

INTERNAL MEDICINE

POSTER



The importance of 24 h Holter monitoring in syncope diagnosis – Case presentation

Author: *Alexandru-Dan Costache*

Co-authors: *Nicoleta Dumitrescu, Ștefania-Teodora Duca*

Scientific Coordinators: *Associate Professor Irina-Iuliana Costache, MD, PhD; Professor Ionela-Lăcrămioara Șerban, MD, PhD*

Introduction: Syncope represents a relatively frequently encountered symptom in emergency departments, especially in older people, often causing differential diagnosis issues, and, therefore, we would like to emphasize the importance of 24 h Holter monetarization in syncope diagnosis.

Material and methods: We are presenting the case of an 82 year old female patient who was admitted to the Cardiology Clinic, "St. Spiridon" Emergency Clinical Hospital Iasi, accusing occipital headache, dizziness, also considering a severe pressure jump (200/100 mmHg at admission). The patient, a long-time hypertensive, presented an inferior myocardial infarction in the past, complicated by paroxysmal atrial fibrillation, which was diminished in sinus rhythm and efficiently prevented with amiodarone associated to the anti-hypertensive and anti-ischemic medication regimen. The clinico-functional result conducted immediately after admission emphasized a mild left ventricle hypertrophy and a degenerative valvular aortic sclerosis which were revealed on echocardiography. Aside from the routine paraclinical explorations (ECG and electrocardiography), 24h Holter monitoring was deemed necessary and it was applied to the patient in order to record her cardiac activity with the purpose of finding eventual paroxysmal arrhythmias, considering her history with atrial fibrillation.

Results: During the Holter monitoring, the patient experienced a short syncope, with fast recovery, originally diagnosed as a transient ischemic attack, but, after analyzing the monetarization 4.4 seconds pause was found at the moment, which imposed the revision of the diagnosis and of the syncope cause, respectively, which was considered to be a sinus node disease. Eventual therapeutic management imposed permanent electric cardiac stimulation by VVI pacemaker implantation. The patient had a favorable evolution, maintaining a stimulated ventricular rhythm.

Conclusions: 24 h Holter monitoring has a particular importance in syncope diagnosis only in the case of exploration and symptom presence concurrence, as in the above-mentioned case.

Keywords: *Holter monitoring, syncope, sinus node disease*

Pitfalls in diagnosing a pancreatic neuroendocrine tumor – an insulinoma case

Author: *Andra Maria Stancu*

Co-authors: *Oana Catalina Dragusin, Ana-Maria-Corina Bivolian, Silviu Ionut Dumitrascu*

Scientific coordinators: *Bogdan Silviu Ungureanu, MD, PhD; Professor Adrian Saftoiu, MD, PhD*

Introduction: Pancreatic neuroendocrine tumors (pNETs) are relatively rare, accounting for 1-2% of all pancreatic neoplasms. This is the case of a 33-year-old female patient, who presented in the emergency room for loss of consciousness, blurred vision, and severe dizziness, pruriginous facial and upper trunk flushing symptoms which have progressed over the last year.

Material and methods: After being admitted in the Diabetes Department, laboratory data confirmed hyperinsulinemic hypoglycemia (glycaemia 38 mg/dL, insulinemia 54.72 μ U/mL) even though serum levels of chromogranin A, serotonin, anti-insulin antibodies and urinary levels of 5-hydroxyindoleacetic acid were in normal range. Since abdominal ultrasound and computer tomography did not bring any new information, the patient was guided to the Research Center of Gastroenterology and Hepatology. At first, a 3T MRI was performed which indicated an 18.3/16.3 mm tissue mass located in the uncinate process of the pancreatic head. Contrast-Enhanced Endoscopic Ultrasound confirmed that the tumor was in close range of the superior mesenteric vein without any local invasion and with no other detectable secondary lesions in the pancreas or the surrounding tissue. Endoscopic Ultrasound - Fine needle aspiration was performed followed by pathological examination.

Results: The patient was scheduled for elective surgery in order to fully dissect the tumor. Pathological and immunohistochemistry findings revealed a functional well-differentiated pNET classified as G1 category with uncertain behavior, without the evidence of tumoral CK19 staining, mitoses and necrosis, angioinvasion or extra-pancreatic invasion. Nine months after surgery, no evidence of recurrence was observed and normal glyceemic values were recorded.

Conclusions: The particularity of this case consists in the atypical combination of hypoglycemic symptoms and carcinoid syndrome, as well as the pathological aspect of the tumor. The use of top the line imaging investigations such as 3T-MRI and EUS were essential to localize this small pNET and to establish the therapeutic management.

Keywords: *pancreatic neuroendocrine tumor, endoscopic ultrasound, 3T-MRI, carcinoid syndrome*

Behçet's disease correlated with femoral artery's aneurism

Author: *Mikahil Kubilay Tutuncouglu*

Co-authors: *Ensaroglu Furkan, Suleymanovic-Gutic Hajro, Latroche Oussama*

Scientific coordinator: *Zergui, MD – Hôpitaux de Paris*

Introduction: Behçet's [BHTs] disease is a rare multisystemic vasculitis with unknown etiology, usually immune-mediated. Vascular complications are frequent, mainly leading by venous thrombosis. Consequent of its rarity, arterial effects of BHTs disease must be followed: arterial aneurysms (rupture) are responsible for 52-64 % mortality rate.

Material and methods: A patient of 32 years with no particular antecedents, came in emergencies for a painful swelling in the left inguinal region since 4 days. On physical examination, signs of oral and genital aphthous stomatitis. On palpation, presence of a pulsatile swelling in the left inguinal region, and blindness in the left eye. Laboratory tests showed severe inflammation. Doppler ultrasound and angiography revealed an aneurysm in the right common femoral artery: 3,2cm × 4.8cm, surrounded by a compressive encapsulated hematoma which extended to the left psoas muscle: 19cm × 8cm.

Retained diagnostic was false spontaneous aneurysm of common femoral artery, complicating a BHTs disease. This diagnostic was established with the presence of one major and two minor criteria classified by the International Study Group of BHTs disease.

Results: Surgical treatment consisted in the drainage of the hematoma with arterial repair. Prescription of a high dose corticosteroids associated with monthly bolus cyclophosphamide [Pre and Post]. The postoperative signs showed the appearance of a fistulized abscess. After 16 months, the patient is stable under a therapy with Colchicine.

Conclusion: Arterial aneurysms in BHTs disease are rare. Their diagnosis is underestimated. Their prognosis is severe, even after surgical treatment. In this observation, we underline the need for research symptoms of Behçet's disease in the case of an arterial disease, in a young patient.

Especially in the presence of aneurysmal lesions which are surgical emergencies because of their fragilities [=exposition to almost constant ruptures aggravating the prognosis of the disease].

Keywords: *Behçet, aneurism, differential*

Double inlet left ventricle: a case of silent adult cyanotic congenital heart disease

Author: *Madalina Cazacut*

Co-author: *Simona Alexa, Alexandru-Petrinel Cirjan*

Scientific coordinator: *Teaching assistant Roxana Enache, MD*

Introduction: Double inlet left ventricle (DILV) is a rare type of congenital heart disease (CHD), in which >50% of each atrioventricular connection is linked to a dominant left ventricle (LV). The defect is associated with a large ventricular septal defect (VSD) and often with transposition of great vessels (TGV).

Material and methods: We present the case of a 37 year-old female, known with a systolic murmur since childhood but without a diagnosis of CHD. In 2002, during pregnancy, she developed dyspnea and fatigability (NYHA class II) and further investigation established the diagnosis of DILV. Transthoracic echocardiography described a single morphological LV connected with both atria, TGV with pulmonary artery arising from the single LV and aorta emerging from a posterior rudimentary chamber and a large VSD. The cardiac catheterization revealed severe secondary pulmonary hypertension (PH) (mean pulmonary pressure of 92 mmHg, pulmonary wedge pressure of 13 mmHg) and increased pulmonary vascular resistances (10 Wood units).

Results: The development of PH, the most common complication in DILV, made the patient incompatible with receiving corrective or palliative cardiac surgery. However, she successfully underwent pregnancy and delivery, without any maternofetal complications. The onset of PH, though, altered her prognosis and thirteen years later, due to mild exertional dyspnea, she was given pulmonary vasodilator therapy (bosentan).

Conclusion: This is an extremely rare case of an unoperated DILV surviving into adulthood in a patient who successfully underwent pregnancy, despite presenting major contraindication (PH). Regardless of this good outcome, two aspects are to be taken into consideration. First, there is a need to better understand the adaptive mechanisms in DILV patients who survive without surgery. Last, besides early diagnosis and treatment in CHD, medical counseling should be reinforced in unoperated cases to decrease morbidity and mortality among those patients who undergo high-risk events, e.g. pregnancy.

Keywords: *double inlet left ventricle, pulmonary hypertension, pregnancy*

Blood pressure variables, arterial stiffness, endothelial function and arterial age in smokers

Author: *Bianca Danciulescu*

Scientific coordinator: *Ioana Mozos, MD*

Introduction: The aim of the paper was to explore the cumulative effect of smoking on blood pressure variables, endothelial function, arterial stiffness and arterial age.

Material and methods: A total of 147 smokers underwent arteriography and they were questioned about their smoking habits. Smoking pack years (SPY) was calculated, considering smoking period and number of cigarettes smoked daily. Pulse wave velocity (PWV), brachial augmentation index, arterial age (AA) and blood pressure variables were assessed.

Results: SPY, PWV, AA were: 9.299 ± 0.946 pack years, 8.387 ± 2.111 m/s and 41 ± 17.228 , respectively. Significant correlations were found between arteriographic and smoking variables. PWV and AA correlated best with SPY ($r=0.597$ and 0.547 , respectively), but also with the number of cigarettes smoked daily ($r=0.437$ and 0.442 , respectively) and the smoking period ($r=0.54$ and 0.525 , respectively). SPY exceeding 9 pack years is a sensitive predictor of increased PWV and pulse pressure in the aorta (sensitivity = 0.7222 and 0.667 , respectively) and a specific predictor of PWV and endothelial dysfunction (specificity = 0.811 and 0.744 , respectively).

Conclusions: Smoking impairs arteriographic variables in a dose-dependent manner. SPY is a sensitive and specific predictor of arterial stiffness, endothelial dysfunction and elevated blood pressure variables.

Keywords: smoking, blood pressure, pulse wave velocity

Insulin Treatment for Hypertriglyceridemia induced pancreatitis in children

Author: *Ayesha Rahman*

Co-authors: *Manal Javid*

Scientific coordinators: *Christina Mihai, MD; Anca Pinzaru, MD*

Introduction: Acute Pancreatitis is a serious medical condition defined by sudden swelling and inflammation of the pancreas. Hypertriglyceridemia is a well-known cause of acute pancreatitis, however in children it's extremely rare and little has been documented with regards to its treatment and efficiency.

Material and methods: A 7 year old boy was admitted in the pediatrics department after a sudden onset of pain 48hrs prior to admission with symptoms of vomiting and severe abdominal pain localized in the epigastrium radiating to the back. Blood tests revealed increased values of serum amylase (>3 x normal value) and serum lipase (>10 x normal value) with severe hypertriglyceridemia (9777 mg/dl). Additionally, imagistic evidence of an enlarged pancreas with edema, micro-abscesses and peri-pancreatic fluid was shown on the abdominal CT. The accumulating data had led to the diagnosis of Hypertriglyceridemia induced Acute Pancreatitis. In addition to supportive care to correct symptoms of dehydration and pain, the patient was treated with i.v. rapid insulin infusion at a rate of 0.5-0.1IU/Kg/Hr alongside 10% glucose infusion. After 48hrs of treatment triglycerides level were significantly reduced to 656mg/dl and serum amylase and lipase were returned to their normal range of 36U/L and 95U/L respectively, thus proving the efficiency of the treatment.

Results: The patient left the hospital in good health (and normalized lab values) and with detailed dietary advice to prevent future episodes. The evolution was favorable for a couple of months until diet negligence led to a relapse. Continuous Insulin infusion was an effective treatment once again and the patient's blood values were normalized after 72 hrs.

Conclusion: IV rapid insulin infusion is a successfully proven treatment for hypertriglyceridemia induced pancreatitis in children for initial and relapse episodes.

Keywords: *pediatrics, pancreatitis, insulin*

Occurrence of cardiovascular diseases among patient with diabetes mellitus associated with arterial hypertension

Author: *Selmi Monaam*

Co-authors: *Soury Arselen, Ahmen Houidi, Souabni Seif Eddine*

Scientific coordinator: *Iheb Kechaou, MD*

Introduction: Diabetes mellitus and arterial hypertension are growing to be a major public health issue. Both entities often coexist and their co-existence can significantly increase the risk of developing cardiovascular diseases (CVD) that represent a principal cause of mortality worldwide.

We are aiming with this study to assess the role of the coexistence of diabetes mellitus and arterial hypertension in developing cardiovascular diseases.

Material and methods: Our analysis was conducted in the diabetology department, we enrolled 424 patients and we used the same identical data sheet to collect the other morbidities and associated risk factors among all our patients.

Results: 210 of our patients were females and 214 were males, 73% of them have type 2 diabetes and 26% have type 1 diabetes. 57% of our patients have arterial hypertension, 53% among them were grade III and 75% of them have type 2 diabetes as an associated morbidity. We noticed that 54% of the patients who suffered from the coexistence of diabetes and arterial hypertension had another cardiovascular disease. Coronary heart disease seems to be the main affection (63%), among them 24% had myocardial infarction, 26% had stable angina and 17% of them had heart failure. We must note that some of our patients had some other risk factor for CVD than diabetes and arterial hypertension, 32% had dyslipidemia, 41% among them had obesity and 16% were smokers.

Conclusion: The association of arterial hypertension and diabetes mellitus plays a major role in the development and progression of cardiovascular diseases. An early diagnostic and a better management of both disorders may lead to decreasing the risk and delaying the occurrence of their complications.

Keywords: *diabetes mellitus, arterial, CVD*

Differential diagnostic between ventricular extra systoles and aberrant intraventricular conduction

Author: *Marius Simion Toma*

Co-authors: *Mihai Tanase; Alina Simion, MD*

Scientific coordinator: *Teaching assistant Andrei Luca, MD*

Introduction: Aberrant intraventricular conduction often pose difficulties in the differential diagnostic with extra systoles and ventricular tachycardia. Aberrant conduction is defined as the propagation of a stimulus in the ventricular myocardium in an abnormal manner, conditioned by the refractory period of the specialized conduction system. In the case of atrial fibrillation, aberrant conduction can appear only in two circumstances: extremely rapid ventricular frequency, because the stimuli falls in the relative refractory state of the specialized conduction system and the presence of Ashman phenomenon (long-short cycle).

Material and methods: Generally aberrant intraventricular conduction does not present with fixed coupling with the precedent contraction and it is not followed by a significant pause as in the case of ventricular extra systole. We have to remember the fact that in atrial fibrillation the QRS complex can be abnormal because of a preexistent right or left bundle branch block or abnormal conduction caused by an accessory fascicle (as in the case of Wolf Parkinson White syndrome).

Results: Aberrant intraventricular conduction can be observed in chaotic atrial tachycardia or atrial parasystole. Aberrant intraventricular conduction through phase block can manifest with long lasting diastoles: second grade AV block, atrial fibrillation with very slow ventricular rhythm or during carotid sinus massage.

Conclusion: The main concern is setting up a guideline in aid of health care professionals regarding the differential diagnostic between ventricular extra systoles and aberrant intraventricular conduction.

Keywords: extra systole, aberrant conduction, EKG

Lugol solution and the risk of Iod-Basedow phenomenon - case report

Author: *Roxana Ciocan*

Co-authors: *Ioana- Nicoleta Nicodim, Claudia Gabriela Moldovanu*

Scientific coordinator: *Assistant professor Letiția Leuștean, MD, PhD*

Introduction: Graves' disease is an autoimmune disorder characterized by hyperthyroidism due to circulating autoantibodies. Thyroid-stimulating immunoglobulins bind to and activate thyrotropin receptors, causing the thyroid gland to grow and the thyroid follicles to increase synthesis of thyroid hormones.

Untreated, this disease may lead to severe thyrotoxicosis with complications: cardiovascular, ocular, and psychiatric and in extreme cases thyrotoxic crisis with a high mortality rate.

Material and methods: We are presenting the case of a 50-years-old woman diagnosed in another service with Graves' disease and treated for many years with antithyroid drugs (ATDs). She was admitted in the Endocrinology Clinic of "Saint Spiridon" Hospital for a relapse due to treatment discontinuation. The surgical treatment was planned and the preoperative preparation with Lugol solution was initiated. Due to a misunderstanding, the administration of iodine solution was extended for a period of about 30 days, thus generating the so-called Jod-Basedow effect, with the exacerbation of the manifestations of thyrotoxicosis and risk of thyroid storm. The patient received treatment with high ATDs doses, glucocorticoids, and beta-blockers, resulting in the progressive improvement of symptoms.

Results: The patient was discharged from hospital and given the risk of thyrotoxic crisis, the surgery was postponed. A month later, she underwent thyroidectomy without preoperative preparation with iodine solution. The operative and postoperative courses were successful.

Conclusion: In Graves' disease, the preoperative preparation of patients with iodine solution is preferred by most surgeons for avoiding perioperative complications due to severe thyrotoxicosis. This treatment must be performed in hospital under close supervision by medical personnel, in order to avoid such complications like Jod-Basedow phenomenon and thyroid storm. Thus, surgery remains a safe therapeutic option for Graves' disease in many circumstances.

Keywords: *Graves' disease, thyrotoxic crisis, Lugol solution*

Approach to Cushing disease with persistent hypercortisolism after transsphenoidal surgery and radiotherapy-case report

Author: *Roxana Ciocan*

Co-authors: *Ioana-Nicoleta Nicodim, Claudia Gabriela Moldovanu*

Scientific coordinator: *Assistant professor Letiția Leuștean, MD, PhD*

Introduction: Cushing disease is the most frequent cause of endogenous hypercortisolism. It is caused by a tumor originating from the corticotroph cells of the pituitary gland, or rarely by corticotroph hyperplasia as a result of ectopic corticotropin-releasing hormone (CRH) secretion, which leads to excess adrenocorticotropic hormone (ACTH).

