

Abstracts of the International Medical Students' Congress of Bucharest (IMSCB) 2018

CASE REPORTS

01. ROBOTIC MYOMECTOMY – THE NEWEST APPROACH OF UTERINE FIBROMATOSIS

Andrei C, Manu, Maria Ilinca D, Iosub, Cătălin-Bogdan, Coroleucă MD, PhD, Professor Elvira Brătîlă MD, PhD, Diana Mihai MD, PhD, Diana-Elena Comandașu, Ciprian-Andrei Coroleucă
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania. ²Affiliation: Clinical Hospital of Obstetrics and Gynaecology "Professor Dr. Panait Sârbu" Bucharest, Romania

BACKGROUND: Although benign, uterine leiomyoma is an affliction that the female population frequently confronts with and is associated with a significant morbidity. Because a tendency of delaying the pregnancies has been seen lately, uterine-sparing techniques are needed, hence the increased use of myomectomy, especially in women who intend to preserve fertility. The introduction of robotic surgery has expanded the indications for minimally invasive myomectomy to more complex cases previously performed by laparotomy. **CASE PRESENTATION:** We are presenting two cases of female patients that were diagnosed with uterine fibromatosis. Both presented to the hospital with a history of heavy menstrual bleeding prolonged for more than a week, metrorrhagia, and pelvic pain. Their past medical history showed no other significant ailments. The 40 years old patient is nullipara and she underwent a laparoscopic myomectomy in the past when she was diagnosed with severe anemia leading to a blood transfusion prior to the intervention. The latest MRI showed multiple (approximately 13) fibromatosis nodules with various locations: intramural, submucosal, subserosal and pedunculated subserosal or submucosal. They had dimensions varying from 4 to 8 centimeters. The 38 years old patient was diagnosed with a 7 centimeter intramural nodule. On both patients was performed a robotic-assisted laparoscopic myomectomy. They suffered no intra or postoperative complications, had a good outcome and a decreased blood loss (approximately 190 mL) and hospitalization (3 days). From the surgical perspective the primary advantages observed with this approach have been the improved dexterity and precision of the instruments coupled with three-dimensional imaging. **CONCLUSION:** These cases were chosen to be presented in order to demonstrate that myomectomy performed through robotic surgery is a safe and achievable procedure, with reduced blood loss, but having the inconvenience of a higher cost. Its role in the myomectomy field is to perform a surgery with an effectiveness compared to the transabdominal approach while preserving the benefits of minimally invasive surgery. As opposed to laparoscopy, robotic surgery allows the removal of larger and less accessible tumors.

Key words: Robotic Surgery, Uterine fibromatosis, Myomectomy, Leiomyoma

02. PEDIATRIC WANDERING SPLEEN: A DIFFICULT ASSIGNMENT

Andreea I.A. Martiniuc, Andreas V Savin, Paula N Sofica, Andrei Cătălin D. Coroiu, Ioan Sarbu
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania

BACKGROUND: Wandering spleen is an uncommon condition that appears when the spleen lacks one or more of the ligaments that hold the organ in its normal position in the upper left abdomen. The incidence of this disease is less than 0,2%. If a person is born with the anomaly it is called a

congenital wandering spleen. The condition is not hereditary. Treatment for this condition involves removal of the spleen. **CASE PRESENTATION:** A 20 months old girl is hospitalized in another institution for fever and cough; a routine ultrasound was requested and it revealed a pelvic tumor of 70/40 mm, localized behind the bladder. At the clinical examination, the patient had a dystrophic facies, microcephaly, left polythelia and a tuberosus hemangioma on the left forearm. Positive history for occasional alcohol consumption during her mother's pregnancy and a diagnosis of fetal alcohol syndrome of the baby was established. The biological exam revealed hypochromic anemia with a low level of iron, eosinophilia, important thrombocytosis (952.000 / uL), elevated ESR and low alkaline reserve. A CT-scan was performed and it showed the absence of the spleen in the left upper abdomen, but a liquid structure with proteinaceous content located in the hypogastric region, postero-superior of the bladder and in front of the rectum and sigmoid. A laparoscopy was performed and the diagnosis of wandering spleen was confirmed. A splenectomy is decided to be performed, using a celioscopic procedure, with the fragments of the spleen being removed through the umbilical incision. The postoperative course was favorable. **CONCLUSION:** Wandering spleen is rare but it can be the source of ischemia or infarction. If the splenic pedicle is twisted the blood supply may be interrupted or blocked to the point of severe ischemia and damage of the parenchima (infarction). Laparoscopy is a safe and useful procedure for both diagnosis and therapy.

Key words: wandering spleen, laparoscopy, pedicle, splenectomy

03. NASAL RECONSTRUCTION WITH DOUBLE PARAMEDIAN FOREHEAD FLAP

Georgios F. Karanasios, Stamatis Sapountzis MD
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania
St. Luke's Hospital, Thessaloniki, Greece

BACKGROUND: Basal-cell carcinoma (BCC) is the most common skin cancer and accounts for 32% of cancers globally. The nose is the facial area where most BCCs are seen. The forehead flap represents a useful flap for nasal soft tissue reconstruction. We present a case of subtotal rhinectomy reconstructed with double forehead flap. **CASE PRESENTATION:** An 82-year-old male patient presented with a progressively growing huge tumor on his nose. He was complaining of nasal cavity compression, pain and visual impairment as the tumor was obstructing his visual field. Physical examination revealed, a large exophytic, ulcerated, pedunculated mass covering the nasal sidewalls, alar regions, nasal dorsum, nasal tip and extending about 1-cm lateral to the right aspect of his nose over the cheek. The tumor was about 7x8cm. The lesion was painful, foul-smelling, with rolled border and a pigmented surface. Histopathologic examination demonstrated tubular BCC. CT scan was negative for metastasis. Subtotal rhinectomy was performed along with a two-stage nasal reconstruction surgery. In the first stage, two paramedian forehead flaps were used, one for the reconstruction of the nasal lining and the other, for the external coverage of the nose. Cartilage grafts from the right concha were obtained to rebuild the lower alar cartilage and provide support. The cheek defect was corrected by an advancement cheek flap. The second stage was performed 8 weeks from the date of the initial surgery to allow maximal neovascularization and healing at the recipient site. At this stage, the flaps were divided, and the inner eyebrows and normal intereyebrow distance

were recreated. The proximal inset flap was thinned and sculpted to reconstruct the nose. Further cosmetic improvement was possible with additional flap thinning and dermabrasion. **CONCLUSION:** Early diagnosis of BCC is critical since the size of the tumor is inversely related with the aesthetic result and positively related with the required flap size and number, complication rate, cost of treatment and healing time. The forehead flap represents an ideal donor for skin coverage due to the similarity of the tissue properties, the good color and texture match and the excellent donor-site healing.

Key words: Basal-cell carcinoma, Paramedian forehead flap, Nasal reconstruction.

04. **BLACK ESOPHAGUS – A RARE CAUSE OF GASTROINTESTINAL BLEEDING**
Cristiana Victoria Nicoleta G. Hergelegiu, Andreea I M Zoican MD, Mariana Jinga MD, PhD, Vasile Daniel Balaban MD, PhD
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania, "Dr. Carol Davila" Central Military Emergency University Hospital, Bucharest, Romania

BACKGROUND: Acute esophageal necrosis (AEN) or „black esophagus” is a rare clinical entity, diagnosed at the upper gastrointestinal endoscopy with the presence of strikingly black necrotic esophagus and associated with significant morbidity. It is thought to occur as a poorly elucidated ischemic phenomenon. We report the case of an elderly female who underwent surgery for a kidney tumor and whose recovery was hampered by AEN. **CASE PRESENTATION:** A 69-year-old female, non-smoker, previously known with cardiovascular disease, on oral anticoagulant for atrial fibrillation, was admitted for nephrectomy in the Urology Department, being recently diagnosed with a right kidney tumor. The surgical intervention was carried out uneventful, but on post-operative day two she had an episode of coffee ground hematemesis and a 2g drop in hemoglobin levels. After hemodynamic and biological assessment and start of fluid resuscitation, an upper gastrointestinal endoscopy (UGE) was done, which revealed circumferentially black-appearing mucosa of the entire esophagus, with sharp transition to normal mucosa at the gastroesophageal junction, hematin residues in the stomach and duodenum - suggestive for AEN. The patient was started on intravenous fluids, antibiotics, high dose proton pump inhibitors and nil per os. Evolution was favorable, without rebleeding and with good transition to oral feeding. A control UGE after two weeks showed re-epithelization of the esophageal mucosa. **CONCLUSION:** AEN can complicate the post-operative course of surgical patients and should be considered in the differential diagnosis of gastrointestinal bleeding in these patients, for which stress ulcers are mostly blamed. Recognition of this pathological condition with prompt medical therapy is needed in order to avoid severe complications.

Key words: Acute esophageal necrosis, Black esophagus, Upper gastrointestinal endoscopy, Hematemesis

05. **THE NEGATIVE VAC PRESSURE METHOD IN DIABETIC FOOT THERAPY: PRESENTATION OF A CASE WITH A REVIEW OF THE RELATED LITERATURE**
Ergina C Syrigou, Christos G. Tsagkaris, Alexandros Kamaratos
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania
University of Crete, Faculty of Medicine, Crete, Greece.

BACKGROUND: It is estimated that 15 to 20% of patients with type II diabetes mellitus have diabetic foot ulcer. Approximately half of these patients will be diagnosed later than they should, resulting in long-term and costly complications, removal from their working environment or even amputation. The aim of this paper is to present the results of applying the negative pressure VAC method to a patient with a highly exudative diabetic foot ulcer that is monitored in our center. **CASE PRESENTATION:** A 65-year-old man presents with a foot ulcer in the malleolus area. The patient is being treated and since 1990 he has been monitored at the Diabetic Foot Clinic of Tzanio GHP. More specifically, the patient is suffering from a venous ulcer in the lateral malleolus of the right leg and is being treated with antidiabetic tablets and insulin. He has a history of hospitalization for treating the ulcer with antibiotic treatment. The patient is hospitalized for ten days in the internal medicine clinic where the ulcer was treated by the VAC method. More specifically, a sponge set with a silver sulfadiazine patch and a hydrocolloid matrix with baseline molecules were applied to the ulcer for ten days exerting a negative pressure of 80mmHg. Changes were made

every three days. During hospitalization, there was a significant decrease in the depth and width of the ulcer, as well as a noticeable reduction in exudation extinction. In later monitoring, ulcer healing was faster compared to conventional cuff therapy while the patient returned to his daily activities and was satisfied with the overall treatment approach. **CONCLUSION:** Based on the case, the utility of the VAC method is documented in patients with severely exudative ulcers. The VAC ensures absorption of the exudate and reduces the humidity of the wound for at least 72 hours, which the conventional patches achieve for four hours. At the same time, the implementation of the VAC in the hospital is done according to guidelines and the application of the patches is done at the will of the patient.

Key words: Diabetic, Foot, Ulcer, VAC

06. **A CHALLENGING CASE OF SYNDROME OF INAPPROPRIATE SECRETION OF ANTIDIURETIC HORMONE WITH ASSOCIATED ACID-BASE AND HYDROELECTROLYTICAL DISTURBANCES**
Cătălina Gabriela Popovici, Alexandra Nicoleta N Ioanid, Ioana Adriana A.G. Serban, Stefania Madalina P. D. Asavei, Mihaela Dora Donciu MD, PhD.
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania

BACKGROUND: Although the Syndrome of Inappropriate Secretion of Antidiuretic Hormone (SIADH) represents one of the most common causes of euvolemic hyponatremia, both the diagnosis and the treatment of this condition remain a challenge. SIADH develops when there is a deficiency in suppressing the secretion of ADH, the etiology consisting of: nervous system disorders, pulmonary diseases and certain types of drugs. **CASE PRESENTATION:** We present the case of a 69-year-old male patient, a chronic alcohol consumer, that was admitted in the Emergency Department (ED) for severe neurological symptoms (disorientation, confusion, alternative lethargy and psychomotor agitation), which had debuted 3 to 4 weeks prior to this episode, and had worsened progressively. Personal history includes Primary Hypertension (treated with beta-blockers, calcium channel blockers, thiazide diuretics). Even if the neurological and imagistic examinations were inconclusive, paraclinical testing revealed Hyponatremia, Hypokalemia, Hypochloremia, Hypomagnesemia and Metabolic Alkalosis. The differential diagnosis included Darrow Syndrome, Bartter Syndrome, Gittelman Syndrome, primary hyperaldosteronism and mineralocorticoid deficiency, but they were excluded on the base of further paraclinical testing and other investigations (superior digestive endoscopy, aldosterone, renin and cortisol dosing). At first, the hyponatremia was considered hypovolemic, due to digestive losses and low water intake, but after volemic resuscitation, the final diagnosis was euvolemic hyponatremia. Its etiology (thyroid/adrenal deficiency) was taken into consideration, but the final diagnosis of SIADH was confirmed after further testing (urinary osmolality 142 mOsm/kg, urinary Na level of 39 mEq/L). Other relevant findings included a Bosniak grade 3 cyst. After NaCl, KCl and oral Mg Spironolactone administration, the metabolic alkalosis and hypokalemia were corrected. There was also a small improvement in the hyponatremia after hydration. **CONCLUSION:** The particularity of this case is the conglomerate of hydroelectrolytical and acid-base disturbances, as well as the fact that there is no association in literature between a Bosniak 3 cyst and SIADH.

Key words: SIADH, Hypokalemia, Hyponatremia, Metabolic Alkalosis, Bosniak 3 Cyst

07. **PERIORBITAL NECROTIZING FASCIITIS – A RARE DISEASE WITH A FULMINANT EVOLUTION**
Adina Georgiana A. Para, Remus-Andrei C. Tofan, Angela C. Oarza, Mihaela Pertea MD, PhD
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania.
Clinic of Plastic Surgery and Reconstructive Microsurgery, "Sf. Spiridon" Emergency County Hospital, Iași, Romania

BACKGROUND: Necrotizing fasciitis is a severe infection of the skin and the subcutaneous tissue with a significant rate of mortality. It is characterized by a rapidly extensive soft tissue infection and necrosis along the superficial fascia and systemic toxicity. Over the last 20 years, only 94 cases of periorbital necrotizing fasciitis were reported. **CASE PRESENTATION:** We present the case of a 67-year-old, homeless, with psychiatric history, who suffers from a multiple wound aggression in the cephalic extremity. He addresses 14 days after the trauma with an infection, showing significant

edema of the left hemifacial with extension to the scalp and occipital region. The area of necrosis is about 10/7 cm in the vertex. For diagnosis, LRINEC (laboratory risk indicator for the diagnosis of necrotizing fasciitis) is used, obtaining a score of 9. The microbiological examination shows a polymicrobial infection. Under general anesthesia, necrectomy, enucleation of the left eyeball, and fasciectomy were performed. Parieto-occipital necrectomy leaves the bone exposed. On the 5th postoperative day, the patient's general condition is improved. It is surgically reintervened for the secondary suture of the wound and the coverage of the denuded bone with a rotation fascial flap and plastia with free split skin, as well as the orbit. During hospitalization, the patient undergoes a type A and B Clostridium Difficile infection, with a relapse 3 weeks after the first manifestation and he also suffers a psychiatric decompensation. The patient is discharged after 40 days of hospitalization, with a good general condition, sent to the psychiatric clinic to continue the specific treatment. The patient is completely cured and will need an ocular prosthesis. **CONCLUSION:** Necrotizing fasciitis is a rare, very aggressive pathology with high mortality potential, for which treatment should be established immediately.

