

MINISTRY OF HEALTH OF THE REPUBLIC OF MOLDOVA



*Nicolae Testemitanu* State University  
of Medicine and Pharmacy of the Republic of Moldova



Medical Students and Residents Association

# Abstract book

May 12-14 2016

Chisinau, Republic of Moldova

6<sup>th</sup>  
International Medical Congress  
for Students and Young Doctors  
MedEspera





*Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova (SUMPh) is the only institution in the country which trains doctors and pharmacists at the undergraduate and postgraduate levels. It was founded on the basis of the Institute of Medicine No 1 from Sankt Petersburg, Russia, that was transferred to Kislovodsk during the Second World War, and later on - to Chisinau, together with the medical students and the whole teaching staff under the name of Chisinau State Institute of Medicine (CSIM).

This institute started its activity on October 20, 1945. In time it served as an impulse for the development of higher medical education and consolidation of the health system in the country. In 1990 the Institute was named after Nicolae Testemitanu (1927-1986), famous scholar, talented teacher and statesman, skilled organizer in the field of public health, who contributed substantially to the organization and development of the healthcare system in our country.

One year later, *Nicolae Testemitanu* CSIM was reorganized in university. In 1996 the institution was given its current name - *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova. The main objective of the University is to improve the training process by implementing advanced methods of teaching-learning-evaluation and also, to develop new possibilities for medical students to be involved in research activities, different conferences and workshops. *Nicolae Testemitanu* SUMPh is highly appreciated in our country and abroad for the quality of studies and researches, and it continuously tends to improve its positions.

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## MESSAGE OF THE RECTOR



At *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova we always encourage youth in their initiatives. It's our responsibility to inspire them to create, to develop and exceed their own limits. MedEspera International Congress for Students and Young Doctors serves as a confirmation in this regard. It is organised biennially by the Association of Students and Residents in Medicine, and we do appreciate them for their inexhaustible force and wish to make things well-done.

In this year, *Nicolae Testemitanu* SUMPh will host the 6th edition of the Congress. We hope this will represent a great opportunity for students and young doctors to exchange ideas and research experience.

The number of foreign MedEspera participants highlights the fact that medicine has no boundaries. Hope this year won't be an exception and our colleagues from other countries will attend this event and will be fully satisfied with the obtained results.

We wish you all good luck! Don't forget to follow your dreams and work hard for achieving your goals. Take full advantage of this event and feel free in sharing your experience and learning something new from your colleagues.

I hope your best impressions of Moldova and *Nicolae Testemitanu* SUMPh will be unforgettable!

*Rector Ion Ababii*  
*MD, PhD, Professor*

## **WELCOME MESSAGE OF THE ORGANIZING COMMITTEE**

Dear colleagues and friends,

We have the honour and pleasure to welcome you to MedEspera International Congress for Students and Young Doctors, welcome to *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova!

This 6th edition of MedEspera will bring you, besides a new experience, the most recent achievements in the fields of medicine, dentistry and pharmacy. Hope you'll enjoy the program we've prepared, which includes conferences, workshops, discussions and also a social part for getting to know the hospitality of our country and the beauty of our traditions.

The idea of organising this Congress came some years ago to a group of our elder colleagues. Since the 1st edition, MedEspera became popular among medical students and young doctors from the Republic of Moldova and abroad.

We make every effort to increase continuously the quality of this event, so that you could take the best of it!



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## ABSTRACTS

### CLINICAL CASES

#### ORAL PRESENTATIONS

#### 1. MULTIPLE ORGAN DYSFUNCTION INDUCED BY ALPROSTADILUM IN A PATIENT DIAGNOSED WITH SCLERODERMA (SYSTEMIC SCLEROSIS)

**Alexandru Emil Baetu, Andreea-Iuliana Miron, Oana Mihaela Punga**

Scientific advisor: Monica Copotoiu, MD, PhD, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction:** Painful, slow-healing ulcers of the fingers are most common in patients with progressive systemic sclerosis. Prostaglandine E1 (PGE1) is a vasodilator that has been found to reduce the pain of the severe peripheral arteriosclerotic vascular disease and to promote healing of the accompanying ulcers.