Material and methods: We are presenting the case of a 60-years-old female, with important cardiovascular disease (essential hypertension stage 3 with high additional risk, heart failure class II NYHA, angina pectoris, mixed cardiomyopathy), modified basal glycemia, menopause at 54 years old (after total abdominal hysterectomy and bilateral salpingo-oophorectomy for a fibroid tumor). She was diagnosed with Cushing disease caused by a 25/13/23 mm pituitary macroadenoma, treated by transsphenoidal surgery, followed by gamma-knife radiotherapy and she was admitted in the Endocrinology Clinic of “Saint Spiridon” Hospital 3 months after radiosurgery for clinical and paraclinical reevaluation.

Results: The laboratory tests used to determine whether remission of Cushing disease has occurred include very low early-morning serum levels of cortisol or ACTH, low 24 h urine free cortisol levels measured in the first 2 weeks after surgery.

In this case, 8 months following surgery and 3 month after radiotherapy, the evaluation of the cortisolic status showed persistently high urine cortisol levels associated with high levels of ACTH. Thus it has been indicated directly suppress tumor ACTH with medications (somatostatin analogs such as Pasireotide).

Conclusions: Patients with Cushing disease are usually treated with transsphenoidal surgery, as this approach leads to remission in 70-90% of cases. The risk of recurrence of Cushing disease could reach 20-25% 10 years after surgery.

Close follow-up and through evaluation of the cortisolic status will eventually dictate switch in treatment options and /or combined strategies overtime.

Keywords: *Cushing disease, pituitary macroadenoma, transsphenoidal surgery*

Metabolic Syndrome in Childhood

Author: *Said Ahmed*

Co-authors: *Aamena Osman, Kazantzi Maria*

Scientific coordinator: *Stana Bogdan, MD*

Introduction: Metabolic syndrome has recently been described in adults and it comprises insulin resistance, dyslipidemia, hypertension, obesity and also renal involvement in the long-term. Initially seen as separate entities, these pathologies have a common etiopathogenic mechanism: the decreased sensitivity of the insulin receptor. In children, there is currently an increase in the prevalence of obesity, with an increasing risk of early development of metabolic syndrome. Obesity in children must be very accurately evaluated and associated risk factors for complete metabolic syndrome must be carefully assessed, because in adult age the risk for cardiovascular and metabolic complications is very high.

Material and methods: We present a case of an obese 9-year old girl admitted in the 2nd Pediatrics Clinic, "Sf. Maria" Clinical Emergency Children Hospital in Iasi, Romania for abdominal pain. Careful clinical examination and biological parameters showed that she was infected with the parasite giardia lamblia, which was then treated with Albendazole.

Results: Further tests showed a mild hepatic steatosis which together with the other biological parameters suggested the onset of metabolic syndrome.

Conclusion: Upon diagnosis of metabolic syndrome, the treatment recommended for her was comprised of lifestyle change and moderate caloric intake together with a change in caloric composition. The lifestyle changes included low to moderate daily activities. All of this was recommended in order to prevent possible complications that may appear at a later age and reduce the chance of morbidity and mortality at adulthood.

Keywords: *metabolic syndrome, childhood*

Limitations in prenatal ultrasound in determining fetal gender

Author: *Manal Javid*

Co-authors: *Aamena Osman, Vergis Anand Cheriyan, Ayesha Rahman*

Scientific coordinator: *Victor Gabriel Rugina, MD*

Introduction: Ultrasound imaging is widely used for prenatal fetal sex determination, usually in the second and the third trimester through direct visualization of the anatomy of the genitals or pelvic structures. With indications for both medical and nonmedical uses, the determination of fetal gender in utero is a vital part of pre-natal diagnosis for all families at risk of x-linked disorders, testicular feminization syndrome, pseudo-hermaphroditism, genital anomalies, ambiguous genitalia, and determination of zygosity in multiple pregnancy.

Material and methods: Although fetal sex determination using ultrasound is feasible in most pregnancies, in some cases, it may pose some difficulties as the correct visualization of any fetal part depends on a host of factors such as breech presentation, closely apposed fetal thighs resulting in covering of the genitalia, close proximity of the fetal peritoneum to the placenta or myometrial wall, oligohydramnios, maternal obesity, gestational age, technical problem with the machine or probe causing poor image quality.

Results: We report a case of a woman diagnosed as carrying a female fetus based on the result of her ultrasound exam at 22 weeks. The sex at birth via karyotype testing confirmed to be male compared to the scan determined gender.

Conclusion: Hypospadias was diagnosed based a physical exam and further testing. The exact cause of the hypospadias was unknown.

Keywords: *ultrasound, hypospadias*

Partial Androgen Resistance - A Clinical Case

Author: *Aamena Osman*

Co-authors: *Said Ahmed, Manal Javid*

Scientific coordinator: *Maria Christina Ungureanu, MD, PhD*

Introduction: Partial androgen resistance or androgen insensitivity is the inability of a fetus to correctly respond to androgens during pregnancy. It is transmitted as an X linked recessive trait with 30% of mutations occurring spontaneously.

Case report

Presentation of a 1 year and 9 month old patient with ambiguous external genitalia. The Barr body test was performed and found to be negative, with the 46XY karyotype. In order to confirm the absence of female internal organs, a diagnostic laparoscopy was performed – no mullerian ducts were found. Furthermore a gonadal biopsy showed testicular parenchyma.

Several hypotheses were then analyzed:

1. Clinical history ruled out the action of endocrine disruptors.
2. Inborn errors of testosterone biosynthesis, was presumed to be absent due to normal plasma levels of dehydroepiandrosterone (DHEAS).
3. ACTH stimulation testing resulted in the absence of hypokalaemic alkalosis, low levels of 17 hydroxyprogesterone and cortisol thus excluding a 17 α hydroxylase deficiency.
4. Due to normal plasma levels of androstenedione, enzyme defects affecting testosterone biosynthesis were precluded.
5. Enzyme defects affecting dihydrotestosterone (DHT) were also dismissed as a result of a normal testosterone/DHT ratio after hCG stimulation testing.

Finally a disorder of androgen action with partial androgen resistance was welcomed. Clinical diagnosis was then followed with treatment of penile lengthening after administration of high doses of testosterone, although basal levels of testosterone still remained low.

Conclusion: Till now, there is no readily available assay in order to determine androgen sensitivity. For the diagnosis of complete androgen resistance, the clinical picture and the presence of elevated basal and hCG stimulated testosterone together with normal levels of DHT should be present. In partial androgen resistance, the response to testosterone treatment can be a tool for diagnosis. What's peculiar about this case, is that in fact, the patient had low levels of testosterone.

Keywords: *androgen, resistance, children*

Weil's disease: case report

Author: *Al Namat Nadia*

Co-authors: *Luta Andreea-Mihaela, Al Namat Dina, Irimita Ionela-Larisa*

Scientific coordinator: *Professor Miftode Egidia, MD, PhD*

Introduction: Leptospirosis, also known as Weil's Disease, is an acute zoonotic infection, caused by spirochetes of the genus *Leptospira*. It is characterized by extensive vasculitis. It is usually transmitted indirectly, per contaminated water, rarely directly, through contact with infected animals. *Leptospira* bacteria commonly enter the body through damaged skin or mucous membranes. The clinical syndromes may vary from a subclinical infection and mild febrile condition to severe clinical symptoms with jaundice and renal failure.

Materials and Methods: We report the case of a 46 year old man who was hospitalized on the 9th of February 2016 in the Hospital of Infectious Diseases in Iasi. His clinical manifestations included icterus, renal failure, hemorrhagic syndrome, disturbances of consciousness, fever, shivering and oliguria. Our patient was diagnosed with ictero-hemorrhagic leptospirosis. His diagnosis was complicated in evolution with leptospirosis Meningitis and a severe episode of anemia that required blood transfusions.

Results: Weil's Syndrome is a severe form of Leptospirosis, which can be fatal. After the use of antibiotics, symptomatic and substitution therapy, all symptoms resolved completely. However in our patient hemodialysis was necessary due to renal failure.

Conclusion: This is a case report of a patient with rare clinical manifestations of Leptospirosis. Early clinical diagnosis of the disease, as well as serologic investigation of infection, are very important prerequisites. Although presenting with severe symptoms, thanks to early and prompt instituted therapeutic measures, complete and fast recovery was achieved

Keywords: *leptospirosis, multiorgan failure*

Lower Gastro-Intestinal Bleeding in a patient with Congenital Ichthyosis

Author: *Al Namat Nadia*

Co-authors: *Andreea-Mihaela Lura, Dina Al Namat, Anda-Larisa Burlacu*

Scientific coordinators: *Teaching assistant Gabriela Păduraru, MD, Teaching assistant Ancuța Ignat, Teaching assistant Valeriu V. Lupu, MD*

Introduction: Ichthyosis is a long-term condition that results in persistently thick, dry, "fish-scale" skin due to a faulty gene. There is no cure, but a daily skincare routine usually keeps the symptoms mild and manageable. Signs and symptoms appear at birth or within the first year of life. Ichthyosis can also be acquired as an adult, caused by developing certain health conditions

Material and methods: We present the case of a teenager aged 15 years. He was admitted to the Department of Emergency Medicine at the Pediatrics Hospital Sf. Maria in Iasi, Romania with colicky abdominal pain, vomiting, psychomotor agitation and rectal hemorrhage in large quantities. Parents observed gastrointestinal bleeding occurring in regular episodes over a period of a few days. It was usually self-limiting. Previous medical history showed that the patient was diagnosed at birth with congenital Ichthyosis. He suffered of numerous episodes of dyspepsia associated with severe gastroesophageal reflux with great difficulty in eating, accompanied by frequent bowel movements. This was not followed-up by any treatment.

Results: There are five distinct types of ichthyosis described as congenital Ichthyosis Vulgaris, Lamellar Ichthyosis, Epidermolytic Hyperkeratosis, Ichthyosis Erythroderma and Congenital Ichthyosis linked to chromosome X.

Congenital Ichthyosis Vulgaris is characterized by early onset, typically between the ages of 3 to 12 months, with specific injuries of the epidermis with fine scales, looking like fish scales and with varying degrees of xerosis and skin dehydration. The most affected areas are the thorax, abdomen, buttocks and limbs.

Conclusion: Chronic gastrointestinal impairment is common in patients with neurological conditions.

Repeated episodes of lower gastrointestinal bleeding in a patient with severe neuromotor retardation and congenital Ichthyosis Vulgaris is considered a case of medical emergency and should be dealt with swiftly.

Keywords: *microcephaly, child, gastrointestinal bleeding*

Prevalence of nephropathy among patients with diabetes mellitus associated with arterial hypertension

Author: *Souabni Seif Eddine*

Co-authors: *Soury Arselen, Houidi Ahmed, Selmi Monaam*

Scientific coordinator: *Associate professor Irina Iuliana Costache, MD, PhD*

Introduction: Diabetes mellitus and arterial hypertension are growing to be a major public health issue. Both entities often coexist and their co-existence can significantly increase the risk of developing a nephropathy. The chronicity of both conditions can significantly affect the management and the life quality of the patient. Therefore we are aiming with this study to assess the role of these two co-morbidities in the development of a nephropathy in order to provide a better care and to avoid the progression to end stage renal disease (ESRD)

Material and methods: Our retrospective study was conducted in the diabetology, nutrition and metabolic diseases department in Sfântul Spiridon Hospital IASI, we enrolled 606 patients, among them 304 male and 302 female and we used the same identical data sheet to collect the other morbidities and associated risk factors among all our patients.

Results: During our study 606 patients were examined of whom 108 (17.8 %) had type 1 diabetes mellitus and 467 (77 %) had type 2 diabetes mellitus and 402 (66.3 %) had high blood pressure. 55 (13.92%) of our diabetic patient have grade 1 high blood pressure (HBP), 104 (26.32 %) have grade 2 HBP and 236 (59.76 %) have grade 3 HBP. We noticed that 130 (32.9%) of the patients having diabetes mellitus associated with arterial hypertension have a nephropathy of whom 109 (83.8 %) patient had a preexisting grade 3 HBP. We should note that our patients did have associated risk factors other than diabetes mellitus and arterial hypertension such as obesity (44 %) and smoking (26.32%).

Conclusion: The existence of hypertension among diabetic patients can significantly increase the occurrence of nephropathy, therefore early detection of diabetes mellitus, arterial Hypertension, a better care and management of both entities may delay the progression of kidney disease in Diabetes mellitus. Hereby studying the prevalence of nephropathy among patient with these two co-morbidities may lead to a better understanding of the causing mechanism and prevent its complications.

Keywords: *prevalence, nephropathy, diabetes*

Insights into severe sepsis in elderly patients. The role of Immunosenescence in the evolution of sepsis

Author: *Ionela Larisa Irimita*

Co-authors: *Nadia Al Namat, Carmen Maria Barsan, Eduard Alexandru Murarasu*

Scientific coordinator: *Professor Egidia Miftode, MD, PhD*

Introduction: It is well known that mortality rates associated with severe sepsis raise as age increases, mortality rate being higher among the patients >85 years old. Even so, there is a lack of data in the literature regarding the prognostic of elderly patients with sepsis and septic shock.

Materials and methods: In this context, we conducted a retrospective study including 65 patients (age >65) who were hospitalized in the Clinic of Infectious Diseases in 2013.

Results: Most of our patients were aged between 76 and 80 years old, with an average age of 77,2 years, maximum age being 101 years. The average hospitalization period was 10,9 days; the patients aged between 65 and 70 years old had an average hospitalization period of 9,9 days while the patients aged >86 years remained hospitalized in average 12.3 days.

In terms of biological response, we found an inflammatory syndrome, characterized by leukocytes over 10.000/mm³ (which was present in 58.4% of the patients). This aspect was more often found among the patients aged >80 years old (70% vs 53% for the rest of the patients).

Although there were plenty of associated comorbidities (chronic hepatitis-12 cases, pneumonia-11 cases, neoplasms-11 cases), 88% of the patients had a favorable evolution. 1% of the patients had a stable, stationary state and 6% developed complications that required their transfer to another hospital. 5% of the patients were discharged upon request.

Conclusions: Outcomes in older survivors of sepsis vary widely as a function of the interaction between the acute critical illness, comorbid disease, pre-and post-critical illness functional status, and physiologic reserve. Despite the increasing incidence of severe infections and significant gravity associated with sepsis for extreme ages, many elderly patients respond remarkably well to the evidence-based diagnostic and management strategies.

Keywords: *sepsis, immunosenescence, elderly patients*

INTERNAL MEDICINE

PRESENTATION



Hypertrophic Osteoarthropathy – paraneoplastic

Author: *Dan Alexandru Arhire*

Scientific coordinators: *Oana Arhire, MD; Assistant Professor Anca Cardoneanu, MD, Rehabilitation Clinical Hospital Iasi*

Introduction: Hypertrophic osteoarthropathy (HOA), commonly known as Pierre Marie-Bamberger disease, is characterized by long (tubular) bones periostitis, whose clinical manifestations may suggest a rheumatoid syndrome. HOA is the secondary form of certain pulmonary and extra pulmonary chronic diseases. The most common cause is lung cancer. Other diseases, such as pleural mesothelioma, pulmonary chronic infections or inflammatory bowel disease could be also linked to HOA.

Material and methods: A 62-year-old male patient, smoker (30 pack-year), presented to the Rheumatology Department of Rehabilitation Clinical Hospital Iași for arthralgia (bilateral knee, ankle, wrist, hand and foot) and joint stiffness. The clinical examination shows clubbing of digits, induration and soft-tissue swelling of the extremities. The laboratory tests revealed: ESR 30 mm/h, fibrinogen 570 mg/dl, negative rheumatoid factor and negative Anti-CCP antibodies. Hands and feet X-Rays are demanded, subsequently followed by other skeletal segments X-Ray.

Results: The radiographic findings are bilateral and symmetrical periosteal reaction in the diaphyseal-metaphyseal region of the long bones: radius, ulna, tibia, fibula, metacarpals, metatarsals and phalanges. The joints are radiological normal. Secondary HOA is suspected, therefore a chest X-Ray is indicated. The radiograph shows the presence of an irregular lung mass opacity, highly suggestive of malignancy. Thoracic CT scan confirms the diagnosis of lung cancer. The patient is directed towards oncology.

Conclusion: In order to make a diagnosis of hypertrophic osteoarthropathy as a paraneoplastic syndrome, careful analysis and clinical-imagistic correlation is required. It is not rare for unsuspected lung tumors to be discovered by the association with HOA. Similar clinical and especially imaging features can be also found in patients with primary form of HOA, known as pachydermoperiostosis, a rare hereditary disorder.

Keywords: *hypertrophic osteoarthropathy, periosteal reaction, clubbing of digits*

Regulatory T cells as biomarkers for the efficacy of subcutaneous or sublingual immunotherapy – a systematic review

Author: *Diana V. Buhai, student, "Iuliu Hațieganu" University of Medicine and Pharmacy, Faculty of Medicine, Cluj-Napoca, Romania*

Scientific Coordinators: *Sorana D. Bolboaca, Ph.D. Habil., M.Sc., M.D., "Iuliu Hațieganu" University of Medicine and Pharmacy, Department of Medical Informatics and Biostatistics, Cluj-Napoca, Romania.*

Introduction: Immunotherapy is the only possible cure for patients with IgE-mediated allergies. However, the exact underlying mechanism remains unsolved. No biomarkers of immunotherapy have been established. The aim of this study was to determine whether sublingual (SLIT) or subcutaneous immunotherapy (SCIT) promote allergen-specific forkhead box protein 3 (FOXP3+) regulatory T cells (Tregs) and, furthermore, if they are biomarkers of a successful immunotherapy.

Material and methods: A systematic review was conducted to answer our research question. PubMed and Cochrane Library databases were inquired on January 2016. Four sets of keywords were searched: (allergy subcutaneous immunotherapy Treg) and (allergy sublingual immunotherapy Treg) and (allergy subcutaneous immunotherapy FOXP3) and (allergy sublingual immunotherapy FOXP3) respectively. The set filters (inclusion criteria) were 'Clinical Trials' and '10 years' as the maximum time span for publication dates. Unavailability of full-text article and intra-lymph node administration of the allergen were exclusion criteria. Extra search was conducted based on references of clinical trials included in the study.

