is essential.

Case Presentation:

We present the case report of a 4 years and 3 months old boy, originated from the rural area, that has been hospitalized in the 5th Pediatric Clinic of „St Mary" Children's Emergency Hospital for a febrile syndrome which showed no signs of improvement for seven days despite the antibiotic and antipyretic treatment received at home. From his medical history we found out that the patient is known from the age of 2 years with hyperammonemia, hypercholesterolemia, cow's milk protein allergy and multiple episodes of respiratory infections. Clinical examination revealed the presence of an accentuated vesicular murmur located bilateral at the base of the lungs together with low blood sugar levels present at the first time of his admission the clinic and confirmed by the paraclinical examination.

Conclusions:

Although pediatric respiratory pathology is well known, we are in front of a patient with a surprising dynamics from interstitial pneumonia to pulmonary abscess, all with a nonspecific clinical picture. The case draws attention to the unexpected evolution that a pediatric patient can have, to the associated metabolic changes, and the diagnostic difficulties that may arise.

Keywords: PULMONARY ABCESS, HYPERAMMONEMIA, HYPERCHOLESTEROLEMIA

THE EVOLUTION OF NEONATAL JAUNDICE OF A PREMATURE CHILD: A CASE REPORT

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Background:

Neonatal jaundice, also known as neonatal hyperbilirubinemia, is a common condition in newborn infants characterized by high levels of bilirubin in the blood, which can lead to yellowing of the skin and whites of the eyes which usually resolves on its own within two to three weeks without any complications, but in some particular cases it can be pathological having a severe development.

Case Presentation:

The purpose of this paper is to present a newborn from pregnancy with a high chance of imminent abortion in the first trimester, with risk of trisomy 21, born prematurely with multiple neonatal ecchymoses, especially periorbital, microcephaly, flattened forehead, left preauricular tubercle, long columella, retrognathism and arachnodactyly was redirected to the Emergency Hospital for Children “Sf. Maria” Iași for specialized investigation.
The patient was diagnosed with intra and extrahepatic biliary atresia (BA), acute liver failure (ALF), cholestatic jaundice, acute respiratory failure, coagulopathy, foramen ovale patent (PFO), pulmonary hypertension, congenital periauricular malformation and he was tested for multiple bacteria and the results were negative, except Enterobacteriaceae. During hospitalization, he presented a stationary clinical state with a favorable slow evolution of the scleral and skin jaundice, with maintenance of vital parameters within normal limits. After one week, the patient had a worsening of the symptomatology with acholic stool, pronounced jaundice, the presence of skin and peri-umbilical ecchymoses, vomiting in "coffee grounds", the tendency to oliguria and bradysystole which responds to resuscitation maneuvers. Subsequently requires intubation and mechanical ventilation but one day later his condition became more severe and he couldn’t be saved.

Conclusions:

Jaundice appears frequently in BA which is a rare and serious condition affecting newborns, being one of the leading causes of liver failure and liver transplantation in children, this is why we should prevent complications by early detection and prompt medical and surgical intervention.

Keywords: jaundice, biliary atresia, bradysytole

The less seen effects of the COVID-19 pandemic

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Background:

In 2020, the COVID-19 pandemic broke out, taking the whole world by sursprise. During the months that passed until healthcare systems around the world adjusted to this new situation and developed protocols adapted to it, acces to non-emergency and non-covid related medical services became limited. During this time, regular check ups for chronic patients were long delayed.
Chronic kidney disease(CKD) is a condition characterized by gradual and permanent loss of kidney function over time. It is divided into 5 stages, stage 4 being translated into an important decrease of the glomerular filtration rate(GFR= 15-30 ml/min) and moderate to severe kidney damage.

Case Presentation:

A 76 years old male patient known with stage IV CKD, type II diabetes and stage II hypertension is admitted into the nephrology department for an imagistic check-up.
4 years prior, in 2019, the patient was diagnosed with a renal tumor on the left kidney and underwent a nephrectomy. A few months after he was discharged from the hospital, the COVID-19 pandemic begun. Therefore he was not able to complete the postoperative check-ups as scheduled or be moniterod for his pre-existing conditions.
In 2022, the imagistic investigations revealed an adenopathic mass located at the level of the left renal hilum. The patient underwent a second surgery, during which the mass was excised and based on the histopathological examination, the diagnosis of clear cell renal carcinoma was established.

Conclusions:

During the first year of the COVID-19 pandemic many patients, especially the elderly, were indirectly affected due to the lack of acces to medical care for their pre-existing chronic illnesses. This has, oftentimes, worsened their conditions, unfortunately causing some to spiral out of control.
This case highlights the importance healthcare crisis protocols have, both in resolving the crisis, and in providing care for those suffering from other pathologies.

Keywords: chronic kidney disease, COVID-19 pandemic, clear cell renal carcinoma

THE MYSTERY AND CHALLENGES BEHIND NEONATAL JAUNDICE

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Background:

Crigler-Najjar syndrome is a rare genetic disorder defined by the inability of the affected individuals to properly conjugate and excrete bilirubin, caused by a disarrangement of a specific liver enzyme: UDP-glucuronosyltransferase. There are 2 forms: Crigler-Najjar type I, characterized by a complete or nearly complete lack of enzyme activity with severe, life-threatening symptoms and type II, with partial enzyme activity and milder symptoms. The goal of this presentation is to describe the diagnosis, treatment and evolution of a patient with Crigler-Najjar type I and to emphasize the challenges encountered in cases of genetic disorders with potentially unfavorable outcome.

Case Presentation:

We describe the case of a 1 year and 11 months-old patient, full-term infant, with a history of neonatal jaundice since day 2 after birth. The value of unconjugated bilirubin rapidly progressed to a peak serum level of 35.2 mg/dl within 1 month. Genetic analysis and blood tests revealed a homozygous mutation in the UGT1A1 gene, without decrease of serum bilirubin value after administration of phenobarbital, which acts as an enzyme inducer. These findings are specific for Crigler-Najjar type I. The total bilirubin concentration could be managed between 15-18 mg/dl with daily phototherapy until 11 months-old, when the patient underwent a liver transplant at ISMETT Clinic, Palermo. After the surgical intervention, the patient has been having favorable results and significant improvement in the quality of life.

Conclusions:

Management of Crigler-Najjar syndrome type I until surgery is critical for the prevention of possible life-threatening complications such as acute bilirubin encephalopathy or kernicterus. In spite of a wide range of treatment options described in the literature (Tin protoporphyrin, calcium carbonate, plasmapheresis), liver transplant is nowadays the only therapeutic and definitive intervention , achievable in Romania only after the age of 1 year.

Keywords: Crigler-Najjar syndrome, Phototerapy, Liver transplant

The Novel Cancer-Fighting Tools: Ready to Believe in Them?

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Background:

The most common cancer-related death globally is lung cancer. Non-small cell lung cancer (NSCLC) makes up more than 80% of lung cancer cases. The development of molecularly targeted drugs and immunotherapy has drastically changed the therapeutic landscape for advanced NSCLC, thereby improving survival and quality of life.

Case Presentation:

We present the case of a 55-year-old male with a significant medical background, including asbestos exposure and heavy smoking. He describes the first symptoms of his condition as persistent coughing, fatigability, significant weight loss, and dysphonia, with a debut in August 2017. Following a series of investigations, including a flexible bronchoscopy, a whole-body computer tomography, and genetic tests, the patient was diagnosed with lung adenocarcinoma with no ALK or EGFR mutations present. The initial CT scan from October 2017 showed a suprahilar right mass, measuring 61/64/64 mm, associated with right hilar lymphadenopathy and masses in both adrenal glands. The patient experienced short-term benefits from receiving the first-line chemotherapy regimen; however, an August 2018 CT scan evidenced the progression of the disease. Second-line immunotherapy with Nivolumab, a PD-1 inhibitor, was initiated. In December 2022, the periodic imaging control showed a long-term response with a substantial reduction in the size of the right mediastinal mass to 14/18/49 mm. During the treatment, no immune-mediated side effects were reported.

Conclusions:

Immunotherapy serves a crucial role in the management of advanced NSCLC patients, particularly those without driver mutations. This case report illustrates the efficacy and safety of Nivolumab in the management of NSCLC patients, as well as the immunotherapy's potential in preserving quality of life and prognosis in this setting.

Keywords: Advanced non-small cell lung cancer, Immunotherapy, Long-term response

THERAPEUTIC CHALLENGE: SARCOMATOID DIFFERENTIATED RENAL CLEAR CELL CARCINOMA WITH SOFT TISSUE METASTASES

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Background:

Clear cell carcinoma is a common subtype of renal cell carcinoma, accounting for around 70% of cases. Metastasis is common in the lungs, liver, bones, lymph nodes, adrenal glands, and brain. However, soft tissue metastasis is relatively rare, occurring in less than 1% of cases. Despite recent therapeutic advances, the prognosis for advanced clear cell carcinoma remains poor. Immune checkpoint inhibitors have shown potential in the treatment of advanced clear cell carcinoma, although their efficacy can vary among patients.

Case Presentation:

We present the case of a 58-year-old male patient who initially presented in august 2020 with asthenia, weight loss and urinary symptomatology, and was clinically and bioptic diagnosed with renal cell carcinoma with sarcomatoid differentiation. The CT scan revealed multiple soft tissue metastases. Treatment with Sunitinib was initiated, and at the 6-months CT scan follow-up, a new metastatic nodule in the lung appeared. According to the Response Evaluation Criteria in Solid Tumors (RECIST), progressive disease was established, reason for the switch to Nivolumab therapy. Ten months after, progression of soft tissue lesions appeared, and switch to Cabozantinib therapy was made. Another six months after, a third progression occurred, and treatment with Everolimus was initiated. During the treatment, the patient's clinical condition deteriorated, along with a fourth progression, and chemotherapy with Doxorubicin and Gemcitabine was administered. At present, the patient is still under chemotherapy, but the prognosis remains guarded.

Conclusions:

Managing advanced clear cell carcinoma with sarcomatoid differentiation is a complex and challenging task, especially when it involves rare occurrences like soft tissue metastasis. This case emphasizes the ongoing difficulties in finding optimal treatment options, despite the use of multiple therapeutic approaches. Further research is needed to enhance the management and prognosis of patients with this subset of advanced clear cell carcinoma.

Keywords: Renal clear cell carcinoma, Sarcomatoid differentiation, Treatment resistance

Therapeutic challenges in major life-threatening STEMI

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Background:

Despite the progress made in the management of patients with acute myocardial infarction (AMI), it is still the leading cause of death from a single disease, especially in developed countries. Myocardial revascularization by coronary angioplasty with stenting is the gold standard in treating AMI.

Case Presentation:

We report the case of a 67-year-old patient with a high cardiovascular risk (obesity, dyslipidemia, hypertension, diabetes) admitted to the Institute of Cardiovascular Diseases in cardiogenic shock, 20 hours after the onset of an AMI complicated with resuscitated primary ventricular fibrillation.
The electrocardiogram shows sinus rhythm with the appearance of an antero-extensive STEMI, biochemically confirmed by increased myocardial necrosis markers. Echocardiography reveals severe systolic left ventricle dysfunction, with severe hypokinesia of the anterior wall and apex.
Emergency coronary angiography was performed, noting the acute thrombotic occlusion of the left main, pathogenic and clinical situation often incompatible with survival. Given the major hemodynamic instability (cardiogenic shock), repeated left main thromboaspiration was decided and performed, leading to its recanalization and the subsequent highlighting of a severe atherothrombotic lesion of the circumflex artery in its first segment, most likely the starting point of the extensive thrombosis.
Coronary angioplasty with stenting was performed at the level of the circumflex artery, the patient survived and the cardiogenic shock remitted, though a quite severe left ventricular failure persisted.

Conclusions:

Major cardiovascular emergencies require an aggressive therapeutic approach, not always perfectly pliable on the guidelines` recommendations. Even though left main injuries have in their vast majority indication for surgicial treatment, in the given situation, because of the major vital risk of the patient, the interventional treatment was decided, overcoming the acute coronary episode.

Keywords: acute myocardial infarction, thromboaspiration, coronary angioplasty with stenting

Total aortic dissection: when severity can not beat fate!

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Background:

Neurological damage is a frequent cause of mortality, morbidity and long-term disability among patients with aortic dissection surgery, promoted by circulatory arrest and extracorporeal circulation under deep hypothermia.

Case Presentation:

We present the case of a 66-year-old patient addressing for retrosternal chest pain that occured 8 hours before presentation without electrocardiographic or enzymatic evidence. The symptoms have improved under anti-anginal therapy. However, after a hypertensive crisis (BP=200/110 mmHg), retrosternal pain with interscapulo-vertebral irradiation reappeard. For this reason was performed a computer tomography examination that showed extended dissection from the origin of the aorta along the entire length of the thoracic aorta to below the level of the right renal artery emergence. Prolonged scanning in the late arterial phase highlighted the extension of the dissecting fold to the level of the common iliac arteries. Emergency surgical treatment was performed under extracorporeal circulation in deep hypothermia (20° C) and prolonged circulatory arrest (50 minutes). The surgery lasted 11 hours. Postoperatively, the patient had seizures that required continuous sedation and induced coma with mechanical ventilation for another 9 days. After extubation, the patient remained with a brachial right hemiplegia, bradylalia, bradypsychia, temporal and spatial disorientation and he could not recognise himself. The complex treatment associated with neurotrophic medication and physical therapy led to a positive outcome. The motor deficiency has been remitted and he resumed bilateral coordination of walking.

Conclusions:

The particularity in this case consists in the unexpected, quasi-complete recovery after a major surgical treatment for total aortic dissection complicated with important neurological injury caused by the need for prolonged circulatory arrest and deep hypothermia.

Keywords: Total aortic dissection, Neurological damage, Circulatory arrest

Treating Psychiatric Complications in an Adolescent with Traumatic Brain Injury

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Background:

An understudied and complex part of the treatment of Traumatic Brain Injuries(TBI) is in dealing with psychiatric complications, as Anxiety emerges in 36% of cases and Depression in 43% of cases. As well, a recent Meta-Analysis discovered that, in patients suffering from Major Depressive Disorder and TBI, antidepressant therapy did not significantly outperform placebo. Therefore, there is often a need to apply more unconventional or innovative treatment modalities to produce results.

Case Presentation:

The patient was a 16-year-old male who presented to a private psychiatric clinic requesting a second opinion after antidepressants and therapy failed to help. Three years prior, he suffered a severe head injury skateboarding, requiring surgery and the implantation of a titanium plaque in the left side of his skull; within six months, he developed depression, anxiety, and a loss of motivation, leading to two suicide attempts. Transcranial Magnetic Stimulation is a common treatment for treatment resistant depression, but it was worried that the plaque would impede treatment in the Left DLPFC, so he was only given an inhibitory 1 Hz treatment to the Right DLPFC to address anxiety, with 20 sessions plus 2 maintenance sessions. The patient reported limited results until the patient's 18th TMS session, where Adderall 20mg qd and Wellbutrin 450mg qd were added to his medication regimen, which produced rapid and durable response in his depression and anxiety.

Conclusions:

While right-sided rTMS has proven effective in treating anxiety, the treatment used here had no excitatory elements as the LDLPFC, where excitatory treatments would usually be targeted, was blocked by a metal plaque. Neurostimulants are known to selectively excite the neurons of the prefrontal cortex in a manner similar to rTMS, and there is ongoing research showing that this excitatory effect is particularly valuable in recovering from TBI.

Keywords: Traumatic Brain Injury, rTMS, Adolescent Medicine

Unusual presentation of renal failure in pediatric extrapulmonary sarcoidosis

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Background:

Pediatric sarcoidosis is a rare multisystemic granulomatous inflammatory disorder of unknown etiology. The renal involvement is infrequent and often related to hypercalcemia and hypercalciuria, although renal infiltration with non-caseous granulomas is also possible. This case report examines the unusual primary clinical presentation of pediatric-onset adult-type sarcoidosis as acute kidney disease due to impaired calcium metabolism and the clinical evolution under treatment.

Case Presentation:

We present the case of a 10-year-old male patient who presented at the "Sf. Maria" Emergency Children's Hospital with fatigue, weight loss, uneasiness, and a recent episode of epistaxis. Upon clinical examination, the patient was found to have hepatosplenomegaly, an enlarged abdomen, oliguria, and failure to thrive, with normal cardiac and pulmonary findings. Laboratory tests confirmed nitrogen retention, corresponding to stage IV chronic kidney disease, which progressively worsened over time until the patient required hemodialysis. Additionally, the patient had pancytopenia, hypercalcemia and hypercalciuria, metabolic acidosis, elevated inflammatory markers with negative results for infectious diseases, hepatocytolysis and cholestatic syndromes. A renal ultrasound detected renal medullary calcifications, indicating nephrocalcinosis as a substrate of the patient's chronic kidney disease. Histopathological examination of liver tissue revealed chronic granulomatous giant-epithelioid hepatitis, suggesting a diagnosis of sarcoidosis, a pathology frequently associated with hypercalcemia. A thoraco-abdominal CT scan did not reveal any pulmonary involvement, leading to a diagnosis of extrapulmonary sarcoidosis, but highlighted a portal hypertension syndrome. The patient was treated with prednisone and supportive care. At a 3-month follow-up, the patient's condition had significantly improved, with symptom relief and normalization of laboratory values, as well as improved kidney function.

Conclusions:

While pediatric extrapulmonary sarcoidosis is rare, it’s important to consider it in the differential diagnosis in children with renal impairment without any etiology. The infrequency of renal involvement may cause a delayed diagnosis, which in this case was in an advanced stage of CKD.

Keywords: extrapulmonary sarcoidosis, chronic kidney disease, hypercalcemia

UNUSUAL THERAPY IN DILATED CARDIOMYOPATHY IN CHILD

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Background:

. Dilative cardiomyopathy (DCM) is a progressive myocardial disease that affects both the systolic and diastolic function of the left ventricle at the begging, then of the entire heart, which becomes dilated, the muscle will not contract normally anymore and so the pump function will be affected. A number of factors can induce DCM, such as infections, autoimmune diseases, coronary congenital malformations that occurs on a genetic background, but the cause can also be unknown. The only efficient treatment is heart transplant.

Case Presentation:

A 15- year old boy was admitted for the first time in his life in the Intensive Care Unit of the Children Hospital ,,Sf. Maria" Iasi with severe heart failure. The tests revealed idiopathic DCM with low contractility (ejection fraction 15%), low cardiac output, severe mitral and tricuspid regurgitation and right bundle branch block. He received supportive treatment for the heart failure, stabilized and transferred to Transplant and Cardiovascular Diseases Institute of Tg.Mures, but the family decided to go on their own to London for further treatment. Heart transplant is the only effective treatment for DCM, but Left Ventricular Assist Device (LVAD) is very helpful as a bridge to that moment and this is what the doctors from London have chosen for this 15 year-old boy.

Conclusions:

The LVAD was life-saving for our patient at least for a while, as a bridge until the heart transplant. We hope that this type of treatment will be available also in Romania, so that more little hearts could be saved.

Keywords: dilated cardiomyopathy, left ventricular assist device, child

CASE REPORT

Surgical

A Case of Uterine Prolapse - The Commonality of Pelvic Floor Dysfunctions

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Background:

Uterine prolapse can be defined as the herniation of the uterus into or beyond the vagina due to the weakened state of the muscular, ligamentous and fascial supporting structures of the pelvis. It frequently manifests alongside other types of pelvic organ prolapse. This pathology affects millions of women worldwide, roughly 20% of whom qualify for major gynecological surgery, and can lead to genital tract dysfunction and diminished quality of life.

Case Presentation:

A 65 year old female patient, known with 1st degree obesity, menopause reached at age 51 and a history of 2 vaginal births, the first of which being a forceps-assisted delivery, presented to the clinic complaining of the outward growth of a pseudotumor formation over the course of the prior year, with recent aggravation. Upon physical examination, one could observe the externalization of the cervix beneath the vaginal walls, depressible upon pressure, with cervical decubitus lesions.
Ultrasound scanning revealed the uterus of 55/45/50 mm, with homogenous echotexture, a central cavity and endometrium of 1.8 mm. The ovaries appeared bilaterally reduced in size.
Following the diagnosis of stage IV hysterocele, the patient underwent surgical treatment, consisting of a vaginal hysterectomy with McCall culdoplasty under general anesthesia. The postoperative outcome was favourable, without the manifestation of any further complications.

Conclusions:

Acknowledgement of the high prevalence of uterine prolapse proves to be of great importance, particularly amongst women who present multiple risk factors, such as older age, high body mass index, multiparity, vaginal delivery, increased abdominal pressure or hereditary transmission. Early detection of the affliction allows for conservative management by way of pelvic floor muscle training and vaginal pessaries.

Keywords: uterine prolapse, hysterocele, hysterectomy

A CHALLENGING CASE OF A NEWBORN WITH APPLE-PEEL INTESTINAL ATRESIA

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Background:

Apple-peel intestinal atresia is a rare form of small bowel atresia in which the proximal bowel is dilated and the distal bowel wraps around its independent blood supply in a spiral resembling an apple peel also known as Christmas tree atresia. This rare form of jejunoileal atresia has an incidence of 1/50.000 live births. The aim of this case report is to describe the particularities of diagnosis, treatment and evolution of a newborn with this rare pathology.

Case Presentation:

A female newborn aged 48 hours with delay in passing the meconium and bilious vomiting was transferred to Emergency Children' s Hospital "Sf. Maria" at 48 hours after birth for diagnosis treatment. The prenatal ultrasound revealed hydramnios. The clinical aspects alongside with X-ray findings (air-fluid levels in the upper abdomen and paucity of gas in the lower bowel) established the diagnosis of neonatal occlusive syndrome with the suspicion of intestinal atresia. Within 72 hours after brith the pacient underwent a particular type of median laparotomy, using an umbilical window. Apple-peel intestinal atresia was identified, located at 10 cm from the angle of Treitz and 15 cm from the ileo-cecal valve. Surgical repair consisted in minimal resection of the dilated proximal end of the jejunum and the distal end of the ileum with optimal diameters modeling for the end-to-end anastomosis. Because of the high discrepancy between the two sides of the atretic bowel, a trans-anastomotic Kehr tube was placed, creating a "T" stoma. At 2 weeks postoperative the pacient underwent a gastrointestinal contrast study that confirmed a functional jejunoileal anastomosis.