**Clinical case:** We present the case of a 46-years old, female, allergic to Hymenoptera venom, and witch in 2010 received swine flu vaccine. In October 2010, she reached the department of Rheumatology, Targu Mures accusing pain and swelling in the extremities, skin changes at the same level accompanied by vasomotor disturbances at cold. Having in mind this clinical appearance of skin, typical for scleroderma, associated with the mesenchymal nonspecific inflammatory syndrome proven by laboratory test, with increased antibody titer (antinuclear antibodies-ANA: 45.2 UI/ml and topoisomerase-I antibodies-anti Scl 70: 39.5 UI/ml) and after radiographic appearance of early resorption of the distal phalanx, IV finger, right hand is given a diagnosis of progressive systemic scleroderma and we have initiated a background treatment with methotrexate. But after two months the disease progresses rapidly with necrotizing vasculitis and pulmonary injury. So we initiated a treatment with cyclophosphamide 600 mg intravenously with favorable evolution until October 2011 when it stopped due to a suspected hemorrhagic cystitis, and when peripheral ischemia occurred we decided to introduce back azathioprine in the treatment plan but with modest results resuming the treatment with Cyclophosphamide in May 2012, which was associated with Alprostadilum and in February 2013 reentered Methotrexate. In January 2014, after the treatment with Alprostadilum, the patient suddenly accused chills, low grade fever, muscular pain, without auscultatory lung changes, arrhythmic heart sounds, with ischemic changes on electrocardiogram, rising the suspicion of an acute coronary syndrome, but which was rejected after cardiological examination. Subsequently, after two days, the patient presents coffee grounds vomiting for which was made an upper gastrointestinal endoscopy in emergency, which shows no active bleeding source. Considering progressive hemodynamic alterations, the patient is transferred in Gastroenterology Clinic where is established the diagnosis of acute gastric ulcer with upper gastrointestinal bleeding. After 2 weeks, the patient presents in the emergency room in bad general condition with necrotic changes in the fingers and she was hospitalized to the intensive care unit with inflammatory syndrome, marked anemia, hepatic and renal failure, pleural effusion fluid with cytopathology diagnosis of atypical cells and suspected neoplastic process having a rapidly evolution to death.

In **conclusion** even if we considered all aspects and risk factors related to the patient's disease, when we prescribe Alprostadilum we should expect to face a tragic outcome.

**Key words:** alprostadilum, scleroderma, organ dysfunction.

## **2. GESTATIONAL GIGANTOMASTIA SURGICAL TREATMENT PROCEDURE**

**Dr. Ben-Tsrooya**

Scientific advisor: Prof. Avshalom, Head of Department, Plastic Surgery, MEIR Hospital, Israel

**Introduction:** Physiological enlargement of the breasts occurs at puberty and during pregnancy. It is known as gestational gigantomastia when enlargement in pregnancy becomes excessive, uncomfortable and embarrassing. Gestational gigantomastia may have far reaching effects for the mother and fetus. This rare condition is Associated with considerable morbidity but may be Associated with good fetal outcome. Our case was very special in the surgical approach. Gestational gigantomastia is a very rare condition and only about 100 cases have been reported in the literature. The breasts are of vital importance to the newborn child, particularly in developing countries where breast feeding is common. Breast feeding confers numerous advantages on the infant including reduced mortality rate and improved neurological development. Physiological enlargement of the breasts occurs at puberty and during pregnancy, when it starts very early and is sustained until delivery. The factors controlling breast growth are complex and not completely understood, although estrogens, progesterone, prolactin, growth hormone and adrenal steroids are all known to play a role. Sometimes this process goes wrong resulting in an excessively large and painful breast called gestational gigantomastia (gravida gigantomastia, mammary hyperplasia of pregnancy) or virginal hyperplasia when it occurs at puberty. This rare but important condition of the breast not only interferes with breast feeding but may cause severe maternal morbidity and even mortality.

**Clinical case:** Gestational gigantomastia is a very rare condition and only about 100 cases have been reported in the literature. The breasts are of vital importance to the newborn child, particularly in developing countries where breast feeding is common. Breast feeding confers numerous advantages on the infant including reduced mortality rate and improved neurological development. Physiological enlargement of the breasts occurs at puberty and during pregnancy, when it starts very early and is sustained until delivery. The factors controlling breast growth are complex and not completely understood, although estrogens, progesterone, prolactin, growth hormone and adrenal steroids are all known to play a role. Sometimes this process goes wrong resulting in an excessively large and painful breast called gestational gigantomastia (gravida gigantomastia, mammary hyperplasia of pregnancy) or virginal hyperplasia when it occurs at puberty. This rare but important condition of the breast not only interferes with breast feeding but may cause severe maternal morbidity and even mortality.

**Discussion:** Gestational gigantomastia was first described in 1684 by Palmuth, and is very rare. An incidence of 1 in 28.000 to 1 in 100.000 pregnancies has been quoted. It is a severely debilitating condition in which massive enlargement of the breasts may be accompanied by thinning of the skin, tissue necrosis, infection and hemorrhages. Movement and respiratory difficulty and emotional, social

and psychological problems may also occur. There is no universally accepted definition. Some authors have suggested the amount of breast tissue removed at surgery should determine the definition.