Key words: Fasciitis, Infection, Necrosis

08. **EDGE-TO-EDGE (ALFIERI) MITRAL REPAIR COMPLICATED BY PAROXYSMAL ATRIAL FIBRILLATION AND SEVERE TRICUSPID INSUFFICIENCY**
Maria-Alexandra G.C. Visan, Andrei-Mihai M.V. Iacob, Ottavio Alfieri
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania. Division of Cardiac Surgery, San Raffaele Hospital, Milano, Italy

BACKGROUND: Patients with degenerative mitral regurgitation (MR) represent the largest subset of candidates for mitral valve surgery, with supporting evidence for repair over replacement being strongest in this population. While most repair techniques correct posterior leaflet prolapse, the edge-to-edge Alfieri stitch augments the repertoire of valvuloplasty procedures by addressing anterior leaflet repair, which continues to pose significant operative challenges. We present a case of Alfieri mitral repair accompanied by some of the most and least common associated pathologies of degenerative MR. **CASE PRESENTATION:** A 60-year-old non-smoker male, NYHA I, negative for ischemic cardiomyopathy, reported to the Cardiovascular Unit of the San Raffaele Hospital following an episode of heart palpitations. Transthoracic echocardiography (TTE) primarily revealed a severe degenerative mitral regurgitation by prolapse of the A2-A3 segments of the anterior leaflet, due to fibroelastic deficiency, with a holosystolic regurgitation jet of centro-medial origin and intermediate risk of systolic anterior motion (SAM). A monophasic diastolic pattern of atrial fibrillation (AF) accompanied mitral insufficiency. Among cardio-pathological conditions, a severe tricuspid regurgitation by annular dilation was additionally described, with a central and eccentric double jet and severe pulmonary hypertension, characterized by a systolic pulmonary artery pressure (PAPs) of 55 mmHg. Surgical therapy was initiated by radiofrequency ablation of the AF through pulmonary vein antrum isolation (PVAI), followed by a Kay anuloplasty for correction of the tricuspid insufficiency. Mitral valvuloplasty was performed through an A2-P2 suture as part of the double-orifice or Alfieri technique, completed by placement of a posterior prosthetic hemi-annulus. Besides a recurrent episode of AF addressed through hydroelectrolytic reintegration, post-operative evolution was regular, with a normal transvalvular gradient and minimal regurgitation residue. **CONCLUSION:** While AF is present in 30-40% of patients with degenerative mitral insufficiency, tricuspid regurgitation is uncommon. Although both conditions have been reported to present recurrent activity, studies suggest that performing ablation and tricuspid valve repair initially in mitral valve surgery is superior to the outcome of isolated procedures. In terms of mitral repair, the Alfieri technique remains an effective method to restore mitral competence in degenerative regurgitation.

Key words: degenerative mitral regurgitation, mitral valve repair, edge-to-edge Alfieri technique, atrial fibrillation, tricuspid insufficiency

09. **DESCEMET'S MEMBRANE ENDOTHELIAL KERATOPLASTY TRIPLE PROCEDURE**
Maria-Delia N. Florean-Cristina Peris-Martinez² MD, PhD, Mikhail Hernandez Diaz MD, PhD

"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania, Fundació per al Foment de la Investigació Sanitària i Biomedica-FISABIO- Oftalmologia Medica (FOM), Valencia, Spain

BACKGROUND: Fuchs endothelial dystrophy (FED) is characterized by an asymmetrical, bilateral, slowly progressive edema of the cornea in elderly patients and affects the endothelial cells. **Descemet's membrane endothelial keratoplasty (DMEK)** is a new minimal invasive surgical technique of corneal transplant used to treat FED. In this procedure, only the inner layers of the cornea are replaced (Descemet membrane-DM and endothelium). If cataract is associated with FED, surgeons can perform the phacoemulsification and lens replacement concurrently with the DMEK, procedure known as **"DMEK triple procedure"**. **CASE PRESENTATION:** We report the case of an elderly patient with simultaneous FED and cataract. The patient presented to FISABIO Oftalmologia Médica (FOM) Valencia with right eye sensitivity, fotofobia and blurred vision. The visual acuity was 0.2. The corneal edema, the folds on DM, the corneal thickness of 643 micrometres were consistent with the expected findings of endothelial dysfunction secondary to FED. Also, the patient had grade 3 nuclear cataract in the right eye, so we performed DMEK triple procedure. A small incision was made on the side of cornea, we injected viscoelastic material and removed the lens by phacoemulsification; after cataract removal and intraocular lens (IOL) implantation, dysfunctional DM and endothelium were stripped from the host cornea. The visco was removed from anterior chamber to ensure the DM attachment. The healthy donor DM and endothelium were stained with trypan blue, positioned and unscrolled into the eye, after we injected sulfur hexafluoride (SF6) 20% to secure graft position and elevate intraocular pressure (IOP). In the first post-operative month, the anterior optical coherence tomography (OCT) scans confirmed graft adherence and demonstrated resolution of stromal edema and **Descemet's folds. The visual acuity improved to 0.65 with pinhole** and pachymetry showed a decrease of corneal thickness to 536 micrometres. **CONCLUSION:** DMEK triple procedure is an effective strategy in rapid visual rehabilitation and offers the advantage of having low risks of rejection, low infectious risks and costs. Technique standardization and confirmation of its success via further clinical study will make the procedure more accessible to surgeons all over the world and aid in its widespread adoption.

Key words: cataract, Fuchs endothelial dystrophy, Descemet membrane, DMEK triple procedure

10. **SLEEP-DISORDERED BREATHING IN A PATIENT WITH COCAINE-INDUCED DILATED CARDIOMYOPATHY**
Anamaria Romana V. L. Orghidan, Magda Mitu MD, PhD, Mihai Roca, Ioana Madalina Zota, Florin Mitu
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania, Affiliation: Cardiovascular Rehabilitation Clinic, Iași, Romania
"Professor Dr. George I.M. Georgescu" Institute of Cardiovascular Diseases, Iași, Romania

BACKGROUND: Cocaine is a common recreational drug acting as a strong sympathetic agonist via the inhibition of norepinephrine re-uptake. Cardiac toxicity caused by cocaine abuse can manifest as arrhythmia, acute coronary syndrome, hypertension and other fatal cardiovascular complications. Sleep-disordered breathing, including central (CSA), obstructive (OSA) or mixed sleep apnea, is reported in more than 33% of patients with heart failure, and is associated with a poorer prognosis. Current therapy options for patients with CSA and heart failure with reduced ejection fraction include continuous positive airway pressure (CPAP) or bi-level positive airway pressure (BiPAP). **CASE PRESENTATION:** We present the case of a 47-year-old male, admitted in our local Cardiovascular Rehabilitation Clinic, accusing shortness of breath upon moderate exertion, atypical chest pain and moderate-severe daytime sleepiness according to the Epworth Sleepiness Scale. Past medical history includes a resuscitated cardiac arrest at the age of 41, when the patient was diagnosed with toxic dilated cardiomyopathy due to cocaine abuse (normal epicardial coronary arteries upon angiography), NYHA class III chronic heart failure with severely reduced ejection fraction (25%) and persistent atrial fibrillation. Our patient is an active smoker (30 pack-years) but denies current alcohol or substance abuse. Upon admission: body mass index 29,2 kg/m², blood pressure 100/80 mmHg, heart rate 100/min, laterally displaced apical impulse, tachyarrhythmic heart sounds. Echocardiography confirmed dilated cardiomyopathy with severely impaired ejection fraction (29,3%), atrial

dilatation and mild tricuspid regurgitation. Cardiorespiratory polygraphy diagnosed a severe form of mixed sleep apnea (apnea-hypopnea index 33,6/h), and the patient started CPAP therapy - 4-8 cmH2O. Sadly, the subject returned the device after 2 weeks, motivating the inability to sleep due to high ventilation pressures. CONCLUSION: Cocaine is a strongly addictive recreational drug which can cause irreversible myocardial damage. Sleep apnea is still underdiagnosed in patients with cardiovascular disease. Cardiorespiratory polygraphy is an accepted alternative to polysomnography, although the latter remains the gold standard diagnosis test for sleep apnea. CSA treatment is difficult due to poor patient adherence to noninvasive ventilation, and high cost of the treatment.

Key words: dilated cardiomyopathy, sleep apnea, cocaine abuse.

11. NITRITE POISONING IN INFANTS – THERAPEUTIC CHALLENGES
Matei R. Iurea, Anamaria Giorgiana V. Felecan, Ioana-Lavinia N Misirgic, Georgeta G Argatu, Cristina Mării, Ionuț Isaia Jeican
"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania
Children's Emergency Hospital Cluj-Napoca, Romania

BACKGROUND: The incidence of nitrites poisoning (NP) in Romania has been decreasing in the last years: in 2011 there were only 84 reported cases while in 2006 there were 228 cases. Despite of the decreases, NP caused by water from contaminated wells is still a public health safety concern that affects primarily 0-1 year old infants. The classic symptom of NP is generalized cyanosis (that appears usually when the methemoglobinemia reaches 10-20%) that does not yield to oxygen therapy. The generalized cyanosis appears because nitrites stimulate the conversion of haemoglobin into methemoglobin, which is unable to release oxygen to the tissues, thus leading to a potentially life-threatening condition. It is very important to diagnose NP properly as soon as possible and start the appropriate medical treatment (that consists of blue methylene in a dosage of 1-2 mg/kg) before the symptoms induced by hypoxia start occurring. CASE PRESENTATION: We present the case of an one-month old male patient, with generalized cyanosis, who was transferred from a territorial hospital with the suspicion of bronchopneumonia. While being admitted into the emergency department of the Emergency Pediatric Hospital in Cluj Napoca, it was determined that the generalized cyanosis persisted under supplemental oxygen, with an 83% oxygen saturation level. However, no pulmonary rales or pathological heart sounds were heard. Furthermore, blood tests showed the chocolate brown blood that is characteristic for NP and a MetHb value of 58,5%, that could potentially have led to coma or even death. Through the anamnesis, it was determined that the patient's milk was prepared using water from the well, which led to a diagnosis of NP with severe methemoglobinemia. Because methylene blue was not available in Romania at that point, vitamin C (30 mg/kg) was administered intravenously and the MetHb levels dropped to 8% in a 12-hour range. CONCLUSION: NP must be included in the differential diagnosis when the patient presents generalized cyanosis that does not yield to oxygen therapy. Unfortunately, determining the MetHb levels and administering methylene blue are not available in a lot of the Romanian hospitals.

Key words: nitrites poisoning, methylene blue, nitrites

12. A RARE JEJUNOILEAL ATRESIA CASE IN A NEONATE AND THE BEST SURGICAL MANAGEMENT
Oana-Stefania Pintilii, Andra-Maria C.C. Cojocar, Assistant Lecturer Elena Hanganu
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania

BACKGROUND: Jejunoileal atresia is a congenital bowel obstructive malformation related to a late intrauterine mesenteric vascular accident. Multiple intestinal atresia (MIA), type 4, represents 5 % of intestinal atresias, with an incidence of 1-3/10.000 live births. Several sections of the intestine are blocked, affecting its ability to absorb nutrients and surgical approach is urgently demanded. Thus, such surgery might be hazardous in a compromised newborn infant. CASE PRESENTATION: Male infant, born at 34 weeks of gestation, weighing 2800 g, presented in the Emergency Department of „Sf. Maria Pediatric Hospital Iasi” for neonatal intestinal obstruction syndrome. In the first 3 hours of life, the baby vomited biliary contents. Through a gastric tube, 40 mL of bile-fluid were aspirated. In 24 hours, no meconial stool was registered. At clinical examination, a distended abdomen arose up questions. Therefore, thermic comfort, fasting,

hydrostability and antibiotic prophylaxis were established. Abdominal X-ray and Webb Wangenstein findings indicated a diagnosis of congenital jejunal and ileal atresia on multiple levels. The opacity in the hypogastrium and the absence of gas in the pelvis correlated the symptoms. The surgical intervention was considered an emergency for the neonate. Consequently, a supraumbilical and subumbilical median laparotomy with the exploration of the peritoneal cavity was performed. After that, 6 segmentary resections on the atretic areas with termino-terminal anastomoses were done with the preservation of the ileocecal valve. Also, a jejunostomy and ileostomy were accomplished and a nasogastric tube had been left in place until the bowel functions returned. After 24 hours from surgery, he passed stool, bowel movement being recovered after 28 days, when the stoma was closed. Oral feeding was started gradually and he was discharged in good condition. CONCLUSION: For neonates with congenital multiple intestinal atresia, performing multiple anastomoses is preferable rather than performing an extensive resection of the intestine, so no short gut syndrome, dilated or paralyzed segments, malabsorption syndrome could be encountered. However, neonatal intestinal obstruction syndrome continues to be a diagnostic challenge and the best surgical management is absolutely demanded in order to assure the integrity of the digestive tract and fast recovery.