Conclusions:

Patients with apple-peel intestinal atresia are complex challenging cases, as they frequently have a high incidence of prematurity, short gut and usually have a big difference in the diameter between the proximal and distal intestines that makes end-to-end anastomosis difficult.

Keywords: apple-peel syndrome, intestinal atresia, umbilical window

AMYAND'S HERNIA A CHALLENGE IN ACUTE CARE SURGERY

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Background:

Amyand's hernia is an uncommon condition in which the vermiform appendix, whether inflamed or not, is found in an inguinal hernia sac.The incidence of appendix within an inguinal hernia is very rare, less than 1% and the finding of appendicitis in the inguinal hernia is only 0.1% . Considering its scarcity and ambiguous clinical evidence, it is typically reported as a discovery made during surgery.

Case Presentation:

We hereby introduce a 62 years-old male patient admitted to the First Surgical Clinic, St. Spiridon University Hospital in emergency for strangulated inguinal hernia symptomatology. The patient presented an irreducible painful mass in the right groin area. Based on clinical examination and imaging a strangulated hernia is suspected, therefore surgical intervention is performed through an open approach via an inguinal incision. Intraoperative exploration revealed the presence of an acute appendicitis in the hernia sac. An open appendectomy was performed through the inguinal incision, as for the parietal defect, the Bassini technique for hernia repair was used. No side effects were noted after surgery, and so the patient made an excellent recovery.

Conclusions:

Appendicitis within an Amyand's hernia is a rare event and it is a challenge in acute care surgery. The preoperative diagnosis is certainly challenging because it simulates the behavior of an incarcerated or strangulated inguinal hernia. Appendicitis undeniably influences the approach of the surgery.

Keywords: AMYAND, INCARCERATED HERNIA, APPENDICITIS

Bleeding, Deficiency, Destruction - All roads lead to Anemia

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Background:

Anemia is among the most common medical problems for which clinical and laboratory evaluation need to be approached logically. Iron deficiency is one of the most common causes of anemia. The etiology is variable and attributed to several risk factors such as decreasing iron intake and absorption or increasing demand and loss, with multiple etiologies often coexisting in an individual patient.

Case Presentation:

We report the case of a 49 years old female who presented in the General Surgery Department of Yeditepe Üniversitesi Koşuyolu Hospital Istanbul for anemia. Regarding her medical history, she underwent a bariatric surgery, gastric bypass, ten years ago. After eight years she returned to the General Surgery Department for the first time since the gastric bypass for anemia. At first, she followed a pharmacological treatment and, for 6 months, her problems seemed to be solved. One and a half year later she asked for another consultation because her anemia got more noticeable. At that moment she was diagnosed with stage IV colon cancer. The first line of treatment applied was a surgical approach. A multidisciplinary team, a general surgeon, a gynecologist and an interventional radiology team worked together for the patient.

Conclusions:

After a gastric bypass surgery 56.5% patients are diagnosed with anemia a few years later since the surgical approach. In front of a patient who is presenting with anemia, this symptom can be very deceptive, especially when there is a medical history that can be used to explain it.

Keywords: Anemia, Gastric bypass, Colon cancer

Can a giant ovarian mucinous cystadenoma grow because of the pandemic?

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Background:

Mucinous ovarian tumors represent 10%-15% of ovarian neoplasms and a common subtype of epithelial cell tumors. They may be benign, borderline, or malignant.

Case Presentation:

We present a case of a 66-year-old female who came for hospitalization at the end of the Covid 19 pandemic, accusing abdominal distension, dyspnoea, transit disorders and bloating. It is emphasized that the patient's mother died at 68 of breast cancer and the patient has a history of subtotal hysterectomy for uterine fibroma at the age of 25. The patient accuses an insidious debut 2 years prior, at the beginning of the pandemic. Clinical examination reveals globulous abdomen, slightly asymmetrical, collateral circulation. At palpation, the abdomen was slightly painful, occupied by a tumor formation of approximately 30/40cm that extends from the level of the xiphoid process to the pubis and laterally to the level of the iliac crests. The pelvic examination shows a small cervix and a cystic formation which occupies the entire pelvis. Laboratory exams are in normal limits, except for the tumor marker CA19-9, which was 398 U/mL. CT examination shows a multiloculated formation on the left ovary with overall dimensions of approx. 230/300/350 mm. The suspicion was a giant ovarian cyst, possibly malignant. A median xipho-umbilical laparotomy was performed and a giant cystic tumor of the left ovary weighing 13 kg was removed. Anexectomy was performed on the right side without complications. Histopathological examination determined the diagnosis of borderline mucinous cystadenoma. The postoperative evolution was without complications.

Conclusions:

Gigantic ovarian neoplasms are rare. In current medical practice, the progress in imaging allows a precise diagnosis when ovarian tumors are small. Therefore, when a patient has a giant tumor, we must ask ourselves what caused him to delay his hospitalization for so long. In this case, the fear of the pandemic was to blame.

Keywords: ovarian tumors, giant ovarian cyst, borderline mucinous cystadenoma

Case report of a lymph node -positive, HER-2 positive carcinoma : Is it check-mate ?

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Background:

Breast carcinoma has the highest oncological death rate in women. HER-2 positive breast cancer has a higher rate of being aggressive and fast-growing, because of excess production of the human epidermal growth factor 2. A multidisciplinary approach is the standard of care in breast cancer management, with surgery remaining the pillar of treatment. Axillary lymphadenectomy is performed as part of the surgical management of breast cancer lymph node metastasis.

Case Presentation:

A 57 years -old female, known with important cardiovascular pathology and other associated comorbidities undergoes a mammography, which revealed a 35/40/28 mm ill-defined irregular opacity at the union of the upper quadrants. Ultrasound findings consist of an irregular hypoechoic mass and multiple axillary adenopathies . Investigations continue, but there was an inconsistency between the imaging aspects and the core biopsy results, therefore a new biopsy is required. The definitive diagnosis, following the morphological evaluation was invasive ductal carcinoma, with HER-2positive, ER, PR- negative and ki67 =60%. The patient underwent 8 cycles of chemotherapy with targeted HER-2 drugs and after an imagistic and biopsy re-evaluation, the mass disappeared, but there was still evidence of several microcalcifications, that raise suspicions of an associated extensive ductal carcinoma in situ. Right subcutaneous radical mastectomy with axillary lymphadenectomy was performed . Postoperative, the patient had external adjuvant radiotherapy through IMRT. The final result was the removal of all tumoral aspects.

Conclusions:

Staging for breast cancer is very complex, with many different factors to be taken into consideration, before the final confirmation of the diagnosis. Nodal involvement is a strong and independent negative prognostic factor, thus a multimodal treatment including neoadjuvant chemotherapy and surgery is demanded. As this case aims to emphasize, if all of them work accordingly, promising results are expected .

Keywords: breast carcinoma , lymphadenectomy, radical mastectomy

Conquering a Locally Advanced Gastric Stromal Tumor through Multi-Organ Resection

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Background:

Gastrointestinal stromal tumors (GISTs) are rare neoplasms of the gastrointestinal tract, associated with high rates of malignant transformation. They originate from the interstitial cells of Cajal which are the pacemaker cells of gastrointestinal movement, characterized by over-expression of the tyrosine kinase receptor KIT.

Case Presentation:

The patient reported an insidious onset 3 years ago, with localized epigastric pain and physical asthenia. Following imaging investigations (CT), endoscopy, and biopsy, an ulcerative-vegetative tumoral mass (148/212/190mm) on the anterior aspect of the stomach body was detected and the diagnosis of GIST was established. Treatment with Imatinib was initiated, and 6 months later the CT showed a halving of the tumor size (88/89/88mm).

Despite continuing Imatinib treatment, the patient experienced an unfavorable evolution with an exacerbation of epigastric pain, weight loss, and abdominal enlargement. The CT scan from February 2022 described an increase-sized tumor (150/120/160 mm) which exerted a mass effect on the corporeal-caudal pancreas, leading to the need for surgery. The surgical procedure revealed that the mass infiltrated the left hepatic lobe and the transverse colon. A comprehensive en-bloc resection of the tumor was performed, along with the preservation of 1/3 of the stomach, segmental resection of the transverse colon, atypical hepatic resection, and omentectomy. The histopathological and immunohistochemical examination of the resected tissue revealed diffuse positive staining for CD117 in the tumor cells, and morphological features consistent with a gastric GIST with a high mitotic rate.

Initially, the patient had a slowly favorable postoperative course, but subsequent imaging (December 2022) revealed evidence of bilateral pleural effusion, cardio-phrenic adenopathies, ascites, peritoneal nodular lesions, and hepatic metastases. The patient was recommended palliative care.

Conclusions:

Prompt diagnosis, appropriate treatment, and close monitoring are crucial for GIST patients. For locally advanced tumors, multiorgan resection is preferred to obtain a better prognosis.

Keywords: GIST, Gatrointestinal stromal tumor, en-bloc resection

Eikenella corrodens causing cerebral abscess in pediatric patient – a rare pathogenic finding

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Background:

Eikenella corrodens is an opportunistic Gram-negative bacillus associated with systematic implications including abscesses and culture-negative endocarditis. CNS invasion is especially ominous, with 6 literature reported cases. Dental procedures followed by upper teeth infections correlate to the dissemination via apical venous drainage and its connections with the cavernous sinus.

Case Presentation:

We describe the case of a 10-year-old patient with past medical history of twin pregnancy origin, multiple dental extractions, vulgar psoriasis on lower limbs under treatment, and a declarative allergy to antibiotics, that presented with sudden frontal cephalgia and episodic vomiting. Blood work showed increased WBC, fibrinogen, and CRP. MRI is ordered to evaluate the increased intracranial pressure syndrome and a lesion located in the left frontal lobe with moderate restriction of diffusion and peripheral enhancement was found. Additional MRI spectroscopy revealed high levels of succinate, alanine, acetate, lactate, and amino acids, orienting the diagnosis to a cerebral abscess. Preoperatory investigations included a cardiology consult to rule out possible cardiovascular malformations or infective endocarditis due to the twin pregnancy, and an allergology consult that infirmed antibiotic allergies. Surgical treatment consisted of guided stereotactic aspiration of the abscess, followed by empiric antibiotic therapy with vancomycin and metronidazole. The sample sent for microbiological analysis identified XMDR Eikenella corrodens that was subsequently treated with penicillin, colistin intravenously, and Eficef orally after discharge. CT scans at 1, 2 and 3 months show treatment was successful with no further complications and complete abscess resolution.

Conclusions:

The presented case illustrates an unusual situation of a pediatric brain abscess of a rare etiology of an opportunistic bacteria that caused CNS infection after repeated dental extractions without antibiotic prophylaxis. MRI scan proved inconclusive with insufficient data for treatment decision, whereas MRI spectroscopy oriented the differential diagnosis. Adequate pus drainage followed by aggressive antibiotic therapy helped to assure a full recovery.

Keywords: cerebral abscess, Eikenella corrodens, dental extractions

Endoscopic approach to a rare case of Intraventricular Colloid Cyst

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Background:

Colloid Cysts of the Third Ventricle are benign tumors, incidentally found on CT or MRI in the rostral third ventricle, near the foramen of Monro.
This rare pathology can cause rapid clinical deterioration, cerebral herniation and sudden death due to obstructive hydrocephalus, especially if the patient is asymptomatic or the cyst is dislodged by trauma.

Case Presentation:

A 38 year-old female pacient with no comorbidities, had suffered from diffuse headache lasting 2 years, with no response to conservative treatment. MRI detected a ventricular hyperintense lesion in T1 sequence of variable density near the foramen of Monro, corresponding with a colloid cyst.
The pacient had been monitored for the past 5 months and the symptoms got worse in the last 2 months, developing cerebral ataxia and papillary edema.
After clinical and imaging investigations, the pacient was submitted to an endoscopic transcranial approach through the left lateral ventricle to completely remove the cyst and reduce the rate of complications. Following the macroscopic resection, an extemporaneous histopathological examination confirmed the nature of the structure.

Conclusions:

Symptoms are caused by the impending of CSF flow across the foramen of Monro and risk factors can lead to acute neurological decline. Considering that colloid cysts are easily discerned from other neoplasms or structures, a CT or MRI might lead the surgeon to an accurate diagnose and a suitable management to save the pacient's life.

Keywords: colloid cyst, CSF flow, endoscopic resection

Evolution of a surgical treated patient with gastric carcinoma(signet ring cells type)

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Background:

Signet ring cell adenocarcinomas(SRCCs) are a rare histological subtype of adenocarcinomas with a poor prognosis, due to advanced disease at diagnosis.A signet ring cell, mimicking its monicker, contain abundant intracytoplasmic mucin that pushes the nucleus to periphery.

Case Presentation:

A case of a 55-year-old male who presents to the general surgery department of Colentina Clinical Hospital for surgical treatment of a poorly differentiated gastric carcinoma(the diffuse type according to Lauren classification) that was found during an upper digestive endoscopy.Patient complained of diffuse abdominal pain without any signs of peritoneal irritation, intensified pain at palpation in the epigastric region, heavy weight loss and severe Iron-deficiency anemia. After oncological neoadjuvant therapy was recommended by the Tumour Board, a CT exam detects suggestive signs for gastric cancer with no other loco-regional tumoral invasion in the abdomen, but intraoperative numerous tumors are found.Postoperatory evolution was favorable, yet a few months later the patient presents with high intestinal occlusion, eating disorders, nausea and vomiting, which required another surgical intervention that revealed an extensive peritoneal carcinomatosis with a unfavorable postoperative evolution that imposed reintervention.

Conclusions:

The intraoperative situations illustrate the importance of a stringent examination notwithstanding only for imagistic investigations, but also the unexpected complications of a gastric carcinoma.

Keywords: Gastric Carcinoma, SRCCs, Tumoral Invasion

Expansive laterocervical formations – why and when to be worried

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Background:

Cervical adenopathies can be observed in both infectious diseases (mononucleosis, tuberculosis) and tumours (benign – Kikuchi disease, Castleman disease or malign – lymphoma, thyroid cancer). Benign tumours are more frequent than malignant ones and can be accompanied by serious complications, so it is important to diagnose and treat them accordingly. A rare benign tumour is Castleman disease, with an incidence of 5-15 cases per million. The etiology is unknown and it can affect any age.

Case Presentation:

A 44 year-old male patient presented dyspnea, dysfonia, disphagia, all installed during two months.
Clinical examination revealed bilateral cervical masses, which were enlarged, fixed, firm and painless. The patient benefited from a tracheostomy to permeabilize the airways. Magnetic resonance angiography showed a big hypervascularised left cervical formation (60 x 78 x 129 mm), which compresses the larynx and diverts the left jugulo-carotid bundle, without invading it. A similar, but smaller lesion (21 x 33 x 68 mm) and several ganglions (10-16 mm) were observed in the right cervical area too. Lymphoma was suspected and fine needle aspiration biopsy was made, but the results were inconclusive. The next step in both diagnosis and treatment is surgery and the left tumour was excised. Histopathological evaluation identified an unicentric, hialine-vascular type Castleman disease. The patient had a good evolution after surgery, with no residual tumour at 4 months follow-up. The other lesion and ganglions noticed preoperatively are stationary and under observation.

Conclusions:

Besides the rare occurence, what is special in this case is the rapid evolution of the left mass. Usually, in unicentric Castleman disease the lump is growing slowly. Furthermore, the diagnosis is a real challenge, because symptoms are nonspecific, they can mimic lymphoma or other solid tumours. Clinical and histopathological examination remain the standard for every suspicious adenopathy.

Keywords: Castleman disease, benign laterocervical formation, unicentric

Giant ovarian tumor in a 76-year-old female, a rare finding in modern times

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Background:

Ovarian masses have become rare in the current medical practice, because they are diagnosed early during routine gynaecology examinations. Giant ovarian tumors are sporadically reported in elderly patients and the majority of them are benign. However, when these tumors occur, specialists should adequately approach them because the risk of malignancy and several complications due to their size can endanger the patient's life.

Case Presentation:

We present the case of a 76-year-old postmenopausal woman, who presented to the General Surgery Department with complaints of abdominal distension, diffuse abdominal pain and constipation which started gradually 8 months ago. The woman had a significant past medical history of cardiovascular affections and surgical interventions including a leiomyoma removal. A contrast-enhanced computer tomography revealed a 25x25x21 cm cystic lesion which appears to arise from the left adnexa, yet, it did not invade any adjacent structures and no other masses were observed. Surgery was decided and during laparotomy, adherences to the sigmoid colon were found. The resection of the mass alongside both ovaries and adhesiolysis was performed.

Conclusions:

Giant ovarian mass is a rare finding in general gynaecology because of the accessible healthcare services and level of education. In terms of diagnosis, pelvic ultrasonography, computed tomography, magnetic resonance imaging and CA-125 tumor marker represent helpful tools. In addition, due to their size, laparotomy and total excision remain the treatment of choice.

Keywords: giant ovarian tumor, laparotomy, cystic lesion

Low-grade appendiceal mucinous neoplasm (LAMN) with pseudomyxoma of the peritoneum

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Background:

Pseudomyxoma of the peritoneum is a rare neoplasia that involves mucinous ascites, often localized, whose starting point is often appendicular.

Case Presentation:

We analyzed the case of a 49-year-old patient who came for an increase in the volume of the abdomen and a weight loss of 12 kg in 2 months. The clinical examination revealed an underweight patient, with an enlarged abdomen, moderately diffuse sensitive to palpation, with multiple, hard, relatively fixed structures throughout the abdomen and mild ascites.
Ultrasound examination revealed localized ascites with high fluid density and a thick-walled appendix.
Laboratory showed moderate elevations of tumor markers CEA and CA19.9 as well as mild anemia.
Contrast-enhanced TAP computed tomography confirms an appearance of peritoneal pseudomyxoma with appendiceal origin and infracentimeter abdominal adenopathies.
Surgical intervention was performed with wide excision of the peritoneum, of the tumor masses, right ileohemicolectomy with ileotransverse anastomosis followed by HIPEC. The histopathological result confirms an appendiceal low-grade mucinous neoplasm (LAMN) with pseudomyxoma peritoneal pT4a Nx-G1, L0V0Pn0 ICD-O: 8480/1.
The evolution was marked by the onset of conservatively treated acute pancreatitis on the 7th postoperative day.

?There are few similar cases in the literature, with most centers reporting less than 100 cases over long intervals.
The most common starting points are appendicular or genital, but they can also have other locations.
The disease is considered border-line, the degree of invasiveness depending on the initial site and invasive extension but also on the KRAS status. In our patient, the peculiarity was the extent of the peritoneal lesions and the evolution with acute pancreatitis after HIPEC.

Conclusions:

Pseudomyxoma peritoneii should be suspected in patients with localized ascites without an obvious cause in whom the density of the intraperitoneal component is gelatinous. HIPEC is an excellent option that reinforces the results of surgery.

Keywords: pseudomyxoma, LAMN, neoplasm

Lower limb High Grade round cell sarcoma with EWSR1-non ETS fusions

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Background:

In World Health Organisation classification of Soft Tissue Tumours and Bone, undifferentiated round cell sarcomas (USRCS) are now kept separate from Ewing sarcoma and subclassified according to the underlying gene rearrangements - CIC, BCLR and not ETS fused sarcomas. Round cell sarcomas with EWSR1-non ETS fusions are the least common entity of USRCS and shows similar characteristics with Ewing sarcoma clinically, morphologically and immunophenotypically.

Case Presentation:

65 years old woman had unpainful lump in right knee area. Magnetic resonance imaging (MRI) revealed a big, heterogenous, well delimited lump. It infiltrated surrounding structures and accumulated contrast. The lump compressed neurovascular bundle in the popliteal fossa, so it was inoperable. Biopsy morphological finding showed high grade round cell sarcoma with EWSR1-non ETS fusions including CIC-, BCOR- type sarcomas.

50 Gy neoadjuvant radiation therapy were described. Afterwards in MRI - tumor has decreased in size, neurovascular bundle was intact and now it was possible to operate. Tumor resection in one block with nervus peroneus communis were performed. Knee joint was replaced with prosthesis and soft tissue defect was closed with contra-lateral microvascular thigh graft. After the surgery patient had “foot drop” as n. peroneus was extracted with the tumor.

Extracted material histology showed clean resection lines. They described cellularity loss more than 90%, fibrous tissue with hialynosis and necrosis, but diagnosis still remained high grade round cell sarcoma with EWSR1-non ETS fusions.

Conclusions:

Aim was to demonstrate a rare case of high grade round cell sarcoma of the lower limb with EWSR1-non ETS fusions and to highlight the importance of diagnostics to distinguish Ewings sarcoma from other soft tissue sarcomas. According to literature soft tissue sarcomas don't show significant reduction in size or tissue necrosis after neoadjuvant radiotherapy unlike Ewing’s sarcoma and it raises discussion about the accuracy of the diagnosis and the need for genetic testing.

Keywords: Round cell sarcoma, Diagnostics, Ewing

Lutembacher’s syndrome: Case of mitral stenosis replaced with a mechanical prosthesis

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Background:

Lutembacher’s syndrome refers to a combination of congenital atrial septal defect with mitral stenosis. Atrial septal defects are common congenital heart defects, characterized by insufficient/absent tissue at the interatrial septum. Mitral stenosis is a common valvular disease characterized by the narrowing of the mitral valve orifice and a reduction in the mitral valve area.