Results: Thirty-eight studies were initially identified out of which 15 were included in the analysis. The positive clinical outcome was proved by all studies ($P < 0.05$, active and placebo groups compared to baseline, respectively), using skin prick tests, total symptom score, or questionnaires. No increase of Tregs in the peripheral blood mononuclear cells population were reported by five studies (three covering the SCIT protocol, two handling the SLIT protocol), although their tolerogenic effect is widely accepted. Tregs were not recommended as biomarkers by eight studies (53%, 95% CI [27–80]) while four studies had a reserved approach on this matter. Having only 20% (95% CI [7–46]) of studies providing a positive recommendation, it may be inferred that Tregs should not be used as biomarkers.

Conclusions: Albeit there are authors who undoubtedly recommend Tregs as biomarkers, the overall view suggests the opposite.

Keywords: *immunotherapy, regulatory T cell, biomarker*

Psychological consequences of hospitalization in pediatric patients

Author: *Radian Alexandru Olaru*

Co-authors: *Raluca Stanca, Dania Simion, Nicoleta Gimiga*

Scientific Coordinator: *Claudia Olaru MD, Smaranda Diaconescu MD*

Introduction: Hospitalization of a sick child will generate psychological modification in the patient and their family and these psychological modifications are felt by the hospital staff. We aimed to evaluate psychosocial consequences of hospitalization both in children and their parents.

Material and methods: This prospective cohort study included 57 patients cared in pediatric gastroenterology unit, and followed up for 3 months. Data on medical comorbidities, previous hospital admissions, medications, and sociodemographics were collected. Child Revised Impact of Event Scale (posttraumatic stress) was measured at baseline and 3-months.

Results: 75.44% (n = 43) of patients were male and only 24.56% (n = 14) female. Patients were aged between 6 and 15 years, mean age of 10.82 years. 59.65% are from urban areas respectively 40.35% in rural areas. (50%, n = 60) of parents presented a lower level of training (maximum 8 years), while 22% (n = 18) attended professional courses and 28% (n = 42) of participants had college. 12 patients were readmitted within 30 days and 29 patients were readmitted at least once during follow-up. Depression at baseline predicted readmission (odds ratio 1.30, 95% CI 1.06 to 1.60, p = 0.013). Significant minority of children recall hallucinations and bizarre dreams during hospital stay. Hallucinations and emergency admission predict posttraumatic stress at 3 months.

Conclusion: Depressive symptoms and socioeconomic status predict risk of readmission and readmission frequency.

Keywords: *psychological modification, hospitalization, child*

Nano antibiotics – A New Approach in the Treatment of Infections with Multi-Drug-Resistant-Bacteria

Author: *Serban Teodor*

Scientific coordinator: *Professor Luminita Smaranda Iancu MD, PhD*

Introduction: Bacteria resistant to the drugs currently in use have become a serious public health problem that makes the development of new bactericidal substances a very important matter. Therefore, there is a strong demand for developing new strategies and materials that can cope with these serious issues. The recent research regarding nanotechnology offers many new antimicrobial options.

Material and methods: More studies show that nanoparticles (NP) have a very potent antibacterial activity. Nanoparticles are very tiny fragments of organic (e.g. quaternary ammonium compounds, polysiloxanes, triclosan, different peptides, etc.) or inorganic structures (e.g. silver, zinc oxide, iron oxide, etc.). In comparison with the classic antibiotics, NP penetrate the bacterial wall, bypassing the bacterial resistance mechanisms. For example, silver NP (inorganic) were shown to cause “pits” in the cell wall by increasing the membrane permeability and inactivating the respiratory chain, while organic compounds attach their hydrophobic tail into the bacterial hydrophobic membrane core, where they denature structural proteins and enzymes.

Results: Nanotechnology helps improving the activity of current antibiotics. For example, we can reduce the toxicity of colistin (polimixine) by combining it with dextrans (the process is called conjugation). We can even reuse old antibiotics by combining them with different nanomaterials, to deal with MRSA (multi-resistant-staphylococcus-aureus) - ampicillin-chitosan-magnetic nanoparticle nanocomposite, strepto-mycin-chitosan magnetic Nano antibiotic, or meticycline surrounded by a layer of a nanomaterial. Moreover, against vancomycin – resistant bacteria (*Enterococcus*, *S. aureus*) we can improve the effectiveness of vancomycin by conjugating it with a nanomaterial, to make it immune to exocytosis (the main bacterial resistance mechanism against this drug).

Conclusion: In conclusion, nanotechnology offers a wide range of efficient solutions regarding bacterial resistance to antibiotics.

Keywords: *nano antibiotics, nanomaterial, multi-drug-resistant-bacteria*

Endoscopic ultrasound guided fine needle injection of iron oxide magnetic nanoparticles for liver tumors - a feasibility study in pigs

Author: *Silviu-Ionut Dumitrascu*

Co-authors: *Petrica Popa, Mihai-Andrei Iordache*

Scientific coordinator: *Bogdan Silviu Ungureanu MD, PhD, Professor Adrian Saftoiu MD, PhD*

Introduction: The poor prognosis of hepatic malignancies creates a need for further developments regarding new potential therapies. Our objective was to assess the safety and feasibility of injecting iron oxide nanoparticles (IONs) via endoscopic ultrasound (EUS)-guidance, both systemically and locally in the liver in order to study new potential therapies for liver tumors.

Material and methods: Six Yorkshire pigs were used for our study design, which were divided into three groups: two pigs were injected through a peripheral vein, two were injected in the portal vein, and the other two were subjected to local exposure of IONs into the liver. Seven days after the procedure, necropsy was performed and the harvested organs were examined using a 3T MRI, followed by pathological examination.

Results: The EUS-guided fine needle injection (EUS-FNI) was performed without any complications. No difficulties were encountered in identifying the vascular structures and the targeted organs under EUS-guidance. There were no perforations and no bleeding. EUS-FNI into the portal vein revealed a large amount of IONs throughout the entire liver, in contrast to the local injection which showed large deposits in the targeted area. Systemic route revealed smaller quantities of nanoparticles within the liver as compared to the other two. The imaging results were confirmed by pathological examination.

Conclusion: IONs possess a great potential for both diagnostics and therapeutics. The possibility of injecting them through an EUS approach may offer new opportunities for liver tumors diagnostic and palliative therapies.

Keywords: *endoscopic ultrasound – fine needle injection, iron oxide nanoparticles, liver*

Intestinal pseudo-obstruction: A functional disorder with a potential lethal risk

Author: *Ilinca-Maria Ciortescu*

Co-author : *Maria Gavrilovici*

Scientific coordinator: *Assistant Professor Irina Ciortescu, MD, PhD*

Introduction: Intestinal pseudo-obstruction (IPO) is a syndrome of massive dilatation of the gut (small intestine or/and colon) without mechanical obstruction. Pseudo-obstruction represents the most severe form of motility disorders and is one of the most important causes of intestinal failure, both in pediatric and adult cases.

Material and methods: We present 2 cases of intestinal pseudo-obstruction, one in a young male of 35 years old and the other in a young woman of 22 years old. Both patients were admitted in emergency for nausea, vomiting, abdominal distension, abdominal pain and constipation. At the physical examination: poor condition, no fever, important abdominal distension, absence of bowel sounds, no signs of peritonitis and perforation. Laboratory blood tests showed: mild leukocytosis, no anemia, slight increase of urea and creatinine, normal value of electrolytes (Na, K, Cl). Plain abdominal radiography: distended bowel loops and air fluid levels in the upright position. By clinical and imagistic methods, mechanical obstruction, toxic megacolon, acute ischemia were excluded. Supportive therapy was made (digestive rest, maintaining fluid and electrolyte balance, nasogastric suction, rectal tube decompression) with no success. Total colectomy was performed on the young male to avoid perforation. As for the woman, abdominal laparoscopy exploration identified gut distention with no obstruction. Intestinal biopsy was taken.

Results: Both patients presented typical clinical manifestation of intestinal obstruction without mechanical stenosis. The histological exam of the gut biopsy (colon and small intestine) sustained the diagnostic of intestinal pseudo-obstruction by excluding inflammation, ischemia or tumor. The post-surgery evolution of the young male was good, but with the maintaining of chronic intestinal failure. For the woman, post-surgery recovery was unfavorable, with the absence of intestinal transit, ascites, sepsis and death of the patient.

Conclusion: Intestinal pseudo-obstruction is a rare, severe and still too often misdiagnosed condition.

Keywords: *intestinal failure, gut motility disorder, acute abdomen*

Small intestinal bowel bacterial overgrowth in patients with irritable bowel syndrome

Author: *Maria Gavrilovici*

Co-authors: *Ilinca-Maria Ciortescu*

Scientific coordinator: *Assistant Professor Irina Ciortescu, MD, PhD*

Introduction: Irritable bowel syndrome (IBS) is a functional bowel disorder characterized by abdominal pain, discomfort, bloating, and alteration of bowel habits. It is the most common condition diagnosed by the gastroenterologist.

Small intestinal bacterial overgrowth (SIBO) is a disorder of excessive bacterial growth in the small intestine defined as the presence of over 10⁵ colony-forming units/ ml of jejunal aspirate.

Material and methods: We conducted a case-control prospective study to determine the SIBO prevalence in patients with IBS and the efficiency of Rifaximin treatment in IBS and SIBO.

We selected 30 patients with IBS and 15 healthy volunteers. The inclusion criteria were Roma III criteria for IBS and the exclusion criteria were: long-term use of PPI, diabetes and surgery of the abdomen, which may favor the emergence of SIBO.

We used a symptoms questionnaire with simple answers (yes/no) and glucose breath tests (GBT).

The symptoms questionnaire was completed by all the subjects on admission and after the Rifaximin treatment. It included 5 symptoms: diffuse abdominal pain, bloating, flatulence, modified stool consistency, functional bowel disorders.

The GBT used 50 g glucose, with the pursuit of H₂ concentration in expired air (ppm) for 120 minutes. It was performed in all patients before and after the Rifaximin treatment. We considered a positive test when ppm in expired air increased by more than 12 from the baseline.

Results: The control group consisted of 10 females (67%) and 5 males (33%), with an average age 22. Analysis of the symptoms questionnaires revealed: abdominal pain present in all patients (100%), bloating in 83,33% (25/30), flatulence in 66,6% (20/30) and bowel disorders in 50% (15/30).

Conclusion: SIBO incidence in patients having IBS is higher than in the general population. GBT is recommended in IBS patients. Also, treating SIBO using Rifaximin is efficient and has no adverse effects.

Keywords: *SIBO, Irritable Bowel Syndrome, urea breath test*

A mechanical complication of acute myocardial infarction – clinical presentation

Author: *Alexandra-Ioana Bohan*

Scientific coordinator: *Viviana Aursulesei MD, PhD, Dan Iliescu, MD, PhD*

Introduction: Myocardial rupture often occurs to elderly patients and women as the first clinical presentation of an acute myocardial infarction because a poor collateral circulation. Frequently, the infarction expansion results in a thin myocardial tissue, determining left ventricle (LV) free/anterior wall rupture.

Material and methods: We present the case of a 73-years old patient, heavy smoker, with no medical history, who was addressed assessing an intermittent claudication between 15 and 20 m. On admission, the patient presents a syncope and low blood pressure with any arrhythmias EKG monitoring system. Clinical examination reveals an altered mental status, marmorated skin, left toe's cyanosis, diffuse abdominal pain, jugular veins turgescence and hepatomegaly 2 cm below the right costal margin. The blood tests showed an increased level of glucose, I troponin and CK-MB. With the clinical hypothesis of aortic dissection a transthoracic was performed, revealing pericardial fluid, the detachment of the visceral pericardium and a large intrapericardial thrombus next to an akinetic LV free wall. At the same time, a linear communication between LV cavity and pericardium was demonstrated in apex region. ECG showed a qR pattern in DI and aVL leads suggestive for lateral acute myocardial infarction. The patient was urgently addressed to coronarography that showed the thrombotic occlusion of the first obtuse marginal artery.

Results: During a complex surgical intervention, the patient received a Bio Glue surgical adhesive with a favorable postoperative evolution, excepting a lonely episode of paroxysmal atrial fibrillation. The second echocardiography showed the absence of the pericardial fluid, LV lateral wall and apex hyperkinesia with mild depressed ejection fraction.

Conclusion: This case is particular because of the sudden debut of the acute myocardial infarction in absence of typical chest pain and a conclusive EKG. Also, our case report highlights the diagnostic importance of urgent echocardiography that guides the appropriate management. Secondly, our case report is conclusive for the concept of vulnerable plaque and vulnerable patient.

Keywords: *complicated acute myocardial infarction, left ventricle wall rupture*

Dyslipidemia: a risk factor or a comorbidity for systemic lupus erythematosus patients

Author: *Mihaela Adelina Gramada*

Co-authors: *Andrei Leonte, Irina-Camelia Hutu, Anca Raluca Apostol*

Scientific coordinator: *Assistant Professor Raluca Haliga, MD, PhD*

Introduction: Dyslipidemia is one of the risk factors for atherosclerosis (ATS) and an important problem for the patients with systemic lupus erythematosus (SLE).

Material and methods: We made a PubMed analysis of the studies performed on patients diagnosed with SLE by ARA criteria (1982). The inclusion criteria was SLE diagnostic and the exclusion one was the presence of hypothyroidism. We checked for presence of dyslipidemia, autoimmune markers, IMT (intimal-media index), FMD (flow-mediated vasodilation) - as markers of endothelial dysfunction, and serum level of annexin A5, an anticoagulant protein, which protects the endothelium from damage by inhibiting the procoagulant effects of tissue factors and binding to negatively charged phospholipids.

Results: Data analysis showed that women were mostly affected by this disease (96,1%), aged from 31 to 40. The most significant were high correlations between IMT and FMD, moderate correlation between annexin A5 and FMD, suggesting that endothelial dysfunction is associated with the replacement of annexin A5 from the vascular endothelium. Lupus patients demonstrate elevation of the anti-annexin-V antibody, which is related to endothelial function. Recent studies showed that FMD was reduced in patients with SLE. Complement-associated immune complexes, abundant in SLE, induced endothelial expression of adhesion molecules, increasing migration of inflammatory cells to the subendothelial space, thus initiating endothelial damage. In patients with SLE and atherosclerosis there were found strong associations between high serum levels of circulating oxidized low-density lipoproteins (ox-LDL) and endothelial damage. Also, recommended treatment in SLE (corticosteroids) accentuate dyslipidemia.

Conclusion: The study reveals that dyslipidemia is significantly correlated with autoimmune markers and can be both a risk factor for ATS and a specific factor associated with systemic lupus in natural evolution of the disease and induced by the treatment.

Keywords: *systemic lupus erythematosus, dyslipidemia, atherosclerosis*

Mesenchymal stem cell therapy- a challenge in ischemic heart disease treatment

Author: *Mihaela Adelina Gramada*

Co-authors: *Irina-Camelia Hutu, Andrei Leonte, Magdalena Alexandra Leostean*

Scientific coordinator: *Teaching assistant Daniela Maria Tanase, MD*

Introduction: Mesenchymal stem cell (MSC) is a non-hematopoietic stem cell subpopulations with a remarkable differentiation potential. The mechanism of the therapeutic effect is based on cytokines secretion with paracrine action and stimulate the local proliferation of cardiac stem cells, promote angiogenesis and manage to fight cardiac remodeling.

Material and methods: Recent studies have revealed the efficiency of mesenchymal stem cells for cardio ischemic disease therapy. To show how these cells work, it had been used a mixture of mesenchymal stem cells with cells obtained from bone marrow for a stronger proangiogenic effect to patients with chronic ischemia. Marrow cells had a double importance: processing, isolation and multiplication of the graft but also for preparing MSC.

Medical studies show that patients with acute ischemia who received a suspension of autologous MSC directly into the infarct zone, through the catheter, have an important ultrasound difference, compared to those who didn't receive the treatment.

Results: For patients with chronic ischemia, the post-procedure exam showed an increase of ejection fraction (compared with the pre-procedure) and decrease of the infarct zone, and for the patients with acute ischemia it has been noticed a low percentage of (segmentary) akinesia and dyskinesia. The wall velocity and the ejection fraction of the left ventricle improved significantly, suggesting that MSC infusion in the human heart stimulates the angiogenic process and also generate new cardiomyocytes.

Conclusion: Clinical studies have demonstrated the efficiency of stem cells therapy for both IMA patients as well as ischemia, but for a long efficiency is required an association with growth factors gene therapy, nanotechnology with biomaterials and biological repair therapy.

Keywords: *mesenchymal stem cells, chronic ischemia, acute ischemia, cardiac remodeling*

Case Report: Dilated coronary sinus and transient aggravation of chronic dyspnea

Author: *Mădălina Pușcașu*

Co-authors: *Anca Vasileniuc*

Scientific coordinator: *Mariana Floria, MD*

Introduction: A 76-year-old man with chest pain and transient aggravation of chronic dyspnea was admitted to cardiology through the emergency room.

Material and methods: His medical history included chronic cor pulmonale due to pulmonary fibrosis. His ECG showed atrial fibrillation with a fast ventricular rate, extreme right axis deviation and an rS pattern in all precordial leads; in a previous ECG the patient had left bundle branch block. He was under chronic oral anticoagulation with Acenocumarol, outside therapeutic range.

Results: Due to the high suspicion of pulmonary thromboembolism, a chest CT-scan was performed. No thrombus in the pulmonary artery circulation was detected, however, the cross section of the coronary venous sinus (CS) showed dilation and an irregular mass of about 8.3 mm inside the CS, most likely a thrombus. Transthoracic echocardiography revealed dilated right ventricular cavities and a pulmonary artery systolic pressure of 75-80 mmHg. Parasternal long axis views confirmed a visible thrombus in a dilated CS, without spontaneous contrast in cardiac cavities. No coronary sinus lead or other invasive cardiac procedures were performed in this patient. After a few days of intravenous heparin, a novel oral anticoagulant was initiated.