Key words: jejunoileal atresia, intestinal obstruction syndrome, emergency, congenital malformation

13. LUNG CANCER REVEALED BY ADULT DERMATOMYOSITIS - THERAPEUTIC CHALLENGES
Cătălina Ioana Branisteanu, Alexandra Nicoleta N Ioanid, George D. Branisteanu, Daciana Branisteanu,
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania

BACKGROUND: Dermatomyositis is a multisystem collagenosis affecting the skin, muscles and blood vessels. Its characteristic erythematous-edematous skin changes are usually associated with myositis phenomena. In adults it is commonly associated with carcinoma or lymphoma, the primary tumor being located in order of frequency in the lungs, female genital organs, stomach, rectum, kidney, and testis. In adults, paraneoplastic dermatomyositis accounts for 26% of all dermatomyosites. Typically, the course of paraneoplastic dermatomyositis parallels the course of cancer, and the treatment of the tumor may result in disease regression. CASE PRESENTATION: A 46-year-old patient presented in May 2012 with skin lesions suggestive of the clinical diagnosis of dermatomyositis. To this clinical picture the patient also associated myalgias, especially in the pelvic girdle, and malaise with fatigue, weight and appetite loss. Histopathology of muscle-skin biopsy confirmed the diagnosis of dermatomyositis. Given the aggressive occurrence of skin and muscle lesions and cancer history (operated stage 1B cervical cancer) a paraneoplastic dermatomyositis was suspected. Successive investigations to detect a neoplasm ruled out the suspicion of cervical cancer recurrence or metastasis, but diagnosed a left lung cancer, pathologically representing a poorly differentiated small cell squamous carcinoma with focal keratinization. General corticotherapy associated with medium potency topical corticosteroids were initiated. Six cycles of cisplatin-etoposide chemotherapy resulted in partial remission and disappearance of clinical signs of paraneoplastic dermatomyositis, followed by the surgical treatment of left lung tumor. Six month after surgery skin lesions reappeared, raising the suspicion of lung cancer recurrence or metastasis occurrence. Cranial- thoracic-pelvic CT detected the presence of brain metastases which were treated surgically. CONCLUSION: The particularity of this case is that paraneoplastic dermatomyositis has not occurred with the first tumor, cervical cancer, but was the accompanying paraneoplasia of the second tumor, lung cancer. Both tumors can be accompanied by paraneoplastic dermatomyositis. Currently, no predictive factors for the development of paraneoplastic dermatomyositis have been described.

Key words: dermatomyositis, paraneoplastic dermatomyositis, lung cancer, brain metastases

14. SILENT HEART ATTACK HIDDEN BY A RESPIRATORY INFECTION
Andreas V Savin, Andreea I.A. Martiniuc, Paula N Sofica, Andrei Cătălin D. Coroiu, Lecturer Irina Esanu
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania

BACKGROUND: Acute myocardial infarction (IMA) is the leading cause of death through a single disease in the modern days. Mortality by IMA reached 30%, half of deaths occurring before reaching any type of medical attention. Even though this serious illness can be easily diagnosed, sometimes the signs can mislead. **CASE PRESENTATION:** An 83-year old woman, with a history of chronic obstructive pulmonary disease (COPD), bronchiectasis, high blood pressure grade 2 (HBP) and Parkinson disease, is hospitalized for an infectious intercurrent episode with an insidious onset of about 3-4 days through fever, irritable cough, dyspnea, chest pain, polyarthralgias and headache. At the objective examination of the thorax, she had emphysema, bilateral symmetrical costal trips and rheumatism rinses disseminated on both pulmonary areas. From the anamnestic and clinical data, the following conditions could be concluded in a strong COPD – bronchiectasis, low urinary infection and algic and functional decompensated arthritic disease. The blood test resulted a CK-MB 51 U/L and Troponin 2.93 ng/ml. The electrocardiogram (EKG) revealed ST overdrive in V2 and V3. On the evolution of EKG, the pathologic Q did not appear, which can be alarming because studies showed similar or worse prognostic than those having this wave present. As a result of the clinical and anamnestic data and the paraclinical investigations, the positive diagnosis was: antero-lateral acute myocardial infarction, bacterial left-hand pneumonia, HBP grade 2 high-risk third stage, bronchiectasis – COPD. The treatment included: hygienic-dietary regimen, medication including Spiriva, Seretide, Bisoprolol, Nitromint, Plavix, Crestor and a return to the hospital after one month. **CONCLUSION:** This case illustrates the possibility of missing an acute myocardial infarction diagnose because of lack of clinical signs and of the value of all the paraclinical analysis which showed the problem behind. Recognition of this illness is critical to institution of appropriate therapy and to prevent heart necrosis.

Key words: acute myocardial infarction, bacterial left-hand pneumonia, high blood pressure, chronic obstructive pulmonary disease, bronchiectasis, electrocardiogram

15. **CYTOKINE ADSORBER TREATMENT IN SEPSIS – CLINICAL CASE**
Andra-Delia V. Dorneanu, Timofte L.D. Raluca, Blaj Mihaela
"Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania

BACKGROUND: Sepsis is a life-threatening organ dysfunction that arises when the body mounts an inappropriate response to an infection with organ dysfunction. Sepsis is one of the leading causes of mortality in Intensive Care Unit (ICU), the proper management of septic shock being of paramount importance. The clinical syndrome of sepsis consists of a myriad of cellular and biochemical interactions between the pathogenic agent and the host that promote immuno-inflammatory responses. There are specific molecules within the microbial antigen called pathogen-associated molecular patterns (PAMPs) that can activate the innate immunity and trigger the inflammatory cascade. The primary proinflammatory mediators secreted by the organism as a reaction to an insult are IL-6, IL-8, and IFN- γ . A better understanding of the human immune physiology advocate in recent time the use of cytokine filters with the purpose of clearing out the proinflammatory cytokines, thus rendering hemodynamic stability to patients in septic shock. **CASE PRESENTATION:** We present the case of a 44-year-old male patient admitted with sepsis through hepatic abscess with Acute Physiology and Chronic Health Evaluation score APACHE II of 27 and a Sequential Organ Failure Assessment score SOFA of 15. An empirical broad-spectrum antibiotic was administered, drainage of the liver abscess was performed, vasopressor and fluid therapy has been performed. The patient underwent one session of Continuous Renal Replacement Therapy (CRRT) with a cytokine filter (CytoSorb®) that adsorbs and removes cytokines. A rapid hemodynamic stabilization with reduction of vasopressor needs was noted within 24 hours as well as a reduction in infection markers. **CONCLUSION:** CytoSorb application as an adjuvant therapy could be considered in septic shock because it reduces inflammatory response and decreases cytokine storm broadly.

Key words: Sepsis, cytokine adsorber

16. **FROM HPV VERTICAL INFECTION TO THORACIC SURGERY – 80 INTERVENTIONS IN A 25 YEARS OLD MALE**
Maria Cătălina D. Ceaușescu, Olga Dănăilă, Lecturer Cristian Paleru
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania. "Marius Nasta" Pneumophthisiology Institute, Bucharest, Romania

BACKGROUND: Human papilloma is a virus with tropism on the respiratory tract mucosa of the newborn. The contamination is vertical and the newborn has low probability of reaching the adulthood. The presented case is a 25-years old male, who has undergone 80 interventions in the otorhinolaryngology, pulmonology and surgery departments, aiming to preserve the patency of the upper and lower airways and the functionality of the lungs. **CASE PRESENTATION:** 25-years old patient was admitted in the Thoracic Surgery Department in 2015, presenting bilateral pulmonary pseudo-tumors of necrotic tissue and multiple pseudo-tumors of HPV origin. His medical history presents over 70 upper airway desobstruction interventions. The computed tomography reveals multiple air cavities in both lungs, with a right lung predominance in 2010, followed by a massive lesion of 7 cm in the right inferior lobe and multiple nodules in the left inferior lobe in 2015. After bronchial desobstructions, a 2-steps surgical intervention on his lungs is decided and performed in 2015 and 2016. A number of 3 bronchoscopy exams are performed between 2015 and 2018 describing the evolution. The patient evolution was favorable until 2018, when a relapse is suspected in the left inferior lobe and another surgical procedure is scheduled for December 2018. The HPV respiratory infections usually prevents the evolution of a pediatric patient. The desobstruction maneuvers of the upper and lower airways allow the development of the patients to an adult age. Due to the HPV descending colonization of the respiratory tract, the pseudo-tumor formations require an aggressive resection protocol, taking into account the danger of local dissemination and the possibility of oncological degradation. The anti-infectious treatment has moderate outcomes, unable to control the disease. **CONCLUSION:** Early desobstructive treatment in vertically infected patients with HPV leads to life prolongation. The advancement of the infection to the lower airways indicated successive pulmonary resection surgeries. The prevention of oncological shift is a major objective in HPV with lung determinations, antiviral treatment having limited effects in this pathology.

Key words: Human papilloma virus, airway desobstructions, bronchoscopy, thoracic surgery, right inferior lobectomy, pediatric development of respiratory HPV infection

17. **CHALLENGING LOWER LIP RECONSTRUCTION AFTER EXCISION OF A LARGE SQUAMOUS CELL CARCINOMA TUMOR**
Ana-Maria S-V Ilași, Laura-Maria C-M Grigoras, Laura Stroica, Ioan Marinescu
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania. Colentina Clinical Hospital, Bucharest, Romania

BACKGROUND: Squamous cell carcinoma is the most common type of malignant oral cavity tumors that account for about 3-5 % of all tumors. The main etiologic factors for development of oral cavities cancers are smoking, alcohol consumption, sun exposure or chronic injuries. Despite their high prevalence, this pathology is rarely fatal. When it spreads, frequently can be life-threatening. Left untreated, they eventually penetrate the underline tissues and can become disfiguring. Removal of a larger tumor often requires reconstructive surgery. **CASE PRESENTATION:** A 77 years old patient was appointed at the Colentina Clinical Hospital to a surgical treatment involving the removal of a giant tumor developing on the lower lip. The tumor was 3 centimeters length and covers about 70% of the lip surface. It is characterized as painless, with indefinite borders and slowly progressive evolution, unspecified in time. Under general anesthesia it was performed a complete excision of the entire tumor, removing all tissues involved in the hypertrophic process. This usually leaves a significant defect that must be addressed in the same session as the tumor surgery. The secondary defect was covered with the Camille Bernard flap, which is probably the most popular of all cheek advancement methods for lower lip reconstruction. Even though esthetic aspect is important, reconstruction was focused on the functional rehabilitation of the oral cavity as labial competence, preservation of sensation and unobstructed muscle activity. Two weeks later we removed surgical wires and were able to see final result with an acceptable lip shape and good function. **CONCLUSION:** Fortunately, lip cancer remains one of the most curable malignancies in the head and

neck region. The distinct advantage of this operation is its ability to reconstruct nearly the entire lower lip in a single-stage procedure despite of reduction in the size of the orifice of the oral cavity.

Key words: Squamous cell carcinoma, Camille Bernard flap, lower lip reconstruction.

18. A RARE CASE OF SURVIVAL FROM PRIMARY AMOEBIC MENINGOENCEPHALITIS
Alexandru Cristian F. Rusin, Marian Constantinescu
"Carol Davila" University of Medicine and Pharmacy, Bucharest,
Romania; County Emergency Hospital Alexandria, Alexandria,
Romania

BACKGROUND: Primary amoebic meningoencephalitis (PAM) is a fulminant disease of the brain, caused by *Naegleria fowleri*. Although the disease is rare, the case fatality rate is very high. The present case is one such case in which we have a favorable outcome. **CASE PRESENTATION:** The patient presented with sudden onset of seizures and fever on admission. On physical examination he was febrile, comatose and with a stiff neck. Cerebrospinal fluid (CSF) collected on admission did not reveal any organism on microscopy or culture, but showed elevated white cell count. A working diagnosis of severe septicemia with acute meningoencephalitis was then made and the patient was started on ceftriaxone and vancomycin, considering him a case of bacterial meningitis. Despite receiving treatment, his condition deteriorated. A second CSF sample collected on day 3 was also negative for bacteria and other organisms. However, the wet preparation of the CSF collected on day 5 revealed trophozoites of *Naegleria* species. Treatment was started with injection Amphotericin B and oral Rifampicin, apart from other antibiotics, with careful monitoring. The patient's condition improved and was extubated on the 10th day of admission. He had a full recovery without any neurological deficit. CSF examination done after 4 weeks was normal. **CONCLUSION:** The amoebic infection should be suspected in a patient who has signs and symptoms of encephalitis/meningitis and in whom CSF examination is negative for bacterial, fungal, tubercular, and viral infection, with increased polymorphs and high proteins. Ultimately, a timely diagnosis and early start of treatment may lead to a favorable outcome.

Key words: Primary amoebic meningoencephalitis, *Naegleria fowleri*

19. POLYMYALGIA RHEUMATICA - THE IMPORTANCE OF DIFFERENTIAL DIAGNOSIS
Irina Andreea C. Vilceanu, Ruxandra Florentina C. Ionescu,
Robert-Mihai I.L. Enache, Ion Relu Ondin Zaharia, Gheorghe
Gabriela Silvia, Zamfirescu Brândușa
"Carol Davila" University of Medicine and Pharmacy, Bucharest,
Romania, "Professor Dr. Theodor Burghel" Clinical Hospital,
Bucharest, Romania, "Elias" Emergency Clinical Hospital,
Bucharest, Romania, "Carol Davila" Nefrology Hospital,
Bucharest, Romania

BACKGROUND: Polymyalgia rheumatica (PMR) is a relatively common chronic inflammatory condition of unknown etiology that affects the elderly. It is characterized by proximal myalgia of the hip and shoulder girdles with accompanying morning stiffness. PMR is a clinical diagnosis based on the symptoms and exclusion of other diseases. **CASE PRESENTATION:** An 86-year-old male patient was admitted to the internal medicine department in August 2018, accusing bilateral pain and stiffness of the shoulder, hip girdle and neck and jaw aches. The patient described sudden onset of symptoms, despite being in good health condition, 3 months prior to this. Firstly, the pain occurred in the left shoulder and mandible. Within a few weeks it became bilateral, also affecting the pelvic joints, accompanied by fatigue and low-grade fever. The patient denied muscle weakness and reported joint swelling. The patient was treated with naproxen with an insignificant effect. Paraclinically, blood tests revealed hypochromic microcytic anemia, neutrophilia, lymphopenia, slightly increased glycaemia. Elevated levels of fibrinogen, reactive C protein and erythrocyte sedimentation rate signaled the presence of inflammation, but clinically, signs of infection were absent. Correlating this with the age, a paraneoplastic syndrome was suspected. Further investigations showed the absence of rheumatoid factor, cancer antigen 19-9, carcinoembryonic antigen, prostate specific antigen and along with the absence of peripheral joint pain excluded rheumatoid arthritis and paraneoplastic syndrome. Other differential diagnoses like dermatomyositis, Parkinson disease, vasculitis, hypothyroidism,

polymyositis, osteoarthritis, remitting seronegative symmetrical synovitis with pitting edema (RS3PE), lupus-likely condition were considered, but not confirmed. Following the established criteria for PMR, resulted a score that suggested the diagnosis of PMR. Therefore, the next step to confirm it was to administer corticosteroids. The patient had a rapid positive response which is considered pathognomonic for PMR. **CONCLUSION:** This clinical case proves the importance of knowledge in diagnostic search, because upon suspicion of PMR it is necessary to exclude other rheumatic diseases, infections and neoplasm, especially in the group of patients at a very advanced age. Moreover, this case highlights the possibility of pharmacological test to diagnose and start sooner a proper management that will significantly **improve the patient's prognosis.**