Case Presentation:

The patient, a 10-year-old male, was first admitted to the hospital in 2013, at the age of 3, for chest pain, fatigue, and flu-like symptoms, such as fever and chills. After the clinical examination, he was diagnosed with a minor atrial septal defect and infectious endocarditis. Two years later, he was hospitalized again at the Cardiac Clinic. The main diagnosis was the post-endocarditis status with mitral valve destruction, mitral insufficiency grade IV, mitral valve stenosis, and aortic valve insufficiency grade II.
The patient also presented thrombophlebitis of the left lower limb, giardiasis, and iron deficiency anemia. It was decided that the best treatment for the valvular defect was surgical intervention, consisting in replacing the mitral valve with a mechanical prosthesis. Since 2016 he is under observation. The paraclinical examinations after the surgical intervention showed low levels of hemoglobin, ferritin, and INR. On the EKG it was shown an ectopic atrial rhythm, left ventricular overload, and discreet changes in ventricular repolarization. On the chest X-ray, it could be seen bilateral lung infiltrates, increased heart diameter, and metal valvular prosthesis. The echocardiography highlighted the mechanical valve prosthesis, the aortic valve insufficiency, and a hyperechoic formation on the aortic valve.

Conclusions:

Mitral stenosis associated with the atrial septal defect, which closed on its own, is a rare condition and the patient has a good evolution contrary to the fact that he does not follow a strict treatment.

Keywords: Lutembacher’s syndrome, atrial septal defect, mitral stenosis

Management of BRCA2-positive patient with ovarian cancer and peritoneal carcinomatosis – A case report

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Background:

Breast cancer allele 1 and 2 (BRCA1 & BRCA2) are tumor suppressor genes that encode proteins involved in faulty DNA repair. In the harmful mutations of these genes that may present inheritance, the risk of developing several cancers is increased, most notably breast and ovarian cancer.

Case Presentation:

We present the case of a 66-year-old female patient who presented with stage IIIC ovarian carcinoma with peritoneal carcinomatosis (PC). Family history was positive for breast cancer in multiple members. She and her daughter both tested positive for BRCA2. The daughter underwent a bilateral mastectomy with breast reconstruction for a right breast cancer, and a total hysterectomy. The mother followed neoadjuvant chemotherapy and was later scheduled for cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC). Peritoneal cancer index (PCI) was 9. Complete CRS was performed, including the excision of the parietal peritoneum, the right and left hemidiaphragmatic peritoneum, the falciform ligament, and Glisson's capsule, and total omentectomy. Total pelvic peritonectomy and para-aortic and bilateral iliac lymphadenectomy were also executed, along with total hysterectomy and bilateral salpingo-oophorectomy. Additionally, mesenteric and mesosigmoid lesions were excised. At the end of the procedure, completeness of cytoreduction score was CC-0. HIPEC was performed with Cisplatinum 190mg at 42°C for 80 minutes. The pathology report indicated peritoneal metastases of a high-grade serous carcinoma. Both patients, mother and daughter, are free of disease at a 2-year follow-up.

Conclusions:

1.2% of women will develop ovarian cancer sometime during their life. In comparison, the risk of developing ovarian cancer in BRCA2-positive women is around 14% by 75 years of age. For breast cancer, the risk increases from 13% during their lifetime to 55% for BRCA2-positive women. This case is an example of the familial aggregation that harmful BRCA mutations possess, and the correct management of BRCA-positive patients, following up-to-date guidelines.

Keywords: breast cancer allele BRCA, ovarian cancer, peritoneal carcinomatosis

Meeting the obscured: a twisted occurance in gastrointestinal malignancies

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Background:

Esophageal diverticula are protrusions of the esophageal wall beyond its normal position. They are divided into two forms: traction (pharyngoesophageal) and pulsion (epiphrenic) diverticulum. Epiphrenic esophageal diverticula are outpouching of the esophageal mucosa, originating in the distal thoracal esophagus, typically 4-8 cm above the cardia and usually protruding through the right posterior wall. The estimated incidence of said diverticulum is about 1:500,000/year. Thus, association between esophageal diverticulum and neoplasia is even rarer.

Case Presentation:

A 66-year old male (A), a 63-year old female (B) and a 67-year old man (C) presented to the Surgical Department with different symptoms: A had a past medical history of gastroesophageal disease (GERD) and reported 1 month of irregular defecation and hematochezia with occasional postprandial regurgitation and pyrosis; B had a history of hypertension on hypertensive medication for 6 years and complained about postprandial regurgitation and pyrosis for approximately 9 years; C presented with a five-month history of epigastric pain and postprandial vomiting. After CT-scannings, colonoscopies and pathological biopsies, the patients where diagnosed with: middle rectal adenocarcinoma, sigmoid colon adenocarcinoma respectively gastric adenocarcinoma. CTs also showed the presence of infradiaphragmatic saccular dilations of the esophagus, that were confirmed by the contrast radiograms with barium swallow to be epiphrenic esophageal diverticula. Routine blood tests and chest X-rays were within normal range. The procedure selected in all 3 cases was simultaneous right thoracotomy with diverticulectomy and low anterior resection with total mesorectal excision (A), colon resection surgery (B), subtotal gastrectomy with D2 lymphadenectomy and gastrojejunostomy (C), all by open approach. The patients were discharged on day 7 without any postoperative complications.

Conclusions:

The particularity in this series of cases resides in the rarity of the diseases association, the fact that all cases were symptomatic, thus necessitating surgical treatment.

Keywords: esophageal diverticula, epiphrenic diverticulum, pharyngoesophageal diverticulum

MULTICYSTIC INTRAPERITONEAL MESOTHELIOMA: A REAL CHALLENGE FOR THE MULTIDISCIPLINARY TEAM

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Background:

Multicystic Peritoneal Mesothelioma (MCPM) is a rare pathology with a borderline potential. This tumor arises from the serosa layer of the peritoneum, mainly in reproductive-aged females. There have been reported less than 150 cases since it was discovered in 1979.

Case Presentation:

We report a case of a 47-year-old woman known with a gynecological intervention in 2000 for an ovarian tumor ruptured in the abdominal cavity. Clinical examination relieved intermittent metrorrhagia and diffuse abdominal pain. The abdominal-peritoneal CT scan showed diffuse multiloculated cystic tumors in the abdominal cavity of different sizes, cystic tumors on the ovaries, and a small volume of ascites, without lombo-aortic or iliac adenopathies. The endometrial curettage showed a hyperplastic endometrial adenoma polyp. Tumoral markers were normal. The surgical treatment consisted of total hysterectomy, left salpingo-oophorectomy, right salpingectomy, excision of the intraperitoneal cystic tumor, and infracolic omentectomy was performed with a favorable postoperative evolution. The anatomopathological examination and the immunohistochemical staining established the diagnosis of peritoneal inclusion cysts, endometriosis foci on the uterine isthmus, and endometrial polyp. The peritoneal inclusion cysts were localized on the uterus serosa, the bilateral annexes, and the great omentum. After 14 months, the control CT scan indicated the presence of 3-4 small cystic tumors. The multidisciplinary team decided that the patient will be imaging monitored every 6 months, and surgical aggressive treatment will be initiated if these tumors grow or multiply.

Conclusions:

The peritoneal inclusion cysts are microscopic benign tumors, with a slow evolution but with a high local recurrence. The multimodal treatment is controversial and it depends on the risk of malignant transformation of mesothelioma.

Keywords: Peritoneal inclusion cysts, Multidisciplinary team, Cytoreductive surgery

MULTIPLE OSTEOCHONDROMAS WITH VENOUS INSUFFICIENCY – A POSSIBLE COMPLICATION OF THE CHERNOBYL DISASTER

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Background:

Hereditary multiple osteochondromas (HMO) is a disorder characterized by bony protrusions arising from metaphysis of long bones during skeletal development. They make up for ~35% of benign bone tumors and are diagnosed before 12 years in 96% of cases. Usually, is an autosomal dominant inherited disease, with only 10% of affected individuals presenting a de novo pathogenic variant after interactions with teratogenic factors, such as radiations.

Case Presentation:

A 36 years old man, born during the Chernobyl tragedy, has presented with a 2 years old growth on the second toe of the left foot that has worsened in the last 2 months. There is no prior family history of his condition. During the clinical examination, numerous other formations of soft consistency that were identified on both feet raised the suspicion of multiple osteochondromas. Also, the consult revealed twisted, varicose veins, with changes in skin color. ????

A CT exploration identified multiple exostoses spread on both legs. A surgical removal of the tumor located on the toe was performed. The excised piece was sent to pathological anatomy, with the initial diagnostic being confirmed: multiple osteochondromas. Furthermore, he started a treatment for venous insufficiency, caused by the vascular compression of these benign structures. Three months postoperatively, the patient is progressing favorably, regaining back the lost mobility.

Conclusions:

What is unique in this case is the close contact of the patient with an increased dose of radiation, prior to being born, during the Chernobyl disaster. This exposure could explain the development of the pathology at such a late age in a patient without any family history of the disease.

Keywords: Chernobyl, hereditary multiple osteochondromas, venous insufficiency

Navigating a Complex Forearm Wound: Restoring Transected Blood Vessels and Nerves

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Background:

Injuries of the limbs may occur in different settings and depending on the level at which they ensue, various anatomical structures could be interested. Skin, muscles and fascia are the first to be affected, but in severe cases, nerves and blood vessels could be impaired, thus treatment becomes more complex and time-consuming, with the involvement of several medical departments.

Case Presentation:

A 38-year-old male with no medical record is admitted to the ER in hemorrhagic shock and acute post-traumatic upper limb ischemia due to a glass-induced laceration. The injury involves the complete section of the brachial artery, the median, ulnar and radial nerves, and the adjacent muscles. Emergency reconstruction of the brachial artery was performed using the interposition of a reversed venous graft, with controlled embolectomy on the brachial, ulnar and radial arteries, followed by a decompression fasciotomy on the right forearm. There have been successive neurorrhaphy procedures of the median, radial and ulnar nerves, followed by the excision of the necrotic muscle mass and reconstruction of the cutaneous defect with a split-thickness skin graft. Due to an infection with a Pseudomonas strain the skin graft was lysed and therefore negative pressure wound therapy was implemented. After a negative antibiogram result, a new skin graft, taken from the thigh, was applied to correct the remaining defect. The postoperative evolution was favorable, with peripheral pulse present in the right radial artery and 95% acceptance of skin graft.

Conclusions:

The complexity of this case lies not only in the fact that brachial artery injuries are atypical, but also in the association with nerve lesions, which overall imply a high risk of long-term disability. However, with rapid and correct surgical treatment, the probability of survival is high, and the risk of amputation, although considered a possible outcome, is lowered significantly.

Keywords: brachial artery, transected nerves, skin graft

Pemphigus vulgaris and pregnancy: a rare clinical case

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Background:

Pemphigus vulgaris (PV) is an exceedingly rare autoimmune disorder of the skin and mucous membranes, that seldom encounters in pregnancy. With only 47 cases reported in the literature, this disease is believed to be associated with infertility, prematurity, and fetal death when in its active phase. In newborns, pemphigus is a rare, transient blistering condition due to the transplacental transfer of maternal autoantibodies against structural proteins of the dermal-epidermal junctions.

Case Presentation:

Herein we present the case of a 31-year-old woman with a history of PV, who was admitted to our OBGYN Department with squamo-erythematous lesions accompanied by itching, multiple residual erosions, and hyperpigmented teguments, accusing unsystematized painful uterine contractions. Before pregnancy therapy consisted of Prednisone 60mg/day, Azathioprine 100mg/day, followed by Medrol 12mg four times a day, Methotrexate 15mg/week, and Safetac dressings. The clinical examination of the 31-week twin, dichorionic, diamniotic pregnancy revealed that the lesions covered 90% of the body surface, including the face, abdomen, upper and lower limbs. During hospitalization therapy consisted of Medrol 56mg/day, corticosteroids, KCl 1g/day, Pepsane, and Augmentin 1g/12h. Shortly after hospitalization, the patient was admitted to our labor unit with premature rupture of the membranes and systematized painful uterine contractions for infant A. Atosiban treatment was initiated, followed by emergency CST (Contraction Stress Test) that showed infant A in transverse orientation, W=1450g, A=7, and infant B in pelvic orientation, W=1500g, A=7. Postpartum, we continued Metrol therapy - 16mg 4tb/day, and Imuran 50mg 2tb/day which lead to the remission of the squamo-erythematous lesions.

Conclusions:

Lastly, we report a unique case of a woman that conceived during drug administration for PV, resulting in a twin, diamniotic, dichorionic pregnancy and a pre-term delivery of two healthy infants with no PV manifestations or apparent complications. As previously presented in the literature, PV symptoms accentuate during pregnancy and fade shortly after birth.

Keywords: pregnancy, autoimmune disorder, infertility

PLEURAL EFFUSION SECONDARY TO MALIGNANCY.

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Background:

Malignant pleural effusions (MPE) due to metastatic disease are the second most common type of exudative pleural effusion. The three tumors most commonly associated with MPE are lung carcinoma, breast carcinoma, and lymphoma; they are the cause of approximately 75% of all MPE. Patients usually present with dyspnea that is often disproportionate to the size of the effusion.

Case Presentation:

This publication presents the surgical management of MPE in a 71-year-old female patient under the oncological treatment for stage IV bronchopulmonary adenocarcinoma (T3N0 M1b; pleural and bone metastasis) who was admitted to the Department of Surgery on 03/20/2023, complaining of dyspnea, and severe left hemi-thoracic pain. Thoracic examination revealed abolished vesicular murmurs on the left side and reduced vesicular murmurs on the right side. A chest X-ray showed left-sided pleural collection in discrete quantitative pattern and minimal collection in the right pleura. Histopathological examination performed one year ago revealed pleural metastasis of adenocarcinoma.

On 03/21/2023, under local anesthesia (lidocaine 1%), a minimal left pleurotomy was performed with drainage of approximately 1200 ml. The next day, a chest X-ray was obtained and it was found that the left pleural effusion has decreased quantitatively compared to the previous examination. On 03/23/2023, with minimal pleural drainage, pleurodesis with bleomycin was performed, with the tube clamped for 4 hours after the procedure and continuous suctioning was applied.

Conclusions:

The therapeutic approach to MPE cases depends on age, histology of the primary tumor, response to cancer therapy, and expected survival. The immediate goal is to alleviate dyspnea. Obstruction of the pleural space should be a long-term goal to prevent recurrence of pleural effusion.

The postoperative evolution was favorable. On 03/24/2023 the left pleural drainage was suppressed, the patient was discharged with slightly improved general condition, afebrile, hemodynamically and cardiorespiratory stable, dyspneic, with minimal parietal pain syndrome.

Keywords: MPE, pleurodesis, Bronchopulmonary adenocarcinoma

Post-burn scar becoming problematic after 18 years-death sentence or a false alarm?

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Background:

Marjolin's ulcer is a rare variant of squamous-cell carcinoma, a highly aggressive disease that develops from chronic wounds, especially burn scars. There are two forms of this disease: an acute variant in which the malignant changes occur within a year of injury, and a chronic one in which the injury may precede the malignancy by decades. Due to their aggressive nature and poor prognosis, it is crucial to make a differential diagnosis between a Marjolin ulcer and an abscess.

Case Presentation:

A 54-year-old female, whose history involved a burn located in the right buttock, 18 years before, presented in the emergency department for partial depth forearm and elbow burns, phlictenes, and epidermal loss. Inspection revealed the presence of ulcers in the right buttock with intermittent fistulization, and a bumpy, 8 cm diameter lesion was found, along with aseptic yellow effusion. Following a complete clinical examination, the suspected diagnosis was a Marjolin ulcer, which needed to be confirmed through a series of tests. A total CT revealed the absence of metastases, and an antibiogram was taken from the lesion, the result being positive for Staphylococcus aureus. Surgery was performed using local anesthesia, and the excision was made in a block of fistulizing paths within the safety anatomical-pathological limits. A biopsy was taken to establish the diagnosis of certainty and the result of the biopsy ruled out the diagnosis of Marjolin ulcer and found that it was a simple abscess.

Conclusions:

The particularity of this case resides in how rare Marjolin's ulcer is, as well as the fact that the patient has shown signs, symptoms, and a medical history that resembled those of this potentially fatal malignant pathology. However, even if this case involved a happy ending, this complication should always be taken in account when it comes to post-burn scars.

Keywords: Marjolin ulcer , Squamous cell carcinoma, Post-burn scar

Post-tuberculosis constrictive calcareous pericarditis – too stiff to beat?

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Background:

Tuberculosis (TB) is a transmissible disease caused by Mycobacterium tuberculosis and one of the ten leading causes of death worldwide. This illness generally affects the lungs but it can also spread to other parts of the body, such as the pericardium, the most serious sequel being constrictive pericarditis. Its management implies that anti-tuberculosis therapy must be started right away, and for some patients who are unresponsive to medical treatment, pericardiectomy is performed.

Case Presentation:

A 48 years old male with a history of tuberculosis in evolution with right basal pleuritis, diagnosed with constrictive pericarditis, atrial fibrillation, and class 3 NYHA heart failure, presented at the Cardiac Surgery Clinic with symptoms like dyspnea, low effort capacity, and palpitations. Echocardiography revealed a calcified pericardium, and inspiratory variations of the mitral flux compatible with the constriction, confirming the diagnosis of post-TB constrictive calcareous pericarditis. The patient underwent open heart surgery through median sternotomy. Upon gross inspection, impressively thick calcifications adherent to the cardiac structures were objectified, especially to the inferior vena cava, which was torn during debridement. An inter-phrenic pericardectomy was performed along with an inferior vena cava contention and a pericardial window on full cardiopulmonary bypass. Tissue specimens were sent for histological examination, which confirmed the presence of necrotizing granulomas specific to tuberculosis. Post-surgery, his evolution was favorable with full recovery.

Conclusions:

The particularity of this case resides in the fact that post-TB constrictive calcareous pericarditis is a rare pathology, given the fact that modern anti-tuberculosis treatments are extremely efficient and available on a large scale. Tuberculous pericarditis is a form of extra-pulmonary tuberculosis and remains unusual, as very few cases of this pathology end up evolving to such a severe form.

Keywords: tuberculosis, constrictive pericarditis, calcifications

Posterior Cranial Fossa Astrocytoma In A Pediatric Patient With Unusual Imaging Findings

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Background:

Posterior fossa tumors are a life-threatening condition due to the limited space to expand and their close proximity to critical brain structures, most importantly the brain stem. Furthermore, in children this region represents the most common area for central nervous system neoplasms and usually present very different pathological findings compared to adults.

Case Presentation:

A 7 year old patient is admitted to the emergency room for an acute episode of transient loss of consciousness, with opisthotonos and right-sided hemibody hypoesthesia. The symptoms disappeared after 2 hours. Laboratory findings are normal. The mother of the patient mentioned that 4 months prior to this episode, the child was admitted to the emergency room for a severe headache and papillary edema, highly suggestive of intracranial hypertension. A CT scan without contrast is performed, its findings suggesting a transient vertebrobasillary stroke. A contrast MRI scan quickly followed and it found a well defined circular tumor in the posterior cranial fossa, situated in the right cerebellar lobe. A pre-operatory MRA with angiographic sequences showed a right transverse sinus hypoplasia, suggesting a slow growing tumor. The patient was operated with a right unilateral median suboccipital approach. A median posterior incision was made, followed by an open craniectomy and tumor excision, with a final diagnosis of a grade I pilocytic astrocytoma.?The patient’s recovery and follow up were favorable, with no adjuvant treatment needed.

Conclusions:

Tumors located in the posterior cranial fossa require a thoughtful and accurate differential diagnosis. While the most common tumor in the pediatric patients is medulloblastoma, we need to keep in mind all possibilities and follow the symptoms. In this particular case, a misdiagnosis would have been made if we did not continue with the imagistic exploration. RMN has superior specificity and sensibility than CT and is the exploration of choice in nervous system examination.

Keywords: astrocytoma, Posterior fossa, Stroke

Regaining Eyesight After Ocular Trauma - Artificial Lens Implantation In Traumatic Corneal Scarring

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Background:

Ocular trauma is a major cause of visual imparity, causing psychological and financial burden on patients. In the United States of America, there are 2.5 million cases of eye trauma annually, both mechanical and nonmechanical injuries. Both can damage the patient's vision and cause blindness.

Case Presentation:

We present the case of a 59-year-old male who suffered a penetrative ocular trauma to the left eye and was admitted to the Ophthalmology Clinic of the St. Spiridon Hospital Iași, on the 18th of December 2021. On primary examination, he suffered penetrative ocular trauma to the anterior segment of the left eye, paracentral corneal laceration and traumatic cataract. Due to the nature of his injury, the patient had the visual acuity of light perception. Emergency surgery was performed to seal the open globe injury. A month later, the patient was admitted again to the hospital; fragments of crystalline lens material in the anterior chamber of the left eye were present. The examination revealed moderate conjunctival hyperemia, dilated episcleral vessels, and deformed eye pupil, with an inferior-nasal tilt and completely opacified crystalline lens. The lens material was irrigated and suctioned. Six months later, after optimal healing, the patient was scheduled for IOL implantation. On the 28th of July 2022, the posterior chamber IOL implantation was performed. 48 hours later, the biomicroscopic evaluation showed the inferior subluxation of the IOL, therefore the former implant was removed and a special IOL with scleral fixation was inserted. Six weeks postoperative, the visual acuity of the left eye was improved.

Conclusions:

This case showcases the challenges of intraocular surgery. The purpose is to demonstrate the impact of corneal scarring on managing a traumatic cataract requiring frequent intraocular surgery. The localization of the corneal leucoma outside of the visual axis has ensured the improvement of postoperative visual acuity.

Keywords: ocular trauma, corneal scarring, cataract surgery

Renal transplant and a series of acute events

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Background:

Renal transplant recipients may present with transplant-specific risk factors related to end-stage renal disease. Although cardiovascular disease-related deaths may be reduced in renal transplant patients, this disease is still the leading cause of death in patients with a functioning allograft

Case Presentation:

We present a 37-year-old male diagnosed with chronic kidney disease with a history of essential arterial hypertension II, that benefitted from a deceased-donor kidney transplant on May 1st, 2022. He had been diagnosed in 2019 with chronic kidney dysfunction during a routine medical evaluation. At that moment the secondary causes of intrinsic renal injury were excluded. Despite all the strategies for slowing the progression of kidney dysfunction, the evolution was progressive towards final stage, which is why in 2021 the patient needed a kidney function replacement therapy. A pre-emptive AVF was performed with the initiation of hemodialysis. In 2022 the patient was hospitalized for further investigations as a potential recipient of renal allograft. Pre-existing comorbidities such as cardiovascular disease, malignancies, infections and coagulopathies were excluded. A complete immunologic evaluation with ABO blood group determination, HLA typing, screening for antibody to HLA phenotypes, and cross-matching need was gathered before the procedure. On day 10 following the transplantation, the patient complained of anterior chest pain, described as constrictive, including an altered general condition. After evaluating a surface electrocardiogram and the cardiac biomarkers levels, the patient was diagnosed with STEMI. After performing a coronarography it was found that the myocardial infarction resulted from a 90% LAD occlusion; therefore, an emergency PTCA has been conducted. The patient regained kidney function and is now following his prescribed treatment.