The etiology is unknown but various factors have been proposed. These include over-sensitivity to or over- production of hormones such as estrogen, human chorionic gonadotrophin, human placental lactogenic and prolactin.

**Conclusion:** This fortunately rare condition is particularly important in developing countries as it prevents breast feeding, which is crucial for the development of the infant, and prevents effective contact between mother and baby, thus making bonding difficult. Gestational gigantomastia does not preclude a normal delivery, although in this case caesarean section was carried out for obstetric reasons. Severe anemia secondary to hemorrhage from the lesion in this case could have caused maternal death. Surgical management is critical for the safety of mother and the newborn.

**Key words:** gigantomastia, pregnancy, surgical.

### **3. OZONE THERAPY IN THE TREATMENT OF RECURRENT APHTHOUS STOMATITIS**

**Mihaela Bogulean**

Scientific advisor: Moisei Mihaela, MD, Associate Professor, Faculty of Medicine and Pharmacy, Galati, Romania

**Introduction:** The pathology of the oral mucosa is very broad and the lesions can have a polymorphic aspect, due to the specific histopathological characteristics, the presence of saliva and the mechanical trauma during the mastication process. The tissue damage is produced by the microorganisms from the biofilm of the dental plaque, but also by the immunologic and inflammatory response of the body. Aphthosis is a frequent lesion that can affect about 20-50% of the population, depending on the type of population, the socio-economic or professional standard. The lesion can affect people of all ages, most frequently women, and depends on the weather and on the immunologic status of the patient. Normally, after a few days, aphthosis heals itself without leaving any marks, even if it's not treated with any medication.

**Clinical case:** I have evaluated the case of a patient diagnosed with recurrent aphthous stomatitis, whose suffering started about a year and a half ago. Dental plaque and restorative dental materials were considered local irritative factors, so the first part of the treatment included professional teeth cleaning and removal of the fixed dental bridges. Despite the professional and individual treatment, the disease reappeared. The patient also collaborated with the dermatologist, who decided to establish a local treatment with cortisone-based ointments. It was observed an improvement of the symptomatology during the therapy, but the symptoms have increased one month after the completion of the treatment. It was decided to perform a biopsy.

With the patient's consent, we started an alternative treatment based on ozone therapy. Infiltrations with ozone were made on the aphthosis lesions, once every 3 days, for a total of 2 weeks.

The patient used ozonated water for mouth rinsing for 10 consecutive days and she also used an ozone-based toothpaste for her daily oral hygiene.

The results of the conventional histopathological exam of the harvested tissue fragment showed half-viable and non-viable squamous epithelial inserts and acute inflammatory modifications. After the ozone therapy, we observed the disappearance of the lesion and a reversion to normal of the oral mucosa tissue.

**Conclusion:** The treatment of the oral mucosa conditions has to be quickly installed after establishing the correct and complete diagnosis. In contrast to the traditional medicine and other methods of treatment, such as using antibiotics and antiseptics, the alternative therapies are less expensive, conservative, easily accepted by patients and they restore the balance of the structures of the oral mucosa, leading to the improvement of the general health of the patient.

**Key words:** recurrent aphthous stomatitis, ozone therapy.

#### 4. ESOPHAGOGASTRIC ADENOCARCINOMA

**Andreea Simina Chibulcutean, Claudia Mihaela Cimpan**

Scientific advisor: Petre Gabriel, University Assistant, *Iuliu Hatieganu* University of Medicine and Pharmacy, Cluj, Romania

**Introduction:** The adenocarcinoma of esophagogastric junction includes three anatomical entities which have in common parietal extension and lymphatic dissemination both to the mediastinum and abdomen. Due to the dramatically increasing incidence, Siewert & Stein described and classified the disease as a tumor located 5 cm above and under the anatomical cardia, in order to lead to an optimal surgical treatment.

**Clinical case:** A 71 years old male presented to C.F. Cluj- Napoca Hospital complaining about progressive dysphagia, loss of appetite, postprandial regurgitation with fetid halitosis. In association, the patient presented fatigability and weight loss (4-5 kg in the last 3 months).

The patient history reveals the existence of multiple cardiac pathology, such as atrial fibrillation, atrioventricular block grade III, right bundle branch block, aortic regurgitation grade II and mitral regurgitation grade II.

The results of the paraclinical tests lead us to the following diagnosis: adenocarcinoma of esophagogastric junction type II Siewert- Stein, pT4N1M1. Taking into account the cardiac pathology, the optimal treatment in this case is a gastrostomy.

**Conclusion:** The particularity of the case consists in choosing the most appropriate surgical therapy considering the advanced stage of the tumor and the Associated comorbidities.