Key words: polymyalgia rheumatica, differential diagnosis, corticosteroids

20. SMILE RECONSTRUCTION - A RELIABLE TECHNIQUE
Alina-Alexandra F. Negrila, Chen Xigen
University of Medicine and Pharmacy of Craiova, Craiova,
Romania; Affiliation: National Defense Medical Center and Tri-
Service General Hospital, Taipei, Taiwan

BACKGROUND: Facial expression is a complex neuromotor and psychomotor process that is disrupted in patients with facial paralysis breaking the link between emotion and physical expression. No single technique currently allows the complete restoration of an immediate, spontaneous smile, normal speech and satisfactory appearance in repose. In order to reduce the morbidity associated with early facial reanimation while maintaining a high rate of success, the masseteric nerve, branching from the trigeminal nerve, has already been shown to be a reliable alternative. **CASE PRESENTATION:** Two female patients aged 53 and 55 are diagnosed with facial paralysis due to acoustic neuroma which is a slow-growing tumor that develops on the vestibular nerve. It can cause hearing loss, ringing in the ear, and facial numbness, tingling or weakness. Treatments for acoustic neuroma include regular monitoring, radiation and surgical removal. The first attempts at the use of the masseteric nerve as a donor motor nerve in facial reanimation were done in 1925. Many surgeons have been reluctant to use this versatile source of axons because of difficulty in locating it intraoperatively. Beginning the dissection through the masseter muscle at a point 3 cm anterior to the tragus and 1 cm inferior to the zygomatic arch makes its use safer and more efficient. Dissection proceeds through a preauricular incision overlying the parotido-masseteric fascia. Masseteric-facial nerve anastomosis is a valid solution for early facial reanimation. The resulting preauricular scar generally heals very well and the patients are able to smile without thinking about it in approximately 4-6 months. **CONCLUSION:** In facial paralysis, a dynamic reconstruction of smile using the masseteric nerve offers several advantages. Its sacrifice produces little, if any, detectable morbidity, since the temporalis and pterygoid muscles can compensate for the denervation of the masseter muscle. Compared with other cranial nerve transfers, such as the hypoglossal nerve which carries a variable degree of morbidity or with a cross facial nerve graft, masseteric nerve provides more powerful reinnervation and faster clinical recovery, patients being able to produce a spontaneous, symmetrical smile in response to emotions and defined by the movement created.

Key words: Plastic-surgery, Smile reconstruction, Facial paralysis

21. AN UNCOMMON APPROACH TO A LARGE INCISIONAL HERNIA CASE COMBINING BOTULINUM TOXIN A ADMINISTRATION WITH POSTERIOR COMPONENT SEPARATION
Laura Ioana Florea, Alina Prodan, Mihai Matei
"Carol Davila" University of Medicine and Pharmacy, Bucharest,
Romania, Emergency Clinical Hospital Bucharest, Bucharest,
Romania

BACKGROUND: Complex ventral hernia repair techniques have become a focal standpoint in leading years designed to improve post-operative results, lower wound morbidity and reduce the chance of recurring hernias. The closure of these defects represents a significant problem because of post-operative complications such as abdominal compartment syndrome or respiratory problems. Posterior component separation via Transversus Abdominis Muscle Release (TAR) combined with temporary paralysis of the lateral abdominal wall muscles with local administration of Botulinum toxin A represents a novel approach in large incisional hernia repair. Why choose TAR? Transversus Abdominis Muscle Release allows for significant posterior

rectal fascia advancement, larger space for mesh reinforcement and maintains the neurovascular supply of the rectus abdominis muscle intact. CASE PRESENTATION: We present the case of a 59 years old male patient, admitted for a giant incisional hernia with loss of domaine, measuring 13 centimeters in diameter, M2-M4 W3 (after Chevrel and Rath classification), prior known of undergoing classical open-cholecystectomy. We performed posterior component separation by Transversus Abdominis Muscle Release, creating a wide space between the transversus abdominis muscle and fascia transversalis. After reintegration of visceral organs, a 30/30 centimeters mesh was placed in the retromuscular space. Prior to surgery, local administration of botulinum toxin A, under ultrasound guidance, was performed a month ahead in order to enhance the results of the operation. CONCLUSION: In our opinion, Botulinum toxin A administration, resulting in paralysis of the lateral abdominal muscles, combined with posterior component separation via Transversus Abdominis Muscle Release proves to be a worthy method of achieving primary fascial closure in cases of large hernia defects.

Key words: Botulinum toxin A, Incisional Hernia, Transversus Abdominis Muscle Release

22. SYSTEMIC LUPUS ERYTHEMATOSUS – A CHALLENGING DIAGNOSIS
Robert-Mihai I.L. Enache, Mihaela - Cezara B.I. Dumitriu, Ruxandra Florentina C. Ionescu, Irina Andreea C. Vilceanuu, Lidia Radu
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania, Private Medical Practice of Internal Medicine, Bucharest, Romania

BACKGROUND: Systemic lupus erythematosus (SLE) is an autoimmune disease that can affect any organ and system. It classically manifests with fever, arthralgia and rash, existing predominantly among women. The autoimmunity is against nuclear and cytoplasmic components. Although rare, de novo systemic SLE can be diagnosed in context of pregnancy. CASE PRESENTATION: A 31-year-old female patient, with no significant medical history, primiparous, with normal progression of pregnancy until its last week, presents nitrogen retention (creatinine 1.58 mg / dL), anemia (Hb 9.6 g / dL), hepatic cytolysis (aspartat aminotransferase 60 U/l) and blood pressure <140/90 mmHg. Being diagnosed with preeclampsia, the patient undergoes caesarean section. Fever, shortness of breath and lower limb edema are encountered 3 days post partum. Clinically, there are to mention bilateral pleural effusion and hepatosplenomegaly. Biologically, there are an inflammatory syndrome (C reactive protein > 100 mg / dl, positive procalcitonin, erythrocyte sedimentation rate 112mm / h), positive LoHi cultures for E. coli and Klebsiella MRSA, normochromic and normocytic anemia (Hg 7.2 g / dl) and nephrotic syndrome (proteinuria 4.49 g / 24 h, serum Cr 4.57 mg/dl). The pleural fluid examination showed its exudate nature. Echocardiographically, there is a normal kinetic of the left ventricle and LVEF (left ventricle ejection fraction) > 60%. The suspicion of sepsis with multiple organ failure is therefore raised. Antibiotic therapy results in remission of fever and inflammatory response. Nephrotic syndrome persists, worsens kidney failure (requiring hemodialysis and kidney biopsy) and left ventricle systolic dysfunction progresses (LVEF from 38% to 25%), all in a favorable outcome of sepsis. Antinuclear antibodies are positive, Anti- dsDNA antibodies are 317 UI/ml, Anti-RO antibodies are 135.3UI/ml and the diagnosis of kidney biopsy is IgA nephropathy. The response to cyclophosphamide and corticosteroids is positive, so renal dysfunction disappears and left ventricle systolic dysfunction ceases to exist. CONCLUSION: The particularity of this case consists in the association of clinical and immunological criteria for SLE with renal biopsy outcome of IgA nephropathy, in the context of a multi-gram negative sepsis.

Key words: SLE, pregnancy, nephrotic syndrome, IgA nephropathy

23. TRIVALVULAR HEART DISEASE WITH A HISTORY OF NON-HODGKIN LYMPHOMA
Andrei-Mihai M.V. Iacob, Maria-Alexandra G.C. Visan, Andrea Blasio
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania, San Raffaele Hospital Milano, Italy

BACKGROUND: Valvular heart disease represents a defect of one of the four heart valves, which become unable to either open or close completely. Here we report a case of mitral, aortic and tricuspid insufficiency in a patient

with a history of non-Hodgkin Lymphoma treated with radiation therapy, one of the known causes of valvular heart disease. CASE PRESENTATION: 59-year-old female with severe mitral insufficiency in follow-up and non-Hodgkin lymphoma in remission (normal values of IgGK paraproteinemia) presents for surgery. Eco-Doppler investigation reveals additional moderate aortic regurgitation and mild tricuspid insufficiency. The latter is of functional type, due to a bicameral pace-maker placed for paroxysmal atrioventricular block, with normal flow in the suprahepatic veins and normal pulmonary pressure, so the decision is not to operate. The aortic valve presents with fibrosis and retraction of leaflets, tele-diastolic backflow and regurgitation jet of central origin. The mitral valve has two regurgitation jets: a main one of central origin and a secondary one originating near the postero-medial commissure. There are calcifications of the subvalvular apparatus present, corresponding to the anterior leaflet of the mitral valve. During surgery, the anatomical aspect of the aortic and mitral valves does not appear favorable for a conservative intervention, so the decision is to replace them with mechanical prostheses. Short-term (4 weeks) follow-up of patient is good. CONCLUSION: This case reveals the importance of taking into consideration the medical history of the patient in assessing the cause of valvular heart disease: treatment of non-Hodgkin lymphoma for the aortic and mitral valve regurgitations and treatment of paroxysmal atrioventricular block for the tricuspid insufficiency, and the surgical management depending on the valvular morphology.

Key words: Trivalvular heart disease; Non-hodgkin lymphoma

24. UNEXPECTED ETIOLOGY OF A THIRD-DEGREE ATRIOVENTRICULAR BLOCK
Claudia-Andreea C. Ene, Laura Maria A.T. Georgescu
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

BACKGROUND: Atrioventricular block (AV block) is a type of heart block in which the conduction between the atria and ventricles of the heart is impaired. The causes of pathological AV block are varied and include ischaemia, infarction, fibrosis or drugs, and the blocks may be complete or may only impair the signaling between the SA and AV nodes. However, another not so common cause of AV block is Lyme disease. Lyme borreliosis, or Lyme disease, is a globally occurring, systemic disease caused by the spirochete *Borrelia burgdorferi* and transmitted by the Ixodes tick. Lyme carditis is a manifestation of the early disseminated stage of Lyme disease and often presents as high-degree atrioventricular (AV) block. Cardiac complications are observed in approximately 1% of all Lyme disease cases. CASE PRESENTATION: We are presenting a case of a 39-year-old man who presented to the emergency room with a three-day history of dizziness, decreased exercise tolerance, dyspnea on exertion and one episode of syncope the previous day. Physical examination was inconclusive, except for a mild bradycardia. Electrocardiogram showed second-degree Mobitz type I AV block with a 2:1 conduction pattern. Cardiac laboratory tests and complete blood count were within normal limits, except for a slightly elevated white blood cell count. After that the patient was admitted to the cardiology department and kept under observation. That same night the patient progressed to complete heart block. After excluding all the common causes of cardiac conduction disorders, our suspicion was that of an infectious disease, such as Lyme Borreliosis. The patient confirmed that he was bitten by a tick three weeks before during a trip to the Carpathians. After discharge, his Lyme serological titers were positive and the patient was readmitted for parenteral antibiotic treatment. CONCLUSION: Lyme carditis must be considered in the differential in all patients who present with syncope and heart block even in those without antecedent or concurrent signs or symptoms of Lyme disease or known exposures. Heart block due to Lyme carditis can progress quickly from second degree atrioventricular block to high-degree block, requiring a high degree of clinical suspicion to ensure timely intervention.

Key words: Lyme disease, Atrioventricular block, Tick-bite

25. FOUR PRIMARY MALIGNANCIES IN BRCA1 MUTATION PATIENT
Maria-Luciana M. Loghinoia, Eusebiu Petru D Irina, Radu Iulian, Scripcariu Viorel
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania

BACKGROUND: Multiple primary malignancy (MPM) is defined as occurrence of two or more malignancies in the same individual without any relationship

between the tumors either simultaneously or with interval of time. An individual may develop MPM in lifetime due to genetic predisposition, environmental exposure to carcinogens, immunodeficiency or as a serious complication of chemotherapy or radiotherapy received for first primary malignancy. CASE PRESENTATION: We present a case of C.A., a 77 year old female, with important surgical history: ovarian cancer (1991) for which it was done total hysterectomy with bilateral aneectomy, gastric cancer of vertical portion (2003) for which it was done total gastrectomy with omentectomy and basal cell carcinoma (2016). After each operation she received adjuvant therapy (chemotherapy). This patient was redirected to 1st Surgery Unit (IRO) in Iasi, diagnosed in 2017 with right breast cancer. After the pre-operative treatment has been done, the surgery (modified radical mastectomy) is performed. **The evolution was a favorable one, that's why after 5 days she was discharged.** The patient had a very good survival after two well-known aggressive and rare cancers, which usually have a poor prognosis. CONCLUSION: In recent years, the number of patients who have been discovered with mutations are increasing due to all advanced genetic studies. Only 5-10% of breast cancer cases in women are attributed to BRCA1 and BRCA2 mutations, but the impact on women with the gene mutation is more profound. Although the patient was known with BRCA1 mutation and she had developed three cancers because of it, she lived until 77 years old due to early detection and an aggressive treatment.

Key words: BRCA1 mutation, malignancy, genetic predisposition, breast cancer

26. A NEW APPROACH IN THE CASE OF A PATIENT DIAGNOSED WITH AMYOTROPHIC LATERAL SCLEROSIS WHO DID NOT RESPOND TO TREATMENT WITH RILUZOLE
Ionut Flavius Bratu, Athena Ribigan, Florina Antochi, Ovidiu Băjenaru
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania
Emergency University Hospital, Bucharest, Romania

BACKGROUND: Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disease characterized by progressive degeneration and loss of the upper and lower motor neurons (LMN). Muscle weakness develops, followed by disability and eventually death, with a survival period of 2-5 years. While **"amyotrophy" refers to the wasting of muscles due to denervation as their corresponding neurons degenerate, "lateral sclerosis" describes the histopathological changes present in the lateral columns of the spinal cord as the degenerated neurons are replaced by astrocytes (astrogliosis).** CASE PRESENTATION: A 41-year old male patient with medical history of multinodular goiter with normal thyroid function presented to our clinic for a 5-month-old progressive left upper limb weakness associated with fasciculations, followed after three months by the development of similar symptomatology on the contralateral arm. The neurology examination revealed the presence of brachial diparesis with hyperreflexia (left > right) **and bilateral Hoffman's sign, atrophy and weakness of the interosseous, brachial biceps, deltoid, triceps and other flexor and extensor muscles of the forearm and arm of both superior limbs, as well as the presence of fasciculations of the paraspinal, anterior and posterior thorax and upper limb muscles.** There was no cranial nerves or sensory involvement. The electromyography showed LMN involvement with subacute denervation in all the evaluated segments (bulbar, cervical, thoracic and lumbosacral). The transcranial magnetic stimulation revealed the absence of cortical motor evoked potential in the upper limbs (reduced cortical excitability) and prolonged central motor conduction time of the lower limbs. The cervico-thoraco-lumbar spinal cord magnetic resonance imaging (MRI) was normal, but the cerebral MRI established the presence of corticospinal tracts hypersignal (suggestive for Wallerian degeneration). As the cerebrospinal fluid and the endocrinology examinations, the tumor markers and the whole-body computed tomography scan were normal, the patient was diagnosed with ALS. The patient received treatment with Riluzole with the exacerbation of his symptoms and he was switched to Edaravone with a good clinical response on successive follow-up visits. CONCLUSION: This case highlights that although ALS is incurable, there are new neuroprotective medications like Edaravone that could slow the evolution and increase the quality of life in such patients.