Conclusions:

Compared with dialysis, kidney transplantation improves both patient survival and quality of life and is currently the preferred treatment for end-stage renal diseases. Nonetheless, posttransplant cardiac complications are associated with increased morbidity and mortality after renal transplantation.

Keywords: chronic kidney disease, renal transplant, myocardial infarction

Resection of an ascending aortic aneurysm with aortic valve sparing procedure

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Background:

Current medical literature points out that the aneurysm is the second most common disease of the aorta, after atherosclerosis. An aneurysm is a dilatation of an artery to more than 150% of the diameter expected for sex, age, and body weight. The ascending aorta is composed of the aortic root and an ascending tubular segment, the sinotubular junction is located between the two. Aneurysms in the sinotubular region are one of the most common causes for aortic valve regurgitation.

Case Presentation:

We present the case of a 69-year-old male, patient diagnosed in 2022 with an aneurysm of the ascending aorta objectified by CT examination, following complaints of chest pain. The aneurysm had a maximum diameter of 5.78 cm. The aortic arch presented a few atheromatous plaques and a diameter of 3.31cm with no visible stenosis. Subsequent echocardiographic evaluation revealed a normal tricuspid aortic valve with regurgitation caused by the aneurysm, concentric left ventricular hypertrophy with normal systolic function and no visible fluid in the pericardium. Surgery was required to replace the dilatated part of the ascending aorta in order to prevent the possibility of a dissection and further degradation of the aortic valve. The aneurysm was resected and replaced with a prosthesis with a diameter of 3.2cm, smaller than the aortic root, which needed to be tightened surgically to achieve normal aortic coaptation. Postoperative echocardiographic evaluation showed a normal aortic valve with no regurgitation.

Conclusions:

Many cases of ascending aortic aneurysm can degenerate and continue to expand resulting in aortic dissection that can lead to the death of the patient. Performing preventive surgery is a necessity for eliminating vital risks, increasing life expectancy and promoting active aging.

Keywords: Ascending aorta, Aneurysm, Aortic valve

RIGHT FEMORAL HERNIA WITH OMENTUM NECROSIS

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Background:

Often confused with inguinal hernia, femoral hernia is the second most important hernia after inguinal hernia, in which one or more organs protrude from the abdominal cavity, at the level of some weak points in the abdominal wall. Femoral hernias are more specific to women (about four times more common than in men) and account for 3% of all inguinal hernias. Although less common than inguinal hernias, femoral hernias have a higher incidence of complications.

Case Presentation:

This publication highlights the surgical management of a femoral hernia in an 86-year-old female patient who was admitted to the Department of Surgery on 05.03.2023, complaining of pseudotumor formation in the right groin that expands on coughing, right groin pain, fatigue, asthenia, and slowed intestinal transit.
An MDCT scan performed in the department revealed a voluminous right inguinal hernia with fatty content, with thickening of the hernia sac wall and adhesion of internal and perihernial fat, as well as fluid accumulation in the hernia sac area.
After further examination and investigation in the department, it was decided that surgical treatment with the McVay technique was the best option for this patient; a partial omentectomy was performed during the operation.

Conclusions:

The gold standard management of femoral hernias is surgical intervention and its main scope is the reinsertion of herniated organs into the abdominal cavity and the closure of the femoral defect using a prosthetic mesh made of synthetic material. Incarceration and strangulation are serious complications that threaten the patient's life. The femoral hole; through which the intra-abdominal organs migrate has rigid and non-expandable margins.
The postoperative evolution was favorable, the patient had no complications after surgery, and she was discharged with improved general condition. Surgical management of this category of patients is challenging due to age, incidence of infection, contraindications to treatment, comorbidities, etc.

Keywords: Femoral Hernia, Omentum necrosis, McVay technique

Salvage surgery in 30-cm-wide axillary-only metastatic melanoma: A case report

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Background:

Melanomas are malignant tumors of the skin derived from melanocytes. Early diagnosis is an important factor in reducing mortality.

Case Presentation:

A 32-year-old male presented with a 15 cm, hard, fixed, subcutaneous right axillary mass. A CT scan showed no cleavage plane with the thoracic muscles and no distant metastases. Biopsy revealed a BRAF-positive melanoma. A chest melanocytic regressed nevus was discovered and excised. A PET-CT and brain MRI showed no lesions. Targeted double-blockade Dabrafenib + Trametinib was started, with an important decrease in size after 3 months. The patient, however, stopped taking the medication, the tumor grew, and showed inflammation. Treatment was changed to Nivolumab, with favorable response for 3 months and no metastases. After 2 more months, the axillary mass grew abruptly, reaching 30 cm, despite immunotherapy. A palliative salvage surgery was decided. En bloc cytoreduction with nearby muscles (pectoralis major, minor, deltoid, latissimus dorsi, serratus) and axillary clearance were performed, in macroscopically healthy tissue. Postoperative evolution was favorable with primary healing and no lymphedema at 2 months. Double-blockade therapy was restarted. Axillary adjuvant radiotherapy is scheduled.

Conclusions:

5-year survival rates (SR) for stage I melanomas are over 99%, but 2-year SR for metastatic melanomas are only 21%, highlighting the need for an early diagnosis. Our case is an example of a salvage surgery with local and systemic risks, and unnecessary resections of nearby elements, a frustrating attitude imposed in a very advanced case that should have been diagnosed and treated earlier with better chances of a cure. It illustrates the need to adhere to treatment, since rebound growth was fast. Despite the size of the tumor, surgical clearance in a single piece with clear macroscopic margins was possible, offering at least local control with an improved quality of life for the patient, no other metastases present, and no postoperative complications.

Keywords: metastatic melanoma, BRAF-positive, axillary salvage surgery

Successful Vaginal Hysterectomy For Uterine Prolapse In A Hypertensive Pacient

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Background:

Uterine prolapse is a condition that occurs when pelvic floor muscles and ligaments weaken, resulting in the descent of the uterus through the vaginal canal. This condition often affects women after menopause, who have had multiple vaginal deliveries. Almost 50% of all women between the ages of 50 and 79 have some degree of uterine or vaginal prolapse, which is also the case for this patient.

Case Presentation:

We present the case of a 68-year-old woman with a history of arterial hypertension under treatment and three vaginal births who was admitted at ''Cuza-Vodă'' Obstetric-Gynecology Clinic Hospital Iași with a protruding mass in the external genital region that had been present for almost a year.
Upon speculum examination, we observed the exteriorization of the cervix through the vulvar pathway, the protrusion of the anterior vaginal wall, and two-thirds of the posterior vaginal wall, along with vaginal mucosa of the anterior vaginal fornix. A digital examination revealed a normal-sized uterus and unpalpable adnexa uteri. Given the severity of the patient's condition, we opted for a surgical approach, which involved a vaginal hysterectomy along with the treatment of the cystocele and rectocele. The procedure was executed with great success and without any complications.
To prevent postoperative infections, the patient was prescribed a regimen of Cefotax® 1g every 12 hours, Refen® 2 vials/day, and 1 vial of Clexane® 0.4 daily. At discharge, the patient was afebrile, had normal vital signs, and was healing well with a per primam scarring of the perineal and vaginal areas.

Conclusions:

One particularity of this case is the patient’s history of arterial hypertension, which can increase the risk of complications during surgery and postoperative care. This highlights the importance of a comprehensive assessment, a personalized treatment plan and a dilligent postoperative care to achieve the best outcomes.

Keywords: uterine prolapse, vaginal hysterectomy, cystocele

Surgical Approach in Exstrophy- Epispadias Complex of 48 hour-age patient

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Background:

Exstrophy–epispadias complex (EEC) represents a spectrum of congenital malformations of the genitourinary tract due to the rupture of the layer of ectoderm as a result of inadequate mesodermal migration between the umbilicus and genital tubercule region. This results in a ventral body wall defect in which bladder mucosa is exposed and associated with defects of the musculoskeletal system, pelvis, sometimes even the spine, and anus. EEC with an evaginated bladder plate is a rare anomaly occurring in 1/ 30.000 live births.

Case Presentation:

A term male neonate delivered by cesarian section is transferred to surgery clinic of Emergency Hospital For Children “Sf Maria” Iasi for cross-disciplinary management of the abdominal wall and genitourinary malformations suggesting EEC. After the surgical consult followed by abdominal ultrasound and lumbar-pelvic radiological exam, the presumptive diagnostic was confirmed. Two days after delivery the newborn patient suffers first repair from Modern Staged Repair of Bladder Exstrophy (MSRBE) involving bladder wall stitching, pelvic girdle closure without osteotomy, abdominal wall closure, and the reconstruction of the belly button. An orthopedic team performed plaster immobilization and an anesthesiologist kept the infant under general anesthesia for the first 72 hours post-operatory to decrease tension on the repair site. The second stage – epispadias repair- will be performed between 6 and 12 months of age followed by the bladder neck reconstruction and antireflux plasty (the third stage) at age 6 to 10 after the bladder reaches a minimum of 100mL. capacity and the child is prepared for continence training.

Conclusions:

Exstrophy–epispadias complex besides being a rare anomaly is the most severe abdominal midline malformation and one of the most challenging surgeries in pediatric urology, with great impact upon the quality of life engaging continence and sexual function. After MSRBE, lifelong follow-up care is crucial and additional surgeries may be required until young adulthood.

Keywords: Epispadias, Bladder Exstrophy, Pediatric Surgery

Surgical Management of Large Ovarian Cysts: A Case Report

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Background:

Ovarian cysts are benign or pathological fluid-filled sacs that develop on the ovaries, and are a common gynecological condition. While most ovarian cysts are asymptomatic and self-limited, some may present with pelvic pain, discomfort, bloating, and menstrual irregularities. The type, size, and location of the cyst play a significant role in determining the appropriate management approach. Treatment options range from watchful waiting to medical management or surgical intervention, depending on the characteristics of the cyst and the severity of the symptoms.

Case Presentation:

The current case highlights a middle-aged female patient who presented at the ER with suspected pregnancy and active labor. However, a comprehensive examination revealed a massive ovarian cyst, measuring 48 kg. The patient's gynecologic history was notable for multiple small ovarian cysts, as well as four successful deliveries and two spontaneous abortions. In the summer of 2022, the patient was urgently admitted with acute abdominal pain and discomfort. The patient underwent routine screening, including a COVID-19 test, which turned out positive. The patient reported her last menstrual period 8 months ago, during the clinical assessment. Although her abdominal girth and consistency resembled pregnancy, a confirmatory urine test and ultrasound ruled out gestation. Further evaluation using imaging modalities revealed multiple ovarian cysts, including a massive 48 kg cyst, requiring prompt surgical intervention to avoid potential complications such as peritonitis. The cyst was extirpated via surgical intervention, and the postoperative recovery transpired without complications. Histopathological examination confirmed that the cyst was benign.

Conclusions:

In conclusion, ovarian cysts may result in significant symptomatology and potential complications necessitating expeditious medical intervention. Surgical excision, particularly for large or symptomatic cysts, represents the most common therapeutic approach. Early detection and appropriate management play a pivotal role in ensuring positive patient outcomes.

Keywords: Ovarian cyst, Gynecological Condition, Benign cyst

Syndactyly: an emergency operation or we can live with it?

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Background:

Syndactyly is a congenital malformation in which adjacent fingers and/or toes are webbed due to failure of separation during embryological limb formation. It is one of the most common congenital deformities, occurring in 1 of 2000 live births , and has twice the occurrence in males than in females. The patient from this case has tpe 1-c syndactyly (according to the Temtamy-McKusick classification), characterized by cutaneous fusion of third and fourth fingers with normal feet.

Case Presentation:

The 26-year-old patient presents to the doctor, accusing aesthetic embarrassment and functional problems of the fingers 3-4 on the left hand and the deformity of the distal phalanx finger 3. Subsequently, paraclinical investigations were requested: X-ray and ultrasound that confirmed the diagnosis of congenital syndactyly syndrome.Surgery was used to individualize the fingers.This was done under local anesthesia with xyline and limb exsanguination.It was performed incision, Z plastic, suture, dressing. The post-operative evolution was slowly favorable.In the analysis, iron-deficiency anemia and multiple hypovitaminosis were found.The patient also has a depressive syndrome associated with a recent family trauma.Initially, she did not follow the doctor’s instructions for postoperative wound care and also continued to smoke.
The particularity of the case is the age of the patient.Usually, this type of congenital malformation is operated around 12 to 18 months of age, but for personal reasons, the patient underwent surgery at the age of 26 because her daily activities were hampered.

Conclusions:

Depending on the anatomical elements involved, hand mobility may be more or less affected.The patient from this case has no bones or tendons affected, but only the skin.The patient was able to perform daily activities with some difficulty. As a patient ages, more complex surgery would be required. This malformation does not endanger the patient's life.

Keywords: syndactyly, congenital syndrome, xyline

The Impact of Asherman Syndrome in Infertility: Diagnosis and Management

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Background:

Menstrual cycle abnormalities, cyclic pelvic pain and infertility associated intrauterine adhesions(IUA) are known as Asherman's syndrome(AS). Between 2% and 22% of women experience AS and IUA, as any mechanical trauma or infectious process can determine scarring of the mucosa, endometrial sclerosis, and further, the development of synechiae between the opposite walls of the uterine cavity, leading to blastocyst implantation failure, early decrease in uterine and fetal blood flow, and infertility or recurrent miscarriages.

Case Presentation:

The aim of this report is to present 2 cases of AS related infertility. The former case, a 37-year-old patient, gravida 2, para 1, with history of uterine myomas for which underwent transbrachial uterine artery embolization, and first trimester spontaneous abortion followed by dilation and curettage presented in the Gynaecology Department for secondary amenorrhoea and impossibility to conceive a pregnancy. The transvaginal ultrasound examination revealed two intramural uterine fibroids of 15/15.5 mm and 8.6/11.2 mm respectively, and an irregular endometrium with slightly distended endometrial cavity containing fluid, having a hyperechogenic band between the two uterine walls. The latter case, a 31-year-old patient, gravida 1, para 0, with history of dilation and curettage for second trimester miscarriage and endometrial osseous metaplasia treated by hysteroscopy presented for secondary amenorrhoea. The transvaginal ultrasound examination revealed a hyperechoic band-like structure between the uterine walls. The treatment in both cases was hysteroscopic adhesiolysis with reestablishing the anatomy of the endometrial cavity, and intrauterine insertion of auto-cross-liked hyaluronic acid gel for secondary prevention of IUA.

Conclusions:

AS remains a challenging disease, with great impact in infertility. Its prognosis is reserved due to the limited effects of existing therapeutic options and the complex endometrial environment. Primary prevention is the most important issue for women who need uterine surgery, especially for those women of reproductive age suffering from intrauterine lesions.

Keywords: Intrauterine Adhesion, Asherman, Endometrial Damage

The Unforeseen Complication of Prolactinoma: CSF fistula in patient with macroprolactinoma following medical treatment

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Background:

Prolactinoma is a benign tumor of the pituitary gland that accounts for 40% of all pituitary adenomas (PA), producing an excessive secretion of prolactin; it is the only PA with medical treatment indications. Tumors have a particular growth pattern, invading and eroding the skull base. Cerebrospinal fluid (CSF) rhinorrhea is a rare complication that may develop subsequent to skull base erosion in the natural course of the disease, or as a result of medical treatment that induces necrosis of the tumor, leaving a large skull base defect.

Case Presentation:

G.H. is a 32-year old male patient presenting a giant prolactinoma, which on the initial MRI scans appeared extended from the 3rd ventricle to the sphenoid sinus, with invasion and erosion of the sellar floor. The patient started Cabergoline therapy (Dostinex), a dopamine agonist used as first-line treatment option. MRI after treatment initiation (3 months), showed a significant reduction in the tumor's size, with further reduction and clinical rhinorheea (6 months). Head CT displayed bone discontinuation in the posterior ethmoid and sphenoid, rising the suspicion of secondary CSF leak. The patient had morbid obesity and underwent a transsphenoidal surgical intervention for the CSF breach closure, in which an extracapsular reconstruction was attempted, given the anatomical condition. After failure, a second surgery was performed using an endonasal endoscopic transsphenoidal approach with partial resection of the tumor. An intracapsular reconstruction was performed using fat, fascia and a nasoseptal flap, secured with a foley catheter and a lumbar drain. Post-operative course was complicated by the development of transitory diabetes insipidus.

Conclusions:

Despite its infrequent occurrence, CSF rhinorheea in patients with prolactinomas invading the skull base that are under medical treatment should be anticipated and monitored closely, as it is a serious, potentially life-threatening complication.

Keywords: prolactinoma, CSF rhinorheea, cabergoline therapy

Tirone David Procedure: valve-sparing aortic root reimplantation, treatment for ascending aorta aneurysm

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Background:

Ascending thoracic aortic aneurysms(ATAA) are abnormal dilatations of the proximal aorta(>50% normal diameter), involving or not the aortic root. The incidence is 5-10/100.000 patient-years, with a peak during the 6th-7th decades. Aortic valve-sparing(AVS) with the reimplantation technique(Tirone David procedure) is used to preserve the aortic cusps in patients with ATAA and Aortic Insufficiency(AI), being undertaken in carefully selected patients.

Case Presentation:

A 62-year-old man with known ATAA(48mm maximal aortic diameter, 2021) and significant associated pathology(grade 3 hypertension, 2020; moderate AI, 2021) is admitted at IBCV Iasi with dyspnea and fatigue. Clinical examination was unremarkable, excepting aortic diastolic murmur. Laboratory findings were normal(including SARS-CoV-2 RT-PCR and Clostridioides difficile test, negative). Chest X-ray and abdominal ultrasound were without pathological features. EKG revealed left anterior hemiblock. Transthoracic echocardiogram(TTE) showed enlargement of sinotubular junction(46mm) and ascending aorta(53mm), tricuspic aortic valve with moderate regurgitation: PHT(472msec), vena contracta(7mm). Cardiac CT results were consistent with TTE appearance, coronary arteries being patent, without stenosis. Due to growth rate of ATAA(>5mm/year), important rupture risk(maximal aortic diameter >50mm), AI associated, leaflets appearance fairly normal, the patient submitted to Tirone David procedure. Technique's peculiarity is that sutures were passed below the aortic annulus in a single horizontal plane along the fibrous portion of the left ventricular outflow tract, following the scalloped shape of the aortic annulus along the muscular interventricular septum, then being passed from the inside to the outside of a Dacron graft with a premade Sinus of Valsalva segment. The commissures and aortic annulus were sutured inside the graft and coronary arteries reimplanted. The patient's evolution was favorable, the antihypertensive treatment being modified.

Conclusions:

Key features of this case: most ATAA are asymptomatic, being imaging diagnosed(TTE, gold-standard); fulfillment of criteria for Tirone David procedure; rarity of the technique(IBCV Iasi - the only cardiovascular surgery center in Romania that performs it routinely).

Keywords: Tirone David procedure, Ascending thoracic aortic aneurysm, Aortic insufficiency

Umbilical hernia - an unexpected manifestation of ovarian cancer

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Background:

Ovarian cancer (OC) is the eighth most common malignant neoplasm in female patients and the seventh greatest cause of cancer death worldwide. The reason for the high mortality rates can be attributed to the late diagnosis of the disease, as more than 75% of affected women are diagnosed at advanced stages with abdominal metastases due to the lack of specific symptoms.

Case Presentation:

We report the case of a 62 year old female who presented herself at the Emergency Care Unit of „St. Spiridon" Hospital with periumbilical pain. She is hospitalised at the Surgery Department for further investigation where she is diagnosed with strangulated umbilical hernia. A biopsy sample taken from her epiplon showed on the histopathological report a fibrous-vascular tissue with high grade carcinomatous infiltration. Immunohistochemical (IHC) markers, such as PAX8, WT1 and p53 established a peritoneal metastasis of a high grade serous ovarian cancer. The diagnosis was confirmed through a CT scan that revealed a left ovary mass, attached to the sigmoid colon. Surgical intervention is performed for the cure of the umbilical hernia with the excision of the ischaemic omentum fragment. The patient's postoperative progress is unsatisfactory and she has been recommended to undergo chemotherapy for OC.

Conclusions:

New concepts in OC are built upon the breakthroughs in IHC and molecular genetics, with imaging technology playing a crucial role in OC assessment. Accurate interpretation of symptoms, detailed knowledge regarding surgical access, as well as therapeutic options play an important role in the selection of patients who may benefit from therapy before large surgery debulking.

Keywords: strangulated hernia, peritoneal metastasis, ovarian cancer

UNCOMMON PRESENTATION OF PANCREATIC CARCINOMA

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Background:

The present study concerns pancreatic carcinoma, a disease that is associated with significant morbidity and mortality. Owing to low survival rates, the prognosis of this malignancy is rather dismal. The tumorous growth exhibits a destructive nature, frequently extending to adjacent anatomical structures. The manifestation of symptoms often lacks precision, thereby posing a challenge to the diagnostic pursuits.

Case Presentation:

This case presents the management of an unusual presentation of a pancreatic neoplasm in a 61-year-old female patient, who was previously diagnosed with essential hypertension. The patient sought medical attention at the emergency department, where she reported presenting symptoms of “black tarry stool”. These symptoms were noticed two days preceding her visit and were not found to have any correlation with abdominal pain, fatigue or weight loss. With no important risk factors, such as smoking, alcohol consumption, or family history. The physical examination showed notable pallor of the skin, Upon performing a digital rectal examination, melena was noted and no masses were identified.