**Keywords:** esophagogastric adenocarcinoma, gastrostomy, multiple cardiac pathology.



## 5. COCHLEAR IMPLANT IN A 10 MONTHS OLD PATIENT

**Oana Coman, Alexandra Cirticioiu, Alex-George Stanciu, Mihai Stanca**

Scientific advisor: Senior Lecturer Dr. Adriana Neagos, Otorhinolaryngology Clinic, Targu Mures Emergency Clinical County Hospital, Romania

**Introduction:** World Health Organisation declares that over 5% of the global population, 32 million children included, suffer from disabling hearing loss, meaning a loss greater than 30 decibels in the better hearing ear in children.

**Objective:** The purpose of this study is to present the case of the youngest bilateral cochlear implant receiver in Romania and the correlations between the imaging and surgical findings.

**Clinical case:** This is a case report of a female patient aged 10 months suffering from bilateral profound sensorineural hearing loss implanted bilaterally with Cochlear<sup>TM</sup> Nucleus<sup>®</sup> 6 Implant at the Otorhinolaryngology Clinic in Tirgu Mures, Romania on 19<sup>th</sup> October 2015. According to the medical history of the patient, the mother stated to have observed bilateral hearing loss and attention deficit, the disease being confirmed through Auditory Steady State Response (ASSR), audiogram, tympanogram and cranial computer tomography. The physical examination did not reveal any pathological change. The axial computer tomography examination with 5 mm pace, 2,5 mm reconstructions in encephalic and skeletal regime showed no apparent pathological modifications. The surgical procedure started with the bilateral infiltration of the retroauricular skin with adrenaline and saline, incision of the skin, bilateral mastoidectomy, observing the incus and the facial nerve. Using the intraoperative facial nerve monitor, any damages to the facial nerve were avoided. The bilateral posterior tympanotomy procedure made it possible to observe the round window niche. In order to introduce the electrodes of the cochlear implant, a perforation through the round window membrane had to be made, sealing it with pieces of muscle. The functionality of the cochlear implant was verified, afterwards, reconstructing the anatomical plans, suturing bilaterally the incision and applying sterile bandages.

**Results:** Both findings, the imaging and the surgical ones, were concordant, no pathological modifications were found that could have discomforted the cochlear implantation.

**Conclusion:** This is the first case of an infant patient under 12 months suffering bilateral cochlear implantation in Romania, with activation of the implant after 7 weeks from implantation, and having a favourable outcome subsequent to the surgery.

**Keywords:** cochlear implant, sensorineural hearing loss, bilateral hearing loss.

## 6. TRICHOBEZOAR, TRICHOPHAGIA AND TRICHOTILLOMANIA

Monica Goia, Alexandru Mihail Barsan, Andrei Feier, Mihai Mudava

Scientific advisor: Gozar Horea, MD, PhD, Lecturer, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction:** Trichobezoar, tricophagia or Rapunzel Syndrome is an extremely rare psychiatric and intestinal condition in humans, resulting from eating hair. It is Associated with the hair pulling disorder Trichotillomania. The peak age of onset is 9 to 13 but it has been also found in infants.

**Objective:** Describe the case of a patient with trichobezoar, tricophagia and trichotillomania that underwent laparotomy.

**Clinical case:** We present 9-year-old patient admitted to the Gastroenterology department in Miercurea Ciuc, Romania with 5 months history of abdominal pain and repeated vomiting. Abdominal ultrasonography revealed an intra-gastric foreign body. After 6 months, the patient was hospitalized in our department of Orthopedics and Pediatric Surgery in Targu Mures with the same complaints. On physical evaluation, the abdominal examination revealed a well defined and firm mass in the left upper abdominal quadrant. Transaminases were slightly elevated and hair was found on fecal culture examination. All other examinations were normal. The patient was referred to a psychiatry examination and came back with the following diagnosis: trichotillomania, Pica eating disorder and obsessive compulsive disorder. An abdominal radiograph confirmed the intra-gastric foreign body which continued in the pylorus and duodenum. Upper gastrointestinal endoscopy highlighted a large trichobezoar and surgical treatment was recommended. We performed a mid-line laparotomy followed by a gastrostomy and removal of the hair mass.

**Results:** There were no complications whatsoever, no signs of perforation, and the postoperative wound was clean. There was no pain in the epigastric region following surgical treatment and the mass was completely removed. The patient status was stable and she was discharged two weeks after the surgery. Further psychiatric treatment was recommended to avoid recurrence.

**Conclusions:** Conventional radiology and upper gastrointestinal endoscopy proved to be the best methods of investigation in this case. Recurrence of tichobezoar can occur if the latent neuro-psychiatric disorder is not correctly treated using a multi-disciplinary team.