Conclusion: After 24 hours the patients' symptoms improved and in 7 days the CS thrombus image disappeared on transthoracic echocardiography. A more attentive examination on transthoracic echocardiography is mandatory in cases of acute dyspnea in patients with dilated CS, even in the absence of spontaneous contrast.

Keywords: *acute dyspnea, coronary venous sinus, transthoracic echocardiography*

A case of evolution of systemic lupus erythematosus on a pediatric noncompliant patient

Author: *Alexandra Ioana Bohan*

Co-authors: *Anda Bulgaru, Alina-Andreea Butnaru, Valentina Maxim*

Scientific Coordinators: *Teaching assistant Irina-Geanina Crişcov MD, Associate Professor Aurica Rugină MD, PhD, Professor Evelina Moraru MD, PhD*

Introduction: Systemic lupus erythematosus is a highly complex and heterogeneous autoimmune disease affecting mostly early-aged women by circulating self-reactive antibodies that usually are stored in tissues, including skin, kidneys and brain. Often, the specific treatment requires an aggressive immunosuppressive therapy. Disease progression is non-linear and follows a relapse-remitting course that can vary widely from patient to patient, making diagnosis and treatment a true challenge.

Material and methods: We present a case of a 18-years old female patient known with systemic lupus erythematosus since 13-years old which was diagnosed at first admission with 5 of 11 criteria (malar rash, mouth ulcers, interphalangeal arthritis of small joints in bilateral hands, immune disorders of ADNc, Ac antiSmith, low C3 and positive AAN) which were confirmed by myelogram, electromyography and blood tests. Due to this results, corticotherapy was initiated and the evolution was positive, but after the patient was discharged and the disease remitted, the therapy wasn't administrated as recommended.

Results: Patient's evolution was inconstant because of relapses and complications of corticotherapy due to chaotically administration that might have generated important metabolic disorders which led to manifestations known as secondary to corticotherapy. Overall, the patient had a pregnancy, also known as a factor determining a relapse of lupus, which compelled for a therapeutic abortion due to weak general condition. Also the evolution records a gradually worsening of patient's general status by manifesting cardio-vascular, neurological and ophthalmological disorders, most of them secondary to messy treatment administration.

Conclusion: Our case is particular because of multiple relapses of this young patient which could have been better controlled with a correct administrated therapy and with a more strict medical observation. Also, the pregnancy on a teenager diagnosed with lupus, due to the fact that it might have determined a relapse of disease, requires a family planning.

Keywords: *systemic lupus erythematosus, autoimmune disease, noncompliant patient*

A rare case of hypercellular FLT3-ITD positive acute promyelocytic leukemia: management of coagulopathy and differentiation syndrome in a young patient

Author: *Laura Popa*

Scientific coordinators: *Teaching assistant Ion Antohe, MD, "Gr. T. Popa" University of Medicine and Pharmacy Iasi, Hematology Department*

Introduction: Acute promyelocytic leukemia (APL) is an aggressive hematologic malignancy, frequently associated with pancytopenia and severe disseminated intravascular coagulation (DIC). The presence of t(15,17) (q24.1;q21.1) and the subsequent PML-RAR α fusion protein render tumor cells sensitive to all-trans-retinoic acid (ATRA), the backbone of APL therapy. Following standard induction therapy, 95% of patients obtain complete remission. Consolidation and maintenance treatment result in a 90% 5-year disease free survival rate. The differentiation syndrome (DS) is a life-threatening ATRA-related complication. Cytokine mediated DS manifestations include respiratory distress, pulmonary infiltrates, fever, acute renal failure, hypotension, pleural or pericardial effusion.

Material and methods: We present the case of a 26 year-old female patient, admitted for progressive fatigue, fever, headache, hemorrhagic syndrome and significant weight loss. A complete blood count revealed hyperleukocytosis with 92% atypical promyelocytes and bicytopenia, as well as hyperfibrinogenemia and elevated D-Dimer levels, suggesting DIC.

Results: Flow cytometry and a positive PML-RAR α transcript allowed us to formulate the diagnosis of APL. Noteworthy, the patient associated a high risk FLT3-ITD (Fms-like Tyrosine Kinase 3 - Internal Tandem Duplication) mutation. Immediate induction therapy was initiated, along with ATRA administration, DS prophylaxis and coagulopathy treatment. During the next 48 hours the patient became febrile and developed respiratory distress symptoms, right lower lobe pulmonary infiltrates and progressive leukocytosis despite induction chemotherapy.

Conclusion: We here discuss the mechanisms and differential diagnosis of respiratory failure and pulmonary infiltrates, as well as the notoriously difficult management of simultaneous DIC and DS in APL patients.

Keywords: *acute promyelocytic leukemia, FLT3-ITD, differentiation syndrome*

A case of Prader-Willi Syndrome diagnosed in the neonatal period

Author: *Oana – Cornelia Gorduza*

Co-authors: *Andreea – Simona Covic, Bogdan – Nicolae Andronic-Niculescu*

Scientific coordinator: *Teaching assistant Lavinia Caba, MD*

Introduction: PWS is a rare chromosomal disorder - 1/10,000 - 1/20,000 newborns, characterized in the neonatal period by severe muscular hypotonia, that not allows natural nutrition, mild facial dysmorphia and skin and hair hypopigmentation. After the age of 1 year, obesity caused by bulimia, short stature, reproductive disorders and moderate mental retardation appear. The disease is caused by paternal deletions 15q11-13, maternal uniparental disomia 15 or printing defects in 15q11-13 region.

Material and methods: We present a case of Prader-Willi syndrome (PWS), diagnosed in the neonatal period. Our girl patient (3 days old), was consulted genetically due to severe neonatal hypotonia. The patient comes from a twin pregnancy obtained by in vitro fertilization technique. His brother is free. The parents are healthy, unrelated, and their reproductive antecedents indicate two pregnancies stopped in evolution. Clinical examination showed an extreme muscle hypotonia, inability to breastfeeding, mild craniofacial dysmorphia (dolichocephaly, low-set ears, micrognathism) and hypopigmentation of the skin and hair. The clinical diagnosis of PWS was suspected.

Results: The classical chromosomal analysis performed in the Cytogenetic Laboratory of the University of Medicine and Pharmacy "Grigore T. Popa" indicated the presence of specific deletion - chromosomal formula 46,XX,del(15)(q11.1q12). The FISH technique, performed on metaphase chromosomes using Leica SNRPN and PML probes confirmed the presence of deletion 46,XX,ish(15)(q11q11) (SNRPN-). The MLPA test to verify the locus Prader-Willi/Angelman MS-MLPA- P028 also confirmed the existence of a deletion, aspect concordant with clinical diagnosis.

Conclusion: We presented a rare case when early confirmation of the diagnosis is important for monitoring the progress and evaluating the prognosis of disease. Thus, gavage feeding was applied and the parents received genetic counseling, during which they were explained how to reduce the risk of complications

Keywords: *Prader-Willi syndrome, 15q11-13 deletion, neonatal hypotonia*

Proteinuria, and not the severity of volume overload or arterial stiffness, associates with renal function decline in patients with chronic kidney disease

Author: *Andreea Covic*

Co-authors: *Mugurel Apetrei, MD, Bogdan – Nicolae Andronic - Niculescu, Oana Cornelia Gorduza*

Scientific coordinator: *Dimitrie Siriopol, MD*

Introduction: Chronic kidney disease (CKD) has become one of the most important public health problems worldwide. There is an increased research to find modifiable risk factors associated with a more rapid renal function decline in CKD patients.

Material and methods: This cohort study enrolled 101 non dialysis-dependent patients with CKD stages 1-5 who were in an integrated CKD care program at the "Dr. C.I. Parhon" University Hospital. The severity of fluid overload was measured by a bioimpedance spectroscopy method and arterial stiffness was recorded noninvasively by an applanation tonometry method. Estimated glomerular filtration rate (eGFR) was computed using the 4-variable CKD-EPI equation.

Results: The mean age of the study population was 64±10.4 years; 68 (67.3%) were men and 60 (59.4%) had diabetes. The median baseline eGFR was 31.1 ml/min/1.73 m². There was no difference in the rate of eGFR decline between the patients with fluid overload above and below the median (6.3%): 1.69 (95% CI -3.43 to 6.82) ml/min/1.73 m²/year. Similarly, we found no significant differences in regard to eGFR decline between the patients with pulse wave velocity (as a measure of arterial stiffness) below and above the median (12.9 m/s): -4.04 (95% CI 9.13 to 1.06) ml/min/1.73 m²/year. However, patients with an increased proteinuria at baseline (>0.85 g/day) had a significantly higher eGFR decline during the study period: 7.75 (95% CI 3.04 to 12.45) ml/min/1.73 m²/year.

Conclusion: Proteinuria is the most important modifiable risk factor associated with a higher eGFR decline in our CKD population. Our study confirms the importance of proteinuria as a therapeutic target in CKD patients, but future intervention studies will be necessary to demonstrate whether objective identification and relief of fluid overload or arterial stiffness can slow down the renal function decline in these patients.

Keywords: *proteinuria, chronic, CKD*

Terlipressin-induced hyponatremia in cirrhotic patients with variceal bleeding

Author: *Cristina Georgiana Nechifor*

Co-authors: *Iuliana Teodor*

Scientific coordinator: *Teaching Assistant Irina Girleanu, MD, PhD*

Introduction: Terlipressin is frequently used in acute variceal bleeding due to its important effect on vasopressin V1 receptors. Terlipressin has agonistic effects on the V1 receptor and partial agonistic effects on renal vasopressin V2 receptors. However, its effects on serum sodium concentration are controversial. The aim of this study was to examine the effects of terlipressin on serum sodium concentration in cirrhotic patients with variceal bleeding.

Material and methods: All consecutive cirrhotic diagnosed with variceal bleeding treated with terlipressin were investigated. Terlipressin-induced hyponatremia was defined as a decrease in serum sodium (Na) level of >5 mEq/L from the baseline level. Main outcome measure was fall in Na level during and up to 5 days post therapy.

Results: The study included 214 patients (mean age, 54.3 ± 10.7 y) with male predominance (60.7%). Median Na pretreatment was 130.0 ± 6.5 mmol/L and 126/214 (58.87%) had existing hyponatremia. Serum sodium level was at the baseline 130.0 ± 6.5 mmol/L and 131.4 ± 6.2 mmol/L after 5 days of terlipressin treatment ($P = 0.758$) in all patients. Changes in serum Na levels from baseline were 0.2 ± 1.2 whereas the frequencies of terlipressin-induced hyponatremia was 6.07% (13 patients). Occurrence of hyponatremia was related neither to duration or dosage of terlipressin treatment but with the severity of the underlying chronic liver disease. No complications of hyponatremia were observed.

Conclusion: Terlipressin-induced hyponatremia was uncommon in cirrhotic patients with variceal bleeding. Hyponatremia was related with the severity of the underlying liver cirrhosis.

Keywords: *terlipressin, hyponatremia, variceal bleeding*

Large asymptomatic left atrial tumor: case report

Author: *Silvia Cristina Strat*

Co-authors: *Alina Silvia Biliuta, Cristina Maga*

Scientific coordinator: *Associate Professor Ciprian Rezuş MD, PhD; Teaching assistant Codruţa Bădescu, MD, PhD; Elena Mitrea MD*

Introduction: Based upon the data of 22 large autopsy series, the prevalence of primary cardiac tumors is approximately 0.02%. About 75% of primary tumors are benign, and 50% of benign tumors are myxomas.

Approximately 20% of patients are asymptomatic, with tumors being found incidentally on echocardiography. Sudden death may occur in 15% patients with atrial myxoma, typically caused by coronary or systemic embolization or by obstruction of the mitral or tricuspid valve.

Material and methods: We present the case of a 57 year-old Caucasian female with an unremarkable personal medical history. Family medical history includes sudden death of the father at age 49 (cardiovascular cause-no details available). The patient is admitted with progressive dyspnea, a chronic productive cough, progressive fatigue, occipital cephalalgia and vertigo. Preliminary examination, EKG, chest radiograph and laboratory blood investigations set the following diagnosis: stage III essential hypertension, stage III chronic obstructive pulmonary disease (COPD), pulmonary hypertension, morbid obesity, hypercholesterolemia and hepatic steatosis. Routine cardiac ultrasonography shows a hyperechogenic, 41.72/44.5 mm left atrial mass, attached through a pedicle to the interatrial septum, causing partial obstruction of the mitral valve.

Results: The patient was transferred to the “Prof. Dr. George I.M. Georgescu” Cardiovascular Diseases Institute for surgical treatment. Histopathology revealed left atrial myxoma, setting a good prognosis for the condition.

Although most cardiac tumors are benign, because of their malignant potential, the risks secondary to impaired cardiac function, conduction system involvement, and/or peripheral embolism mandate prompt evaluation and definitive treatment.

Conclusion: Primary cardiac tumors remain an unexpected challenge for the clinicians and surgeons because of their rarity and the lack of clinical guidelines. The present report illustrates the poor symptomatology of a large left atrial myxoma. Death is attributed to embolization or mechanic obstruction of the mitral valve. Prompt surgical treatment sets a good prognosis and annual echocardiography is mandatory due to recurrence risk.

Keywords: *myxoma, asymptomatic, ultrasonography*

The atrial myxoma and pseudovasculitis syndrome

Author: *Isabela Nitica*

Co-authors: *Dan Iliescu, MD; Viviana Aursulesei, MD*

Scientific coordinator: *Viviana Aursulesei, MD*

Introduction: Cardiac myxoma is a rare benign neoplasm of the endocardium, more common in women as sporadic form or young men as familiar form. From a clinical point of view it is characterized by a triad of cardiac events, embolic events and general symptoms.

Material and methods: We report the case of a 42 year-old male with known history of essential hypertension, type IV hyperlipoproteinemia and previous normal echocardiography. The patient was admitted for gradual onset of myalgia, muscular weakness, prolonged febrile syndrome, 5 kg weight loss and asthenia in the last two months before actual presentation. The clinical exam was normal excepting the persistent fever and pale teguments and mucosa, while the biochemical and hematological parameters revealed a systemic inflammatory response and mild anemia. We conducted the investigations in order to confirm the hypothesis of polymyositis or polyarteritis nodosa. Searching for asymptomatic organ damage in hypertension was also performed.

Results: The nerve conduction velocity provided an equivocal pattern for polymyositis while the musculo-cutaneous biopsy was highly suggestive for diagnosis. At the same time, other causes of secondary myositic syndrome were excluded by specific techniques. Renal arteriography revealed multiple microaneurysms suggesting polyarteritis nodosa. Corticotherapy was initiated with favorable clinical course but persistent systemic inflammatory response. The conclusive exam was transthoracic echocardiography that discovered a left atrial myxoma. The patient was urgently addressed to cardiac surgery for its removal. The short and long-term evolution was uncomplicated.

Conclusion: This case is particular because of the diagnosis circumstances, on the basis of so-named pseudovasculitis syndrome in absence of cardiac manifestations and previous normal echocardiography in a male patient. At the same time, the case highlights the importance of echocardiography during the work-up for a prolonged febrile syndrome.

Keywords: *atrial myxoma, pseudovasculitis syndrome, echocardiography*

The Significance of Intraocular Pressure Alterations from Common Therapeutic Interventions: Preliminary Study with Clinical Implications

Author: *Ehtesham Shamsher*

Co-authors: *Schutz J.S., Thumann G., Chronopoulos A.*

Scientific coordinator: *Professor James Schutz MD, PhD*

Introduction: Human intraocular pressure (IOP) is normally controlled within narrow limits to maintain ocular form and firmness while allowing abundant retinal perfusion. Dangerous IOP elevation can occur when this equilibrium is challenged by common therapeutic maneuvers which acutely increase intraocular volume or acutely decrease eye wall volume, such as intravitreal injection or scleral buckling. The purpose of this study is to confirm the relationship between acute intraocular volume changes and IOP elevation in an experimental model, review the pertinent literature, and discuss the ocular tolerance for acute IOP elevation as well as how to avoid related complications.

Material and methods: A porcine eye model was used to demonstrate the relationship between the volume of normal saline or air injected into the vitreous and resulting IOP increase. Incremental injections of normal saline or air were performed and IOP measured.

Results: Both normal saline and air injections of only 0.2 ml resulted in a dramatic increase of IOP. Injection of 0.3 ml or greater increased IOP to levels which potentially compromise retinal perfusion. Similar volumes of scleral buckling cause equivalent pressure elevations.

Conclusion: Dangerously elevated IOP caused by acute ocular volume changes associated with therapeutic intraocular injection or with scleral buckling may compromise retinal perfusion and may necessitate medical or surgical therapeutic maneuvers. The safe interval for complete central retinal artery occlusion is probably only about 15 minutes rather than 90 minutes as commonly expressed in the literature.

Keywords: *intraocular pressure, pressure volume relationship, intraocular injection*

Neurofibromatosis type 1 associated with pheochromocytoma: a case report

Author: *Ioana Florea*

Scientific coordinator: *Associate professor Laura Ciobanu, MD, PhD, FERS*

Introduction: Neurofibromatosis type 1 is a rare autosomal dominant syndrome (one in 3,000-4,000 people worldwide). The patients have characteristic café-au-lait skin spots and may develop various types of tumors, especially neurofibroma, but there are some other tumors like pheochromocytoma that may appear.

Material and methods: We report a case of a 43-year-old Romanian woman admitted in the hospital for respiratory symptoms and incidentally discovered with pheochromocytoma through abdominal ultrasonography. She was diagnosed with neurofibromatosis type I and grand-mal epilepsy since her preschool age and later on with dorsal lumbar severe scoliosis, pulmonary fibrosis and gastro-esophageal reflux disease. On admission, the patient was normotensive. Abdominal ultrasonography revealed a suprarenal mass and an ovarian transonic collection. An abdominal computed tomography was performed, revealing a solid round tumor of 40/36/54 mm located in the left adrenal gland and a left ovarian fluid cyst. Urine catecholamines were normal, but plasmatic metanephrines and normetanephrines were highly increased over the normal limit. Adrenal biopsy revealed pheochromocytoma.