The upper endoscopy procedure showed an actively bleeding gastric varices, with no esophageal varices. Abdominal CT scan demonstrated the presence of a huge mass on the head region of the pancreas resulting thrombosis of splenic vein. Intubation procedure was performed to achieve an airway protection. following the initial diagnosis, the patient was relocated to a medical facility to undergo a specialized splenic vein thrombectomy.
Postoperative outcome is favorable, and the patient was admitted to oncology department to further investigate the pancreatic neoplasia.

Conclusions:

the inclusion of pancreatic cancer within the differential diagnosis is critical in managing patients who present with symptoms of lower gastrointestianal bleeding.

Keywords: Pancreatic adenocarcinoma, splenic vein thrombosis, lower gastrointestinal bleeding

Uterine Fibroids and Pregnancy: How Do They Affect Each Other? Outcome of a very rare case of polyfibromatosis during pregancy

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Background:

Pregnancy has a variable and unpredictable effect on fibroid growth. Due to the fact that usually fibroids give no symptoms at all to the patient, 7 of 10 women had severe abdominal pain requiring hospitalization. Very rarely does the presence of a single fibroid during pregnancy lead to an unfavorable outcome. However, the outcome and evolution of most women with both pregnancies and fibroids were no different with regard to the incidence of risk factors such as: preterm delivery, placenta previa or postpartum hemorrhage. Fetal injury attributed to mechanical compression by fibroids is common as well.

Case Presentation:

We report a case of a 37-year-old woman admitted for evaluation and therapeutic conduct for vaginal bleeding and severe abdominal pain. She was being known to be 12 weeks pregnant, presenting also a uterine tumor in her medical history. She was conscious with good vital signs and hemodydamically stable. Upon inspection of the abdomen, its volume is observed 3 cm above the navel, with a polycyclic contour and increased consistency. Local clinical examination shows normal-appearing and intact vaginal mucosa and significant vaginal bleeding. Pelvic ultrasonography shows a uterus with an irregular outline and numerous hyperechoic images that orriented to the presumptive diagnosis of uterine polyfibromatosis.
Despite the hemostatic treatment administered, the vaginal bleeding persists and the blood pressure values decrease (SBP: 80 mmHg; DBP: 50 mmHG) so the patient is rushed in the OR. Subtotal hysterectomy was needed, accompanied by right adnexectomy and left salpingectomy, as well as Douglas drainage. The extracted fragments are sent for anatomical-pathological examination.

Conclusions:

This case is a spectacular example showing the controversial involvement of uterine fibroids in miscarriage and preterm birth that is also cited in the literature. Thereupon, the prognosis of this pregnancy would have been reserved due to the large size of the fibroids.

Keywords: uterine fibroids, pregnancy, hysterectomy

When AAA Takes a Toll: The Story of Bilateral Intermittent Claudication

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Background:

Abdominal aortic aneurysm (AAA) is a hazardous medical condition that has a significant impact on the global population. It is defined as a dilatation of an artery having at least a 50% increase in diameter compared to the expected normal diameter. Progressive enlargement of the aneurysm can result in a rupture of the aorta, leading to severe and potentially fatal bleeding. Therefore, early detection and appropriate management of AAA are crucial for preventing catastrophic outcomes.

Case Presentation:

The paper refers to a 69-year-old patient with a documented infrarenal AAA, presented to the Vascular Surgery Department of “St Spiridon” Hospital, Iași for bilateral intermittent claudication at about 100 meters. Further computer-tomographic investigations were performed in order to determine the characteristics of the AAA and to establish the therapeutic management. Even though the AAA antero-posterior diameter was 47 mm, the presence of chronic ischemia with reduced walking perimeter led to the decision to operate the patient. The intervention consisted in: partial AAA resection, aorto-bifemoral bypass and inferior mesenteric artery reimplantation. The postoperative evolution was favorable.

Conclusions:

The complexity of this case lies in three aspects: the necessity to address the AAA before reaching 55mm due to peripheral arterial disease symptoms, AAA characteristics that made it inappropriate for endovascular treatment and the necessity to reimplant the inferior mesenteric artery in order to prevent entero-mesenteric infarction.

Keywords: abdominal aortic aneurysm, bilateral intermittent claudication, aorto-bifemoral bypass

When Placental Hematoma Is a Diagnosis Dilemma

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Background:

Placental hematomas represent a common pregnancy complication, and can occur at any time during the entire pregnancy, with an associated appearance of obstetrical bleeding in 5–25% in the first trimester, putting both mother and child at risk. Placental hematomas can be classified according to their location as retroplacental, subchorionic, subamniotic, or intraplacental hematomas (IH). The latter are rare and the literature on this entity is scarce, with less than 100 cases being found on PubMed.

Case Presentation:

The 23-year-old gravida 1, para 1 patient was in evidence at her obstetrician since the beginning of the pregnancy with normal clinical and paraclinical assessments. She had no medical history and presented for regular check-up at 33 weeks 0 days estimated gestational age, with no symptom being reported. The physical examination was normal, the ultrasound (US) examination revealed a 48.7 x 35.4 mm heterogeneous mass that seemed to be connected to the umbilical cord (UC). The differential diagnosis included UC pseudocyst, single fetal demise in a possible twin pregnancy, succenturiate lobe. The mass was further US evaluated on a weekly basis, as the pregnancy evolved, with stationary apereance. After an uneventful pregnancy and the delivery of a healthy baby through cesarean section, it was observed on gross examination that the mass was actually connected to the placenta, thus the histology report revealing an intervillous hematoma, with placental infarction and thrombosis, concluding a clinical diagnosis of IH.

Conclusions:

The IH are associated with preeclampsia, intrauterine growth restriction, stillbirth, and there is one case report of IH causing non-immune hydrops, however in the presented case there were no materno-fetal complications. Being sparsely evaluated in the literature but carrying life-threatening complications, further studies are awaited, with emphasis on prenatal identification, complications and establishing the best course of treatment.

Keywords: Placental Hematoma, Placental Infarction, Umbilical Cord Cyst

ORIGINAL STUDY
RESEARCH

Fundamental and Social Sciences

EMPLOYING BACTERIAL VIRUSES IN ONCOLOGY: FUTURE CHALLENGES AND TECHNOLOGIES

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Background:

Cancer is one of the main causes of death in the industrialized countries around the world. Conventional cancer treatments face an array of difficulties, such as drug resistance, lack of tumor selectivity and dose-dependent toxicity and, as such, there is a constant need to develop new therapeutic agents. Many research teams are developing new technologies with oncology applications, some of which are based on bacterial viruses, known as bacteriophages.

Materials and methods:

A review of the relevant scientific literature was performed, using the PubMed database, to find the latest updates on the different challenges of current oncology and how bacteriophage-based technologies can be employed to face them, including developing new therapeutic peptides, altering the microbiome, discovering tumor-targeting nanoparticles and developing new chemotherapy delivery systems.

Results:

Cancer is continuing to increase in prevalence due to the aging population, requiring more complex medical assistance, prolonged hospitalization and invasive procedures. We have found numerous studies reporting the use of different phage-based cancer therapy approaches, showing the broad potential to be used as a means of manipulating the cancer microbiome by reducing pro-tumoral bacterial species, promoting the growth of those with anti-tumoral effects and improving the response to chemotherapy and overall survival. A particular interest is given to therapeutic peptides, which represent a new and exciting approach for cancer therapy that has proved to be impressively active in vitro and in vitro. They show selectivity in targeting cancer cells with a very favorable toxicity profile.

Conclusions:

From being modulators of the microbiome, to screening for peptides, the production of monoclonal antibodies and vaccines, to nanotechnology, studies based on phages can be employed in all areas of medical sciences. Oncology will continue to find a valuable tool in the use of bacteriophages, with newer breakthroughs bringing ever more promising results for patients with cancer.

Keywords: PHAGE DISPLAY, BREAST CANCER, THERAPEUTIC PEPTIDES

IMPROVING THE EATING HABITS OF YOUNG OBESE WITH THE INVOLVEMENT OF PSYCHONUTRITION

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Background:

Obesity is a chronic, preventable disease, that has reached the level of a pandemic. Psychonutrition provides the methods to make the change in food behaviors. We aimed to assess how the eating habits of young obese patients improved following psychonutrition consultations.

Materials and methods:

The study was performed in April and September 2022, on 31 obese patients, by using the methods: the diversification of the babies' diet, the description for awareness of the ingredients, the role transfer. The initial consultation was denoted by T0 and the final consultation by Tf. Data was processed with Excel Microsoft and analyzed with GraphPad.

Results:

The gender distribution, female-to-male ratio, was 2.88/1 (23 females) with the sample mean age of 20.55 ± 0.72 years old (range 20 - 22 years). At the initial consultation, the daily fast-food eating was mentioned by 100% of the patients, and at the final consultation, by 29.03% ($p<0.0001$). At the initial consultation, 6.45% of subjects ate fruits and vegetables, and at the final consultation, 100% ($p<0.0001$), by using the method of the diversification of the babies' diet. Moreover, at the initial consultation, 93.55% of patients stated having experienced a feeling of vomiting when thinking about eating fruits or vegetables, while at the final consultation, none of them experienced it.

Conclusions:

The psychonutrition consultations had a significant impact on the eating habits of young obese patients. All patients accepted fruits and vegetables, and a considerably smaller number of them exhibited negative emotions towards the thought of eating them. Further research in this area is essential.

Keywords: eating habits , obese patient , psychonutrition

MEDICAL BUSINESS IN ROMANIA: CHALLENGES AND OPPORTUNITIES IN THE COMING YEARS

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Background:

The medical business is one of the fields with the greatest growth worldwide. In Romania the main focus is on limiting healthcare privatization and increasing public health spending by at least 0.5 percent of GDP annually. These are goals of the National Recovery and Resilience Plan and the Health Operational Program. The last Pandemic represented an opportunity to grow the medical business, and the great challenge for the private businesses, comes by increasing the quality of state hospital services.

Materials and methods:

We studied all the relevant information about the medical business in Romania and about the medical business around the world through the specialized economic platforms and what are the best business and medical management models in term of profitability and customer satisfaction. We analyzed the behavior of patients who need private or state services, in order to see the trends of the following years. We searched the terms "business intelligence" and "artificial intelligence" in the Google Scholar, PubMed, Cochrane Library and Web of Science and we integrated all the relevant results.

Results:

After analyzing and corroborating the data obtained, the term "business intelligence" is particularly important for the future of medical businesses because, along with the role of artificial intelligence, they will create the proper environment to implement, on the one hand, new medical management strategies to maximize profits, increasing patient satisfaction, avoiding or better managing medical waste, and on the other hand, increasing the efficiency of medical operators, increasing the quality of the medical act and improve the work-life balance of medical workers.

Conclusions:

People need dedicated medical businesses close to their homes or workplaces and expect pragmatic solutions. They expect medical services that come to them, through fast, cheap and qualitative solutions.

Keywords: Medical business, intelligence, economic behaviour

My German Medical Experience: A Journey of Growth and Discovery

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Background:

I would like to share my experience as a medical student at the Universitätsmedizin Rostock in Germany. This experience allows students to gain valuable knowledge, skills, and insight that can enhance future medical careers. We obtain an understanding of how healthcare and medical practices differ from one country to another, which can be useful when practicing medicine in a multicultural society.
At this university, the semester is divided between practice in the hospital, seminars and courses. The approach towards the practice period and the seminars is different from the one I was used to.The courses are not mandatory, but the amphitheaters are always full. What could be the secret? There are no tests during the year, only exams at the end of the semester. The students are driven by the desire to overcome their limits and the fact that they could do more.

Materials and methods:

A 10-questions questionnaire filled in by 30 students highlighted the degree of satisfaction with the German medical teaching system.It targeted both foreign and German students.

Results:

The results showed that most of them are satisfied with the organization and functioning of the medical system, but the time spent in the hospital could be longer.Many of them want to remain in Germany for the future. To the question "What would you want to change in the process of medical knowledge?", the answers were varied, innovative and unique.Also, this may be due to the cultural complexity of the group.

Conclusions:

Overall, life as a medical student in Germany can be challenging but is highly rewarding. I gained extensive understanding of medical science and had ample opportunities to develop my practical skills.Some of the key skills developed by the students included patient communication, interdisciplinary teamwork as well as problem-solving, and many others.In this system you learn to be disciplined and responsible.

Keywords: Germany, experience, medical student

Nearly clinically untraceable 2q24-q33 deletions: the new form of autism?

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Background:

With only 100 cases available in the literature, 2q24-q33 deletions are cytogenetic aberrations associated with nonspecific abnormalities, such as developmental delays, intellectual disability, and dysmorphic features. The association between inattentive behavior and dysmorphia often leads to a clinical diagnosis of autism. In the presented study, we analyzed the heterogeneous phenotypical manifestations due to different genes and the size of the deletion.

Materials and methods:

We collected clinical data from two girls (5 and 7 years-old), one of them–patient A, with positive anamnesis for autism in the family (having a second-degree cousin diagnosed with autism spectrum disorder), and the other with no reported family history–patient B. We compared the clinical manifestations and the genetic findings obtained by WES (Whole Exome Sequencing) long-read, and Microarray-based Comparative Genomic Hybridization (aCGH) confirmed both deletions. ACMG(American College of Medical Genetics and Genomics) guidelines were used to classify the deletions.

Results:

Patient B aCGH revealed a 13.80 MB corresponding to 2q32.1q33.1 cytogenic bands (without involving SBAT2 gene). Given the size of the deletion and the large number of genes involved, it was classified as pathogenic deletion, based on ACMG guidelines. Patient A was suspected to have the same monogenic disorder as her cousin (Intellectual Developmental Disorder, X-linked, pathogenic variant in HNRPH2 gene). WES analysis revealed the absence of the suspected variant, and identified a 5.98 MB microdeletion in 2q24.1q24.2 (including TBR1 gene), confirmed by aCGH. This deletion, classified as likely pathogenic (ACMG guidelines), is associated with intellectual disability, autism, and speech delay.

Conclusions:

Our results support that the clinical manifestations vary greatly, without major malformations that are specific for microdeletion syndromes. In consequence for any patient with discrete dysmorphic features and autism long read WES testing should be the gold standard for diagnosis, because it has the possibility to assess DNA sequence and CNV (copy number variations).

Keywords: microdeletion, cytogenic aberration, autism

A new perspective on cross-reactivity in solid organ transplantation

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Background:

Solid organ transplantation is well known as a life-saving treatment for end-stage organ failure and its beneficial effect lays in HLA matching between recipients and donors. Due to the polymorphism of the HLA antigens, the size and diversity of the individual T cell repertoire, alloreactivity plays a significant role in allograft rejection. Furthermore, the potential cross-reactivity of virus-specific memory T cells with HLA molecules defines the ability of a given TCR to interact with more than one peptide-MHC complex, including donor alloantigens, in these circumstances.

Materials and methods:

Considering the potential of viral-specific T cells leading to allograft rejection, we evaluated the seroprevalence of Cytomegalovirus and Epstein-Barr virus among a total of 1312 healthy subjects through a retrospective study occurred between January 2018 and January 2020 at “St. Spiridon” Emergency County Hospital, Iași.

Results:

Our preliminary data suggest a high incidence and prevalence of CMV and EBV infections as determined by the serological profiles of IgM and IgG antibodies specific for each investigated pathogen. Additionally, the prevalence of all studied infections displayed an age-related increasing trend: from 94.4% (< 20 years) to 100% (> 45 years) for EBV, and from 76.4% (< 20 years) to 86.4% (> 45 years) for CMV. Moreover, females had significant higher levels of IgG anti-EBV and anti-CMV than males.
These results are correlated with the general statistics reported for developing countries, that should be considered in the context of virus-specific memory T cells cross-reacting with alloantigen, when a single TCR could interact with up to 100 different peptides.

Conclusions:

Given that viral infections are able to generate cross-reactivity against numerous allogeneic-HLA antigens, we may anticipate that patients expecting a solid organ transplant may thus possess a broad alloreactive potential as a result of their lifelong exposure to EBV or CMV infections.

Keywords: cross-reactivity, solid organ transplantation, TCR

A short study in applied craniometry

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Background:

Even back in ancient times, the structure of the cranium posed one of the major components which made the difference between humans and animals. This aspect can be noticed both in medicine as well as in the art of that particular time. This so-called „obsession" persisted over time, especially in the scientific community, creating craniometry, which tried to explain the differences between people. This study aims to verify if craniometry is a feasible method of explaining the effects of the environment on somatic development, despite the stigma associated with it.

Materials and methods:

Seventy-eight participants engaged in craniometric measurements, thirty-four of them being males and forty-four being females. Their ages ranged from twenty to twenty-five years old. The measurements had been made using the following instruments: ruler, compass, calipers, and tape measure while considering the distance between the bone benchmarks corresponding to the classic craniometric points.

Results:

The statistical review pointed out that fourteen out of seventy-eight participants show values of one standard deviation higher than the average for both the cephalic index as well as the facial index. Out of these fourteen people, three of them revealed values of two standard deviations higher than the average. These participants specified that they originated from geographical areas that present an average temperature lower than normal. Taking into consideration the classic classification, twenty-one of the participants are dolichocephalic, thirty-nine are mesocephalic and eighteen of them are brachycephalic.

Conclusions:

Following the statistical interpretation of the results achieved it can be affirmed that craniometric measuring can be a valuable method of evaluating somatic changes conditioned by the environment. The study participants are gathered from a somewhat homogenous group. Despite that, important differences were detected. This analysis could be extended to a larger group of people with a more diverse geographical origin or more different lifestyles and living conditions.

Keywords: Craniometry, Neuroanatomy, Somatic development

Epicardial Adipose Tissue and its Outcome in Heart Failure at Obese Patients

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Background:

Epicardial adipose tissue (EAT) represents a well established risk factor when it comes to cardiac pathology, thereby serving as a local energy source in high demands. Due to its close proximity to the myocardium, it can have a major outcome when secreting pathogenic adipokines, leading to the distruction of the heart tissue. Obesity-related cardiac dysfunction is closely linked to the inflammatory status of the EAT, therefore impacting the heart functionality.

Materials and methods:

We studied the role of EAT (Epicardial adipose tissue) and PVAT (Perivascular Adipose Tissue) in Heart Failure, as well as their clinical application using a transthoracic two-dimensional (2D) echocardiography in 246 Caucasian subjects (58% of them with metabolic syndrome). The established median value for the high-risk echocardiographic EAT thickness ranges between 9.5 and 7.5 mm in both males and females. However, a computed tomography (CT) or the cardiac magnetic resonance (CMR)- considered the 'gold standard' option of the adipose tissue imaging may provide a more accurate volumetric measurement of the EAT.

Results:

The pro inflammatory CD11c+ M1 macrophages in EAT, as well as the growth of the pro inflammatory cytokines as TNF-alpha, IL-6, MCP-1 posses a leading role in the coronary artery disease, cardiac inflammation and lipotoxicity by diffusion across the interstitial fluid as a result of the destabilization of the atherosclerotic plaque, inflammation and atherogenesis. In obesity high levels of triacylglycerols stored in EAT trigger the release of free fatty acids in order to rise up to the myocardial energy demands, resulting the alteration of the cells and their function.

Conclusions:

Although the experimental evidence is still warranted, it is hypothesized that EAT may posses a critical role in cardioprotection, as well as a high therapeutic potential due to the fact that it has been accepted as a marker in obesity related cardiac dysfunction.

Keywords: Obesity, Heart Failure, Adipose Tissue

Ethanol-induced central nervous system dysfunction in fetal alcohol syndrome

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Background:

Fetal alcohol syndrome (FAS) is a mental and physical defect pattern affecting unborn babies exposed to prenatal alcohol consumption. One major indicator from the triad of symptoms (growth deficiency, facial abnormalities, and mental retardation) is central nervous system (CNS) dysfunction, which leads to permanent brain damage.

Materials and methods:

The PubMed database was used to conduct a specialized literature review with an emphasis on original articles that were published within the past 15 years, of which 34 scientific papers were selected.

Results:

The rapid alcohol passage through the placenta to the fetus and the reliance on the maternal hepatic detoxification cause the agenesis of the corpus callosum, characterized by learning disabilities later in life, cerebellar hypoplasia resulting in ataxia, and memory loss due to frontal cortex and hippocampus dysfunctions. Ethanol can directly induce neuroinflammation by activating neuroimmune cells and affecting neuronal plasticity. Microglia play a vital role in CNS development; however, their gene expression can result in increased levels of inflammatory mediators such as cytokines, glutamate, and reactive oxygen species upon activation. Studies have reported that neuronal damage could be also caused by elevated levels of pro-inflammatory cytokines such as interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF-α), and interleukin-1 beta (IL-1β) in both maternal and fetal circulation. Alcohol consumption during the brain growth spurt may lead to microcephaly and defects in white matter tracts as a result of the teratogenic effects of ethanol on oligodendrocytes. Furthermore, astrocytes can release factors that affect dendritic arborization and structural plasticity, which are critical for brain maturation and neuronal development.

Conclusions:

The developing brain is affected by ethanol-induced neuroinflammation, leading to long-term consequences for the immune system. This is due to a decrease in the release of trophic factors and antioxidants from astrocytes as well as an increase in the release of neuroinflammatory molecules from microglia, leading to neuronal loss.

Keywords: Fetal Alcohol Syndrome , Central nervous system damage, Neuroinflammation

Genetic heterogeneity in Coffin Siris Syndrome

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Background:

Coffin Siris syndrome (CSS) or the fifth digit syndrome is a rare autosomal dominant disease that manifests through impaired intellectual development, aplasia or hypoplasia of the distal phalanx or the nail of the fifth digit, hypertrichosis, failure to thrive and organ malformations: congenital heart defects, renal abnormalities. Mutations in genes that encodes Brahma-associated factor (BAF) complex subunits play a major role in the pathogenesis of this disorder because these factors stimulate normal organ development, modulates chromatin structure, transcription, cell differentiation, DNA reparation and tumor suppression. The aim of this paper is to review the genotype-phenotype correlation in CSS.

Materials and methods:

We performed a PubMed database review articles search using the following keywords CSS, BAF complex.