**Key words:** trichobezoar; trichophagia; trichotillomania.

## 7. CASE REPORT: THE OUTCOMES OF IDIOPATHIC INFLAMMATORY MYOSITIS IN A 43 OLD WOMAN

Natalia Loghin-Oprea

Scientific advisor: Minodora Mazur MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** We report a case of a 43 old woman with medical history of dermatomyositis for 8 years, and complaints of symmetrical muscle weakness, especially in lower extremities, low endurance

and fatigue. The patient's medical history is remarkable by osteoporosis due to treatment with corticosteroids, bilateral hip arthroplasty for avascular necrosis. The physical examination was remarkable by proximal muscular atrophy, calcinosis of gluteus muscles. The remainder of examination was normal.

In this patient, our goal was to apply clinical tools in order to assess disease's outcomes.

**Clinical case:** Changes Associated with damage in MII are post-inflammatory, cumulative and irreversible, present at least 6 months despite prior immunosuppressive treatment or rehabilitation. In order to assess diseases outcomes in this patient we applied the next tools: patient's questionnaire, Myositis Damage Index(MDI), Manual Muscle Test 8(MMT8), LifeSatisfaction 11, PATIENT GLOBAL ACTIVITY ASSESSMENT(PGA), PHYSICIAN GLOBAL ACTIVITY ASSESSMENT(MDGA). After analyzing the results we determined that MMT8 score was rather high 55 out of 80, due to the rehabilitation programs that the patient attended. There was an insignificant discrepancy between PGA and MDGA, with the trend from patient to diminish the role of the disease. We tried to measure life satisfaction by LiSat 11, in this patient, it was dissatisfied due to psychological health and leisure situations. The MDI score got 14 points out of 38, the most damage was found in muscular and skeletal systems.

**Conclusion:** In order to determine how myositis patients' illnesses change over time we have to assess them using special established and validated tools and to have patient-reported outcome measures for myositis.

**Competing interests** None.

**Key words:** idiopathic inflammatory myositis, outcomes.

## 8. INFECTIVE ENDOCARDITIS AT THE PATIENTS AT HEMODIALYSIS

**Irina Matceac, Maria Siscanu, Ruslan Ridcodubschi**

Scientific advisor: Alexandra Grejdieru, MD, PhD, Associate Professor, Cardiology, Medical Clinic nr.3, Department Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Infective endocarditis (IE) at patients on hemodialysis (HD) is 10-18 times higher than in the general population, caused by arterio-venous fistula or central catheter, increased susceptibility to infections and renal failure. HD patients with valvular calcification often presents (28% - 36% calcification Vao and VM), fistulae and synthetic venous catheters 7.6% being the gateway to infection. Severe complications frequently occur in staphylococcal IE at patients on HD: pulmonary edema (82-100%) embolic syndrome, cerebral often (9-17%) lung abscess. High mortality in the first year of evolution of the disease 45-75% compared with 25-52% in-hospital death.

**Clinical case:** Patient X. 64 years old. Diagnosis: chronic renal disease. Chronic diffuse glomerulonephritis. End-stage chronic renal failure. Hypertension gr. III very high additional risk. CF II NYHA at dialysis 1.5. months.

**Results:** subfebrility, palpitations, inspiratory shortness of breath, sore legs, pain in lombar, asthenia. Objective: skin petechiae, limited verbal contact, right hemiparesis, rhythmic heart sounds, TA-105/70 mmHg. FCC-109 c / min. Anemia (Hb 62 g / l), thrombocytopenia, lymphopenia, leucocytosis and increased ESR. Blood biochemistry: hyperuricaemia, hipercreatininemie. Staphylococcus aureus blood culture positive. ECG: Sinus tachycardia 100 c / min, ventricular premature beats, atrioventricular block gr.I. AEC left deviation. LV hypertrophy EcoCG: Expansion AS, moderate AD, LV and RV. LV hypertrophy EF - 49%. VAO failure gr.I. VM failure gr.II. VTS failure gr.II. Impaired VAP gr.I. Moderate pulmonary hypertension.

**Treatment:** HD, antimicrobial, antifungal, vascular rheology.

**Conclusions:** patients with HD who develop IE onset of congestive heart failure, peripheral stigma, developing hypotension, staphylococcal etiology, embolic complications at onset in disease presents a reserved prognosis.