Results: Left laparoscopic adrenalectomy was performed. She had a pneumothorax as a postoperative complication that needed a pleural drain. 72 hours thereafter the drain was suppressed and the chest X ray revealed only a small remaining apical pneumothorax, without any respiratory functional impact. Metanephrines and normetanephrines returned to normal ranges. Currently, the patient has no complication related to the pheochromocytoma but she was recently discovered with a tongue tumor, still unexplored because of the patient's refuse.

Conclusion: In conclusion, pheochromocytoma can be incidentally discovered in any patient with this disease. Following a diagnosis consisting of Neurofibromatosis type 1, patients should be evaluated for pheochromocytoma, even if the blood pressure is normal.

Keywords: *pheochromocytoma, neurofibromatosis, normotensive*

Uveitis, prognostic factor for juvenile rheumatoid arthritis

Author: Răzvan Alexandru Murgu

Co-authors: Florin Mihai Florea, Costantin-Vlad Carasevici, Eduard Cristian Cucuruzac

Scientific coordinator: Alina Murgu, MD

Introduction: The ocular affection is one of the chronic debilitating complications that can occur in 20-30% of cases in the evolution of juvenile rheumatoid arthritis (JRA), which can lead to vision loss (50% cases), cataracts or glaucoma (25% of cases) or blindness (10% cases).

Material and methods: The authors present the evolution of a patient diagnosed with polyarticular JRA seronegative form who developed ocular complication of anterior uveitis and cataracts. He particularly presents chronic gastritis associated with *Helicobacter pylori*, ulcerative colitis nonspecific, inflammatory anemia and mitral valve prolapse. These elements individualized massively the treatment plan.

Results: The treatment is one of multimodal association plan including: systemic corticosteroids (i.v. methyl-prednisolone) and locally applied, methotrexate, salazopyrin associated with pain therapy (acetaminophen ± codeine), muscle relaxants (Mydocalm), physiotherapy and massage, specific treatment for *Helicobacter pylori* gastritis (proton-pump inhibitors - Esomeprazole, antibiotics: Amoxicillin + Clarithromycin, and Malucol). Under therapy, evolution after a year has been slowly favorable with improvement of specific monitoring score ARJ (ACR Pedi 30) and partial recovery of anterior uveitis, fact that recommends the introduction of perspective treatment with biological agents type inhibitors of TNF alpha (etanercept). The monitoring of the patient after the age of 18 was conducted by the adult clinic of Rheumatology.

Conclusion: The presented case demonstrates the major risk of developing chronic debilitating ocular sequelae of uveitis and cataract type, when the diagnosis and specific treatment is late instituted. In these circumstances the individualized treatment must be aggressive and of association including the local ocular level. The medical approach will be conducted while taking into consideration the associated comorbidities.

Keywords: *child, rheumatoid arthritis, anterior uveitis*

Accuracy of blood pressure monitoring applications on smartphones

Author: *Tahir Khokhar Hassan*

Co-authors: *Ilona Alina Ilie, Martha Gismodi, Augustine Maria Aerlyn*

Scientific coordinator: *Assistant Professor Raluca Haliga, "Grigore T. Popa" Univeristy of Medicine and Pharmacy Iasi*

Introduction: Hypertension is a major public health issue, affecting about 970 million of the world's population. In this era of technology and ease, preference is given to new blood pressure monitoring applications on smart phones over the conventional method by most of the non-hospitalized patients. These applications are marketed as accurate blood pressure monitoring applications to these customers.

The aim of our study was to put the accuracy of these applications under a test and compare it to the standard blood pressure measurement by sphygmomanometer.

Material and methods: Following a thorough research we were able to locate the most valued and accurate application between apple and android users presented under the name "Finger Blood Pressure".

A total of 30 patients were included in our study, men (n=10) and women (n=20). With the patients relaxed and seated for 2 minutes, the blood pressure was measured with the application on the smartphone. After a minute pause, the blood pressure was measured again with a standard cuff sphygmomanometer, and the results were recorded.

Results: Statistically no significant correlation was shown between the application and manual sphygmomanometer. On an average, the difference between the systolic blood pressure measured by these two methods was +/- 13.8 mmHg, and diastolic blood pressure +/-10.05 mmHg.

Conclusion: It is essential to caution patients not to rely on the accuracy of these smart phone applications, as they may not be able to perform as they are marketed, blinding the patients of the severe underlying conditions that they may be inflicted with.

Keywords: *blood pressure, smartphone, accuracy*

Forensic analysis of death by mechanical asphyxia

Author: *Gabor Estera-Andreea*

Scientific coordinator: *Assistant professor Hadarean Viorel MD, PhD*

Introduction: The deaths determined by mechanical asphyxia typically fall within the jurisdiction of the coroner and are evaluated using a medicolegal examination of the scene, circumstances of death and victim.

The aim of our study was to evaluate the deaths involving asphyxia that occurred during the year 2013 in Mures area, as it is a known fact that in Transylvania region, in Harghita, Covasna and Mures counties the highest number of deaths by self-suspension are registered and the hanging is the most common type of mechanical asphyxia.

Material and methods: We performed a retrospective study, including the victims of asphyxial deaths from Mures county registered at the Institute of Legal Medicine Targu Mures in 2013, in order to evaluate their number, sex distribution, nationality, age, environment and either the asphyxia was accidental or it was an attempt of self-murder.

Results: We observed that, from the total number of autopsies performed in the Institute of Legal Medicine Targu Mures, 16% of the deaths were caused by mechanical asphyxia. 87.7% of the victims were male and 12.3% were female. 49.5% of the victims were under the age of 50. 26.3% of the deaths were accidental, 17.3% of them being drowning victims, while 73.7% committed suicide.

Conclusion: The conclusion is that most of the mechanical asphyxia victims were male, around the age of 50, using the hanging as a method of self-murder.

Keywords: *mechanical asphyxia, deaths, self-murder*

Unmasking severe heart complications of Graves' disease in a geriatric patient: case report

Author: *Andra Madalina Chiriac*

Co-authors: *Gabriela Andriescu*

Scientific Coordinator: *Teaching Assistant Alexandru Florescu, MD, PhD; Teaching Assistant Maria Christina Ungureanu, MD, PhD*

Introduction: Graves' disease is an autoimmune disorder, where the presence of thyroid stimulating antibodies, binding to the TSH receptor lead to autonomic increased function of the gland. Some of its classical clinical features include enhanced sympathetic tonus (heart palpitations, sweating), anxiety, insomnia, tremor, accompanied by a more specific sign: bilateral axial proptosis.

Material and methods: We report the case of a 77 year old woman, who presented with severe weight loss (40 kg over the last year), fatigue, heart palpitations and dysphonia. The patient's family history included one daughter who underwent surgery for multinodular toxic goiter. Her personal medical history revealed significant cardiovascular comorbidities: atrial fibrillation, arterial hypertension and congestive heart failure. Upon physical examination, the patient appeared cachectic; she was tachycardic with arrhythmic heart sounds, and exhibited typical signs of decompensated heart failure: enlarged liver, jugular turgescence and peripheral edema. High plasma levels of fT3, fT4 with suppressed levels of the TSH were consistent with thyrotoxicosis. Furthermore, evaluation of TrAb confirmed the diagnosis of Graves' disease, also supported by ultrasound features (hypoechoic, heterogenous structure of the gland with "hell-like" vascularization). Antithyroid drug therapy was initiated and the patient was transferred to the cardiology department.

Results: Over the next two months, her clinical status improved significantly, she gained 5 pounds, while her biological parameters showed a tendency towards normalization.

Conclusion: What is particular in elderly hyperthyroid patients is a polymorphic, often atypical clinical presentation. Given the probability of coexisting, age-related heart disease, establishing its connection with a potential underlying thyroid disorder can be difficult. Studies show that, in young patients, thyrotoxic cardiomyopathy may be completely reversible, once the euthyroid status is achieved. This is not a realistic goal in geriatric patients, but unmasking the real cause of the heart failure remains essential.

Keywords: *thyrotoxicosis, geriatric patient, heart failure*

Atrial septal defect in a 53-year-old patient: percutaneous closure or surgical treatment?

Author: *Gabriela Andriescu*

Co-authors: *Andra Madalina Chiriac*

Scientific coordinator: *Teaching Assistant Carmen Elena Pleșoianu, MD, PhD; Professor Cătălina Arsenescu Georgescu, MD, PhD*

Introduction: Atrial septal defect (ASD) is the most commonly recognized congenital cardiac anomaly in adulthood. It is characterized by a defect in the interatrial septum allowing pulmonary venous return from the left atrium to pass directly to the right atrium. Depending on the size of the defect, size of the shunt, and associated anomalies, this can result in a spectrum of disease from no significant cardiac sequelae to right-sided volume overload, pulmonary arterial hypertension, and even atrial arrhythmias.

Material and methods: We present the case of a 53-year-old woman, known with atrial septal defect from childhood, who reported a previous episode of syncope, chest pain and numbness in the upper limbs upon hospital admission. She was previously diagnosed with severe pulmonary hypertension, chronic heart failure and arterial hypertension, having been on specific medication for each condition. On physical examination, auscultation objectified a diastolic murmur with highest intensity in Erb's point and a splitting of the second heart sound. There were electrocardiographic signs of pulmonary hypertension. The echocardiography showed dilation of the right cavities, as well as severe tricuspid regurgitation and a Qp/Qs ratio of 3. Upon Doppler echocardiography, the patient exhibited signs of a predominant left-right shunt. A transesophageal echocardiography confirmed the presence of a 3 cm-sized interatrial septal defect and absence of the anterior rims of the defect.

Results: Interventional repair of the defect using the Amplatzer septal occluder is usually the gold-standard treatment in patients with ostium secundum atrial septal defect. However, the performance of this technique is conditioned by the existence of edges for the location of the device.

Conclusion: In our case, the anatomy of the defect precludes the use of a percutaneous device, making classic open surgery the optimal solution.

Keywords: *atrial septal defect, pulmonary hypertension, transesophageal echocardiography*

The challenge of diagnosis and treatment of Noonan Syndrome correlated with KRAS gene mutation: case report

Author: *Gabriela Andriescu*

Co-authors: *Andra Madalina Chiriac*

Scientific coordinators: *Teaching Assistant Alexandru Florescu, MD, PhD; Professor Carmen Vulpoi, MD, PhD*

Introduction: Noonan syndrome is a genetically heterogeneous disorder characterized by the association of facial dysmorphism, short stature, congenital heart defects and skeletal malformations. It is one of several disorders that are caused by a disruption of RAS-MAPK pathway signaling. Most cases of Noonan syndrome result from mutations in one of three genes, PTPN11, SOS1, or RAF1. About 2 percent of the cases with Noonan syndrome are associated with a KRAS gene mutation.

Material and methods: We describe the clinical case of an 8-year old female patient, who presented with significant growth retardation and other associated abnormalities. Physical examination found many skeletal malformations such as pectus excavatum inferior, pectus carinatum superior, slightly shortened fingers, pterygium colli and cubitus valgus. Hormonal findings revealed that growth hormone, IGF, TSH and fT4 levels were normal. The X-ray examination which was further performed revealed a delayed bone age. A mitral valve prolapse and dental dystrophy were also associated to the findings above. Judging by the phenotypic features already mentioned, the diagnosis of Turner syndrome was initially taken into consideration. A molecular genetic test affirmed this hypothesis, but revealed a pathogenic mutation in the KRAS gene, therefore, leading to the diagnosis of Noonan syndrome.

Results: Due to the abnormal growth, therapeutic management implied daily administration of recombinant human growth hormone. During treatment, the patient's height increased 17.5 centimeters, resulting in height close to the average values for her age. The therapy also augmented the height velocity to an average of 0.6 cm/month

Conclusion: Growth hormone therapy was efficient as it induced an increase in height and growth velocity of the patient. We can conclude the KRAS mutation did not contribute to a potential deficient response to the human recombinant growth hormone therapy.

Keywords: *Noonan syndrome, KRAS, growth hormone*

Imaging features of developmental abnormalities of central nervous system in children

Author: *Ilie Copaceanu*

Scientific coordinator: *Associate professor Svetlana Hadjiu, MD, PhD, State Medical and Pharmaceutical University "Nicolae Testemițanu", Chișinău, Republic of Moldova*

Introduction: Non-invasive imaging in nevraxial pathology today is a continuous concern to obtain highly sensitive information and possibly high specificity. One of the areas of evolution, both morphological and functional plan, in the last years, is brain imaging. Difficult cases related to neurodevelopment, accompanied by psychomotor retardation and seizures in children with cerebral malformations are increasing. In this context, this study allows us an overview of imaging techniques MRI diagnostic highlighting essential elements of developmental abnormalities of the CNS in children.

Material and methods: The study group consisted of 25 children (select from neurology wards of PMSI BMI), who were subjected to a clinical exam (history, family medical history and complete neurological and clinical examination) and imaging MRI, CT, X-ray of the skull.

Results: It was found that the most common clinical manifestation of congenital brain malformations notified in children in the study group was mentally retarded mild to severe degree ($91\pm 1.2\%$), followed by axial and limb hypotonia ($56\pm 2.3\%$) and epilepsies ($37\pm 1.5\%$), manifested by focal seizures and infantile spasms. Hemi / spastic tetraplegia was diagnosed in $15\pm 1.3\%$, reduction in size of the cranial perimeter (5-6 cm below the age norm) $-20\pm 1.2\%$, abnormal of the fine coordination - $20\pm 2.6\%$, hemianopsia - $5\pm 1.4\%$; nystagmus - $5\pm 2.6\%$, ataxia - $4\pm 1.2\%$. Asymptomatic cases diagnosed by chance were found to $3.5\pm 2.5\%$. According to the results obtained by MRI brain we found the following: birth disrafice - 5 cases, defects because of ventral induction disorder – 3 cases, brain cysts – 8 cases, developmental abnormalities of the rombencephal – 2 cases, abnormalities in cell migration disorders - 4 cases, abnormal growth - 3 cases.

Conclusion: Abnormalities in development of CNS are common in pediatric units. Imaging diagnosis remains one of the best in their diagnosis. In most cases abnormalities in development of CNS have a poor prognosis. Antenatal diagnosis in some cases being done too late.

Keywords: central nervous system, imaging diagnosis, development abnormalities

Hepatic disorders as a risk in open heart surgery: utilizing the MELD Score as a risk assessment system

Author: *Fizah Muratib*

Co-authors: *Tarek Nabih, Melindi Brink, Alaa Talhaoui*

Scientific coordinator: *Marcus Jee Poh Hock MD*

Introduction: Nowadays, an increase in number of patients with hepatic disorders require open heart procedures. However, there hasn't been a standardized pre-operative risk assessment system for this. The MELD Score is a system that has been created to predict the mortality and morbidity rates of patients with chronic liver diseases.

The aim is to evaluate the effectiveness of the MELD Score in assessing operative risks in patients who will undergo open heart surgery.

Material and methods: This scoring system was initially created by the Mayo Clinic to evaluate liver transplant candidates. The data consisted of 112 patients in total. The study was conducted on those patients that underwent open heart procedures at Institute of Cardiovascular Disease "Prof. Dr. George I.M Georgescu" in Cardiovascular Surgery. The material consisted of patients having undergone coronary surgery during a 12 year period from the year 2000 to 2012. The collected data was then divided into three parts; the preoperative, intra-operative and postoperative.

Results: The usage of the MELD Score proved superior to assess post-operative risks. The statistics revealed its ability to take liver dysfunctions into account (where the EuroScore does not) which is a useful tool in predicting mortality. Compared with the Child Pugh Score, the MELD Score does not require the subjective evaluation of ascites or encephalopathies.

Conclusion: Due to its flexibility and convenience, the MELD Score exceeds the limitations of other scoring systems, such as the EuroScore II and the Child-Pugh Score. Hepatic disorders does indeed affect the success rate of an open heart surgery and the authors would like to propose a change to the standard protocol to include the use of the MELD scoring system as a pre-operative risk assessing tool.

Keywords: *MELD, hepatic disorders, risk assessment*

Incidence and risk factors of *Clostridium difficile* infection in inflammatory bowel disease patients

Author: *Ioana Adelina Clim*

Co-authors: *Eduard Manuel Prisacariu, Andreea Clim, Elena Alexandra Dranca*

Scientific coordinators: *Professor Anca Trifan MD, PhD; Teaching Assistant Irina Gîrleanu MD, PhD*

Introduction: Recent epidemiologic studies have shown that patients with inflammatory bowel disease (IBD), ulcerative colitis (UC) or Crohn's disease (CD) are at increased susceptibility Clostridium difficile infection (CDI) compared with the general population. The objectives of this study were to assess the incidence and risk factors for CDI in UC patients in a tertiary center from North-Eastern Romania.

Material and methods: Data of all UC and CD patients admitted at the Institute of Gastroenterology and Hepatology, Iasi, Romania between January 2014 and December 2014 were analyzed. In patients with concomitant CDI, risk factors for CDI were identified.

Results: A total of 56 UC and 45 CD patients were included in this study, among whom 7 with UC and 5 with CD were identified as having a concomitant CDI. The incidence of CDI in UC patients was 12.5 %, and 11.1% in CD patients. Most of the patients with UC included in the study were men (78.5%) and had active left side colitis. On univariate analysis, age > 60 years (OR = 2.76; CI=1.45-29.6, p = 0.023) and hemoglobin < 10 mg/dl (OR = 1.93; CI=1.19-18.5, p = 0.043) were associated with CDI and UC. Most of the patients with CDI and CD were older and had an active colonic form, anemia and increased level of leucocytes.

Conclusion: CDI was detected in one of fourth patients admitted with a UC or CD flare. Older age and anemia could represent risk factors of CDI in patients with inflammatory bowel disease.

Keywords: *inflammatory bowel disease, Clostridium difficile infection*

Assessment of sepsis-associated encephalopathy in patients with severe infections

Author: *Ionela Larisa Irimița*

Co-authors: *Radu Ștefan Mițode, Carmen Maria Bârsan, Andrei Alexandru Șălaru*

Scientific coordinator: *Teaching assistant Codrina Bejan, MD*

Introduction: Sepsis-associated encephalopathy (SAE) is a diffuse or multifocal cerebral dysfunction determined by the systemic response to the infectious agents, in the absence of a direct brain infection.