Results:

CSS is characterized by locus heterogeneity. There are genotype-phenotype correlations for certain genes variants. The most frequent characteristic in these pathogenic variants is the typical facial features. Mutations in both ARID1B and SMARCB1 led to intellectual disability and to hypoplastic fifth fingers or toes or fingernails. Prominent hypertrichosis is associated with mutations in ARID1B gene. Frequent kidney malformations are present in CSS determined by SMARCB1 gene mutations. The cardiac abnormalities are associated with variants in SMARCC2 gene.

Conclusions:

CSS is a rare genetic disease with genetic heterogeneity that makes clinical diagnosis difficult. The outcome of this study is to highlight the genotype-phenotype correlations. This is important for molecular diagnostic, proper management and genetic counseling.

Keywords: Coffin Siris syndrome, Brahma-associated factor complex, Genetic heterogeneity

Genetics behind darkness of mind: relation between telomere length and psychiatric disorders

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Background:

Telomeres represent the end portion of human chromosomes, whose length has been proven as a biomarker of cellular aging and is related to multiple chronic pathologies, including cardiovascular disease and diabetes. Recently, research has been trying to show the relation between telomere length (TL) and distress-related psychiatric disorders.

Materials and methods:

This review is based on articles found on the PubMed database using the search-terms “telomere length” and “psychiatric disorders” that have been published within the last decade. These have studied the correlation between telomere length and disorders such as major depressive disorder, anxiety and post-traumatic stress disorder (PTSD), schizophrenia and bipolar disorder (BPD), as well as the response medication therapy has on preserving telomere length.

Results:

The aformentioned disorders have shown shortened telomeres comparative to the control groups, depressive disorders showing a mean of 10 years of accelerated cellular aging and schizophrenic patients presenting with a lower telomerase level alongside shorter TL. Possible mediators involved are oxidative stress, chronic inflammation, higher cortisol levels and mitochondrial dysfunction. Also it has been shown that lithium in BPD and anipsychotic medication in schizophrenia have a role in the preservation of length in telomeres.

Conclusions:

Given that this association is still being reseached at the moment, more studies have to be done in order to reach conclusive results. However there is already proof that diagnosing this spectrum of disorders early can prevent diseases related to cellular erosion, as well as early mortality.

Keywords: telomere length, psychiatry, oxidative stress

Gut microbiota and Alzheimer-do all roads lead to Rome?

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Background:

Alzheimer's disease (AD) is a complex neurodegenerative illness of unknown etiology, with symptoms emerging after the pathology's development. Gut microbiota dysbiosis is related to neuroinflammation and can be a root cause of AD progression. This review seeks to discover the link between the gut microbiome and AD, aiding in understanding its pathogenesis and stopping its development.

Materials and methods:

This review is based on 12 articles from PubMed (2017-2022), studying the connection between gut microbiota, neuroinflammation, and AD progression. In this study, we included adults aged more than 40 years, presenting with suspected cognitive impairment, or a positive diagnosis of AD with or without obvious clinical symptoms. The exclusion criteria referred to people with other conditions leading to memory loss for which they were taking medication, patients who were taking probiotics/antibiotics, influencing the gut microbiome, these being factors that could have led to inconclusive results.

Results:

The gut microbiota is critical in the formation of bacterial amyloids, which enter the brain via the blood-brain barrier, supporting Aβ production and neuroinflammation, eventually leading to AD. Furthermore, an altered gut microbial profile has been described in AD patients: the abundance of proinflammatory bacteria (Escherichia, Shigella) increased in the gut of patients with brain amyloidosis and cognitive impairment, while anti-inflammatory bacteria (Eubacterium rectale) decreased. It was found that metabolites of the intestinal flora, such as tryptophan, hydrogen sulfide, and lipopolysaccharide influence the disease progression, activating immune cells and leading to neuroinflammation.

Conclusions:

The amyloid plaques, neuroinflammation, and metabolites produced by the gut microbiome, associated with the immune response triggered in the brain, interfere with AD and other nervous system disorders. In the future, AD could be diagnosed, even treated, through methods implying the neuroinflammation process and intestinal microbial changes.

Keywords: Alzheimer, neuroinflammation , microbiome

Immune Checkpoint Inhibitors: PD-1/PD-L1 Blockade in Cancer Treatment

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Background:

PD-1/PD-L1 pathway operates by regulating T-cell activity, therefore restraining the hyperactivation of immune cells. High expression of PD-1 and PD-L1 can be observed in various tumor-type conditions, contributing to a highly suppressive immune microenvironment and allowing neoplastic infiltration. PD-1/PD-L1 blockade interrupts downstream inhibitory signals, consequently becoming an attraction in anti-tumor immunotherapy.

Materials and methods:

This review is based on 11 PubMed articles (8 Randomized Controlled Trials/RCTs and 3 Meta-analyses) published between 2015-2022, totalling 5337 patients. Conduction of RCTs highlighting phases 2 & 3 focused on PD-1/PDL-1 inhibitors monotherapy (Atezolizumab, Nivolumab, Pembrolizumab, Avelumab) in comparison to standard therapy (docetaxel/ chemotherapy). Underlying malignancies included Non-Small-Cell Lung Cancer (NSCLC), Head and Neck Squamous Cell Carcinoma and Esophageal Squamous Cell Carcinoma. Inclusion criteria comprised patients aged over 18 diagnosed with one of the previously-mentioned types of carcinoma, while patients suffering from autoimmune diseases or under immunosuppressive treatment were excluded. This review assessed Overall Survival (OS) in both groups.

Results:

In comparison to classical therapeutic agents, PD-1/PD-L1 inhibitors showed an increased Overall Survival (OS) in all randomized controlled groups. OS had a median of 17 months in the ITT (Intention to Treat) Non-Small-Cell Lung Cancer population, in contrast to 11 months in the chemotherapy groups. In Squamous-Cell Carcinomas, Nivolumab demonstrated a median value of 9 months, as compared to 6 months in standard therapies. Other immune-based therapies such as Avelumab, despite not indicating a significantly improved OS, had a favorable safety profile, with fewer treatment-related adverse events (65% versus 85% in the docetaxel/chemotherapy group).

Conclusions:

Therapies implementing PD-1/PD-L1 pathway inhibitors indicated an extended overall survival as opposed to standard, single-agent therapy. Moreover, compared to chemotherapy, immune pathway inhibitors were generally associated with better tolerability, thereby enhancing the overall patient care experience.

Keywords: PD-1/PD-L1, Immunotherapy, Carcinoma

INTERMOLECULAR INTERACTION IN HOMOGENEOUS SOLUTIONS OF 1,6-DIPHENYL-1,3,5-HEXATRIENE

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Background:

DPH (1,6-diphenyl-1,3,5-hexatriene) is a small uncharged molecule with a rod-like structure that absorbs and emits with high efficiency. DPH is one of the most frequently used cromophore for its role in appreciation of microviscosity and anisotropy of the heterogeneous microsystems. DPH is used in fluidity estimation of the model and natural membranes because in hydrated environment does not show fluorescence but it show fluorescence in lipid bilayer. In non-hydroxyl solvents, DPH shows an intense and structured electronic spectrum both in absorption and emission. The electronic (absorption and fluorescence) spectra of DPH in some solvents were analysed from the mirror symmetry point of view. The electronic absorption spectra more shifted in the wavenumber scale and they can indicate the nature of the intermolecular interactions in DPH solutions.

Materials and methods:

DPH with purity 98% and few solvents were purchased from Sigma-Aldrich Co. The procedure to get multicomponent solutions was known and used for experiments regarding cell membrane labeling protocol in membrane fluidity evaluation. The absorption data were acquired using a Rayleigh UV-1800 Spectrophotometer (BRAIC).

Results:

We present the spectroscopic results in order to explain the striking displacement observed in electronic spectra in different solvents. The experimental results were correlated with those obtained in through molecular dynamics simulations of multicomponent solutions which revealed non-homogenous regions formation in ternary DPH aqueous solutions.

Conclusions:

The spectral shifts measured in electronic spectra are discussed on the basis of the theories regarding the solvent influence on absorption and fluorescence electronic bands. The wavenumbers in the maxima of the DPH vibronic bands depend on the solvent nature by the dispersion function f(n). The solvents with high polarizability lead to a high fluorescence yield. The spectral shifts do not depend on the solvent electric permittivity.

Keywords: DPH, electronic spectra, multicomponent solutions

Lanadelumab: A Highly Effective Weapon in Battling Hereditary Angioedema

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Background:

Hereditary angioedema (HAE) is a rare genetic disorder with an autosomal dominant hereditability, caused by the deficit of C1-INH enzyme. Lanadelumab is a recent discovery in the domain of long-term prophylaxis for HAE, being involved in the interaction of human monoclonal antibodies.

Materials and methods:

Eleven different studies published between 2022 and 2023, aiming at identifying new effective treatments for HAE, were considered. The results of these studies were further exploited in a 26 weeks trial named HELP. The trial included 125 subjects, which were divided in 4 groups. The first group was treated with 150mg Lanadelumab every 4 weeks, the second one received 300mg every 4 weeks, and the patients in the third group were given 300mg every 2 weeks. The fourth group was the pacebo one. Noteworthy, only patients with HAE type 1 or 2 were included in this study. The children under 12 years were excluded.

Results:

At the end of the trial, the new drug was found to be effective in reducing the frequency of HAE attacks. Participants who received the drug experienced a significant decrease in the average number of attacks from 3.2-4 per month to 0.26-0.53 per month. Additionally, 44.4% of those who received a dose of 300mg every 2 weeks became attack-free. The study also revealed that Lanadelumab had a positive impact on the health-related quality of life of the individuals.

Conclusions:

HAE is a life–threatening condition which can be effectively controlled by the new medication.
Lanadelumab, with its efficient performance, ease of self-administration, and favorable half-life, is considered to be the most beneficial drug for HAE treatment, significantly improving patients' quality of life.

Keywords: Lanadelumab, C1- inhibitor, Hereditary Angioedema

LATEST INNOVATION IN GENE THERAPY - VALOCTOCOGENE ROXAPARVOVEC, A POSSIBLE CURE FOR HEMOPHILIA A

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Background:

Hemophilia A is a genetic bleeding disorder that occurs due to mutations in the F8 gene, leading to a deficiency in factor VIII (FVIII) within the coagulation cascade. It affects about 17.1 males per 100,000, of which severe cases make up 60% and are defined by less than 1% of normal FVIII activity in the blood. Valoctocogene roxaparvovec, an investigational gene therapy, has demonstrated long-term benefits in patients following a single administration.

Materials and methods:

This study is based on 6 articles from Pubmed and Elsevier (2015-2022). Valoctocogene roxaparvovec delivers a functional factor VIII gene to liver cells in hemophilia A patients using adeno-associated virus 5 (AAV5) vector and a liver-selective promoter. The clinical trials were conducted to assess the safety, efficacy and quality of life of individuals who received the single intravenous infusion with Valoctocogene roxaparvovec. One clinical study utilized liver biopsy samples from 5 patients to investigate the impact of the therapy on liver histopathology. Inclusion criteria required males over 18 years old with severe hemophilia A and no previous FVIII inhibitors or anti-AAV5 antibodies.

Results:

The data from clinical trials indicate that valoctocogene roxaparvovec gene therapy leads to sustained and significant increases in FVIII activity, resulting in reduced bleeding episodes and a decreased need for FVIII replacement infusions. Molecular analysis showed the existence of stable episomal genomes that are associated with long-term expression. Subsequent examination of human samples revealed no hepatocyte abnormalities or indications of stress. The main complications observed were low-grade toxicity, specifically elevations in alanine aminotransferase levels and glucocorticoid-related side effects.

Conclusions:

Valoctocogene roxaparvovec has the potential to innovate the treatment of hemophilia A, offering long-lasting solutions and leading to significant improvements in both clinical outcomes and patient experience.

Keywords: hemophilia A, valoctocogene roxaparvovec, gene therapy

Magnetogenetic neuromodulation in Parkinson's disease: a revolutionary perspective for neurological disorders

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Background:

Neuromodulation is an evolving therapy that can involve a series of electromagnetic stimuli, which are aimed at altering neural signals in the nervous system. The advantages have been observed in the management of movement disorders, epilepsy, psychiatric disorders or chronic pain. Parkinson's disease (PD) is a degenerative condition of the brain, and the effectiveness of neuromodulation can be quantified by assessing motor symptoms.One type of transcranial stimulation that has proven effective is transcranial magnetic stimulation (TMS). The goal is to normalize low production in the basal ganglia by high-frequency excitatory cortical stimulation.Activation of neurons is achieved by neuronal expression of an exogenous magnetoreceptor.This iron-containing magnetoreceptor will form an iron-sulfur compound that could bind to the cell plasma membrane either by cytoskeletons or by filaments.It will lead to the depolarization of the membrane and the creation of action potentials, which will trigger an influx of calcium and the onset of neuronal activity.Events are triggered when a remote magnetic field is applied.

Materials and methods:

We searched through various medical databases by using the following keywords: “Parkinson Disease”, “neuromodulation”, “magnetogenetics” and identified 10 sources pertaining to our goal, which we have systematically reviewed.

Results:

A systematic review suggests that in several studies, in hundreds of patients with Parkinson's disease, TMS targeting the dorsolateral prefrontal cortex have improved the performance of several executive functions and the motor scores in PD. The repetitive technique of TMS in the primary cortex had significant therapeutic effects on motor function and depression in Parkinson's disease, including stimulation during "on" and "off" states.

Conclusions:

In conclusion, cognitive dysfunction in Parkinson's disease involves a deep disruption of specific circuits, and magnetogenetic neuromodulation provides a unique way to modulate these circuits, minimizing side effects. The advantages of magnetogenetics over other neuromodulation methods are non-invasive, deep penetration, long-term continuous dosing, spatial uniformity and relative safety.

Keywords: Parkinson Disease, neuromodulation, magnetogenetics

NATURAL KILLER CELLS' ACTIVITY IS IMPAIRED IN CHRONIC LYMPHOCYTIC LEUKEMIA

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Background:

Chronic lymphocytic leukemia (CLL) is a hematological disorder characterized by the proliferation and accumulation of functionally incompetent B-cells in the blood, bone marrow, and lymphoid tissues. Patients with CLL experience symptoms such as fatigue, unintentional weight loss and chronic fever, lymphadenopathies, cytopenia and a high peripheral B cell count (over ≥5 × 10^9/L for at least 3 months). Natural killer (NK) cells play a critical role in the recognition and elimination of circulating malignant cells. Importantly, the NK cell cytotoxic activity is controlled by the balance between their inhibitory and activating surface receptors' expression.

Materials and methods:

We assessed NK cells' cytotoxicity and surface Killer Ig-Like Receptors (KIRs)' distribution in 15 healthy individuals and 15 patients with CLL. Peripheral blood mononuclear cells (PBMCs) were isolated and different ratios of effector (NK) -target cells (K562 cancer cells) were co-cultured for 4 hours at 37°C. Cytotoxicity was evaluated by flow cytometry, using propidium iodide staining to identify dead cells. Monoclonal antibodies were used to individualize NK cell subtypes (using CD16 and CD56) and to differentiate between activating (KIR2DS4) and inhibitory receptors (KIR3DL1, KIR2DL2/3).

Results:

The NK cell cytotoxicity followed a linear increasing trend from 12% to 30% with increasing the effector-target ratio in healthy individuals, while the NK cytotoxicity efficiency was extremely low, below 10% for all conditions, in CLL patients. Importantly, the percentage of NK cells expressing inhibitory receptors was 3-times higher in CLL patients compared to healthy controls (45% versus 15%). This result was accompanied by an enhanced cellular expression of inhibitory receptors by 50% in CLL individuals, while the expression of activating receptors showed no-significant differences.

Conclusions:

NK cells are an important arm of the innate immune system in removing the cancer cells from the blood stream and their cytotoxic activity is impaired in CLL due to an increased expression of inhibitory receptors.

Keywords: Chronic lymphocytic leukemia, NK cells, Cytotoxicity

NUTRITIONAL STATUS OF CHILDREN BORN BY TEENAGE MOTHERS

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Background:

According to literature data, pregnancy in adolescence and child malnutrition are common challenges in low- and middle- income countries. Romania occupies the first place among European countries with the most adolescent mothers and the highest infant mortality rate in Europe. We started from the hypothesis that there is an association between child malnutrition and the mother's minor age.

Materials and methods:

We conducted an observational study on 87 children, aged between 5 days to 5 years old, hospitalized in the Pediatric Department of County Emergency Clinical Hospital of Targu Mures, and whose mothers were ≤ 18 years old at their birth. In order to follow the association between the mother's age at birth and child malnutrition, we divided the mothers into two groups: the first group formed by mothers who were 12 to 15 years old at birth, that we called early adolescence, and, respectively, 16-18, called actual adolescence. Data were taken from the hospital records from observation sheets and the electronic database, and analyzed with GraphPad.

Results:

In our study, 29.88% of children presented the deviation from Ponderal Index of which 10.34% were first degree dystrophic, 9.20% were third degree dystrophic, 10.34% were obese. The third degree of Ponderal Deficiency of Energy-Protein-Malnutrition in function of anthropometry was observed in 9.20% of subjects. Moreover, the deviation from birth-weight norms was noticed in 21.84% of patients, and hyposideremia in 43.68%. The association between maternal age and the children's Ponderal Index revealed a RR =1.949 (p=0.0346), and the association between maternal age and birth-weight, a RR=2.161 (p=0.0152).

Conclusions:

The study confirmed that malnutrition prevails among a significant proportion of children born by teenage mothers and should be considered as a risk factor for various forms of complications and pathologies. Furthermore, implementation of adequate health education programs is greatly needed.

Keywords: adolescent mother, malnutrition, nutritional status

Prophylactic Measures and Adaptations Among Romanian General Practitioners During the Covid-19 Pandemic

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Background:

The Covid-19 pandemic has presented a multitude of challenges, both in terms of managing the disease and adapting to new prophylactic measures. This study aims to analyze the prophylactic methods imposed by law during the pandemic, with a focus on the practices of general practitioners in Mures county.

Materials and methods:

To gather data, a questionnaire consisting of 28 questions was developed, covering both general and specific information. A total of 148 responses were received.

Results:

The results of the study show that the majority of doctors chose to continue working in the same private practice, with 22% deciding to work in shifts. During quarantine, 68 doctors decided to interrupt their professional activity, while 40 continued to take on cases of emergency. When asked about the vaccine, 76% considered it essential in medical practice, with a positive association between age and a positive response to this question. The protective measures predominantly used were temperature assessment, mandatory mask-wearing for patients, and appointment scheduling with 20-minute gaps between them to ensure patients could sit alone in the waiting room. Disinfectant substances and disposable shoe covers were provided for patients. Over half of the doctors (51%) added a supplementary disposable gown on top of their medical uniform, and 54% chose to wear a mask with a visor. For surface disinfection, 73% used UV lamps in combination with chemical disinfectants, while 66 used air purifiers and 8 chose ozone machines.

Conclusions:

In conclusion, the Covid-19 pandemic required new protective measures, which Romanian doctors quickly adopted, although some did not comply with all the measures required by law. This study highlights the importance of adapting to new circumstances and the need to prioritize patient and personal health in medical practice. Lessons learned from this pandemic should inform future practices and protocols.

Keywords: Covid-19, Prophylaxis, Pandemics

Renal biopsy significance in renal transplant surveillance

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Background:

Kidney transplant pathology is directly associated with the Banff Classification Scheme developed between 1991 and 2022. In the last decade, the interest has also been directed towards regular assessment of the allograft status, through surveillance or protocol biopsies. The aim of this study was to analyse the histological spectrum of kidney changes in adult recipients of kidney transplantation, useful in detecting subclinical renal pathology and improving long-term outcomes of renal allografts.

Materials and methods:

The study group comprised of 25 patients who underwent, between February 2020 and February 2023, surveillance biopsies at one year after kidney transplantation at “Dr. C. I. Parhon” Clinical Hospital. The main clinical and biological characteristics were extracted from the patient records. The renal specimens were assessed by using light and immunofluorescence microscopy. The distribution in diagnostic categories was performed in accordance with the 2019 Banff Classification.

Results:

The histological exam revealed normal biopsy or nonspecific changes (Banff category 1) in 4 patients. The morphological changes correlated with the semi-quantitative scores for grading of acute and chronic active lesions with sustained T-cell mediated rejection – chronic active type (Banff category 4) were found in 21 cases. No patient showed specific changes for antibody-mediated changes – active or chronic active types (Banff category 2), borderline for acute T-cell mediated rejection (Banff category 3), T-cell mediated rejection – acute type (Banff category 4) and polyomavirus nephropathy (Banff category 5). The clinical and biological parameters of the patients were consistent with the Banff diagnostic categories.

Conclusions:

The original Banff Classification Scheme registers updates that reflect the in-depth understanding of the relationship between the immune mechanism involved in transplantation and the allograft microscopic lesions. Nowadays, the Banff criteria are also applied in surveillance or protocol biopsy, allowing a better monitoring of patients by early identification of histological changes in the graft and treatment adjustment.

Keywords: Banff Classification, Renal allograft, Microscopy

SARS-CoV-2 infection CRISPR-based molecular diagnosis method

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Background:

The COVID-19 pandemic brought up the issue of fast, reliable testing that does not require specialized equipment to identify potential emergent infections. CRISPR - based diagnostic techniques combined with isothermal amplification methods have the potential to be an adequate replacement for traditional detection methods. Our objective was identification and clinical validation of a method for rapid detection of SARS-CoV-2 viral load, without specific equipment.

Materials and methods:

In this study, we used the SHERLOCK (Specific High Sensitivity Enzymatic Reporter UnLOCKing) method to identify viral RNA in samples from subjects who were suspected of SARS-CoV-2 infection. The method consists of three distinct steps: 1. RPA isothermal amplification, using the TwistAmp Basic Kit; 2. detection of the pre-amplified viral RNA sequence using CRISPR-Cas13 system (sgRNA binds to target RNA and activates the Cas13, cleaving the reporter and generating detectable signal); 3. visual readout of the detection result using the HybriDetect - Universal Lateral Flow Assay Kit.