Key words: Amyotrophic lateral sclerosis, Riluzole, Edaravone

FUNDAMENTAL SCIENCES

27. ANGIOTENSIN II - A KEY FACTOR IN THE OCCURANCE OF RENAL FIBROSIS
Delia Melania I. Popa, Șerpeanu MA Irina Alexandra, Alexandru-Dan R. C. Costache, Ionela-Lacramioara Șerban, Minela Aida Mărăduca
"Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania

BACKGROUND: It is well-known that the renin-angiotensin-aldosterone hormonal cascade is part of the regulatory mechanism of the arterial pressure, by influencing hydroelectrolytic balance. Secondly, angiotensin II (Ang II) enhances the inflammatory response and fibrosis. Therefore, the aim of our study is to investigate the implications of angiotensin II in the renal fibrosis which developed in experimental animals (rats) with induced arterial hypertension. MATERIALS AND METHODS: The study was performed in a period of 14 days on 28 male rats, Wistar breed, which had been split into two groups of 14 rats each: the first group, used for control, were continuously infused with saline solution, while in the second group, Ang II was administered. The solutions were administered with Alzet osmotic minipumps 2001 model. Throughout the study, the animals had their arterial pressure monitored using the tail-cuff method. At the end of the experiment, they were euthanized in order to have their kidneys extracted. Kidney sections had been obtained and stained with hematoxylin-eosin for the identification of the inflammatory infiltrate, while Gieson and Szekely stains were used to reveal the renal fibrosis. RESULTS: In the group of rats treated with Ang II, the systolic arterial pressure registered higher values, compared to the control group (120±5mmHg control group vs 208±2mmHg Ang II group, p<0.05). Also, the histopathological examination of the renal tissue extracted from the **"Ang II group" showed the presence of the lymphocytic inflammatory infiltrate and the renal fibrosis.** CONCLUSION: Regarding all those mentioned above, the results of the study had managed to show not only the raised systolic arterial pressure values, but also the occurrence of inflammatory fibrotic tissue, proving not only the proinflammatory, but also the pro-fibrotic effects of Ang II at renal level.

Key words: angiotensin II, fibrosis, systolic arterial pressure

28. CEREBELLUM AS A CONTROLLER OF OSCILLATORY CORTICAL ACTIVITY FROM NORMAL TO PATHOLOGICAL STATES
Razvan Alexandru A. Steopoaie, Ana-Maria Zagrea
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

BACKGROUND: Synchronies of neuronal activity in the sensorimotor cortices play a crucial role in motor skills and learning. They can be modulated through upstream activity in the cerebello-cortical network. Yet, the dialog between the cerebral cortex and the cerebellum remains poorly understood. Our aim is to study the contribution of the cerebellum to brain oscillatory activities, in particular in the case of dystonia, a very disabling motor disease associated with altered sensorimotor coupling. We used a kainic-induced dystonia model to evaluate the cortical oscillatory activity and connectivity during dystonic episodes. We performed microinjections of low doses of kainic acid into the cerebellar vermis in mice and examined activities in somatosensory, motor and parietal cortices. MATERIALS AND METHODS: Adult male albino mice were anesthetized with isoflurane for the surgical procedures. We inserted Electrocorticography (ECoG) electrodes through 4 small holes drilled in the skull at the corresponding sites for sensory, motor and parietal cortices. 7 mm posterior to bregma we inserted a cannula for performing kainic acid injections directly on the vermis surface of the cerebellum. Recordings were performed for 6 consecutive days. In the first day (baseline day), no injection was performed. On the next five consecutive days, recordings were performed before (10 min) and after kainic acid applications on the vermis surface of the cerebellum (150 min). RESULTS: During the baseline condition, we found a phenomenon of permanent adaptation with a change of baseline locomotor activity coupled with an ECoG gamma band increase in the motor and somatosensory cortices. Additionally, after kainate administration, we observed an increase in muscular activity, but fewer signs of dystonia together with modulations of the ECoG power spectra with an increase in gamma band in motor, parietal and somatosensory cortices. Moreover, we found a reduced coherence for all frequency bands between the motor cortex and somatosensory or parietal cortices during dystonia. CONCLUSION: In conclusion, examination of cortical oscillatory activities in this animal model

of chronic dystonia caused by cerebellar dysfunction reveals a disruption of the coordination of neuronal activity across the cortical sensorimotor/parietal network, which may underlie deficits in motor skills.

Key words: cerebellum, intra-cortical oscillations, dystonia, kainate, mice

29. CONNECTOMICS ANALYSIS OF WIND-SENSING AND MEMORY RETRIEVAL PATHWAYS IN DROSOPHILA MELANOGASTER
Patricia-Demetria R.F. Popovici, Ruairi J.V. Roberts, Marta Costa, Serene Dhawan, Gregory S.X.E. Jefferis, Alexander Shakeel Bates "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania, University of Cambridge, United Kingdom

BACKGROUND: The *Drosophila* olfactory system is a highly attractive model for neurobiological investigation owing to its numerical simplicity and genetic tractability. Two higher brain centres, the mushroom body (MB) and lateral horn (LH), are respectively involved in the mediation of learned and innate behaviours. The LH receives projections from a region of the brain named WEDGE, with a strong mechanosensory input that was previously linked with wind sensation. WED-LH projection neurons receive strong inputs from MBON a'3 (an MB output cell type involved in flies' response to a novel odour), as well as glomerular projection neurons, carrying olfactory information and other modalities. Our objective was to classify the different types of WED-PNs and map their upstream and downstream partners in order to get some insight into the circuitry that instinct and memory information converge upon. **MATERIALS AND METHODS:** Neurons were reconstructed using a complete female *Drosophila melanogaster* brain volume from a 7-day-old adult [iso] w1118 x [iso] Canton S G1 female. This volume, comprising 7060 sections, was acquired with serial section transmission electron microscopy by the Bock Lab at Janelia Research Campus at a resolution of 4nm x 4nm x 40nm. Manual reconstruction or 'tracing' was conducted in CATMAID, a web-based interface for the collaborative annotation and preliminary analysis of large-scale biological image datasets. The placement of nodes in successive adjacent sections was used to iteratively trace neuronal skeletons. The WED-PN neurons were identified and manually reconstructed and their upstream and downstream synaptic partners were comprehensively mapped. **RESULTS:** This connectomic data reveals that there are 8 types of WED-PNs, differing both in morphology and connectivity; this likely implies significant functional difference. These neurons were placed in putative circuits, contributing to the understanding of memory retrieval and the novelty response (the recognition of a novel odour). **CONCLUSION:** Many of the same rules that govern the sense of smell are found both in flies and mammals. It is, thus, possible that these findings in the fly might translate to a greater understanding of the human brain that could one day impact the development of treatments for people suffering from memory loss, post traumatic stress disorder or dementia.

Key words: Connectomics, *Drosophila melanogaster*, Memory circuits

30. DIABETIC RETINOPATHY – SENTENCE TO BLINDNESS?
Laura D. Preoteasa, Alida Nicoleta G. Dumitru, Claudia A. Mihail, Diana Elena P. Pirlea Dana Preoteasa "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

BACKGROUND: Diabetic retinopathy is a dangerous complication that appears in 30% of the patients with diabetes mellitus, which may lead to blindness due to abnormal retinal vessels that affect the retina. Symptoms include blurred images with impaired colour vision and dark areas in the visual field. In the following study we try to establish the major risk factors and the best course of action for every patient. Risk factors for diabetic retinopathy include hyperglycemia, hypertension, dyslipidemia, tobacco use, duration of diabetes and a genetic predisposition. **MATERIALS AND METHODS:** The study includes 89 newly diagnosed patients with type II diabetes mellitus, enhancing the retinal alterations produced over time in connection with other risk factors. In order to observe the evolution of retinopathy, all patients were given a full ophthalmologic examination including visual acuity tests, fundus examination, ocular fundus photography, retinal angiography and macular OCT (Ocular Computed Tomography). **RESULTS:** From 89 patients, 56 were found with non-proliferative and 33 with proliferative retinopathy, suggesting an advanced stage. Visual acuity tests showed a reduction of 50% in visual capacity, ocular fundus revealed haemorrhages, microaneurysms, and abnormal

retinal blood vessels. OCT allowed us to highlight the macular oedema, appearing in 51 patients, which is another major complication of diabetic retinopathy. Retinal angiography found the leakage zones, suggesting the laser treatment areas. 50% of patients underwent laser treatment, 11% were treated with local injections, 32% were recommended combined treatment and 7% resorted to surgical intervention. **CONCLUSION:** The data collected suggests that patients associated with risk factors have an increased possibility of developing diabetic retinopathy. Since this ocular complication has a multifactorial etiology, annually ophthalmologic examination should be considered in order to provide appropriate timely treatment, thus reducing the burden of blindness due to diabetes.

Key words: blindness, diabetic retinopathy, risk factors, retinal treatment

31. EFFECTS OF TWO NITRATES IN NOCICEPTIVE REACTIVITY IN MICE – EXPERIMENTAL DATA
Ana D. Damaschin, Andrei D. Damaschin, Cosmin I.G. Tartau, Liliana Mititelu-Tartau "Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania

BACKGROUND: The salts potassium nitrates are chemical agents used as food additives, fertilizers, rodenticides and insecticides. Once, introduced into the organism, nitrates are transformed in different types of nitrites. We aimed to investigate the effects of sodium and potassium nitrates in cutaneous and visceral pain models in mice. **MATERIALS AND METHODS:** The experiment was carried out on Swiss mice, randomly distributed in 4 groups of 6 animals each, treated orally (using an eso-gastric tube) according to the following protocol: Group I (Control): saline solution 0.1 ml/10g body weight; Group II (coded ACET): ibuprofen 100 mg/kg body weight; Group III (NaNO₃): NaNO₃ 0.085 mg/kg body weight, Group IV (KNO₃): KNO₃ 0.1 mg/kg body weight. The nociceptive cutaneous test was performed using tail immersion model, to assess the mice's tail reaction when its introduced in hot water, by counting the latency time response 15, 30, 60, 90 minutes after the substances administration. The writhing test, consisting in chemical peritoneal irritation induced by acetic acid 0.6% was used as a visceral pain model. Pain responses were evaluated by counting the number of the behavioral manifestations (licking, stretching, abdomen contractions or writhes) every 5 minutes, during a 30 minutes period after acetic acid administration. The data was statistically analyzed using SPSS version 17.0 Software for Windows and ANOVA one-way method. Experimental protocol was implemented according to the recommendations of our University Committee for Research and Ethical Issues, in compliance with the international ethical regulations regarding the handling of lab animals. **RESULTS:** The treatment with NaNO₃ and KNO₃ induced a statistically significant increase in the latency time reactivity to thermal noxious tail stimulation, compared to control group. The use of NaNO₃ and KNO₃ was associated with a substantial diminution of the behavioral manifestations, compared to saline group. The effects of KNO₃ were more intense than NaNO₃, but less intense than the ibuprofen, with known analgesic effect in both somatic and visceral pain models. **CONCLUSION:** Oral administration of NaNO₃ and KNO₃ determined antinociceptive effects in tail immersion and writhing test in mice.

Key words: nitrates, nociception, mice, tail immersion, writhing test

32. EXPERIMENTAL DATA REGARDING THE EFFECTS OF CODEINE – FLURBIPROFEN ASSOCIATION IN NOCICEPTIVE SENSITIVITY IN MICE
Andrei D. Damaschin, Ana D. Damaschin¹, Cosmin I.G. Tartau¹, Ioana-Irina C. Rezus, Liliana Mititelu-Tartau "Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania

BACKGROUND: The phenanthrene derivative, codeine is a moderate opioid receptor agonist, indicated as weak analgesic and antitussive in the dry irritant cough. The phenylalkanoic acid derivative flurbiprofen, is a nonsteroidal anti-inflammatory drug, indicated especially as analgesic and anti-inflammatory in arthritis and dental pain. The purpose of our study was the experimental researches on the effects of co-administration of low doses codeine-flurbiprofen in somatic and visceral pain models in mice. **MATERIALS AND METHODS:** The experiment was carried out with white Swiss mice (20-25g), arbitrarily assigned into 4 groups of 6 animals each, treated intraperitoneally, as follows: Group I (Control): saline solution 0,1 ml/10g weight; Group II (coded COD): codeine 15 mg/kbw; Group III (coded FLU): flurbiprofen 5 mg/kbw; Group IV (coded COD+FLU): codeine 15 mg/kbw + flurbiprofen 5 mg/kbw. The nociceptive somatic investigation was

performed using hot plate assay, in order to estimate the latency period of the response to heat noxious paw stimulation. In order to evaluate the visceral nociceptive sensitivity, writhing test was used as a standard experimental model. The data were statistically processed using SPSS 17.0 variant for Windows and ANOVA one-way method. The experimental protocol was approved by the Grigore T. Popa University Committee for Research and Ethical Issues, in agreement with the EU Directive 2010/63/EU, regarding the investigations performed on laboratory animals. **RESULTS:** The treatment with low doses of COD, respectively of FLU induced a slight increase in the latency time reactivity to noxious thermal paw stimulation, but statistically non-significant, comparing with saline solution group. The use of association COD+FLU resulted in a significant prolongation of the latency period of the response in hot plate assay. The administration of low doses of COD, respectively of FLU was associated by a minor decrease of the writhes number, but statistically non-significant, compared to control group. Intraperitoneal injection of the combination COD+FLU was accompanied by a substantial diminution of the behavioural manifestations number in writhing test in mice. **CONCLUSION:** The co-administration of COD+FLU proved to have synergic analgesic effects in both somatic and visceral pain models used.