Clinically, SAE is characterized by an altered state of consciousness, progressing even to unresponsiveness and coma. The evaluation of these cognitive dysfunctions is difficult in the absence of any specific investigations or biomarkers and, also, by the widespread use of sedatives in critically ill patients. SAE thus remains a diagnosis of exclusion which can only be made after ruling out other causes of altered mentation in a febrile, critically ill patient by appropriate investigations. While SAE is generally considered an acute, reversible syndrome, recent studies suggest that SAE may pose substantial risks for long-term cognitive impairments, including alterations in mental processing-speed, executive functions, memory, attention and temporo-spatial orientation.

Material and methods: We conducted a retrospective study (January 2014-December 2015) in which we assessed 40 patients who fulfilled criteria for sepsis and who presented neurological disorders, suggestive for SAE. For each patient, we collected data regarding relevant personal information (age, sex and comorbidities), clinical aspects and laboratory results.

Results: Among the 40 analyzed patients, we observed a high prevalence of consciousness alteration (21 cases), severe headaches (19 cases), vertigo (16 cases) and prolonged somnolence (11 cases). More serious neurological conditions were also met: seizures affected 9 patients, while coma occurred in 7 cases. Men were more affected than women (55% vs. 45%). The average remission time for these neurological disorders was 6.2 days. Evolution was favorable for 72% of the patients.

Conclusion: The increasing frequency of infectious pathologies and hence sepsis raise interest regarding SAE. Besides the immediate life-threatening condition represented by sepsis, neuropsychiatric effects and long-term cognitive sequelae can affect the quality of patients' lives.

Keywords: encephalopathy, sepsis

Clinical implications and risk factors for patients with *Clostridium difficile* colitis

Author: Ionela Larisa Irimița

Co-authors: Radu Ștefan Miștode, Nadia Al Namat, Andra Paula Iordache

Scientific coordinator: Teaching assistant Isabela Iordache, MD

Introduction: *Clostridium difficile* is a Gram-positive anaerobic bacteria that produces enterotoxin A and cytotoxin B. The infection with *Clostridium* (CDI) is a well-known etiologic factor for diarrhea, colitis and life-threatening sepsis, with a growing incidence worldwide. The *Clostridium* spores are ubiquitously present in the environment, persisting for long periods of time in the sporulated form without the loss of viability. In the absence of antibiotic administration, the normal endogenous microflora prevents the overgrowth of ingested *C. difficile* spores. The use of antibiotics, that modify the gut microbiota, allow *C. difficile* to germinate sufficiently to establish infection.

Material and methods: We retrospectively analyzed 70 patients who had colitis with *Clostridium* as primary diagnosis at discharge. These patients were admitted to the Infectious Diseases Hospital Iasi in the period January-May 2014.

For each patient, we followed certain personal parameters with epidemiological relevance (age, sex, anterior antibiotic exposure, previous hospitalizations). We also assessed specific factors for colitis with *Clostridium*: recent abdominal surgery, severe infections with prolonged antibiotherapy and evaluated the therapeutic management and the number and type of antibiotics.

Results: The most common digestive manifestations in patients with CDI were diarrhea and abdominal pain, experienced by 33 patients. History of colitis with *Clostridium* was met in 17 patients, while those of acute diarrheal disease were present in only 4 patients. Almost 12% of the patients had previous abdominal surgery and more than 30% reported other associated digestive pathologies. Elderly (age>60) represented >50% of all patients. Recurrence of CDI occurs in approximately 27% of successfully treated patients, 10% of them presenting even 2 or more recurrences.

Conclusion: In addition to classical risk factors (extreme ages, antibiotic treatment), we observed that CDI also occurred with relatively high prevalence in the „low-risk” patients category, being accompanied by many comorbidities.

Keywords: *Clostridium, colitis*

The future of autologous therapy: platelet rich plasma as a treatment in early knee osteoarthritis

Author: *Fizah Muratib*

Co-authors: *Elena Ana Ramascanu, Saad Ali Maqsood, Mohammed Louahbi*

Scientific coordinator: *Marcus Jee Poh Hock, MD*

Introduction: Until now, money has been spent on research and development on the recovery and restoration of many diseases. One significant method has emerged as Platelet Rich Plasma (PRP), where the most extensive analysis has been made on patients with early knee osteoarthritis. Other methods of treatment have not been as reliable in reducing pain, improving normal knee function, and decelerating the progression of the disease. The study aimed to analyze the effectiveness of the clinical outcomes of PRP therapy on patients with early knee osteoarthritis over 1 year.

Material and methods: This is a prospective study that evaluated 22 patients in the Hospital for Special Surgery in New York, aged 30 to 70 years, suffering from early osteoarthritis who underwent PRP therapy. All patients had 20mL of blood taken and centrifuged using an MTF Cascade System. PRP was drawn from the centrifuged blood and 6 ml was injected in the knee. The patients underwent clinical assessment for 1 year, during which multiple scores were used to assess overall knee function, pain and daily activity. MRI scans were used to assess the cartilage morphology.

Results: All score results that were assessed at 6 months or 1 year were compared to pre-injection baseline values. The pain score was significantly improved with a reduction of 55.9% at 1 year. Stiffness scores improved at 6 months by 43.2%. At 1 year, 66% of patients showed at least 25% of overall improvement in the scores.

Conclusion: Analyzing the results, this study has shown that PRP therapy plays a main role in improving the clinical outcomes of patients who suffer from early knee osteoarthritis. Although significant refinements have been seen observing the results up to 1 year, further studies are still being made to realize the clinical significance and long term effects of this treatment.

Keywords: *PRP, MTF cascade system, MRI*

Isolated persistent left superior vena cava unmasked by a simple non-invasive cardiac imaging

Author: *Smaranda Radu*

Co-authors: *Paula Munteanu, Cosmina Georgiana Ponor*

Scientific coordinator: *Mariana Floria, MD, PhD*

Introduction: A persistent left superior vena cava is an embryological remnant that represents persistence of the embryonic left anterior cardinal vein and is the most common congenital anomaly involving thoracic central venous return. This paper presents the case of an asymptomatic persistent left superior vena cava draining into the coronary sinus.

Material and methods: A 25 years old man complaining of atypical chest pain at exertion was examined by the cardiologist. The clinical exam was normal. The ECG showed sinus rhythm of 55 beats/min, QRS axis of 70 degree and RBB. Transthoracic echocardiography has shown a large coronary sinus of 32 mm, without right cavities dilatation and without any sign of pulmonary hypertension. In addition, a small atrial septum defect with left-right shunt without hemodynamic consequences was diagnosed. Transthoracic echocardiogram was repeated during injection of agitated saline solution into the left arm and micro-bubbles unexpectedly filled firstly coronary sinus and then passed through the right atrium.

Results: Contrast enhanced CT angiography confirmed the presence of persistent left superior vena cava and the site of drainage into a large coronary sinus. Right superior vena cava was also identified.

Conclusion: It is mandatory to consider persistent left superior vena cava draining into the coronary sinus in the diagnosis of patients presenting with dilated coronary sinus shown by transthoracic echocardiography. This case underlines the importance of multimodality imaging in the evaluation of these abnormalities. An associated heart disease must always be excluded in these patients.

Keywords: *persistent left superior vena cava, congenital anomaly, multimodality imaging*

Multimodal management and its significance in rectal cancer patients

Author: *Kazantzi Maria*

Co-authors: *Elena Ana Ramascanu, Aamena Osman, Said Ahmed*

Scientific coordinator: *Professor Lucian Miron, MD, PhD*

Introduction: Rectal cancer represents almost 15% of all neoplasms, with a 5year survival rate of 58-84% for stage III and 12% for stage IV. The management of this disease is complex due to differences in prognosis, stage and patient status. Currently, chemotherapy and/or radiotherapy are offered alongside surgery in most stage III patients, but the optimal type of chemotherapy remains controversial.

The aim of this study was to analyze therapeutic management and outcomes in patients with advanced rectal cancer.

Material and methods: A retrospective analysis of all rectal cancer patients admitted to the Regional Institute of Oncology Iasi between January-April 2014 was performed. The following information was collected: gender, age, tumor stage & localization and disease management (radiotherapy, surgery, chemotherapy). Furthermore, survival data or data of last hospital admission was collected. Statistical interpretation was performed by means of SPSS software.

Results: The inclusion criteria were met by 52 patients with stage III of the disease and 25 patients with stage IV. Exactly 50% of the patients with stage III that received treatment with chemotherapy, radiotherapy and surgery, showed an increase in survival rate. Chemotherapy regimens used included capecitabine/5-fluorouracil and platinum-based regimes, however, no benefit of survival was seen by adding the latter in stage III. Average survival for stage III was 35.4 months, whereas for stage IV it was 20.2 months. The stage of the tumor had a significant influence on survival, with other variables having no statistical significance.

Conclusion: Rectal cancer management has significantly improved in the last decade. The combination between several types of treatment has led to an increased survival rate. The stage of the disease and chemotherapy remain significant prognostic factors. New methods of choosing tailored treatments for stage III patients still needs to be identified.

Keywords: *rectal cancer, survival rate, chemotherapy*

The future of oncology: high intensity focused ultrasound

Author: *Elena Ana Ramascanu*

Co-authors: *Kazantzi Maria, Kaisser Gallaby, Fiza Muratib*

Scientific coordinator: *Marcus Jee Poh Hock, MD*

Introduction: With over 20 million new cases expected annually, cancer is raising an important demand in finding new treatments to significantly reduce side effects, minimize intervention, hospital stay and provide an alternative option in cases where conventional therapies fail. Addressing these real-world challenges, high intensity focused ultrasound therapy (HIFU) has been rapidly gaining clinical acceptance, being non/minimally invasive, with fewer complications and no risk of added radiation. HIFU uses high intensity sound waves guided by MRI/ultrasound to locally heat and destroy diseased tissue through ablation, causing coagulative thermal necrosis and cavitation damage. The aim of this study was to assess the safety and effectiveness of HIFU for applicable cancers, providing a comprehensive overview of the procedure and its' features, indications and future applications, according to clinical experience.

Material and methods: A systematic literature search was conducted and resulted in the identification of 22 studies that evaluate the efficiency of HIFU in the treatment of prostate (10), breast (2), liver (2), pancreatic (2) and renal cancer (1), benign prostate hyperplasia (2), bone metastasis (1) and uterine fibroids (2) providing efficacy and safety data.

Results: HIFU has been effective in all the studies mentioned, showing best results in the treatment of prostate cancer, with a disease-free rate ranging from 68-83 % (Gelet et al) to 93.4% (Blana et al), PSA level < 0.5 ng/mL, 86% negative biopsies (Vallancien et al) and side effects including: rectal burns, urinary retention and transient incontinence.

Conclusion: With the potential to play an important role in treating cancer, HIFU therapy is non/minimally invasive, low cost, with a faster recovery rate and less unpleasant side effects compared to the traditional approach. However, this method still poses certain limitations regarding bone and air penetration, ultrasound artifacts or imaging quality that once improved will expand the versatility and applicability of HIFU.

Keywords: *diabetes, vitiligo, autoimmunity*

Diabetes Mellitus Vs Vitiligo: A strong link amongst patients?

Author: *Said Ahmed*

Co-authors: *Aamena Osman, Kazantzi Maria*

Scientific coordinator: *Marcus Jee Poh Hock, MD*

Introduction: Diabetes mellitus (DM) is an autoimmune condition whereby impaired insulin secretion and variable degrees of peripheral insulin resistance leads to hyperglycemia. There are 2 types: type 1 DM; insulin production is absent because of autoimmune pancreatic-cell destruction. Whereas, there's a relative lack of insulin in the setting of insulin resistance in type 2 DM. Vitiligo is a skin condition in which the skin loses pigmentation in blotches. It is has been thought that patients develop autoantibodies against melanocytes, and thus it is most likely an autoimmune condition.

The aim of this study is to identify whether it's common for patients that have been diagnosed with DM, to develop vitiligo or vice versa.

Materials and method: A survey, consisting of 4 straightforward questions was distributed to the general public via diabetes and vitiligo support groups by way of websites, forums and social media.

Results: In total, 264 responses were obtained, of which 42 persons claimed to have both DM and vitiligo. From these 42 individuals, all developed vitiligo before being diagnosed with DM. Furthermore, of these, 24 (57%) were diagnosed with type 1 DM and 18 (43%) with type 2 DM. The results from the survey do not show that individuals developed vitiligo after being diagnosed with DM.

Conclusion: It can be concluded that vitiligo can be linked with both type 1 and type 2 DM. However, there is not enough evidence to say that by developing vitiligo a patient will develop DM. In addition the development of diabetes is associated with other co-morbidities and thus it cannot be ascertained as to what the probability of developing DM after diagnosis with vitiligo would be. Further research is needed by assessing the different co-morbidities in relation to the diagnosis of DM in patients with vitiligo.

Keywords: *diabetes, vitiligo, autoimmunity*

Annular pancreas and chronic pancreatitis - a rare occurrence and a diagnostic surprise

Author: *Iulia-Maria Câmpanu*

Co-authors: *Eliza Maria Froicu*

Scientific coordinator: *Associate Professor Alina Pleșa MD, PhD, Teaching Assistant Roxana Maxim, MD, PhD, UMF "Grigore T. Popa" Iași*

Introduction: Annular pancreas is a rare congenital anomaly characterized by the presence of ectopic pancreatic tissue surrounding the duodenum. Chronic pancreatitis is a slow, irreversible process characterized by pancreatic parenchymal loss, fibrosis and calculus formation most often found among male patients with a history of alcohol consumption. The association of the two conditions is extremely rare.

Material and methods: We present the case of a 54-year old female patient who was admitted at the Institute of Gastroenterology and Hepatology Iasi, Romania for recurrent abdominal pain, loss of appetite and chronic fatigue. She suffered significant weight loss but had no fever. There was no history of alcohol consumption or chronic medication. Her past history was unremarkable except for type 2 diabetes mellitus which required lifelong insulin therapy. On clinical examination, mild tenderness of the upper abdomen was noted. Laboratory findings were normal. Abdominal ultrasound showed an inhomogeneous pancreas and a computed tomography (CT) scanning and MRI of the abdomen were performed.

Results: The diagnosis is currently based on abdominal CT scan and MRI of the pancreas. They showed chronic pancreatitis and an annular pancreas encircling the second part of the duodenum, with severe duodenal stenosis. Surgical treatment was offered but the patient opted for conservative treatment.

Conclusions: Annular pancreas is a rare malformation that manifests itself primarily by signs related to duodenal stenosis. Both the rarity of this congenital abnormality and its atypical association with chronic pancreatitis among a female patient with no medical or family history have prompted us to make this presentation.

Keywords: *annular pancreas, chronic pancreatitis, duodenal stenosis*

Wilson's disease: a diagnostic challenge

Author: *Eliza-Maria Froicu*

Co-authors: *Iulia-Maria Câmpanu*

Scientific coordinator: *Associate Professor Alina Pleșa, MD, PhD; Teaching assistant Roxana Maxim, MD, PhD*

Introduction: Wilson's disease is a familial, lethal neurological disease accompanied by chronic liver pathology leading to cirrhosis. It can present clinically as liver disease, as a progressive neurological disorder or as psychiatric illness. Symptoms can occur at any age and are frequently nonspecific, delaying the diagnosis.

Material and methods: We present the case of a 38 year old male patient who was admitted at the Institute of Gastroenterology and Hepatology Iasi, Romania for extreme weight loss, nervousness and insomnia. On examination, patient was conscious, impulsive and irritable. His pulse rate was 112/min, BP was 150/80 mmHg, temperature was 37.8°C, mild asymmetric tremor of the extremities, bilateral exophthalmia with a diffusely enlarged thyroid. Further blood tests revealed elevated thyroid hormone levels and elevated liver enzymes. His laboratory investigation revealed negative markers for viral hepatitis, negative ANA, LKM1, ASMA antibodies, normal serum levels of IgA, IgG and IgM and low ceruloplasmin levels. Abdominal ultrasound showed homogenous hepatomegaly and no free fluid. Slit lamp examination for Kayser-Fleischer ring was positive. The neck ultrasonography showed a small thyroid nodule suggestive for malignancy and guided fine-needle aspiration biopsy was performed with positive diagnosis for papillary thyroid carcinoma.

Results: Keeping the patient's clinical profile in mind, differential diagnosis of Wilson's disease and autoimmune liver disease was kept.

Conclusion: Wilson's disease can manifest with an impressive spectrum of neurological, behavioral or psychiatric disorders, which may be its first clinical manifestation, appearing simultaneously with hepatic signs, or some years later. The diagnosis of Wilson's disease was an unexpected surprise, but even in the current circumstances it is a necessity the need to test it mostly because of the course of treatment and the need for further family screening.

Keywords: *Wilson's disease, autoimmune liver disease, thyrotoxicosis*

Early onset of insulin dependent diabetes – case report

Author: Nicoleta Tărbîță

Co-authors: Ecaterina Georgiana Tudor, Andreea Teodorescu, Alina Elena Nedelcu

Scientific coordinators: Teaching assistant Ana Simona Drochioi, MD, PhD; Oltean Carmen, MD, PhD; Assistant professor Dana-Teodora Anton-Păduraru, MD, PhD

Introduction: Type 1 diabetes (T1D) is the most common form of diabetes in pediatric patients. It is the consequence of the autoimmune destruction of the insulin-producing beta cells in the pancreas, which leads to insulin-requiring hyperglycemia. Type 1 diabetes can occur at any age. However, it usually develops by early adulthood, most often starting in adolescence.

Material and methods: We present the case of an 8 months old infant with unspecific malaise, polyuria, polydipsia and weight loss (PI =0,8). The anamnesis discloses a positive family history for the T1D - father diagnosed at the age of 19. The physical examination mainly divulged a respiratory tract infection (mucopurulent rhinorrhea, pharyngeal congestion, rhonchi). The most relevant parameters of the paraclinical examinations were: high level of fasting plasma glucose, suppressed C-peptide value, elevated concentrations of liver transaminases, inflammatory syndrome and a level of 1406.2 UI/ml of glutamic acid decarboxylase antibodies (anti-GAD).