Results:

We conducted a number of detection tests using a total of 38 samples (23 positive and 15 negative - determined by RT-PCR) in order to clinically validate this technology. To ensure the reliability of the test, we included one positive control RNA and one negative water-only control for each detection. With this method, we identified 23 true positives, 10 true negatives, and 5 negatives with a high cycle threshold that we found as positives with our test. This shows that this adapted SHERLOCK method is a sensitive and cheap alternative for RT-PCR, which can be used as a preliminary test for low-resource setups.

Conclusions:

This viral nucleic acid detection technique can potentially be a practical choice for point-of-care applications and multiplex detection for several strains or diseases simultaneously. Human health applications are increasingly utilizing CRISPR-based technologies, which is a versatile tool for both treatment and diagnosis.

Keywords: CRISPR-Cas13 , SHERLOCK, RPA

Telemedicine adoption and perceptions during the COVID-19 Pandemic: A study in Mures county

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Background:

Telemedicine has emerged as a novel concept in the medical world, with the COVID-19 pandemic highlighting its importance as doctor visits became increasingly challenging. Telemedicine enables long-distance interaction between doctors and patients, allowing for consultations, treatment plans, continuous monitoring, or medical advice through telephone, video calls, or even emails and text messages.

Materials and methods:

This study aimed to assess the adoption and perceptions of telemedicine among general practitioners in Mures County, for which a list of 5 questions was formulated. We received 148 responses from the participants.

Results:

The majority of the respondents (76%) were already familiar with the term telemedicine and had used it before. However, only 36% of these respondents enjoyed using this method and found it efficient. A quarter of the participants (24%) had started using telemedicine before the pandemic, while 22% tried it for the first time during the pandemic. 11% of the participants did not use telemedicine, nor did they intend to, while 13% expressed a desire to try it in the future. Although general practitioners considered telemedicine to be highly useful, they also acknowledged that they were not fully prepared to implement it. Telemedicine methods have helped doctors gather medical data in electronic format, obtain patient history, communicate various treatments, refer patients to specialized centers suitable for their treatment, and provide advice on prophylaxis during the pandemic.

Conclusions:

Telemedicine is a groundbreaking development in the medical field, poised for widespread adoption, although doctors still prefer face-to-face interactions with patients. The COVID-19 pandemic has demonstrated new perspectives in the field and taught us new ways to manage our professional life, thereby revolutionizing the way medical practices operate.

Keywords: Telemedicine, Covid-19, Pandemic

The bacteriophages: from intestinal microbiome to colorectal cancer

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Background:

Colorectal cancer (CRC) is the third most common cancer worldwide and it is associated with a bad prognosis due to the insensitivity to chemotherapy and immunotherapy. The gut microbiome plays a pivotal role in immunity, homeostasis and intestinal tumorigenesis. Bacteriophages, viruses that infect bacteria, have been shown the capacity to destroy their host, disrupt biofilms and adjust immune system. They are considered potential candidates for developing new therapies for CRC. However, bacteria have evolved several immunity mechanisms to defend themselves against the action of bacteriophages.

Materials and methods:

We have performed a review of the relevant scientific literature, both clinical and fundamental studies, where phage therapy has been applied in CRC, highlighting different approaches on using phages in those studies, and also, the advantages and disadvantages of this therapy.

Results:

Microbial dysbiosis and changes in gut homeostasis can lead to a malignant process. Many bacteria, including Fusobacterium nucleatum (FN), Clostridium butyricum, Escherichia coli, Bacillus subtilis and B. thuringiensis are the main contributors in the pathogenesis of CRC. We investigated numerous studies and have found that FN bacteriophages can be modified to enter and accumulate in the CRC neoplastic parenchyma and have the potential to interfere with the developing of cancer populations, augmenting the efficiency of phagotherapy. By using bacteriophages as transporters, researchers can change the behavior of bacteria and cells, leading to completely new treatment strategies.

Conclusions:

Considering that certain bacteriophages can target and destroy oncogenic bacteria, and are ideal vectors for transporting anti-tumoral molecules, we can conclude that phage therapy is a potential approach that may contribute to the prevention, detection and treatment of CRC. We present the newest data available about treating tumours based on the complex processes underlying the interaction between bacteria, bacteriophages and malignant cells.

Keywords: colorectal cancer, bacteriophages, phage therapy

The future of schizophrenia treatment: going beyond the dopamine theory

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Background:

Schizophrenia (SCZ) is a debilitating mental illness with a median incidence of 15.2/100000. Although the current treatments reduce positive symptoms (delusion, hallucinations),they induce severe neurological and metabolic side effects or may prove ineffective with treatment resistant schizophrenia(TRS). The aim of this review is to emphasize new possible treatments that can deal with symptoms more effectively, with less side effects.

Materials and methods:

This review is based on 11 articles from PubMed (2008-2021).SCZ has been primarily associated with dopamine dysfunction, thus treatments target the dopamine pathway in the central nervous system (antagonists of D2 receptors).Recent studies have outlined the implication of neurotransmitter (Glutamate, serotonin, Acetylcholine, GABA) and inflammation systems in SCZ pathophysiology.Patients with SCZ showing degrading negative, cognitive symptoms or non-responsivness to treatment were studied alongside the prenatal methylazoxymethanol acetate(MAM) rats which displayed similar neurophysiological and behavioral deficits analogous to those observed in schizophrenia patients.

Results:

Studies have suggested the effect of altered brain muscarinic activity in schizophrenic pacients, with the observation that 70% of SCZ patients are smokers, who use nicotine to relieve negative symptoms.These hypotheses were tested in the MAM model,where nicotine administration normalized behavioral perturbations.Glutamate plays an important role in pathophysiology of negative and cognitive symptoms and people who abuse NMDAR antagonists, such as ketamine, frequently show psychotic symptoms similar to those in SCZ. Serotonin antagonists ameliorate the extrapyramidal effects of antipsychotics, studies also showing the reduction of psychotic symptoms associated with Parkinson’s disease.

Conclusions:

Current forms of treatment for SCZ may induce damaging side-effects or be ineffective for patients, hence why discovering new targets for treatment is needed.

Keywords: Schizophrenia, Dopamine, Nicotine

The impact of statins on tuberculosis - evolution and improvement

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Background:

Recent studies on statins, drugs primarily used to lower blood cholesterol levels in people with risk of cardiovascular disease, found to have benefit as an adjunctive therapy for tuberculosis. While the standard treatment for tuberculosis involves a combination of antibiotics, there is a growing interest in exploring adjunctive therapies that could help to improve treatment outcomes. The aim of the present paper was to review clinical data from clinical trials and randomized controlled trials on the effects of statins in tuberculosis.

Materials and methods:

The review of the effect of statins in tuberculosis included published clinical trials and randomized controlled trials, up to March 2023 and published after 2018, with participants aged 18 years and older with tuberculosis, but human immunodeficiency virus (HIV) negative. Exclusion criteria: participants under 18 years of age, patients with positive HIV antibodies and acquired immunodeficiency syndrome (AIDS), treatment for other chronic autoimmune diseases.

Results:

Studies focused on this class of drugs started from the observation that, in addition to the effects in the treatment of cardiovascular diseases, statins also have effects in modulating the immune system, being important in infectious diseases and sepsis. Statin treatment has been shown to correlate with a reduction in the risk of tuberculosis, the relationship being directly proportional to the duration of treatment. Other studies have shown that the risk of developing tuberculosis is mainly influenced by the dose.

Conclusions:

The immunomodulatory effects of statins can modulate the immune response to Micobacteriumtuberculosis and potentially enhance treatment efficacy. The good safety profile, widespread global distribution and affordable prices make this drug class suitable for first-line adjuvant treatment of tuberculosis.

Keywords: Statins, Tuberculosis, Adjunctive therapies

Treating or preventing xerostomia? (Non)pharmacological management for post-radiotherapy patients

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Background:

Xerostomia is defined as the subjective complaint of dry mouth. It's a common complication resulting from radiotherapy (RT) for head and neck cancer (HNC), because it causes damage to the salivary glands. The aim of this review is to provide new perspectives on managing xerostomia in these patients.

Materials and methods:

This research is based on 19 PubMed articles (original studies, reviews, meta-analysis), published between 2011-2022. Pharmacological treatment for xerostomia consists of parasympathomimetics (Pilocarpine, Cevimeline) associated with the increasing of the oral mucosa moistening (chewing sugar-free gum, drinking water frequently). Non-pharmacological treatment includes using stem cells, gene therapy, acupuncture, hyperbaric oxygen, neuro-electro-stimulation. Prophylactic methods involve submandibular gland transfer (SGT), intensity-modulated radiation therapy (IMRT), Amifostine administration. Patients with HNC older than 18 years old who did not undergo other treatments before RT were studied, while HNC patients with xerostomia associated with other pathologies (primary/secondary Sjögren's syndrome) were excluded.

Results:

Up to 88% of the serous acini in the parotid gland are reduced during RT, hence treatments (which are only effective on functioning residual glandular parenchyma) cannot be a solution for all the patients. Prophylaxis showed a significant improvement in the quality of life for the studied patients. With conventional RT, 7,15% of patients regained at least 25% of their salivary flow (1-year post-treatment); 66,65% of patients treated with IMRT regained these functions. The SGT group showed a 21%/7,7% xerostomia incidence at 12/24 months after RT. 79%/90% of patients had no/minimal levels of xerostomia at 1/2 years after RT.

Conclusions:

Two or more strategies for xerostomia prevention in HNC patients treated with RT should be combined. In terms of supportive care, xerostomia treatment is an area in which advances are needed. Treatment should be based on biological markers (epidermal growth factor receptor expression, pharmacogenomics), in order to avoid/diminish radiation therapy-related toxicities.

Keywords: xerostomia, radiotherapy, head and neck cancer

UPDATES ON HPV ONCOGENESIS: MECHANISMS, DIAGNOSIS AND THERAPY

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Background:

Human Papilloma Virus (HPV) is one of the most important known oncogenic viruses, this infection being the cause of almost 5% of new cancer cases worldwide. HPV is related with a wide array of known cancers: cervical, oropharyngeal, anal, vaginal, penile and skin cancers. While for cervical cancer there are rigorous algorithms of screening, therapy and follow-up procedures, the other cancer types still require further research.

Materials and methods:

We have performed an analysis of the relevant scientific literature, using the PubMed database, searching for newly published data on the mechanisms of HPV oncogenesis, screening and diagnosis algorithms, therapeutical procedures, patient follow-up for the main types of cancers that are HPV-induced.

Results:

There is ongoing research about the mechanisms of HPV oncogenesis, especially about identifying precursor lesions that can be detected early, in all types of cancer, and also about other risk factors for malignant transformation. In order to optimize the management of HPV-induced cancers, comprehensive screening protocols need to be implemented in each region, using molecular detection diagnostic platforms, that can detect high-risk HPV types. Those methods must have optimal sensitivity, and specificity, at acceptable costs. New treatment procedures focus on using the appropriate post-surgical chemotherapy protocols, and using different biomarkers, such as ctDNA, to identify high-risk patients.

Conclusions:

Additional research is required to clarify the natural history of HPV in cancer, identifying proper virus detection methods, which have decisive impact on diagnostic and decisional algorithms. The therapy of such cancers will benefit from the identification of new biomarkers for patient follow-up.

Keywords: HPV, ONCOGENIC VIRUS, SCREENING

VEGF-C and VEGF-R3 expression as tumor lymphangiogenesis evidence in ovarian carcinoma

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Background:

The relationship between carcinogenesis and tumor angiogenesis and lymphangiogenesis, documented by relevant results in the clinical context, is now unanimously accepted. The formation of new vessels and, subsequently, the development of the angiogenic and lymphangiogenic tumor phenotype are regulated by the intervention of pro-angiogenic and inhibitory factors and their specific receptors. Our study aimed to analyze the heterogeneity of tumor lymphangiogenesis in ovarian carcinoma.

Materials and methods:

The study group comprised 20 cases of ovarian carcinoma, histopathologically diagnosed as: high grade serous carcinoma (8 cases), low grade serous carcinoma (2 cases), high grade endometrioid carcinoma (5 cases), low grade endometrioid carcinoma (2 cases), mucinous ovarian carcinoma (2 cases), clear cell ovarian carcinoma (1 case). Immunohistochemistry was performed by using anti-VEGF-C and anti-VEGF-R3 antibodies; immunoexpression was assessed by a semi-quantitative score system. The main clinico-pathological characteristics were extracted from the patient records.

Results:

Our results showed positive VEGF-C expression in 14 cases, and positive VEGF-R3 expression in 15 cases out of 21. We registered a significant heterogeneity of each marker both within the same histological type and between histological subtypes. We noted a high diversity in the immunoexpression, mirrored by VEGF-C and VEGF-R3 positive cases, VEGF-C and VEGF-R3 negative cases, VEGF-C positive and VEGF-R3 negative cases, and VEGF-C negative and VEGF-R3 positive cases. This diversity suggests particular interactions of the tumor with tumor microenvironment, interfering with tumor development and progression. Our results revealed that advanced tumor stage 3 was exclusively associated with positive VEGF-C and VEGF-R3 expression, stage 2 was predominantly associated with positive VEGF-C and VEGF-R3, and stage 1 had both positive and negative VEGF-C and VEGF-R3 profiles.

Conclusions:

Ovarian carcinoma presents an extensive lymphangiogenic profile in aggressive types defined by histological classification and pathogenic classification. The lymphangiogenesis development is correlated with advanced tumor stag

Keywords: ovarian carcinoma, lymphangiogenesis, VEGF-C

ORIGINAL STUDY
RESEARCH

Internal Medicine

Electronic Cigarette or Vaping Use-associated Lung Injury (EVALI): A Dangerous Behavior

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Background:

The use of electronic cigarettes or vaping has become increasingly popular over the past decade, particularly in the adolescent and young adult population. Electronic cigarettes (EC) use is promoted as a safe or less harmful alternative to smoking, but it has as a result acute lung injury. Electronic cigarette or Vaping-product use Associated Lung Injury (EVALI) is a potentially fatal condition which can be described as a spectrum of constitutional, respiratory, and gastrointestinal symptoms following e-cigarette use, vaping, or dabbing.

Materials and methods:

The objective of this thesis is to conduct a state-of-the-science assessment on aetiology and probable mechanisms of toxicity causing this novel phaenomenon. The assessment is based on evidence from animal and mechanistic studies as well as human case reports. All available sources with original data about EVALI were identified, appraised, and selected. Electronic databases PubMed, Toxnet and Scopus were searched.

Results:

Toxic effects of repeated e-cigarette exposure can be classified as: device-, aerosol- and user-derived.
Vaping behavior, including Valsalva maneuver, preference for manipulable powerful devices, choice of active substance and flavor preference as well as e-liquid consumption, all play a part in the pathogenesis of EVALI. The use of adulterated counterfeit THC e-cigarettes or dabbing butane hash oil is strongly linked with EVALI. Vitamin E acetate, frequently found in illicit THC (tetrahydrocannabinol), is a source of toxic ketene when it is superheated. It could be one of the key components in EVALI aetiology. Most e-cigarette components, particularly in post-pyrolysis aerosol mixture, are, however, capable of eliciting severe synergistic pneumotoxicity. Age and genetics also play their part: adolescents with developing organ systems seem to be more susceptible to these effects.

Conclusions:

According to existing evidence EVALI aetiology is probably multi-factorial, involving both exogenous (device, e-liquid, aerosol) and endogenous (phenotype, genotype, personal preferences) factors.

Keywords: electronic cigarette, acute lung injury, EVALI

ANTIBIOTIC PROPHYLAXIS IN INFECTIVE ENDOCARDITIS- LEVEL OF IMPORTANCE

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Background:

Infective endocarditis (IE) is an infection caused by pathogen microorganisms that occurs in the endocardium/ valvular endocardium. With an incidence of 7 of 100.000 people/year and high mortality rate, it is a bacteraemia that can be developed as a result of healthcare-associated procedures, often in patients with no previously known valve disease or in patients with prosthetic valves. The diagnosis includes the presence of fever, vascular and immunological signs, blood cultures and echocardiography validation.

Materials and methods:

We selected recent electronic searches in scientific databases, reviews made on over 170 eligible studies, a scientific statement from American Heart Association(AHA), observational studies, clinical trials and guidelines, and a meta-analysis realized by British Cardiac Society.
Inclusion criteria: patients with a prostethic valve or a prosthetic material used for cardiac valve repair, certain congenital heart diseases, without surgical repair or with residual defects, patients with antecedents of IE.
Exclusion criteria: patients with no antecedents of IE, patients without recent dental or another surgical procedures, patients with very good oral hygiene.

Results:

Antibiotic Prophylaxy(AP) in infective endocarditis is controversial. The data collected from the presented studies show that IE cases are often associated with medical interventions, situations in which the pathogens make contact with human bloodstream, especially in stomatology, but also in gastrointestinal, genitourinary, dermatologically procedures. On the other hand, there is evidence of no effectiveness of AP in infective endocarditis before any intervention, because it can induce the risk of developing antibiotic resistance and of occurring antibiotic-induced side effects.

Conclusions:

According to the results, it is clear that there is a lack of updated and new clinical trials/cohort studies and so far we don't have enough evidence to firmly sustain one of the options. However, the current used protocols follow the guidelines from European Society of Cardiology(ESC) and American Heart Association.

Keywords: infective endocarditis prophylaxis, antibiotic prophylaxis, bacteraemia

Challenges in building a stool bank: the donor screening process

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Background:

Fecal microbiota transplant (FMT) has been proved to be a promising treatment, but donor selection and implementation in clinical practice are difficult, in order to ensure a safe procedure . We have initiated a round of screening of potential donors among medical students.

Materials and methods:

We applied an extensive donor screening questionnaire via an electronic platform to potential donors, among third year medical students. The questionnaire was designed following the current international recommendations and the Romanian guideline for implementing FMT.

Results:

Among the 90 invited to participate in the screening process, only 56 volunteers were willing to participate and completed the screening questionnaire. 11 screened volunteers successfully passed the first screening stage, based on the results of the questionnaire. Several potential donors were temporarily excluded from donation at this stage, due to one or more criteria, such as: recent antibiotic intake, recent invasive procedures and also due to potential COVID-19 related. 10 volunteers were excluded due to chronic pathology.

Conclusions:

The high standards imposed through rigorous screening using this questionnaire stage led to a percentage of 12.2 % students who qualified for proceeding to the biological screening. Screening donors for FMT is a complex and demanding process, but this treatment option can be life saving for patients with recurrent or refractory Clostridioides difficile infection.

Keywords: Fecal microbiota transplantation, Clostridioides difficile infection, Stool banking

Insulin and Wound Healing: Pathophysiological Aspects and Efficacy of Topical Use

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Background:

With an increasing prevalence, low healing rates, and lack of efficient treatments, wound care puts a strain on the global healthcare system, with even greater implications on the quality of life. Insulin, an exogenous growth factor that is both well-studied and affordable, may prove to be a promising therapeutic strategy.

Materials and methods:

This review aims to compile and analyze recent evidence linking the use of topical insulin to improved wound healing, given its metabolic pathways involved in skin growth, angiogenesis, and protein synthesis. The research is based on 18 articles published in the past 15 years, acquired using scientific databases such as PubMed. Starting from mice and advancing to human patients, delivery methods of insulin to the wound site included creams, injections, and polymeric nanoparticles. Afterward, the healing rate was quantified using criteria such as wound contraction rate, complete epithelialization time, and histological aspects of cutaneous biopsies.

Results:

Subjects treated with topical insulin showed improved wound closure time, with a shorter period until complete epithelialization and an increased number of new blood vessels, but no difference in fibrosis rate. Furthermore, there were no notable discrepancies in findings between the diabetic and non-diabetic murine animal models. Topical administration diminished the possibility of systemic side effects.

Conclusions:

The selected studies showed positive results regarding the efficacy of topical insulin in restoring the integrity of the skin, but a larger number of clinical studies involving more patients is required to reach a definitive conclusion. Nevertheless, insulin proved to be a viable option in wound care management.

Keywords: Bioactive insulin, Angiogenesis, Wound healing

Klebsiella spp. - pathogenic role and resistance patterns in hospitalized patients

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Background:

First described in 1882 by Carl Friedlander in the sputum of patients with pneumonia and classified in the genre Klebsiella in 1886, these germs are gram-negative, non-motile, and encapsulated bacterium. These microorganisms can colonize the oro- or nasopharynx and the human digestive tract. Humans are the primary reservoir of Klebsiella spp. in the community but also in the hospital environment. K. pneumoniae is the most common cause of hospital-acquired pneumonia and one of the main agents of other nosocomial infections, often with high mortality ranges in alcoholics and diabetics. The resistance to antibiotics has been linked to efflux pumps, alteration of the outer membrane, and increased production of ESBL enzymes in the organism. Currently, a worrying growth of multi-resistant strains of Klebsiella spp. is observed in hospitalized patients.

Materials and methods:

The study was retrospective and aimed to evaluate the distribution, and involvement of Klebsiella species in infections and resistance profiles in hospitalized patients. The study group included 1061 Klebsiella strains isolated from patients hospitalized in the Clinical County Emergency Hospital of Brasov, between 1.01.2022-31.12.2022. Routinely, genre/species identification was based on manual tests and diffusimetric method, confirmed, if necessary, with the VITEK 2 COMPACT system

Results:

Klebsiella spp. was isolated more frequently from the ICU department (40,43%), especially from urine (47,21%), respiratory secretions (22,71%), and wound infections (13,28%).
Isolated Klebsiella spp. strains showed resistance to various antibiotics including those that are reserve drugs for the treatment of infections with gram-negative bacilli (carbapenems, colistin).

Conclusions:

Klebsiella spp. is an alarming phenomenon in hospitalized patients that requires careful monitoring and judicious use of antibiotics based on selective reporting of tested antibiotics.

Keywords: Klebsiella spp.V, infections, multidrug resistance

Management and outcomes of ALK-positive lung cancer patients: a retrospective analysis

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Background:

Lung cancer remains a major health problem worldwide, accounting for approximately 25% of cancer deaths. Although in recent years aggressive national anti-smoking policies have decreased the incidence of tobacco-related tumours, 10-20% of all lung cancers occur in non-smokers, most often due to driver mutations. Anaplastic lymphoma kinase (ALK)-mutated lung cancer is responsible for 1-5% of all lung cancers. Despite several drugs showing efficacy in this type of cancer, real-world data are scarce due to the rarity of this type of tumour.