Key words: Codeine, Flurbiprofen, Hot plate, Writhing test

33. IN VITRO CLEAVAGE OF TOTAL TAU BY HUMAN SERINE PROTEASE HTRA2/OMI
Miruna M Rascu, Homira Behbahani
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania, Department of Neurobiology, Care Sciences and Society (NVS), Center for Alzheimer Research, Div. of Neurogeriatrics, Karolinska Institutet, Solna, Sweden

BACKGROUND: Aside from being a devastating neurodegenerative disease affecting millions of people, Alzheimer's disease (AD) is generating a serious social and economic burden worldwide. Clinical manifestations of AD include progressive cognitive decline, cerebral atrophy and neuronal loss, leading to various associated disorders and a decreased quality of life. AD etiology is multifactorial and its pathogenesis is still unclear. However, increasing evidence suggests that neuronal inclusions of hyperphosphorylated and aggregated tau protein are correlated with dementia progression. This suggests that a potential therapeutic target for AD could be reducing the quantity of tau aggregates in neurons. HtrA2/Omi, a mitochondrial serine protease involved in several neurodegenerative disorders has been shown to have an increased protease activity in the AD brain. The objective of this study was to investigate the effect of HtrA2/Omi proteolytic activity on total and aggregated tau. **MATERIALS AND METHODS:** We performed in vitro protease assays using recombinant human tau441 protein, full-length and aggregated, as a substrate for HtrA2/Omi. Human calpain 1 and HtrA1 were used as positive tau cleavage controls, as their proteolytic activity on tau has been previously described. Tau filament formation was induced in vitro using low molecular weight heparin as polyanionic cofactor. The efficacy of tau fibrillization was confirmed by the thioflavin T (ThT) fluorescence assay for amyloid fibril detection. **RESULTS:** SDS-PAGE gel electrophoresis followed by silver staining showed that HtrA2/Omi can indeed cleave both full-length and aggregated forms of tau. Moreover, it seems that HtrA2/Omi protease activity is more intense on the aggregated form of tau than on the normal, full-length tau. However, calpain has a more effective protease activity on these species of Tau, generating multiple Tau fragments after 2-h incubation period. **CONCLUSION:** This study stands as proof of concept that full-length and aggregated tau are substrates of HtrA2/Omi. Our results suggest that HtrA2/Omi protease might have a significant role in regulating tau homeostasis in vivo and raise new questions on its neuronal functions and implications in neurodegenerative diseases.

Key words: Alzheimer's disease, neurodegeneration, tau, HtrA2/Omi

34. IN VIVO CHEMOGENETIC MODULATION OF SEIZURE ACTIVITY IN MICE
Raluca-Elena G.S. Mitran, Patricia-Demetria R.F. Popovici, Miruna M Rascu, Mihai Stancu
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania, "Ludwig Maximilian" University, Munich, Germany

BACKGROUND: Epilepsy is often characterised by a disruption to the normal balance between excitation and inhibition of the neuronal networks in the

brain. Parvalbumin-expressing (PV), somatostatin-expressing (SST) and vasoactive intestinal peptide-expressing (VIP) interneurons are thought to play a significant role in network activity regulation by targeting distinct sub-cellular post-synaptic domains, such as the cell body or distal dendrites of excitatory neurons, or even other inhibitory interneurons. The aim of this study was to investigate the ability of PV, SST and VIP interneurons to modulate epileptic behaviour by designing an in vivo model of pharmacoresistant epilepsy. **MATERIALS AND METHODS:** We used three strains of mice expressing Cre recombinase in either of the PV, SST or VIP interneuron populations. Adeno-associated virus (AAVs) carrying the double-floxed DREADDs (designer receptors exclusively activated by designer drugs) construct was used to transduce hippocampi bilaterally. After viral expression was achieved, the mice received a cannula implant which was used for the gradual intra-hippocampal infusion of the convulsant agent, 4-aminopyridine (4-AP). DREADDs were activated by intraperitoneal injections of clozapine-N-oxide (CNO) prior to the infusion. While freely behaving, the mice were administered with 200nL of 4-AP 2 mmol every 10 minutes until reaching a generalised convulsive seizure until a maximum of 600 nL. **EEG activity was recorded and the animals' behaviour** was scored using the Racine scale. **RESULTS:** Prior to the epileptic seizure, mice presented brief twitches and tail stiffening. Retrograde locomotion and complete loss of motor control usually followed absence seizures. When stimulating PV interneurons, the probability of a generalised seizure to happen decreased by 45%. However, when SST and VIP interneurons were recruited, no significant probability change was recorded. Epileptic behaviour was positively correlated with seizure-specific EEG alterations. **CONCLUSION:** Our study stands as a proof of concept, indicating that specifically stimulating distinct interneuron populations of the hippocampus via excitatory DREADDs has the potential to significantly alleviate epileptic behaviour in freely behaving mice, depending on which interneuron subtype is recruited. In addition, modulating the progression of epileptic behaviour towards generalised seizures may contribute to the development of new antiepileptic drugs.

Key words: DREADDs, Epilepsy, Parvalbumin, Somatostatin, Clozapine-N-oxide.

35. THE CORONARY SINUS: ANATOMIC CORRELATIONS AND IMAGE ORIENTATION
Andreea Maria I Zariosu, Sarah Alexandra M. Abdullah, Pantu Cosmin
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

BACKGROUND: The dissections of the fetal heart pursued the location and the aspects of the structures shaping the coronary sinus. The dissections of the adult heart followed the coronary sinus with its branches and their connections with important structures of the heart. The dissection technique started from the superficial layer of the epicardial surface to the profound layer with the removal of the atria for exposing the connection between the coronary sinus with internal structures of the heart. **MATERIALS AND METHODS:** The period of the study was 4 years (2012-2016). 23 hearts from adults conserved in formaldehyde solution 10%, provided from human bodies preserved in formaldehyde. 5 hearts from fetals and embryos aged between 9 weeks and 7 months. For the dissections we used the laboratory fully equipped with specific instruments belonging to the laboratory of the **Anatomy Discipline of the UMF "Carol Davila"**. **Echocardiographies** were made in the Cardiology Clinic of the Emergency University Hospital of Bucharest and in the Cardiology Clinic of Klinikum Ludwigsburg, Germany. We used GE Healthcare-Vivid 7. Computed Tomographies were made in the Hiperdia Clinic of the Elias Hospital using Siemens SOMATOM Sensation 64 CT scanner. **RESULTS:** The coronary sinus is a structure that presents a considerable grade of variability, in the meaning of its valves, its branches and its connections with other intra or extra cardiac structures. The coronary sinus represents a way of transmission of the electric impulse from the right atria to the left atria, but also can represent a slow way for the re-entrant arrhythmia or an accessory atrioventricular path involved in pre-excitation syndromes. **CONCLUSION:** Imagistic evaluation of the coronary sinus is necessary in the modern practice era. Echocardiography, especially in preinterventional context, it can evaluate the coronary sinus ostium, its calibrum and its path for a variable length. Computed tomography provides seminefactive details of its position, its tributaries, its connections and it is also important in the treatment using cardiac resynchronization therapy and percutaneous mitral annuloplasty.

Key words: Dissection, Echocardiography, Computed Tomography

36. THE EFFECT OF IRON OXIDE NANOPARTICLES FUNCTIONALIZED WITH SALICYLIC ACID ON THE DEVELOPMENT OF CHORIOALLANTOIC MEMBRANE VESSELS OF THE AVIAN EMBRYO.
Andrei C. Mesina, Ovidiu I. Mihailescu, Flavia Mihaela C. Stoicea, Laura Andreea I. Mindriă - Mindrila Ion
University of Medicine and Pharmacy of Craiova, Romania

BACKGROUND: Nanotechnology provides an attractive work platform for the development of new therapeutic anti-tumor products. Testing the biological properties of nanoparticles remains a challenge, in which in vitro tests have shown their limits, and in vivo tests are starting to raise more and more ethical issues. In this paper we propose to test on the avian in vivo model the effects of iron oxide nanoparticles functionalized with salicylic acid on the development of the chorioallantoic vessels. MATERIALS AND METHODS: Our study used a batch of 12 chicken embryos six days old and the chorioallantoic membranes were implanted with antibiotic probes impregnated with nanoparticles with different concentrations (0.356, 0.7, 1, 10 mg Fe / ml). As a control, probes impregnated with physiological saline were used. The evaluation of the chorioallantoic membrane vessel development was done by using an operating microscope for over 5-days period. RESULTS: The results of the experiment showed that iron oxide nanoparticles with a concentration greater than 0.7 mg Fe / ml showed a visible antiangiogenic effect on the chorioallantoic membrane vessels. The magnitude of this effect is dependent on the concentration of the nanoparticles and can be attributed to the salicylic acid used in their functionalization. CONCLUSION: In conclusion, through magnetic field manipulation, the studied nanoparticle can be used as a target blocking agent for angiogenesis of the chorioallantoic membrane vessels. Furthermore, this technique may come as an improvement in the oncology department through its mechanism of stopping tumor growth by antiangiogenesis.

Key words: Chorioallantoic membrane, Ferromagnetic nanoparticles, Salicylic acid, Angiogenesis

37. THE FEATURES OF THE HISTOCHEMICAL PECULIARITIES OF LIMITED PROTEOLYSIS IN THE PLACENTAL TROPHOBLAST ASSOCIATED WITH IRON DEFICIENCY ANEMIA OF PREGNANCY AND PREMATURE TERM OF THE CHORIONIC TREE
Hennadii P. Petrochenkov, Olexandra Vasylyvna Garvasiuk, Olexandra Garvasiuk
Bucovinian State Medical University, Chernivsti, Ukraine

BACKGROUND: Assessment of the processes of limited proteolysis is necessary to specify the mechanisms of preterm maturation of the placental chorionic tree and preterm labour. The study was first carried out in association with iron deficiency anemia (IDA) of pregnancy. The diagnostics of preterm maturing of the chorial tree is based on finding the fact of its preterm structure as compared to the parameters of a certain gestation period, which can be calculated on the percentage of various types of chorial villi. MATERIALS AND METHODS: 58 placentas were examined. The main group №1- the examination of combined IDA and preterm maturing of the chorial tree in 29-32 weeks of gestation (n=18); the comparison group №2 - the examination of preterm maturing of the chorial tree without anemia in labour in 29-32 weeks of gestation (n=19). In addition, morphology of physiological pregnancy are estimated (n=21). The technique for free amino groups of proteins by A.Yasuma and T.Ichikava method was applied. Digital material was statistically processed by means of the bilateral odd Student criterion. The differences were considered statistically valued with $p < 0,05$. Optic density of staining was applied as a measure of immunohistochemical concentration. RESULTS: Average in dices concerning the processes of limited proteolysis in the trophoblast of the placental chorionic tree were determined in all the groups under study. The main results of quantitative staining assessment are: the main group №1 - the examination of combined IDA and preterm maturing of the chorial tree in 29-32 weeks of gestation - $0,245 \pm 0,0018$ (units of optic density); the comparison group №2 - the examination of preterm maturing of the chorial tree without anemia in labour in 29-32 weeks of gestation - $0,202 \pm 0,0016$ (units of optic density); physiological pregnancy - $0,164 \pm 0,0014$ (units of optic density). CONCLUSION: The highest level of limited proteolysis in the trophoblast cytoplasm of the placental chorionic tree was found in case of preterm maturation of the chorial tree associated with iron deficiency anemia. In group with IDA the

indices is always lower in comparison with those observations without anemia.

Key words: preterm maturation of the placental chorionic tree, IDA of pregnancy, limited proteolysis, oxidative protein modification.

38. THE FREQUENCY OF HLA-A, -B AND -C ALLELES IN TRANSYLVANIA'S POPULATION
Georgeta G. Pop, Mihaela Elvira Cimpean, Mihaela Laura Vica, Stefana Balici, Horea-Vladi Matei, Costel-Vasile Seserman
"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

BACKGROUND: The Major Histocompatibility Complex (MHC) and molecular HLA typing techniques provide rich genetic information on the hereditary transmission of diseases. Their investigation has a real applicability in establishing the donor-recipient compatibility from organ transplantation perspective, especially since in Romania there is no data reported in the international anthropological data bases. The aim of this study was to determine the frequency of HLA alleles specific to the Transylvanian population. This study was approved by the Ethical Committee of the "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania. MATERIALS AND METHODS: The target population was made up of people who had a Transylvanian genealogical tree. The study sample size was of approximately 300 people. The sex of the subjects was irrelevant to the present study because the analyzed genes are not on heterochromosome. The data was collected in a cross-sectional way. The following steps were taken: blood sampling; extracting whole blood DNA using the inno-train kit; purification and concentration of the extracted DNA: HLA typing by the PCR-SSP method for HLA-A, -B, and -C-alleles; visualization of HLA-derived PCR products by automatic fluorescence detection (under UV radiation) of the FLUOVISTA analyzer; analyzing and interpreting the results obtained (using the EXCEL program). RESULTS: Since it was of interest for us to quantify the relationship between the presence of a specific HLA allele (following HLA genotyping using the PCR-SSP method) and its belonging to a population group, it was possible to identify the most common alleles (specific alleles and allele combinations) present in the population of each county from Transylvania. The most common HLA alleles were HLA-A*02, HLA-B*18 and HLA-C*07. CONCLUSION: The HLA-A*02, HLA-B*18, HLA-C*07 alleles are the most frequent among Transylvania's population, which comes in correlation with the frequency found in the Caucasian population.

Key words: MHC, HLA, PCR, genotype, Transilvania

39. TUMOR ANGIOGENESIS IN COLON ADENOCARCINOMA - AN IMMUNOHISTOCHEMICAL POINT OF VIEW
Teodora Ana T. Balan, Constantina Stephanie G. Panayiotou, Diana V. Andres, Simona Eliza Giușcă Irina Draga Căruntu
"Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania

BACKGROUND: The tumor angiogenesis is intensely studied in the framework of tumor growth and progression, with results in the benefit of the specific oncotherapy with angiogenesis inhibitors. VEGF-A (vascular endothelial growth factor A), together with one of its receptors, VEGF-R2, represents the most important molecule of the VEGF family, being involved in the angiogenesis regulation not only in carcinogenesis and metastasis, but also in the normal processes. The evaluation of the angiogenesis amplitude can be achieved by correlating the expression of VEGF-A and its receptor with microvascular density (MVD), using endothelial markers. The aim of our study was to illustrate the diversity of tumor angiogenesis in colon adenocarcinoma. MATERIALS AND METHODS: Our study comprises 25 cases, histopathologically diagnosed on routinely processed and stained specimens as: well differentiated (3 cases), moderately differentiated (13 cases) and poorly differentiated (9 cases) colon adenocarcinomas. The immunohistochemical examination was performed by using anti-VEGF-A, anti-VEGF-R2 and anti-CD34 antibodies. The assessment of VEGF-A and VEGF-R2 expression was based on a semi-quantitative score system. The quantification of microvascular density (MVD) was done in hot-spot areas. RESULTS: Our study showed immunopositivity for VEGF-A and VEGF-R2 in all investigated cases. The expression of both markers was extremely heterogeneous. VEGF-A score was high in 16 cases and low in 9 cases, while VEGF-R2 score was high in 15 cases and low in 10 cases. MVD presented increasing values from the well differentiated forms to the poorly differentiated ones. The angiogenic profile of the colon adenocarcinoma was correlated with the differentiation degree, tumoral stage and MVD.