**Key words:** Infective endocarditis, Hemodialysis, High mortality.

## 9. DIAGNOSTIC DIFFICULTIES IN A CHILD WITH PROLONGED FEVER

**Claudia Olaru, Nicoleta Gimiga, RA Olaru, Raluca Stanca**

Scientific advisor: Smaranda Diaconescu, *Grigore T. Popa* University of Medicine and Pharmacy, Iasi, Romania

**Introduction:** Fever of unknown origin is defined as a rectal temperature higher than 38.3°C more than 3 weeks, the diagnosis of which remains uncertain after initial investigations. Identification of the causes and management of prolonged fever in children is important and is guided by thorough history-taking and repeated physical examinations combined with standard laboratory tests and simple imaging procedures.

**Clinical case:** We report the case of a two-years-old male who had been managed 1 week for rinofaringitis at home and for 6 days in a tertiary clinic were had been placed on various intravenous antibiotics with no clinical improvement and was finally referred for further management to our hospital. Physical examination revealed pyrexia (temperature of 38.2°C), faringeal congestion and injected tympanic membranes. The signs of meningeal irritation were absent. Other aspects of physical examination were normal. Results of laboratory tests showed nothing of significance apart from anaemia. He received antibiotic treatment. The fever persisted and in 3-rd day of hospitalisation the child becomes drowsy and father describes cutaneous hyperesthesia. The cerebrospinal fluid analysis showed features in keeping with meningeal inflammation and he had a raised erythrocyte sedimentation rate. The brain computed tomography scan revealed a **tetraventricular hydrocephalus**. He had ventricular shunt and was placed on antituberculous drugs and intravenous steroids but despite this his clinical condition slowly ameliorated and he developed right spastic hemiparesis.

**Conclusion:** The diagnosis of TB meningitis in this patient highlights that when a patient is not obviously exposed to the causative factors of a disease and clinical signs are absent, possible occurrences may present a diagnostic problem.

**Key words:** fever of unknown origin, meningitis, child.

## 10. HYDROXYCHLOROQUINE IS A FOE FRIEND IN A DRUG INDUCED SYSTEMIC LUPUS ERYTHEMATOSUS?

**Oana Mihaela Punga, Andreea-Iuliana Miron, Alexandru Emil Baetu**

Scientific advisor: Copotoiu Monica, MD, PhD, University of Medicine and Pharmacy, Targu Mures, Romania

**Introduction:** The golden standard in the management of systemic lupus erythematosus (SLE) is the hydroxychloroquine. The main listed side effects of hydroxychloroquine are the ocular toxicity and in lupus with myositis overlaps the desquamation.

**Clinical case:** A female patient known with a history of sterility and upper respiratory tract infection (started on June 2015 and resolved in December 2015) on treatment with Amoxicillin and symptomatics presents in January 2016 with parotid swelling and sicca symptoms. Corroborating the history (photosensitivity, amoxicillin intake, parotid swelling, sicca symptoms, mother diagnosed with psoriasis) with the immunology panel (positive antibodies for SSA, SSB, RO-52, dsDNA and histone) the patient was diagnosed with secondary Sjogren Syndrome Associated with drug induced SLE. Hydroxychloroquine Associated with low doses of Prednisone was started. After the first dose, the patient complained about pruritus and extended erythematosus plaque. She was admitted in the ER. She was put on high doses of corticosteroids and the hydroxychloroquine was stopped. A skin biopsy was performed showing a pattern characteristic for toxic dermatitis. Results from a prior parotid biopsy are expected. The patient was admitted in the Department of Rheumatology to start a new drug treatment.

**Conclusion:** Four major questions arised from the history of our patient. Did we missed something prior the onset of the treatment with hydroxychloroquine? Was the Amoxicillin to be blamed for the drug induced lupus? Are we dealing with a secondary Sjogren syndrome with complications – eg. lymphoma? What is the best treatment to be started?

**Keywords:** lupus, hydroxychloroquine, side effects

## 11. MULTIFOCAL MOTOR NEUROPATHY WITH CONDUCTION BLOCK: A CASE REPORT

**Alexei Racovita, Oxana Jugurt**

Scientific advisor: Lisnic Vitalie, MD, PhD, Professor, Institute of Neurology and Neurosurgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Multifocal motor neuropathy with conduction block (MMN-BC) is a rare disease and a distinct entity, its clinical and electrophysiological features differ from other chronic inflammatory demyelinating neuropathies. Its' first description in 1988 lead to new diagnosing assessments. The distinction of this disease is very important as the treatment differs and incorrect treatment can lead to clinical decline.

**Clinical case:** We report a case of a 62-year old man who developed muscular weakness in all his four limbs, muscle wasting of both hands (2005), claudication, difficulty ascending stairs, muscular

cramps, palpebral ptosis(2007) on the right eye and diplopia on upward gaze. No other neurological signs detected. His past medical history included: Amygdalectomy (1985), Hearnia repair(1995), Chronic pancreatitis.