Results: Regarding the genetic susceptibility and the moment of diagnosis, we took into consideration the seasonal incidence in the onset of insulin-dependent diabetes which means that the intercurrent diseases occurred in the cold seasons act as diabetogenic triggers that take to a severe autoimmune reaction.

Conclusions: The early signs of the insulin dependence shall not pass unobserved on infants since the acute complications such as ketoacidosis lead to permanent brain damage or death.

Keywords: type 1 diabetes, child, onset

Type 1 diabetes in children – multiple complications. A case report

Author: *Alina Elena Nedelcu*

Co-authors: *Andreea Teodorescu, Nicoleta Tăriță, Ecaterina Georgiana Tudor*

Scientific coordinator: *Assistant professor Dana-Teodora Anton-Păduraru, MD, PhD; Oltean Carmen, MD, PhD; Teaching Assistant Ana Simona Drochioi, MD, PhD*

Introduction: Insulin-dependent diabetes or type 1 diabetes is a metabolic condition which usually appears during childhood or adolescence. It is characterized by the autoimmune destruction of the pancreatic β cells leading to the absolute or relative deficiency of insulin. Complications in type 1 diabetes are classified as macrovascular or microvascular and they usually develop gradually, over decades. In special cases, the risk of complications is dramatically increased, leading to disabling or even life-threatening situations.

Materials and methods: We report herein the case of a 19-year old patient, diagnosed at age 6 with insulin-dependent diabetes and known with repeated episodes of acute ketoacidosis, microvascular and macrovascular complications. The patient was admitted for high blood pressure, occipital cephalalgia, eyelid and lower limbs edema. The clinical and paraclinical investigations which were further performed led us to the following diagnoses: chronic mesangioproliferative glomerulonephritis associated with nephrotic syndrome, secondary hypercholesterolemia, chronic kidney disease, secondary hypertension, diabetic retinopathy and neuropathy.

Results: Taking into consideration the patient's symptoms, the associated diabetic complications and the prognosis, we developed a treatment plan for the short and long-term management of the disease which consists of the following objectives: suppression of the symptoms, metabolic optimization and a good blood sugar control, lowering the risk of other complications and delaying the evolution of the existing ones, increasing the survival rate.

Conclusion: Chronic diabetic complications develop gradually, after decades of evolution. In this case, the particularity is that we presented a young patient with type 1 diabetes and multiple severe complications which necessitated vitals monitoring and a complex treatment. All of these aspects lead to a poor long-term prognosis.

Keywords: *insulin-dependent diabetes, child, complications*

The Effect Of Bariatric Surgery On Renal Outcomes: Meta-analysis and systematic review

Author: *Alina Elena Nedelcu*

Co-authors: *Andreea Teodorescu*

Scientific coordinator: *Teaching Assistant Ionut Nistor, MD, PhD*

Introduction: Obesity is a growing epidemic concerning patients worldwide. Elevated body-mass index (BMI) is an independent risk factor of the progression of chronic kidney disease (CKD) and development of end-stage renal disease (ESRD). An effective way of achieving long-term weight loss is bariatric surgery, with evidence that also contributes to improving metabolic disorders. However, it is unclear what the impact of bariatric surgery on renal function is. We conducted a systematic review to assess the benefits and harms of bariatric surgery for weight loss on proteinuria and kidney function.

Material and methods: We searched MEDLINE (January 1966 to 1st of January 2016) and Cochrane Library (through Issue 1 of 12, January 2016) without language restriction. Hand searched for relevant articles was done on reference lists of textbooks, articles, and scientific proceedings. We included studies in English which examined renal outcomes (serum creatinine, creatinine clearance, eGFR, need for renal replacement therapy (RRT) and proteinuria) among obese or overweight adults before and after bariatric surgery interventions. Study characteristics and methodological quality was assessed using the Newcastle-Ottawa scale.

Results: We identified 669 articles in MEDLINE using the MeSH words. After reading the title and abstract we selected 50 which we studied in full text. 17 observational studies were included (983 subjects). Various surgical techniques were performed (sleeve gastrectomy, Roux-en-Y gastric bypass, adjustable gastric banding, biliopancreatic diversion) but more than 50% of the patients included had Roux-en-Y gastric bypass done either by open surgery or laparoscopic. The mean follow-up period varied between six and 12 months with only three studies assessing the renal parameters on a longer period of time (24 months). 13 out of 17 studies reported creatinine value, five estimated the renal function using the MDRD formula and four describe data about proteinuria. In 13 out of 13 studies, serum creatinine significantly decreased after the surgery. GFR decreased in five studies on hiperfiltration patients and increased in one study on patients with CKD Stage 3-4. Proteinuria decreased to lower values in four studies. Not enough data was available on the need for RRT. When evaluating the methodological quality of the included studies, grades between four and eight were given with a mean value of seven out of nine, indicating a medium to high quality.

Conclusions: Weight loss secondary to bariatric surgery is associated with improvements on renal outcomes. Observational studies provide evidence on creatinine level, eGFR or proteinuria. Different surgical techniques seems to be associated with the same outcomes. However, limited data is available on patients with advanced CKD and very few data is available on long term follow-up or about the need for RRT. Larger studies, with longer follow-up data are needed.

Keywords: chronic kidney disease, bariatric surgery, proteinuria

Precocious diagnosis of hemorrhagic ascites in a patient with chronic pancreatitis

Author: *Alexandra Chiriac*

Co-authors: *Octavian Carol Mocanu, Radu Chiriac, Elena-Ana Ramascanu*

Scientific coordinator: *Dimache Mihaela, MD*

Introduction: Hemorrhagic ascites can pose diagnostic and therapeutic dilemmas in patients with hepatic and pancreatic problems such as chronic pancreatitis and have important complications we have to look into - patients with hemorrhagic ascites have higher rates of spontaneous bacterial peritonitis, acute kidney injury and are more likely to require intensive care unit. In clinical practice, the most frequent causes of hemorrhagic ascites are peritoneal tuberculosis, peritoneal carcinomatosis and pancreatic causes. The aim of this study is to assess the difficulties of finding the etiology of an ascitic syndrome in order to minimize its complications and prolong life.

Material and methods: We took into account one clinical case of a 38 years old patient known with Grand-Mal seizure who was previously diagnosed with chronic pancreatitis in 2013 and it is out of IGH Iasi Clinic. He sought consultation at "Sf. Spiridon" Hospital Iasi in February 2016 and was diagnosed with hemorrhagic ascites of pancreatic origin, by assessing the following parameters: physical examination, abdominal ultrasonography, biological tests and abdominal CT scans.

Results: The repeated imaging investigations with abdominal CT scans together with the exclusion of other possible causes (peritoneal tuberculosis or carcinomatosis) concluded the presence of a pancreatic peritoneal fistula as a cause of hemorrhagic ascites, possible occurred by repeated episodes of pancreatitis or by traumatic origin due to his Grand Mal seizure. We addressed the patient for surgical treatment.

Conclusion: Finding the etiology of a hemorrhagic ascites is crucial for the health of the patient especially in cases of chronic pancreatitis with pancreatic peritoneal fistula. Leakage of pancreatic secretions can cause significant morbidity due to malnutrition, skin excoriation, and infection and it is important to be treated properly.

Keywords: *hemorrhagic ascites, chronic pancreatitis, pancreatic peritoneal fistula*

The difficulties and the importance of precocious diagnosis of Tuberous Sclerosis

Author: *Alexandra Chiriac*

Co-authors: *Sofia Mavromati,*

Scientific coordinator: *Lacramioara Butnariu, MD*

Introduction: Tuberous sclerosis is a multi-systemic genetic disease characterized by hamartomas that can affect any part of the human body, primarily the brain, kidney, heart, skin and lungs. It is an autosomal dominant disorder, involving TSC1 or TSC2 genes by altering their normal tumor suppressing functions which leads to the development of tumor-like structures. The clinical picture has a wide spectrum of symptoms such as epileptic seizures, mental retardation, angiofibromas and cutaneous hipomelanotic dots.

The aim of this study is to assess the difficulties of diagnosing Tuberous Sclerosis and its complications, in order to prolong life expectancy.

Material and methods: We took into account two clinical cases of patients previously diagnosed with TS who sought genetic consultation at the Medical Genetic Center in Iasi. The diagnosis was established based on the criteria set at the “Tuberous Sclerosis Complex Consensus Conference” in 1998 and updated in 2012. By assessing the following parameters physical examination, echography, genetic consultation and MRI.

Results: The first case is a male patient, age 33 with epileptic crisis in childhood, diagnosed with TS (4 major criteria and 3 minor). The second case is a female, age 7 with a history of epilepsy, also diagnosed with TS (5 major criteria and 2 minor). Clinical examination showed a broad spectrum of features characteristic in both patients. The paraclinical examination (echography & MRI) revealed multiple tumoral structures also linked to this disease.

Conclusion: Due to the wide spectrum of clinical features a multidisciplinary approach is necessary in order to diagnose and minimize further complications thus prolonging life expectancy.

Keywords: *genetic disease, Tuberous sclerosis, multidisciplinary approach*

Rare association: cystic fibrosis - Marfan syndrome

Author: *Teodora Patraucean*

Co-authors: *Octavia Maftai*

Scientific coordinators: *Teaching Assistant. Ana Simona Drochioi, MD; Assistant professor Dana-Teodora Anton-Padurararu, MD*

Introduction: Cystic fibrosis (mucoviscidosis) is a multisystemic disorder caused by the mutation of the gene that encodes the protein which regulates the transmembrane conductance, and the most frequent genetic disease with autosomal recessive transmission in the Caucasian population. The consequences are failure in evacuating the mucous secretions, a high level of salt in the glandular secretions, and a limited and chronic infection of the respiratory tract. Marfan syndrome is a genetic disorder of connective tissue involving three major systems: skeletal system (tall stature, scoliosis, joint hypermobility and hyperlaxity), cardiovascular system (mitral valve prolapse, aortic ascending dilatation/dissection), ocular system (myopia, ectopia lentis, flat cornea).

Material and methods: Male patient, age 16, with prior diagnosis of mucoviscidosis, is admitted in Emergency Hospital for Children "Sfanta Maria" Iasi with suspected Marfan syndrome due to suggestive clinical signs. Physical examination reveals a teenager in fairly good health, asthenic, tall, with precarious state of nutrition, despite preserved appetite, cranio-facial dysmorphism, elongated fingers and toes (arachnodactyly), chest deformity (indented sternum), decreased visual acuity, dental caries.

In the management of this case were used laboratory explorations, functional imaging and genetic testing.

Results: Laboratory Results showed: eosinophilia, hypocalcemia, increased SGOT and alkaline phosphatase. Echocardiography revealed: mitral valve prolapse, bicuspid aortic valve, dilated aorta, second degree aortic regurgitation. Thoracic CT: chest asymmetry, dilated bronchi, emphysema; EKG – right bundle branch block. Pulmonary function tests indicated mild restriction and obstruction. The patient continues his background therapy with Kreon, a high calorie and high protein diet, completed with nutritional supplements, and performs respiratory physiotherapy.

Conclusions: The association of cystic fibrosis with Marfan syndrome is extremely rare, and life expectancy of such patients is severely affected by complications that can occur in both diseases, but drug therapy and physiotherapy techniques associated may lead to enhanced quality of life and thus, increasing life expectancy.

Keywords: mucoviscidosis, Marfan syndrome, genetic disease

The nephrological complications in patients with Infectious Endocarditis

Author: *Maria Siscanu*

Co-author: *Valeria Evtodii, Ala Ivasi, Elena Samohvalov*

Scientific coordinator: *Alexandra Grajdieru, MD*

Introduction: Infectious Endocarditis (IE) is a serious disease with a high mortality rate - 20-30%. Renal complications in IE are present in 6-30% of cases and favorizes the reserved pronostics.

To study the nephrological complications in patients with IE and it's influence over their evolution and disease prognosis.

Material and methods: The research was carried out on 235 patients-69.8% man and 30.2% woman, medium age being 51 ± 0.7 , from 19 till 83 years, that included the Duke criteria. The study was effectuated in the Cardiological Institute and MCH "Holy Trinity" of the Republic of Moldova during the period 2008-2016.

Results: Nephrological complications (NC) were presented in 49.4% cases: renal failure in 59.5%, glomerulonephritis in 44% cases and renal embolisms in 4.3% cases. Men had developed more frequently NC (53%) than women, the most affected age was in the group of 45-64 years (61.2%). The most frequent etiology was NC was streptococcal in 38.4% cases, the most affected valves were mitral valve (28,4%) and aortic (39.7%).

From clinical manifestations near the toxico-infectious signs and symptoms of cardiac failure prevailed the dysuria symptoms and edema (60.3%), from paraclinical data was presented by uremia (44.8%) and creatininemia (30%). The mortality in the group of patients with NC constituted 8,6%.

Conclusions: IE complicated nephrologically is frequently caused by streptococcal triggers with more aggressive evolution and reserved prognosis.

Keywords: Infectious Endocarditis, nephrological complications, renal failure

Study of the applicability of the BTS-Nirvana instrument on the neuro-motor rehabilitation in patients with medium-severe mental retardation

Author: *Rosaria Tartarone*

Co-authors: *Ludovica Corsello, Lo Curzio G., MD*

Scientific coordinator: *Rametta, MD*

Introduction: The study was born with the aim of implementing a new method on protocols already used for the development or improvement of specific cognitive functions (attention spans, spatial orientation, and coordination) in patients with medium-sever M.R., through the use of virtual reality.

The proposal is to realize a protocol of intervention, organized in a series of tests and procedures, prepared through qualitative descriptions behavioral patterns and their relative quantification.

Material and methods: 44 adults (M=28; W=16) hospitalized patients have been selected with age profile of 39,7, mental age 6/7, non-epileptic, with partial visual and motor defects medical treated for behavioral disturbances.

As far as preliminary stage is concerned, the team has been trained in order to standardize the rehabilitation procedures. The stages have been organized as follow: description of the instrument, explanation of the task, standardization of the examples to follow.

The efficacy of the protocol has been measured with longitudinal study through the administration of N.P.I (Neuropsychiatric Inventory) and R.Cavagnola.

The methodology included n.3 of batteries composed of 9 exercises (duration of 2 min.), performed each week on a weekly basis for 12 months.

Results: The analysis of the data collected revealed positive effects from a qualitative point of view (immersion into virtuality, emotional involvement, finalized learning, improvement of the sensomotor abilities) and from a quantitative point of view (improvement on the re-test phase, efficacy of the performance, reduction of backup, reduction of prompt)

Conclusion: The therapeutic strategies, including the use of the “virtual reality”, ensures more uniform levels of learning (from the efficacy point of view, a more constant ideomotor control over the time) and the improvement of specific cognitive domains, object of study.

Keywords: BTS-Nirvana, mental retardation, neuro-motor rehabilitation

An overview of patients with Chiari Malformation type I

Authors: *Melindi Brink*

Co-authors: *Rabeea Anwar, Fizah Muratib*

Scientific coordinator: *Reza Mohammed Parker, MD*

Introduction: The hallmark sign of Chiari malformation is the caudal displacement of cerebellar tonsils. This results in compression of the medulla oblongata, the 4th ventricle and the upper spinal cord, which causes an interruption of the normal CSF flow leading to increased intracranial pressure. Therefore it leads to the tell-tale symptom of debilitating headache, exacerbated by coughing, sneezing, laughing and other Valsalva maneuvers. This can have a severe debilitating effect on the patient's quality of life.

The aim of this study was to see the time of diagnosis, main symptoms and the effect of Chiari malformation type 1 on patients.

Material and methods: A patient based questionnaire with 16 questions on www.patients.co.uk; www.thebrainandspinefoundation.org and Chiari forums were used to conduct this study.

Results: Chiari malformation has a predisposition to females (92% female: 8% male). Most patients (83%) were diagnosed after the age of 19, with the majority of diagnoses made due to the severity of symptoms. Headache & neck pain, dizziness & imbalance and nausea were found to be the most common symptoms. Of our patients, 14% were capable of performing normal daily activities and 36% were unable to do so. Up to 45% of the patients regard their quality of life would have been better if they were diagnosed earlier.

Conclusion: Majority of patients are diagnosed in late adolescence or adulthood. The most common symptoms were found to be headache & neck pain, dizziness & imbalance and nausea. A large number of patients believe that their quality of life would have been better with earlier diagnosis and therefore earlier treatment.

Keywords : Chiari Malformation type 1, Debilitating headache, Cerebellar tonsil herniation

Burkitt's lymphoma in a child: a case report

Author: *Carmen-Maria Bârsan*

Co-Author: *Farai Nhambasora, Ionela-Larisa Irimita, Eduard Murarasu*

Scientific Coordinators: *Professor Ingrith Miron, MD, PhD; Teaching Assistant Ancuta Ignat, MD, PhD-student Pediatrics Department, "Gr.T. Popa" University of Medicine and Pharmacy, Faculty of Medicine, Iasi, Romania*

Introduction: Burkitt lymphoma is a highly aggressive B cell non-Hodgkin lymphoma characterized by an increase in B lymphocytes in the blood and bone marrow shown by a rapid growth of lymph nodes. There are three distinct clinical forms of Burkitt Lymphoma recognized: endemic (African), sporadic(non-endemic), and immunodeficiency-associated. The symptoms of Burkitt lymphoma depend on the type.

Material and methods: A 6 year old male was admitted at „Sfanta Maria” Children’s Emergency Hospital with complaints of abdominal pain, fever and vomiting. Inspection revealed pale skin and an increase in abdominal volume. On palpation of the right flank an immobile, tumoral formation of approximately 8cm could be felt causing pain to the patient. Auscultation of the patient’s lungs revealed no vezicular murmurs on the inferior1/3 of the right hemithorax.

Laboratory tests: revealed inflammation syndrome, neutrophilia, metabolic, acidosis. Medical imaging showed lymphadenopathy in the mediastinum near the celiac trunk; bilateral pleurisy; metastasis infiltration in the pleura, pericardium, peritoneum and kidneys; a solid tumoral formation of approximately 10cm in the right flank with peritumoral collateral circulation; portal hypertension and liquid in the peritoneal cavity.