Materials and methods:

We performed a retrospective analysis of all ALK-positive lung cancer cases treated in the Regional Institute of Oncology (IRO) between January 2021 and December 2022. We searched the IRO database and selected patients with a certified ALK mutation. For each case identified, several clinical and treatment data were collected, including type of first-line treatment, first-line progression free survival (PFS) and overall survival (OS).

Results:

Of the 770 patients with lung cancer treated in IRO within the pre-specified timeframe, we identified 32 ALK+ patients. Of these, only 23 had sufficient data in the system to allow for survival analysis. In the first-line setting, 69,6% of patients were treated with Alectinib, 17,4% with Crizotinib and 13,0% with chemotherapy. Mean PFS was 17,55 months and median PFS was 13,5 months. Mean OS was 27,91 months while the median was 21,00 months, with 82.9% of patients alive at the time of data cut-off. Targeted therapy was well tolerated, the most common side effect being increased serum bilirubin values.

Conclusions:

ALK-positive lung cancer is usually associated with a good prognosis and long-term survival can be achieved by targeted treatment. Real-world data is required for validating the results of clinical studies that often select the patients they enrol. A prospective regional or national database could significantly improve follow-up and patient outcomes.

Keywords: ALK-mutated lung cancer, Alectinib, Crizotinib

Nivolumab In Immunotherapy- Can It Lead To Pituitary-Adrenal Axis Hormonal Imbalances?

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Background:

Nivolumab is a genetically engineered immune checkpoint inhibitor (ICI) with a high-efficiency rate in treating adenocarcinomas, melanomas and other cancers. Through its boosting action on the immune system, it may lead to immune-related adverse events, frequently affecting the endocrinological system.

Materials and methods:

The review was composed by consulting 17 PubMed articles, elaborated between 2017 and 2021, that analysed the side-effect of Nivolumab on imbalancing the levels of hormones of the pituitary-adrenal axis. We excluded the articles focused on only certain demographic segments, as well as the ones describing adrenal insufficiency in patients treated with both CTLA-4 and PD-1 inhibitors. These articles would not offer us a definite answer on only Nivolumab-related side effects.

Results:

Nivolumab is a multiclonal antibody, which binds to the Programmed Cell Death Protein 1 (PD-1) of the T cell, preventing the interaction of the PD-1 with the PD-1 ligand expressed by the cancer cell. Therefore, it unblocks the immune suppression of anti-tumor T cells. ICI-based immunotherapy can lead to immune-related adverse events (irAES) in the form of endocrinopathies. Isolated adrenocorticotropin (ACTH) deficiency (IAD) is the most frequent type of pituitary hormonal deficiency associated with the administration of PD-1 antibodies. Tests detected the presence of anti-corticotroph antibodies in 58% of the patients with IAD, explaining the autoimmune pathogenesis. Through the negative feedback loop, the level of cortisol drops, resulting in secondary adrenal insufficiency. Clinical signs, lab tests' results and MRI signs need to be acknowledged in order to institute the right hormone replacement therapy with its particularities for both chronic and acute patients.

Conclusions:

Hypocortisol associated with hypopituitarism can appear in oncological patients after the induction of the Nivolumab treatment in a small number of patients (approx. 0,5% of cases), manifested in both acute and chronic forms.

Keywords: Nivolumab, Hypopituitarism, Secondary Adrenal Insufficiency

Phyllodes tumors: a challenging diagnosis on ultrasound and mammography

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Background:

The aim of the study is to identify the ultrasound and mammographic characteristics of Phyllodes tumors, which are benign, borderline, or malignant breast tumors with a high risk of recurrence.

Materials and methods:

From a total of 4200 patients examined between 2018–2022 with ultrasound (B mode, armonic, and Doppler imaging with an 18 Mhz linear transducer, GE Voluson E6 ultrasound machine) and mammography (GE Senograph Pristina), we suspected Phyllodes tumors in 19 patients.

Results:

The lesions had the following features on ultrasound: shape: oval (16 cases–84.21%), round (3 cases -15.79 %); structure: inhomogenous with anechoic inclusions (14 cases-73.68%), inhomogenous without anechoic inclusions (3 cases–15.78%), homogeneous (2 cases–10.54%); ecogenicity: hipoechoic (17 cases-89.47%), izoechoic (2 cases-10.53%); margins: well defined (19 cases-100%), smooth (7 cases–36.84%), macrolobulated (10 cases–52.63%), microlobulated (2 cases–10.53%). Doppler signal was present in 15 cases (78.94%). The most important feature was the dimensions doubling in size after 3–4 months (10 cases—52.63%). Seven patients over 45 years old (36.6%) underwent mammography; we found in all cases high-intensity, well-defined, lobulated nodules; rim radiolucency around them was present in 2 cases -10.52% and benign macrocalcifications in 1 case (5.26%).

Conclusions:

Phyllodes tumors are a diagnostic challenge and are suspected on ultrasound when a solid, well-defined, lobulated, inhomogeneous nodule is observed, which doubles in size in 3–4 months. The mammographic characteristics are high intensity, lobulated nodules with or without rim radiolucency, and well defined margins.

Keywords: Phyllodes tumor, Breast tumor, Mammography

The complexity of atrial fibrillation treatment

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Background:

The high mortality and major adverse cardiovascular events seen in AF patients proves the importance of a comprehensive management of the disease. The ABC pathway provides a structured and integrated approach to the treatment of patients with AF.

Materials and methods:

In the study were enrolled 50 patients with different types of clinical AF, hospitalized at the Cardiology Institute, Chișinău, during October 2022 and January 2023. Applied treatment was examined and the collected data were analyzed using Microsoft Excel.

Results:

According to the CHA_2DS_2-VASc score, 98% of the patients had a high thromboembolic risk, but only 86% of the patients were following an anticoagulant therapy. The drug of choice for anticoagulation was VKA (58%). In the management of the AF symptoms, the rate control therapy was preferred to rhythm control (88% versus 12%). As for rate control, beta-blockers were used in 48% of patients, digoxin in 10% of cases and 30% using both drugs. The rhythm control strategy relied on pharmacological cardioversion, amiodarone being the drug of choice in 83% of the cases. Multi-morbidity, defined as the co-existence of ≥2 comorbidities, was present in all patients, the most frequent being hypertension (96%), coronary artery disease (84%), heart failure (98%) and valvular heart disease (92%). The drugs used for the treatment of comorbidities were diuretics (96%), ARBs (50%), ACEI (32%), oral hypoglycemic medication (22%) and others.

Conclusions:

As the treatment of patients with AF is complex, the ABC pathway can be used as a simple decision-making strategy for a comprehensive management of the disease.

Keywords: Atrial fibrillation, ABC pathway , Integrated management

The potential of biomarkers in predicting neurodegeneration and optimizing its treatments

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Background:

Neurodegeneration is an irreversible process which leads to neuronal damage and death, its causative agent being the aggregation of misfolded proteins. The rising prevalence of neurodegenerative diseases, such as Alzheimer's, Parkinson's or Huntington's disease has accelerated the medical efforts to elucidate their physiopathological mechanisms in order to develop cost-efficient tests that will help in the early diagnosis and treatment methods to counter their uncontainable progression. The aim of this literature review is to present the cerebrospinal fluid and blood-based biomarkers which may be key in preventing the onset of
disabling symptoms.

Materials and methods:

Using a PRISMA flowchart, we analysed 313 studies that resulted from our first search in PubMed database between 2018-2023. After applying inclusion criteria, namely cerebrospinal fluid and plasma biomarkers, and exclusion criteria, such as imaging or rare genetic disorders, 50 papers were selected, which prove the existence of heterogeneity among neurodegenerative diseases despite their many overlapping clinical manifestations.

Results:

Several fluid biomarkers have recently emerged. Plasma levels of GFAP are increased in Aβ pathology and can predict the conversion from mild cognitive impairment to dementia. The most promising is neurofilament light, which reflects the intensity of the neurodegenerative process and levels increase in Alzheimer's disease years before symptom onset. Analyses of cerebrospinal fluid are cardinal in neuropathologies, because brain-derived protein levels are diluted in blood. Aβ(40-42) levels are decreased in Alzheimer's, and in combination with phosphorylated tau, they predict the subsequent development of dementia. α synuclein
correlated with plasma neurofilament light is representative for the multiple system atrophy diagnosis, but correlated with T-Tau and, sometimes, TDP-43, is utilized as a tool for diagnosis of different motoneuron diseases such as amnyotrophic lateral sclerosis.

Conclusions:

Considering the rather low precision of clinical diagnosis, plasma and cerebrospinal fluid biomarkers are valuable means for the identification of prodromal stages and developing disease-modifying treatments.

Viral vectors within the landscape of oncologic gene therapy

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Background:

Viral vector gene therapy is a promising field in oncology since its appearance more than 30 years ago. It involves the transfer of genetic information to a target cell to facilitate the production of desired therapeutic proteins through viruses. The main advantages which viral vectors offer is the high efficiency of gene delivery and engagement of the immune system for anti-tumour response. Within the last decade, many new gene therapies drugs based on viral vectors have been approved in CAR-T cell therapies, cancer vaccines and targeted oncolytic therapeutics.

Materials and methods:

A comprehensive search of the English medical literature was conducted in PubMed using the terms viral vector, gene therapy, oncolytic virus, immunotherapy. The relevant papers were selected from the 156 resulted articles. We have checked the validness and reliability of the selected papers through a thorough read of the abstracts and results.

Results:

In this review we present the principal types of viral vectors and the most common oncolytic viruses used in cancer therapy, and their mechanisms of action of action. We will also discuss the latest advancements of viral vectors, potential challenges, safety issues and future prospects by analysing several recent studies in this field.

Conclusions:

Viral vectors offer numerous opportunities in cancer therapy. Many clinical trials and studies have shown that these vectors have anti-tumour activity and are well tolerated. Recent advances in viral vector drugs development and testing have opened new, safe and efficient viral therapeutic strategies in cancer treatment, especially combined with radiotherapy, chemotherapy and immunotherapies. Viral vectors could become a new valuable tool used in the treatment of a variety of cancers.

Keywords: Viral vector, Gene therapy, Oncolytic virus

ORIGINAL STUDY RESEARCH

Surgery

Bicuspid aortic valve-a retrospective observational study in North-Eastern Romania during the last 15 months

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Background:

The aortic valve is composed of three cusps: posterior, left and right. It functions as a gateway, allowing oxygenated blood to enter the aorta during the ventricular systole and preventing aortic regurgitation during the diastole. Altered functionality can be caused either by congenital defects, such as an abnormal number of cusps (one, two or four), which accelerate degeneration, or by acquired pathologies (stenosis, insufficiency, etc.).

Materials and methods:

Our study focuses on patients presenting the bicuspid variant that were admitted to the Institute for Cardiovascular Diseases Prof. Dr. George I. M. Georgescu Iasi between January 2022 and April 2023. During the selected time frame, 2197 patients were admitted to the hospital presenting aortic valve stenosis, 46 of them having a bicuspid aortic valve. Statistical analysis was performed, and to correlate our data with the current literature, PubMed was searched, and five most suited articles published between 2020-2023 were selected.

Results:

A majority of 65.22% of patients were male, and 66.66% of males, and 75.00% of females respectively, were over 50 years of age. In the selected patient group 76.66% of males, and 81.25% of females, required replacement of the aortic valve, while 41.66% needed additional procedures. All patients presented varying degrees of aortic valve insufficiency and displayed comorbidities: dyslipidemia (21.74%), aortic valve stenosis (43.48%), aortic aneurysm (21.74%), infective endocarditis (13.04%), obesity (8.7%), aortic dissection (8.7%), other congenital heart defects (6.52%). At admission, 17.4% of patients were receiving oral anticoagulants.

Conclusions:

Our study shows that the bicuspid aortic valve variant is more susceptible to degenerative pathologies. Depending on the condition of the aortic valve, the presence of other congenital defects, and the general health status, our patients can exhibit normal functionality during their early life, many of them being asymptomatic until their fifth decade.

Keywords: Bicuspid aortic valve, Anatomical variant, Valvular prosthesis

Craniopagus and thoracopagus conjoined twins: preoperative assessment and surgical separation

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Background:

Conjoined (Siamese) twins represent the result of aberrant embryogenesis. Incidence worldwide is 1 in 200.000 births/year (40% survival rate at birth). The aim of this review is to evaluate the process of separation, regarding craniopagus and thoracopagus twins.

Materials and methods:

This review is based on 39 articles from PubMed (2004-2023), totalling 2226 cases of Siamese twins. Conjoined patients (ages 14 days-39 years) were studied, whilst twins having other similar defects (e.g. twin reverse-arterial-perfusion) were excluded. Craniopagus twins (2%) have fused craniums, involving the most difficult type of separation; thoracopagus twins (40%) are joined ventrally at the upper chest. For a deeper understanding of their health status, twins require CTs, MRIs, EKGs, and ultrasounds to prove they are fit for separation (the integrity of cardiovascular system is required in order to proceed with the surgical plan). A multidisciplinary team is assembled to perform surgery with a staged approach, a smooth separation being helped by prior interventions (e.g. subcutaneous tissue expanders).

Results:

Both cases register high death rates. Over 50% of thoracopagus twins do not survive the procedures, because the fusion prolongs further into their abdomen, sharing one duodenum/liver. Only 23% of craniopagus twins both survive the separation (higher death rate if they share brain tissue). The primary goal of separation is to improve the quality of life (in some cases, emergency separation is mandatory if one of the twins dies prior scheduled surgery). Cardiovascular and respiratory failures are major risk factors for post-separation death.

Conclusions:

In accordance with this review, it was concluded that thorough preoperative assessment and surgical plan are required for a successful separation, offering an insight in future discoveries about this abnormality.

Keywords: conjoined twins, craniopagus, thoracopagus

Free Gracilis Muscle Transfer in Facial Reanimation: Cross-face Nerve Graft-Innervated versus Double-Innervated

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Background:

Peripheral facial nerve palsy is one of the most common peripheral cranial nerve disorder, thus having a radical impact on psychological limitations and appearance changes. The aim of this review is to compare two Free Gracilis Muscle Transfer (FGMT) techniques, deciding on the more propitious one.

Materials and methods:

This review focuses on 12 PubMed articles (3 Meta-Analysis, 9 original studies), published between 2006-2017, totalling 1580 patients. The most used FGMT neurotization techniques are cross-face nerve graft (CFNG), a 2-stage neurotization (60% of cases), and double-innervated FGMT (involves a dual coaptation with end-to-end masseter nerve and end-to-side CFNG; 40%). Patients with unilateral facial paralysis who did not undergo other treatments while included, while patients who tried other treatments before, were excluded.

Results:

Patients who underwent CFNG showed increased smile excursion at rest (P=0.000), whereas the dual-innervated group exhibited an increase both during rest (P=0.002) and smiling (P=0.028). Better symmetry was achieved in the second group, although CFNG proved the most natural aspect during longer observation. All patients recovered voluntary (3.8 months) and showed spontaneous smiling abilities (7.2 months). Dual-innervated neurotization showed more significance in spontaneous smile achievement (25.8%). However, there are no outstanding differences concerning Terzis' scores or functional aspects.

Conclusions:

Recent popularity gained by double-innervated FGMT as compared to the CFNG option is notable due to its ability to produce a stronger, more spontaneous smile in a shorter time, as well as showing better symmetry results.

Keywords: facial reanimation, facial palsy, free gracilis muscle transfer

Iliotibial Band Friction Syndrome in Athletes and Runners: a race against pain

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Background:

Iliotibial band syndrome (ITBS) is the most common injury of the lateral side of the knee in runners, with an incidence estimated to be between 5% and 15%. ITBS is the main cause of lateral knee pain and responsible of impaired mobility for 25% of adults. It's a common injury in cyclists, long distance runners, and people who practice activities that involve repetitive flexion and extension movement in the knee.

Materials and methods:

This study is based on 5 articles published between 1984 and 2013 on Pubmed. The purpose of this article is to investigate the connection between diagnosis, conservative or surgical treatment effectiveness but also to review information on prevention of this pathology.

Results:

Patients with this syndrome experience pain when running, walking, or even resting. Using a cross-sectional analysis, certain studies concluded that ITBS may be promoted by joint misalignments, congenital predisposition, abnormal activation of inserting muscles or excessive ITB stiffness. Conservative treatment consisting of a combination of rest stretching, pain management, and modification of running habits produced a 40% cure rate , with return to running/sports at 8 weeks and a 91.7% cure rate in 6 months In persistent or chronic cases, surgical management is indicated. As the duration of symptoms increases and conservative measures fail, surgical treatments result in a return to sport rate of 100% Surgery had excellent (84.4%) and good results (13%).

Conclusions:

Despite many options for conservative and surgical treatment, there has yet to be an agreement on one standard of care. Certain treatments, conservative or surgical, are shown to be more effective than others for a given individual; however, further research is needed to understand the true pathology of iliotibial band syndrome in athletes, as well as the optimal treatment regimen.

Keywords: Iliotibial Band Syndrome, Conservative Treatment, Runner Pathology

Locally advanced prostate cancer: choosing the proper approach

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Background:

Prostate cancer remains the second most frequent malignancy worldwide, with an estimated European incidence of 151,2/100.000 inhabitants. Although prostate specific antigen (PSA) is a reliable screening marker, approximately 10% of cases are diagnosed with locally advanced disease (T3-4N0-1M0). Radical prostatectomy (RP) and External beam radiotherapy (EBRT) constitute the main management approaches. This systematic review aims to compare the efficiency and survival rates among those options.

Materials and methods:

After a Google scholar and Science direct search, 35 articles were found and 6 articles met the inclusion criteria for this study. The patients were categorized into medical (EBRT) and surgical (RP) treated groups. Prostate cancer specific survival (PCSS), Overall survival (OS) and PSA levels were assessed. Statistical significance was established as p-value <0,05.

Results:

A total of 40.291 cases were divided into: RP group (n=22.139) and EBRT group (n=18.152). The median ages were 65,45 and 71,5 years old for RP and EBRT groups respectively. The mean initial PSA for RP group was 15,5 ng/ml, (95% Confidence interval [CI] 9,1-21,9), while for EBRT group was 23,8 ng/ml, (95% CI 12-35,6). In addition, in both categories initial PSA levels were significantly correlated with better OS, p-value 0,003 for RP group and 0,029 for EBRT group. Regarding 10-year OS, RP group had an 77,95% survival and EBRT group came up with 63,87% survival. Plus, 10-year OS was statistically significant prolonged in RP group versus EBRT group, with a p-value 0,01. Furthermore, 10-year PCSS regarding RP group was 94,81%, while EBRT group presented 90,53%, RP group was statistically better than EBRT group p-value 0,03.

Conclusions:

Finally, locally advanced prostate cancer management comes with astonishing results. RP as a first line approach is associated with a better PCSS and OS while patients were younger. However, EBRT remains a useful alternative option especially for older patients.

Keywords: Prostate cancer, Radical prostatectomy (RP), External beam radiotherapy (EBRT)

Optimizing amniocentesis indications for prenatal diagnosis by using the FISH technique

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Background:

Amniocentesis is a procedure used to remove amniotic fluid from the uterine cavity. It is performed for prenatal diagnostic which enables the identification of a broad spectrum of chromosomal abnormalities, X-linked conditions, gene disorders, infections and neural tube defects. This is an invasive technique which is associated with a risk of abortion and also has a higher cost which makes it less accessible for large groups of people. The aim of this paper is to analyze the indications of amniocentesis in a group of patients supposing to see which has the highest rate of presenting a chromosomal abnormalities.

Materials and methods:

The study is based on 1406 patients with the average age being 33. The amniocentesis was preceded by ultrasound evaluation in order to obtain data concerning fetal biometry and morphology, ultrasound abnormalities representing one of the indications. The maternal serum was also evaluated in order to determine the values of the double and triple test . We divided the lot in patients which had only one, multiple and no indication (on demand). In order to determine the presence of a chromosomal abnormality we used the FISH test performed in the cytogenetics laboratory of Obstetrics and Gyneclogy Hospital ``Cuza Voda`` Iasi.

Results:

From the study group, 1008 amniocentesis (71,43%) had a single indication, and the ultrasound anomalies (16,5%) was the indication with the most cases confirmed by the FISH test (15%). 392 cases had multiple indications and the ones associating ultrasound abnormalities had the highest number of cases confirmed.

Conclusions:

Amniocentesis along with FISH test represent an important step in prenatal diagnosis, but beneficial to increase the efficiency of this procedures, a correct selection of cases that present a risk of aneuploidy based on multiple results is needed.

Keywords: amniocentesis, prenatal diagnosis, chromosome aneuploidies

The effectiveness of the use of biological leeches in the treatment of venous congestion after replantation

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Background:

The aim of this paper is to show the usefulness of medicinal leech therapy (Hirudo medicinalis) in replantations. They are used in the treatment of venous congestion or complete outflow obstruction which can occur in replantations, leechs'saliva containing 20 active substances with analgesic, anticoagulant, platelet inhibitor, thrombin and antimicrobial agent. In 2004, FDA approved leeches as a medical device.

Materials and methods:

Our study is based on 24 patients (19 men and 5 women) who suffered amputations of fingers and thumb in 20 cases and, in the other 4, a complete amputation of the ear auricle. In all ear replantations, we performed the arteriorrhaphy and, just in one case, the venous reconstruction was possible. Even though in 12 cases of digital replantation we managed to perform the venous reconstruction, the leech therapy was necessary and beneficial. The use of leeches started from the second postoperative day in 15 cases and from the third day in the other 8 cases. The therapy was maintained on average 5 days. The patients received antibiotics and benefited of continue blood parameters monitoring.

Results:

We didn't record any Aeromonas hydrophila (a gram negative germ located in the gut of the leech) infection and no prolonged bleeding. All the replantation results were good with the survival of the amputated segment.

Conclusions:

Hirudotherapy (leech therapy) plays an essential role in postoperative management of the venous congestion in microsurgical replantations. It is a safe, easy to use and beneficial therapy with very low implementation costs.

Keywords: leech, replantation, venous congestion

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