CONCLUSION: Although limited by the small number of investigated cases, our study supports the value of angiogenic response pattern through the VEGF-VEGF-R complex, and also sustains, through MVD assessment, the prognostic value of these markers. The heterogeneity of the VEGF-A and VEGF-R2 expression mirrors the particularity of each case and, consequently, the value of the personalized therapy.

Key words: adenocarcinoma, colon, VEGF-A, VEGF-R2, MVD

40. VARIANTS OF CIRCLE OF WILLIS AND THEIR CLINICAL SIGNIFICANCE
Lucia L. Indrei, Ilina L. Barbulescu, Cosmin Pantu
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania, "Gr. T. Popa" University of Medicine and Pharmacy, Iasi, Romania

BACKGROUND: The aim is to identify and classify the anatomical variants of the circle of Willis, to compare our data with information available in literature and to emphasize the clinical importance of these variants by evaluating the cause of death by cerebro-vascular diseases in patients with variants of arterial circle. **MATERIALS AND METHODS:** Our study was carried out on 48 brains specimens obtained during autopsies performed in the laboratory of anatomical pathology in the "Prof.Dr.N.Oblu" Clinical Emergency Hospital Iasi. We macroscopically examined and measured the caliber of the vessels forming the circle of Willis, compared our results with previous findings reported in literature and classified our cases based on different types of anatomical variants, also taking into account the cause of death. **RESULTS:** Of the 48 cases, only 14 presented an unusual variant of the arterial circle, 7 found in male brains. Regarding the arterial territory, most of the anomalies affected both the anterior (the carotid artery system) and posterior (the vertebro-bazilar system) circulation. Moreover, in 6 cases variants of the vessels were present bilaterally. The most common variants were the posterior communicating artery (PCOM) or anterior cerebral artery (ACA) hypoplasia and the absence of the anterior communicating artery (ACOM). 70% of the cases presented multiple vessels anomalies. For example, we found a right and sinuous ACA associated with a fetal type PCOM, and in another case we could see the absence of the ACOM, along with the fenestration of the right ACA and hypoplasia of the right PCOM. **CONCLUSION:** Although we found more cases of the classical type of circle of Willis than reported in literature, in about two thirds of the cases of variants of the circle we could observe multiple anomalies, whereas in other studies the vast majority of cases had only one modified vessel. In our study we managed to identify 3 variants which were not previously published so that we could assert that these variants of the circle of Willis, although not so frequent, are polymorphic and present particular aspects. Multiple vessels anomalies could be correlated with the high mortality rate caused by hemispherical or cerebellar infarctions.

Key words: Arterial circle, Variants, Cerebro-vascular diseases

MEDICAL SCIENCES

41. A CROSS-SECTIONAL STUDY ON THE ATTITUDES AND PERCEPTIONS OF OUTPATIENTS TOWARDS PALLIATIVE CARE AT THE HONG KONG QUEEN MARY HOSPITAL HOSPICE CENTRE
Crystal C. Hsue, Margaret K. Ho, Amy Tien-Yee Chang
Li Ka Shing Faculty of Medicine, University of Hong Kong

BACKGROUND: Palliative care aims to improve the quality of life for patients and their families, by helping them to cope with problems associated with illness. It targets four aspects of health: physical, psychological, social, and spiritual. Most of the current literature on palliative care is limited to the perspectives of health professionals. **MATERIALS AND METHODS:** This study aims to investigate the views of outpatients receiving palliative care at the Hong Kong Queen Mary Hospital Hospice Centre (HKQMHC), which offers outpatient palliative care services to cancer patients. The objective is to assess their attitudes and perceptions as well as their knowledge and beliefs, in order to achieve the outcome of gaining a better understanding for evaluation and future development. This observational cross-sectional study was performed with the completion of a single paper-based original questionnaire, during 18 afternoon clinic sessions on Thursdays and Fridays from December 2017 to February 2018 at the HKQMHC. In total, 100 outpatients participated. Descriptive and univariate analyses were performed. **RESULTS:** The study revealed that all the mean scores for aspects

of care offered at HKQMHC were above 8, on a scale of 0-10 with 0 being extremely inadequate and 10 being extremely adequate. Each respondent was able to identify an average of 1.82 of the 4 aspects of palliative care. 87% of respondents perceived the physical aspect of this care to be of the highest priority. Patients generally held very positive attitudes, reflecting that the services sufficiently met their needs. However, owing to their rather limited knowledge, this may have restricted their perspectives to a largely superficial level, as many discerned palliative care to be simply targeting physical health with medical consultations. **CONCLUSION:** Considering the implications of the results, the addition of components such as accessibility and education to Hong Kong's current system of palliative care are crucial in the betterment of such services for patients. During disease progression, a continued spectrum of services, such as physical and mental health activities and psychosocial counselling, may be reinforced, so as to better help patients to cope with illness.

Key words: Palliative care, Outpatients, Attitudes, Perceptions, Knowledge, Beliefs, Hong Kong

42. FEATURES AND DIAGNOSTIC VALUE OF β_2 -MICROGLOBULIN IN THE BLOOD AND URINE OF PATIENTS WITH RHEUMATOID ARTHRITIS WITH KIDNEY DISEASE
Snizhana V. Pasailiuk, Yaroslav V. Kulachek, Hennadii P. Petrochenkov, Veronika Kulachek
Bucovinian State Medical University

BACKGROUND: Proteinuria is one of the significant factors in the progression of kidney disease, a frequent and sometimes the only symptom of kidney disease. One of the diagnostic studies of pathological conditions, especially in uronephrology, is the determination of the level of low molecular weight protein β_2 -microglobulin (β_2 -MG) in the human body. **MATERIALS AND METHODS:** 109 patients with RA were examined. The patients with RA were divided into four groups by presence of CKD and its stages: Group I - RA without CKD (n = 20), Group II - RA and CKD I c. (N = 31), III group - RA and CKD II. (N = 30), Group IV - RA and CKD III Art. (N = 28). We determined the levels of β_2 -MG in blood and urine by using enzyme immunoassay. The studies were carried out in respecting with the main provisions of the Helsinki Declaration of the WMA on the ethical principles of scientific medical research involving human subjects. **RESULTS:** A significant increase in the content of β_2 -MG in the blood of patients with RA ($1.39 \pm 0.01 \mu\text{g} / \text{ml}$) compared with the group of practically healthy individuals was detected. In the presence of signs of CKD, the level of β_2 -MG in the blood of patients of group II and group III increased significantly. In the blood of the IV group of the examined, the content of β_2 -MG ($2.99 \pm 0.31 \mu\text{g} / \text{ml}$) was significantly increased compared with its content in the group of practically healthy individuals and other groups. The content of β_2 -MG in the urine in patients of group IV ($1.99 \pm 0.14 \mu\text{g} / \text{ml}$) was significantly increased compared with β_2 -MG of urine from practically healthy individuals and other groups. **CONCLUSION:** So, according to the progression of CKD and a decrease in the functional ability of the kidneys, the β_2 -MG level increases. Concentrations of β_2 -MG in the blood and urine are sensitive parameters to detect kidney involvement in the pathological process in RA, can be used for early diagnosis of CKD in patients with RA, as well as to determine signs of CKD progression.

Key words: CKD, RA, β_2 -MG

43. THE CORRELATION BETWEEN THIRD VENTRICLE DIAMETER (TVD) AND VENTRICULAR INDICES AT THE TIME OF DIAGNOSIS AND DURING ITS EVOLUTION IN PEDIATRIC HYDROCEPHALUS
Louise B.L. Schweizer, Susanne Kerscher, Martin Schuhmann
"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania, University Hospital of Tuebingen, Germany

BACKGROUND: Measurement of ventricular width is important in pediatric patients with hydrocephalus. At the present it is assessed using cranial MRI or CT, coming along with risks of anesthesia in small children or radiation. As the third ventricle is accessible via the temporal bone window using ultrasound, measurement of its diameter could be a reliable and radiation-free alternative to assess ventricular changes. A necessary precondition is, that changes of third ventricle diameter (TVD) correlate to changes of the whole ventricular system. In this study TVD was compared to standard ventricular indices to investigate its correlation. **MATERIALS AND METHODS:**

394 MRT/CT images from 117 pediatric patients (median age 6.5 years) with hydrocephalus were measured at the time of diagnosis and during acute and chronic changes. Measurements included axial TVD and three standard measures of the lateral ventricles (Evans Index, FOHR and Cella Media Index (CMI)). TVD and lateral ventricle measurements were compared using Spearman's and Pearson correlation coefficient at the time of diagnosis, therapy and acute shunt dysfunction. Furthermore, a correlation within subjects was calculated in 8 patients. RESULTS: The best linear correlation was found between TVD and CMI after initial therapy ($r=0.7$), at acute shunt dysfunction ($R=0.702$) and after shunt revision ($r=0.566$). After shunt revision changes of TVD correlated well to changes in Evans ($r=0.609$), FOHR ($r=0.74$), $p < 0.01$. The correlation within subjects were outstanding Evans Index ($r=0.988$), FOHR Index ($r=0.99$) and CMI (0.99). CONCLUSION: TVD showed a significant correlation with all lateral ventricle indices at the time of diagnosis, therapy, shunt dysfunction and during chronic changes. It is therefore an excellent mirror of ventricular changes in pediatric hydrocephalus. Thus, TVD measurements by ultrasound can potentially substitute standard imaging to assess changes in ventricular width.

Key words: Third ventricle diameter (TVD), pediatric hydrocephalus, ventricle changes

44. USP8 EXPRESSION IN PITUITARY ADENOMAS
Betul Beyza Mentese, Meral Mert, Esra S Hatipoglu, Ayla Solmaz Avcikurt, Omur Gunaldi
Biruni University, Istanbul, Turkey. Bakirkoy Dr. Sadi Konuk Training and Research Hospital, Istanbul, Turkey. Faculty of Medicine, Balikesir University, Balikesir, Turkey. Bakirköy Psychiatric Hospital, Istanbul, Turkey

BACKGROUND: Ubiquitin-specific protease 8 (USP8) stabilizes epidermal growth factor receptor (EGFR) protein, which is overexpressed in various tumor types. USP8 mutation is known to be specific for corticotroph adenomas. Herein we aimed to determine expression status of USP8 in various types of pituitary adenomas. MATERIALS AND METHODS: A total of 43 tissue samples from human pituitary adenomas (7 non-secretory, 36 hormone secreting) and 16 from normal brain tissues were evaluated and compared for their USP8 expression levels. Tissues from pituitary adenoma were obtained during pituitary surgery of the adenomas, whereas normal brain tissues were obtained from temporal lobe during surgery of the patients for epilepsy. Of the 36 hormone secreting pituitary adenomas, 14 secreted FSH/LH; 3 secreted PRL; 6 secreted ACTH and 13 secreted GH. RESULTS: USP8 expression levels were 3.7 [IQR: 1.1-50.2] in pituitary adenomas and 1.1 [IQR: 0.7-1.4] in non-adenomatous pituitary (NAP) tissues ($p=0.002$). When pituitary adenomas were stratified by their secretory status, USP8 expression levels were 1.9 [IQR: 0.6-42.6] in non-secretory pituitary adenomas (NSPA) and 4.2 [IQR: 1.2-56] in hormone secreting pituitary adenomas (HSPA). There was a statistically significant difference for USP8 levels between NAP, NSPA and HSPA groups ($p=0.008$). The difference was due to higher expression of USP8 in SPA compared to that in NAP ($p=0.002$). Expression levels of USP8 were not different between NSPA and HSPA ($p=0.6$) or between NSPA and NAP ($p=0.09$). Additionally USP8 expression levels were not different among subtypes of hormone secreting pituitary adenomas ($p=0.6$). CONCLUSION: In conclusion USP8 may have a role in tumorigenesis of hormone secreting pituitary adenomas. Since USP8 downregulates EGFR expression which promotes tumorigenesis, we may speculate that USP8 carries out its task in pituitary tumorigenesis via a different route.

Key words: Pituitary Adenomas, Gene Expression, Ubiquitin-specific Protease 8 (USP8)

SURGICAL SCIENCES

45. EAR REPLANTATION – A REAL CHALLENGE
Remus-Andrei C. Tofan, Stefania G. Gherge-Moise, Adina Georgiana A. Para, Mihaela Pertea
"Gr. T. Popa" University of Medicine and Pharmacy, Iași, Romania
Clinic of Plastic Surgery and Reconstructive Microsurgery, "Sf. Spiridon" Emergency County Hospital, Iași, Romania

BACKGROUND: Although not common, the traumatic amputation of the auricle has a major psycho-emotional impact over the patient as a result of

the aesthetic prejudice determined by it. Often, with the traumatism taking place by avulsion, the microsurgical replantation of the auricle represents a challenge for any microsurgeon. MATERIALS AND METHODS: The study included three male patients aged between 45 and 56 years old, all presenting complete amputation of the auricle following a work-related accident. The doctors have performed microsurgical replantation, in all three cases, which meant arterial anastomosis and venous anastomosis. In two cases, only venous anastomosis was possible. In the third case, due to the impossibility of venous repairing, the posterior face of the auricle was deepithelialized along with the incision of the posterior face of the cartilage and enlargement of the receiving area. Post-operatory, the leech therapy was used in order to realize the venous drainage by alternating the biological leech with the biochemical one (represented by local heparin administration). Immediately after the operation, anticoagulants were administered. Also, a system allowing the exposure of the replanted ear to heat in order to have a vasodilatation effect was put in place. RESULTS: In all three cases, the post-operatory evolution was favorable. In only one case the venous suffering was important, but the leech therapy improved the results. CONCLUSION: Because of the important emotional impact that the amputation of the auricle exerts, efforts must always be made for its reconstruction, being it microsurgical replantation or non-microsurgical techniques using skin flaps. We must not forget that leech therapy can be used when venous anastomosis is not possible during microsurgical replantation.