**Results:** At first radial compressive neuropathy was suspected, after exclusion of this diagnose Myastenia gravis the ocular form was suspected. Anti-AchR antibodies were not detected and anticholinesterase drugs did not show effect. Electroneurography revealed conduction block on the right medianus nerve, decrease of sensory nerve action potentials (SNAP) on the medianus and ulnaris nerves bilaterally. Compound muscle action potentials (CMAP) decrease on the left nervus peroneus profundus. CMAP decrease on the fibers of nervus tibialis posterior bilaterally. Also alfa waves were detected on the fibers of nervus tibialis posterior bilaterally and latency increase of F waves.

Imunological assay has revealed anti-GM1 and anti-GD1b positive antibodies. The patient was diagnosed with Multifocal Motor Neuropathy with Conduction Block with flaccid tetraparesis with oculomotor nerve implication. The patient underwent intravenous immunoglobulin (IVIG) and cyclophosphamide therapy with prominent improvement in muscle force and other clinical features.

**Conclusions:** Slow onset of assymetrical limb weakness, sometimes with visible muscle wasting and fasciculations without any sensory abnormalities should guide the physician to consider MMN-CB and its' chronic immune mediated demyelinating course. As this disease is extremely rare we highlight the importance of this case report to raise awareness on MMN-CB. This condition is often misdiagnosed at Primary Health Centers and this case shows that time efficient diagnose and corect treatment can improve the clinical and electrophysiological indicators.

**Key words:** multifocal, neuropathy, immunological, conduction block

## 12. THE USE OF VAC ASPIRATION SYSTEM IN THE TREAMENT OF ABDOMINAL WALL PHLEGMON

**Victor Schiopu, Stanislav Munteanu**

Scientific Advisor: Serghei Ignatenco, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Purulent postoperative complications remain to be a challenge for surgeons even in the 21st century. Septic-purulent complications rate remains high (from 5.0% to 35% of the number of operated patients). As a consequence, morbidity records an increase and also the costs incurred by public medical institution are increased due to the higher number of hospitalization days, an average of 11-14 days. Use of V.A.C. (vacuum assisted closure) asspiration allows to solve problems related to suppurative postoperative complications and provides the ability to minimize the number of hospitalization days thanks to its specific properties in relation to the classic management of these complications.

**Case report:** It is described the clinical case of a patient, 41 years old, with phlegmon of the anterior abdominal wall, developed after abdominoplasty or "tummy tuck". To remove muscle diastasis was used polypropylene mesh fixed to aponeurosis of rectus abdominis muscle. The case was solved using the system for V.A.C. aspiration in intermittent regime with negative pressure 125 mmHg, in

complex with antibacterial treatment, based on the result of microbiological investigation and determination of cultural sensitivity highlighted toward antibacterial preparations, also with immunomodulator and detoxifying treatment.

**Discussion:** This case shows the relevant clinical data for treatment of anterior abdominal wall phlegmon with cosmetic and minimal economic results.

**Conclusions:** VAC aspiration system compared to the classical method of suppurative wound management has a higher number of advantages, among which are the preservation of prosthetic material used in the surgical procedure in particular cases, reducing the frequency of dressing at 48-36 h, which is more convenient for patient and lowers treatment costs, the possibility of continuing treatment in outpatient system etc. Such activity represents an opportunity for surgeons in surgical service of suppuration.

**Key words:** abdominal, wall, phlegmon, V.A.C aspiration,

### 13. JOIN-INVOLVEMENT IN INFECTIVE ENDOCARDITIS

**Ruslan Ridcodubschi, Elena Samohvalov, Mihai Curudimov, Natalia Spancioc, Valeria Evtodiev.**

Scientific advisor: Alexandra Grejdieru, MD, PhD, Associate Professor, Cardiology, Medical Clinic nr.3, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** infectious Endocarditis (IE) is a serious disease with incidence of 3-10 to 100.000 episodes per year, late diagnosis establishing (36-40%), fatal complications: congestive heart failure in 30%, embolic phenomena in 20%, stroke 15%. Joint manifestations in patients with IE are rare, they are manifested by: arthritis-6.4%, sinovitis-2.8% and creates difficulties in establishing early diagnosis.

**Clinical Case:** Patient Y., 47 years old, Diagnosis: Active Infectious Endocarditis with negative hemocultures with native valve involvement(aortic valve (AoV), mitral (MV) and the pulmonary artery (PA)), MV failure of III degree, AoV II degree, VAp II degree, HF II NYHA. Chronic Periodontitis. Chronic hepatitis of viral etiology (HCV), moderate activity.