Results: An aggravated progression in the general state of the patient in the evolution was seen by changes in respiration, cardiovascular circulation and gastrointestinal function. The patient was admitted into Intensive care for emergency intervention. Further examination of pleural effusion cytology identified blast 66%. The bone marrow aspiration was normal and immunophenotyping examination revealed CD45 + CD19 +.

Conclusion: The results of the investigation demonstrates that the diagnosis is (sporadic) Burkitt's lymphoma stage III. The Serious clinical condition of the patient and increased anesthetic risk (ASAIV) requires joint surgical, oncology and pediatric consultations for laparotomy, chemotherapy and treatment. In children, lymphomas are rare and have nonspecific symptoms that appear late in evolution which makes early diagnosis difficult.

Keywords: Burkitt's lymphoma, multiple tumors, child

Alcohol - cause of road accidents

Author: *Andreea Elena Iacob*

Scientific coordinator: *Assistant professor Viorel Hadarean, MD, PhD*

Introduction: This paper aims to highlight the importance of alcohol effects on perceptual and cognitive processes of road traffic participants.

Material and methods: As investigation method we used the retrospective analysis of the toxicological data from the archives of Mures Institute of Legal Medicine, year 2013.

Results: The study was conducted on a sample of 829 people, from Mures county. Processing the data revealed that of those who were tested the majority were male – 87%, females being only 13%, however the persons that had the ethylotest positive constituted 44%, this showing that at the level of Mures county population still exists a sense of preservation, of preventing road-traffic accidents. Regarding the age of the subjects, was found that alcohol test was positive mostly at relatively young people. Considering that the educational factor is involved in road accident prevention we studied the professions of the sample: 32% were without any profession, these individuals being with a low level of education and intellect, also being likely to drink more alcohol than the rest of the population, 19% were drivers, and 9% - retired. 55% of people with positive test didn't have psychiatric manifestation at the moment of hospital examination, this fact can be interpreted as alcohol resistance influenced by different factors as prolonged consumption of alcohol or food ingestion and only 7% showing agitation, confusion, dispersed attention and incoherency.

Conclusion: The study shows that alcohol is affecting the whole population, with a peak of age between 21 - 30 years and with the highest value of 2,80 mg of alcohol/L of breathed air, and especially when it's consumed in significant amounts which lead to impairment: slowing of cerebral function, alteration of time and way of body response.

Keywords: *breath alcohol test, impairment, population*

Orthokeratology-modern treatment for myopia

Author: *Alexandra Teclici*

Co-authors: *Adina Mihaela Popa, Alina Ioana Puscasu, Andra Radulescu*

Scientific coordinator: *Camelia Margareta Bogdanici, MD, PhD*

Introduction: Refractive errors occur when the eye fails to correctly focus rays of light from an object onto the retinal plane. One of the most common refractive errors is represented by myopia, high myopia being ranked second as the leading cause of visual impairment globally. In myopia, light is focused to a point anterior to the retina as a result of excessive refraction at the cornea, lens or more frequently, an increased length of the eye. Orthokeratology is an alternative way to correct refractive errors using special, custom designed rigid lenses to temporarily modify the curvature of the cornea. The purpose of this presentation is to evaluate the ocular safety of orthokeratology treatment for myopia correction.

Material and methods: Modern orthokeratology technology uses breathable rigid lens material and reverse geometry designs to allow faster and more effective corneal reshaping. We are presenting a group of 7 patients, 3 females and 4 males, between the ages of 9 and 32 years old which were treated with orthokeratology therapy from March 2014 till present. The treatment implies wearing the lenses at night for 6 to 8 hours. The effect is completely reversible, if not worn the shape of the cornea gets back to its initial form after 72 hours with no physical or chemical modification of the eye.

Results: Although it has been reported in literature that possible complications and side effects may occur in long term therapy, there were none in our group of patients.

Conclusion: In conclusion, orthokeratology is a safe option for myopia correction and retardation therefore improving health quality.

Keywords: *myopia, orthokeratology, refractive errors*

The evolution of a tetralogy of Fallot in an 8 years-old patient before and after total intracardiac repair

Author: *Iuliana Teodor*

Co-authors: *Cristina-Georgiana Nechifor*

Scientific coordinator: *Teaching Assistant Alina Costina Luca, MD, PhD*

Introduction: Tetralogy of Fallot (TOF) is the most common form of cyanotic congenital heart disease, a constellation of four cardiac abnormalities that results from a single developmental defect. The systemic circulation of oxygen-desaturated blood results in symptoms of cyanosis, polycythemia and hypoxia. Although only 30% of untreated patients reach age of ten, long-term studies report good results after corrective surgery, usually within the first year of life. We present the case history of an 8 year-old female with uncorrected TOF who survived until this age without surgical intervention, only being administered Propranolol, 3x10 mg per day, orally.

Material and methods: An 8 year-old patient, with a history of uncorrected TOF, mitral regurgitation grade 2 and psychomotor retardation, presented with generalized cyanosis, hypoxic spells and one episode of a syncopal attack (1 minute). General examination revealed statur-ponderal hypotrophy (BMI=12,4), generalized cyanosis, nail clubbing, bulging precordium, a 4/6 systolic murmur and also a thrill over the entire precordial area. Her pulse was regular with a rate of 60 beats per minute. Electrocardiogram showed right QRS axis deviation and right ventricular hypertrophy. Transthoracic echocardiogram revealed pulmonary (infundibular) stenosis, patent ductus arteriosus, subaortic ventricular septal defect with bidirectional shunt. The packed cell volume 45% and hemoglobin 15.6 g/dl indicated relative polycythemia as a compensatory response to chronic hypoxia.

Results: Following the aforementioned set of examinations, the patient underwent complete intracardiac repair, with good postoperative evolution despite unfavorable prognosis.

Conclusion: TOF can be corrected surgically with improved outcomes among patients. Effort should be made to identify these patients early enough so that they can benefit from corrective surgery to prevent late complications and poor quality of life.

Keywords: *tetralogy of Fallot, congenital heart disease, complete intracardiac repair*

Cancer nanotherapy

Author: *Houidi Ahmed*

Co-authors: *Soury Arselan, Souabni Seifeddine, Maiassi Nadir*

Scientific coordinator: *Ensaruglu Furkan, MD*

Introduction: Nanoparticles as drug delivery systems enable unique approaches for cancer treatment.

Material and methods: Investigations have shown that both tissue and cell distribution profiles of anticancer drugs can be controlled by their entrapment in submicronic colloidal systems (nanoparticles) The goal of this approach is to increase antitumor efficacy, while reducing systemic side-effects.

Results: Nanotechnology could offer a less invasive alternative, enhancing the life expectancy and quality of life of the patient.

Conclusion: There is a growing sense of urgency in developing effective targeted nanotheranostics for clinical trials.

Keywords: *nanoparticules, cancer, therapy*

Sleep apnea syndrome: a cause of recurrent atrial fibrillation

Author: *Irina Vacarciuc*

Co-authors: *Ioan Radu Todiras*

Scientific coordinators: *Professor Traian Mihaescu, MD, PhD; Sanziana Lovin, MD*

Introduction: Sleep apnea syndrome is a condition defined by respiratory pauses greater than 10 seconds accompanied by oxygen desaturation in the blood and abnormal cardiac frequencies. It is one of the main causes of secondary arterial hypertension and cardiac arrhythmias.

Material and methods: We present a 43 year old patient, nonsmoker, does not consume alcohol, of healthy weight (BMI-23kg/m²) normal thyroid function with a medical history of recurrent paroxysmic atrial fibrillation, the patient declares waking up every night because of cardiac palpitations and dyspnea for more than 20 years, he was due to undergo radiofrequency ablation of ectopic source. Nocturne polygraphy evaluation is a standard procedure of cardiac evaluation given that the patient is moderately sleepy, 11/24 on the Epworth scale, chronic snoring with micrognathia.

Results: The polygraphy test has revealed up to 03:30 am numerous apneic events with blood oxygen desaturations (60/h) with bradycardia during apnea periods (45/minute) and tachycardia after the apneic episode (90/minute), at 03:30am the patient began having atrial fibrillation (AV 150/minute) and at 03:40 he wakes up, rises out of bed and the apnea disappears. At 04:40am he falls asleep again and begins having apnea once more with the reappearance of atrial fibrillation. The patient has indication of CPAP(continuous positive pressure treatment). He uses CPAP 8 hours a night, every night with the help of an oxygen mask (therapeutic pressure of 8mbar).

Conclusion: With CPAP the patient stopped having atrial fibrillation. The cardiac intervention was no longer necessary. For an atypical patient, non-obese, with no apnea recognized by his entourage, a sleep apnea diagnosis was a surprise and the corresponding treatment stopped the arrhythmic episodes.

Keywords: *sleep apnea, atrial fibrillation, micrognathia*

Endoscopic treatment of portal hypertension in children less than 24 months of glue injection

Author: *Maroue Ben Hassine*

Co-authors: *Soury Arselen, Ahmed Houidi, Souabni Seifeddine*

Scientific coordinator: *Wael Jaloul, MD*

Introduction: Endoscopic treatment of portal hypertension in infants remains particularly problematic due to the lack of suitable equipment. Here we report the feasibility and effectiveness of the injection of N-Butyl-2-Cyanoacrylate in 8 children with portal hypertension complicated by gastrointestinal bleeding.

Material and methods: 8 children (6 girls and 2 boys), mean age 15 months (9-23), average weight 8.5 kilograms (5.5 to 10.3) with portal hypertension were hospitalized for gastrointestinal hemorrhage with acute anemia. Endoscopy was performed under general anesthesia. The bleeding was related to the VO of grade III-IV (3 children) or VSC (5 children). The adhesive used was the Histoacryl® (1 case) or Glubran® (7 cases).

Results: The shutter by bonding the VO and VSC allowed to control bleeding due to portal hypertension in 8 children without immediate complication observed. 8 children (VO 3, 5 VSC) were carried out with a 1ml medium glue. Three children showed no rebleeding after the 1st session of collage, effectively treated by electrocoagulation argon plasma (n = 1) to J3 (for oozing around the bond site) or a new injection of glue (n = 2).

Conclusion: Endoscopic treatment of portal hypertension in infants remains a technical challenge. The closure of varicose veins with N-butyl-2-cyanoacrylate seems promising but must be validated in a larger number of patients.

Keywords: *portal hypertension, endoscopic treatment, infants*

Dilated cardiomyopathy in Bland White Garland syndrome: mitral regurgitation, is it a cause or a consequence?

Author: *Souabni Seif Eddine*

Co-authors: *Soury Arselen, Selmi Monaam, Houidi Ahmed*

Scientific coordinator: *Associate professor Irina Iuliana Costache*

Introduction: Bland white garland syndrome, better known as anomalous left coronary artery from the pulmonary artery, is a rare congenital anomaly in which the left coronary artery (LCA) branches off the pulmonary artery instead of the aortic sinus causing serious complications.

Material and methods: We report the case of a 3 months old patient hospitalized for dyspnea, cyanosis, cold sweating and altered state of consciousness. Echocardiography showed grad 3 mitral regurgitation and grad 2 tricuspid regurgitation and a dilated cardiomyopathy,

Results: He was given symptomatic treatment and discharged , 2week after the patient comes back in a worse condition (heart failure), doctors has discovered the presence of blind white garland Syndrome (ALCAPA) and he was operated in urgency and came to the conclusion that the mitral and tricuspid regurgitation were the consequences of the pathology and not the cause.

Conclusion: Hereby we recommend that the search for ALCAPA syndrome should be systematic for dilated cardiomyopathy in all infant cases.

Keywords: *mitral regurgitation, ALCAPA*

Management of pharmaco-resistant seizures in extensive low grade glioma: insights from a case

Author: *Alexandra-Ioana Bohan*

Scientific coordinator: *Assistant professor Irina Moisei-Constantinescu, MD, PhD; Associate Professor D. I. Cuciureanu, MD, PhD*

Introduction: Seizures represent a frequent revealing symptom in low grade glioma, but they often imply difficult therapeutic approaches as they don't usually respond to different associations of antiepileptic drugs, thus defining pharmaco-resistant epilepsy.

Material and methods: We present a case of a 34-years old patient, right-handed, with no significant medical history, who was addressed in the Neurology Department for investigation of two epileptic, focal seizures with secondary generalization in the same year. The semiology suggested a mesio-temporal and insular onset. Scalp electroencephalographic recordings have revealed epileptogenic elements in the right anterior temporal region. The cerebral imagery detected a large tumor involving the frontal, temporal and parietal lobes of the right side of the brain. The exploratory surgery revealed a 3rd grade glioma and at the time being, no curative surgery was proposed, but radiotherapy and antiepileptic treatment.

Results: The patient continued to experience focal seizures, daily, despite polytherapy, for one year. He remained asymptomatic between seizures. The imagery showed regression of tumor post radiotherapy. Knowing that potential risk of malignancy of low grade glioma, the patient was re-evaluated by a multidisciplinary team (neurologist, neurosurgeon, oncologist), which considered sub-maximal surgical tumor resection, including anterior pole of the right temporal lobe and right insula, as the therapeutic attitude to reduce the frequency of seizures and also increase the surviving rate. The surgery resulted in no residual focal deficit and the patient is 3 months seizure free post-intervention.

Conclusion: Pharmaco-resistant epilepsy secondary to brain tumors leads to a decreased quality of life, even though patients are asymptomatic initially. Surgical approach of low grade gliomas may represent a challenge due to cost-effectiveness risk and requires a multidisciplinary discussion.

Keywords: *epilepsy, pharmaco-resistant, brain tumors*

Benzodiazepines - between treatment and addiction

Author: *Elena Mădălina Petrariu*

Co-authors: *Ioana Smaranda Lupuşoru, Constantin-Vlad Carasevici*

Scientific coordinator: *Teaching Assistant Raluca Frâncu, MD, Professor Cristinel Stefanescu, MD, PhD*

Introduction: Benzodiazepines are a class of drugs with anxiolytic, hypnosis-inductor, muscle relaxer and anticonvulsant effect. They are often used for psychiatric patients due to their rapid mechanism of action and low frequency of adverse effects. Initiation and discontinuation of benzodiazepine treatment must occur after advice given by a specialist. The risk of accidental overdose or poisoning by voluntary it's really high and installation of physical and psychological dependence may be present in a chronic drug use case.

Materials and methods: We present the case of a 78 years old patient, from Iasi county, with multiple admissions to the Institute of Psychiatry "Socola" Iaşi. The patient is admitted at the same institute for benzodiazepine dependence syndrome with polymorphic symptomatology. Psychiatric examination reveals a cooperative patient with a good orientation in time and space, with an unpleasant disposition accompanied by anhedonia, hipobulia, with an acute ideation focused on health, psychasthenia, interpretation tendency, with a poor quality and fragmented sleep, which was also drug-induced.

Following psychological examination we reveal a patient configuration with worsening depressive and anxious interpretative elements, obsessive-phobic tendency, emotionally unstable, difficulty in social integration and dependent behavior.

Results: The patient received treatment at home with Clonazepam, Quetiapine and Valproic Acid in adjusted dose. However their effect has diminished over time, and the symptoms returned. During hospitalization was tested body's response to different doses of drugs. The goal was the remission of symptoms.

Conclusion: In the case shown, psychiatric medication can be compared to a balance, in one tray is the treatment, and in the other one is the addiction, the difference lies in the dose and timing of administration.

Keywords: *benzodiazepines, insomnia, addiction*

Febrile syndrome with unknown cause – case report

Author: *Ahmed Houidi*

Co-authors: *Souabni Seif Eddine, Soury Arselen, Maiassi Nadir*

Scientific coordinator: *Andrei Vata, MD*

Introduction: B.I - male, 49 years old , without medical history or significant family history, smoking 1 pack / day, chronic alcoholic, plumber APAVITAL, originally from jud. Arges (posted 4 months in Iasi).

Material and methods: Our patient was hospitalized for: fever 38 - 39C (7 days), sweating, mio-arthralgia (more pronounced lumbar spine and lower limbs), semiconsistent feaces 2-3 / day, dry cough, paresthesia of the inferior limbs, Dupuytren's contracture in both hands ,Scleral sub-icter, symptoms persisted more than 22 days with unknown cause. We tried several times to identify the etiologic agent but lab test came consecutively negative so we tried many antibiotherapy with different spectrum , the patient got better and then his condition got worse once again .

Results: The patient was treated with betalactam antibiotic but the symptoms persisted, inflammation tests were not specific, beside the micro-reticulo-nodular aspect in the chest X ray and these facts oriented us to mycoplasma pneumoniae

Conclusion: *Mycoplasma pneumoniae* is a frequent cause of atypical pneumonia and resistant to betalactam antibiotherapy, hereby the investigation for these germ should be immediate when suspected.

Keywords: *semiconsistent feaces, paresthesia, antibiotherapy*

Phage Therapy

Author : *Soury Arselen*

Co-authors : *Souabni seif-eddine, Houidi ahmed, Ben hassine Marouen*

Scientific coordinator : *Hmida Charaf, MD, PhD*

Introduction : Bacterial viruses (bacteriophages, also called "phages") can be robust antibacterial agents in vitro. However, their use as therapeutic agents, during a number of trials from the 1920s to the 1950s, was greatly handicapped by a number of factors.

Materials and methods: In recent years, well-controlled animal models have demonstrated that phages can rescue animals from a variety of fatal infections, while non-controlled clinical reports published in Eastern Europe have shown that phages can be effective in treating drug-resistant infections in humans.

Results: Several species of bacteria have become resistant to most antibiotics, with some strains being resistant to all antibiotics. There is now a compelling need to develop totally new classes of antibacterial agents, ones that cannot be resisted by the same genes that render bacteria resistant to antibiotics. Phage therapy represents such a "new" class.

Conclusion: Multidrug-resistant bacteria have opened a second window for phage therapy. Modern innovations, combined with careful scientific methodology, can enhance mankind's ability to make it work this time around. Phage therapy can then serve as a stand-alone therapy for infections that are fully resistant.

Keywords : *bacteriophage, bacterial infections, multidrug resistance*