Key words: Ear, Replantation, Amputation

46. EVALUATING TRAUMA MANAGEMENT, OUTCOMES AND ECONOMIC DATA IN A SYSTEM IN CRISIS: CHANGES REQUIRED FOR IMPROVEMENT
Chrysanthos D. Christou, Alexandros A. Tsolakidis, Apostolos Prionas, Andreas Tooulis, Tsoulfas Georgios, Vasileios Papadopoulos
Aristotle's University of Thessaloniki, Thessaloniki, Greece

BACKGROUND: The goal is to record and evaluate trauma management in our University Hospital, while laying the foundations for a national database. MATERIALS AND METHODS: Retrospective study of trauma patients (N=2320) between 2014 and 2015, through our single-center registry. Demographic information, injury patterns, hospital transfer, diagnostic and therapeutic procedures, duration of hospitalization, ISS, outcomes, complications and cost were recorded. RESULTS: For the total 2,320 trauma patients, RTAs(23.2%) were the most common injury pattern after fall traumas(36.3%) and presented the highest associated injury severity (mean ISS=5.49). RTAs were decreased during the study period (from 25.6% in 2014 to 21% in 2015). Regarding prehospital management, after applying the EMS triage algorithm criteria [1], we found that over-triage of trauma patients to our facility was high(52.1%) and was not reduced during the study period. Hospital transfer by the National Emergency Medical Services was provided in 6.4% (n=76/1192) of patients in 2015 and in 9.7%(n=109/1128) in 2014. Overall, 3.9%(n=91) of our trauma patients received operative management (4.2% in 2015 and 3.5% in 2014, with 30 days surgical mortality been 7.5% and 7.3% respectively). 2.8%(n=64) of our patients were considered polytrauma(ISS>17) and their mortality was 37.5%. Overall non-salary cost for trauma management was 623,322Euros. 50% of overall costs was attributed to managing RTAs' victims. A significant reduction of costs (mean 24%, CI95%:12%-60%) could have been achieved if prehospital triage was more effective. CONCLUSION: There is a need for improved prehospital triage in order to increase the cost-effectiveness of trauma care. Road safety programs and further training of medical personnel in treating critical traumas are necessary.

Key words: Trauma registry, Trauma database, trauma databank, Greece

47. IN VIVO ELECTRIC CONDUCTIVITY STUDY REGARDING NEW RECONSTRUCTION METHODS USED IN NERVE REGENERATION
Călina M.C. Dan, Loredana-Maria N. Conțiu, Andreea C. Nistor, Anamaria-Victoria Bumbu
University of Medicine and Pharmacy of Tirgu-Mures, Tirgu-Mures, Romania

BACKGROUND: Peripheral nerve reconstruction is a very debated subject nowadays, that's why new surgical techniques are performed. It has been

demonstrated that after a complete section of a peripheral nerve, the healing process takes time, and most frequently the recovery isn't complete. One possible but important factor in this process is the formation of scar tissue at the repair site, and the development of a neuroma, that's why special care should be taken to minimize scar formation when operating on peripheral nerves. The purpose of this study is to evaluate the effect of wrapping a muscle flap or an adipose flap around the primary suture repair on motor nerve regeneration in a rat model using in vivo electric conductivity. **MATERIALS AND METHODS:** Twenty-four adult Wistar Albino rats were divided in three equal groups. The left sciatic nerve was trans sectioned and reconstructed with primary suture. For the first group the primary suture was left alone, for group no. two the reconstructed site was wrapped in a local muscle flap, and the third group was wrapped in adipose flap harvested from the interscapular region of the same rat. The right sciatic nerves were used as control group. At 4,6,8 and 10 weeks, in vivo electric measurements were performed for all rats. **RESULTS:** In the injured nerve were observed a significant increase in the stimulation threshold and a decrease in conduction velocity when compared with the healthy nerve in all groups. The conduction velocity increased progressively from 4 to 10 weeks in the first group, compared with the other two groups where it decreased. There is also a difference between the second and the third group, the conduction velocity being the smallest in the group where we used adipose flap. **CONCLUSION:** Significant functional differences were observed between the direct sutured group but no flap around the repair and the other two groups. From the average voltage response point of view, **the rat's sciatic nerve from the first group is healed at 10 weeks** after surgery. These differences between the healing process of all three groups may be the result of a new formatted neuroma.

Key words: Peripheral nerve, Neuroma, Regeneration

48. **INCIDENCE OF PRECANCEROUS LESIONS DURING SCREENING IN THE RURAL AREA**
Maria Ilinca D. Iosub, Andrei C. Manu, Cătălin-Bogdan Coroleucă, Ciprian-Andrei Coroleucă, Assistant Lecturer Diana-Elena Comandașu, Diana Mihai, Elvira Brătiiă
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania "Clinical Hospital of **Obstetrics and Gynaecology** "Prof. Dr. Panait Sârbu", University of Medicine and Pharmacy "Carol Davila" Bucharest, Romania

BACKGROUND: With a global incidence of 527.624 cases in 2014, and 85% of the cases emerging from the developing countries, cervical cancer represents a public health challenge. Published data showed a steep reduction in the USA mortality rate due to an efficient screening (75% in 50 years). In contrast, in our country due to insufficient medical education and lack of a national screening program the standardized mortality ratio occupies the first position in the European rank. **MATERIALS AND METHODS:** During a national campaign aimed towards low income rural areas with difficult access to proper healthcare services we performed cervical exams and collected samples for Pap smear and microbiological analysis. **RESULTS:** Analysis of 337 pap smears showed 316 (93.76%) normal results, 10 (2.96%) ASC-US (atypical squamous cells of undetermined significance), 1 (0.29%) LSIL (Low grade Squamous Intraepithelial Lesion) with HPV (Human Papilloma Virus) atypia, 4 (1.18%) ASC-H (atypical squamous cells, cannot exclude high-grade lesion), 4 (1.18%) HSIL (high grade Squamous Intraepithelial Lesion), and 2 (0.59%) HSIL with features suspicious for invasion. Most of the patients presented various degrees of inflammation or atrophy. The mean age of the patients is 47 years old. **CONCLUSION:** This study shows an incidence of 6 high grade and 15 low grade precancerous lesions in the rural area. Considering the fact that our country does not have a national screening program yet, most of the examined patients have not had done another pap smear prior to this campaign. Because of this fact and insufficient medical education the target population is at risk which is consistent with occupying the first place as mortality due to cervical cancer in Romania. We also want to highlight the importance of additional screening services and establishing a health education campaign in the population. For a better understanding of the prevalence of precancerous lesions, a comparative study between the incidence of this lesions in rural and urban areas would be useful.

Key words: Pap smear, Intraepithelial lesions, Precancerous lesions, Screening, rural area

49. **JUVENILE Pilocytic ASTROCYTOMA OF THE POSTERIOR FOSSA**
Gabriel R. Șerban, Sorin Târnoveanu
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania. "M. S. Curie" Emergency Clinical Hospital for Children, Bucharest, Romania

BACKGROUND: Pilocytic astrocytoma (PA) is the most common primary brain tumor in children and is seldom reported in adults. The most common sites are the posterior fossa (about 60%) and the optic pathway (25-30%), with locations like cerebral hemispheres and spinal cord being rare. Obstructive hydrocephalus is common at presentation and bulbar or cerebellar symptoms may also be present. There is a strong association with neurofibromatosis type 1 (NF1). **MATERIALS AND METHODS:** A database screening from our Department of Neurosurgery was conducted to identify cases of juvenile PA. Further, we performed a literature review in PubMed and summarized the current knowledge. **RESULTS:** Over the last decade we were able to identify 12 cases of juvenile PA located in the posterior fossa (70,6% from a total of 17 cases of PA). The ages of patients ranged from 2 to 17 years (median, 8 years) and only 4 patients were boys (33,3%). Signs of raised intracranial pressure were present in 9 patients. Headache, vomiting, vertigo, gait abnormalities and vision disturbances were common symptoms. These tumors had a range of imaging appearances, with the majority presenting as a large cystic lesion with a brightly enhancing mural nodule. Although one case of NF1 was confirmed, it was localized on the optic pathway. Gross total resection was performed in 10 patients, whereas resection was partial in 2 (one of them had tumor regrowth two months after surgery). All patients were treated without cerebrospinal fluid (CSF) drainage and the hydrocephalus persisted in only one case. There were no significant post-operative complications except for one patient which developed a CSF fistula. In the literature the overall prognosis was favorable, with a 2-year survival rate of 97.6% and 94.6% at 10 years. The value of postoperative adjuvant radiotherapy for residual low-grade gliomas is not clearly assessed at the moment. The role of chemotherapy (temozolomide, vincristine and carboplatin) is limited. **CONCLUSION:** Knowledge of the clinical presentations and imaging findings is essential for an accurate diagnosis. Gross total resection resulted in the best prognosis. Long term follow-up, preferably by MRI, is essential.

Key words: pilocytic astrocytoma, brain neoplasm, glioma, posterior fossa

50. **THE QUALITY OF LIFE IN PRIMIPAROUS PATIENTS ACCORDING TO DELIVERY METHOD**
Camelia A. Alexandroaia, Romina-Marina E. Sima, Delia M. Carp, Liana Pleș
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania. "Bucur" Maternity, "Sf. Ioan" Emergency Hospital, Bucharest, Romania

BACKGROUND: The patients quality of life represents an actual interesting domain in surgery and obstetrics. There are multiple recent studies regarding the postoperative or postpartum patients' evolution related to surgical technique. We evaluated the impact of the method of delivery in patients' life. **MATERIALS AND METHODS:** We realized an observational prospective study on primiparous women who delivered in "Bucur" Maternity, "Sf. Ioan" Emergency Hospital, between January 2017 to January 2018. The patients were asked to respond to our questionnaire at the end of the puerperium about life changes in postpartum. **RESULTS:** Our study included 78 patients. The mean age was 27.72 years of age. The birth distribution was: 24,4% patients delivered vaginally and 75,6% delivered by cesarean section. The patients who delivered vaginally mobilized earlier after birth (73,68% under 6 hours postpartum). Depression feelings after the cesarean section were more frequently compared to the vaginal birth (30,51% versus 21,05%). The patients who delivered by cesarean section felt a higher support due to the obstetrician care („excellent" in 61,02% of cases). The majority of patients (21,05%) who delivered vaginally reported the birth event as being very traumatic (10/10). The postpartum complications were more frequent after vaginal delivery (10,53%) compared to cesarean section (6,78%). Patients who delivered vaginally described that birth method did not influenced the new-born care (94,74%), but it had important impact for 88,14% of the patients who underwent cesarean section. The mode of delivery influenced the patients' decision of not choosing the same method again for 8,70% of cases. **CONCLUSION:** The method of delivery represents a significant parameter in postpartum period. The vaginal delivery was characterized by early mobilization and breast

feeding. The patients who delivered by cesarean section felt more comfortable and had less complications.

Key words: primiparous, quality, life, delivery, cesarean

51. THE USE OF VANCOMYCIN AS AN EFFECTIVE ELEMENT IN MEDIASTINITIS PROPHYLAXIS
 Stefan M. Cretu, Aureliu Batrînac, Andrei Ureche, Adrian Rotaru, Serghei Voitov
 "Nicolae Testemitanu" State University of Medicine and Pharmacy, Chişinău, Republic of Moldova; International Hospital Medpark, Chişinău, Republic of Moldova "Nicolae Testemitanu" State University of Medicine and Pharmacy, Chişinău, Republic of Moldova

BACKGROUND: Sternal mediastinitis known as a complication of a post-operative infection especially after cardiac surgery. Analyzing international data on this serious complication, its morbidity varies between 0.25% and 2.5%, with mortality varying between 7 and 45% in different patient groups. Using different prevention methods is the objective. MATERIALS AND METHODS: In the period of 2011 – 2018 years in Medpark International Hospital - 1800 patients had open-heart surgery. From 2015, for 98% of patients (in exception of patients with allergy) was used the method of sternal interior surfaces impregnation (post-sternotomy) with Vancomycin 1,5 gr powder, applied 2 times: before the pericardiotomy and upstream of sternal suturing, via the topical techniques. RESULTS: The rate of postsurgical complications with deep sternal wound infection in our Hospital was about 2% (N18). After starting using Vancomycin in 2015 there were no postoperative infections, deep sternal infections were not registered, reducing the cases up to 70% the number of superficial infections. CONCLUSION: The results are soothing, because after 2015 when this method is used Vancomycin 1.5 gr powder forming a homogeneous paste with 1 ml NaCl solution, applied 2 times: before pericardiotomy and upstream of sternal suturing. The hazard of deep mediastinal complications is evidently reduced due to the surgical management optimized in correlation with the impregnation of powder. It is necessary to continue detailed study with the identification of the optimal formula of application.

Key words: Vancomycin, Pericardiotomy, Sternal Mediastinitis, Postsurgical mediastinal, Superficial infections.

52. THREE EDITIONS OF NATIONAL SURGICAL SUMMER SCHOOL IN POLAND AS A SIGNIFICANT TOOL IN IMPROVING SURGICAL MEDICAL EDUCATION
 Maria Gołębiewska, Robert Chudzik, Beata Golebiowska, Beata Golebiowska
 Medical University of Lublin, Lublin, Poland

BACKGROUND: Surgery - the art of medicine which has fascinated students for centuries. From scientific achievements of Sushruta in Ancient India, through beginnings of Halsted's school of surgery, to modern times, it has always been considered a profession requiring manual abilities and practical training of surgical skills. Answering the need for more practical undergraduate surgical training, we decided to provide more concrete practice for medical students and create opportunities to experience practical surgical reality, resulting in three editions of National Surgical Summer School in Poland - course designed for undergraduate surgical enthusiasts. The aim of the study is to present the effectiveness of Surgical Summer School training in increasing knowledge on surgical practice, and improving surgical skills as well as confidence of the participants. MATERIALS AND METHODS: During three years of National Surgical Summer School 150 hours of surgical training for 92 students from all of Medical Universities in Poland were performed from various disciplines (general surgery, cardiosurgery, vascular surgery, thoracic surgery, among others), accompanied by workshops on essential skills from other specialties relevant to surgery, (e.g. trauma radiological examination, anesthesia aspects for surgeons). We measured the knowledge on practical surgical information with self-designed questionnaire before and after the course, surgical skills within time of performance and durability of the performed sutures in days 1 and 4. RESULTS: The increase of knowledge was 14,29%. As for the practical aspect, students decreased the time of performance by 35-70%, as well as improved the aesthetic effect of the sutures (mean score in day 1= 2 points, mean score in day 4 = 5 points/5 points scale). 100% participants recommend our course for surgery enthusiasts, 85% of students would participate again in the course. 81,5% of participants feel definitely more confident with surgical equipment and 72% of participants feel confident to perform the sutures learnt during the course if asked by the senior staff in the future. CONCLUSION: Effectiveness of National Surgical Summer School proves the importance of implementing significant changes in surgical medical education in Poland.

Key words: Surgical skills, Medical education, Surgical education