**Results:** subfebrility inspiratory dyspnea, palpitations, pain of the mean-severe severity in shoulder joint, elbow joint, coxofemoral joint, lumbalgias, fatigue. Objective: tegumental peteschias, tumefiation of the periarticular regions, rhythmic heart beats, attenuated, BP-135/60 mmHg. FCC-105 b/min. Vesicular murmur in lungs. ECG: Sinusal tachycardia with frequency of 102 beats per minute. EAH - horizontal. EcoCG: Moderate dilatation of LA, RV, RA. EF-65%. Plate vegetations, floating on the anterior and posterior cusps and MV (7 x 10 mm), floating vegetations of the AoV cusps, MV failure, III degree, AoV-II degree, TrV-III degree, ApV-I degree, moderate PHT, PsVD-36 mmHg. General blood analysis: anemia (Hb-102 g/l), ESR-40 mm/HR. Biochemical analysis: total bilirubin 25 mmol/l, ALT-49.9 mmol/l, AST-66.9 mmol/l, GGT U/l-295.4. General urine analysis: leucocitury, immunological tests: Anti-HCV-positive, rheumatoid factor-44 IU/ml, C-reactive protein-384 mg/l. Negative hemocultures.

Empirical antimicrobial **treatment** with sol. Vancomycin-60 mg/kg/day, i/v in 2-3 plugs, Sol. Gentamicin-3 mg/kg/day, i/v in a single dose, antifungal, antiinflammatory drugs, diuretics.



**Conclusions:** Patient 47-year-old young man with chronic oral bacteriemia develops IE with polyarticular syndrome from the beginning, that creates difficulties in early diagnosis establishing and late appropriate antimicrobial treatment.

**Key Words:** Infectious Endocarditis, Joint manifestations.

## 14. ANGIOGENESIS INHIBITORS - A NEW OPPORTUNITY IN CANCER TREATMENT. CLINICAL CASE – RECURRENT GLIOBLASTOMA

**Sergiu Moraru**

Scientific Advisor: Oxana Odobescu, University Assistant, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Angiogenesis (from gr. *Angeion* blood vessel and *genesis* - birth) is the process of forming *new* vessels, from the network of existing vessels, the phenomenon begins during fetal life and continues in child and adult ensuring growth and development. Aberrations of phenomenon can be a condition *sin quo non* in the pathogenesis of diseases such as *cancer*. Angiogenesis inhibitors are revolutionary products called *molecular targeted therapies* aimed to inhibiting the progression of essential processes in carcinogenesis, one of which is angiogenesis.

### **Objectives:**

1. To evaluate the effectiveness of treatment with bevacizumab in recurrent glioblastoma;
2. To appreciate the tolerability of the product by the patient. Adverse reactions.

**Clinical case:** Current research is a retrospective analysis of a clinical case, the patient A., 28 years old, diagnosed with recurrent *glioblastoma* and treated in Section of Chemotherapy No.2 of the Oncological Institute of Chisinau, the patient was monitored from May 2010 to November 2011. The evolution of treatment with *bevacizumab* was monitored using brain MRI executed at optimal intervals.

**Results:** In the absence of blood vessels who will infiltrate tumor tissue, it cannot exceed 2 mm<sup>3</sup> in volume, because oxygen and nutrients can diffuse freely through the tissues just over a distance of approx. 200 micrometres, which limits tumor growth and subsequent the metastasis *via* blood and lymphatic vessels. Preventing the activation of tyrosine kinases (TK), angiogenesis inhibitors limit the proliferation and migration of cells involved in an angiogenesis process (endotelioocytes, fibroblasts, myocytes). The target can be achieved either through monoclonal antibodies which working as blocking ligand-receptor interaction: *bevacizumab*; *trastuzumab*, or small molecules that interact directly with the intracellular TK acting as competitive inhibitors of ATP binding: *imatinib*, *pazopanib*.

### **Conclusion:**

1. For the presented patient the administration of a suitable conservative treatment, then apply a contemporary regimen of treatment with Avastin, allowed an increase of survival by 19 months, compared with the average statistics for patients with similar staging, but more important is increasing the quality of life and reintegration of the patient in the family and society;

2. Inhibitors of tumor angiogenesis is a group of anticancer drugs without haematological toxicity (aplastic anemia, neutropenia are very common result of classic chemotherapy), and without hepatotoxicity, because not involved in DNA replication they not cause other cancers.

**Key Words:** angiogenesis, cancer, molecular targeted therapy, bevacizumab.

## **15. TREATMENT OF ACTINIC SKIN DEFECT USING LOCOREGIONAL ISLAND FLAP**

**Alina Stoian, Viorica Mihaluta, Natalia Cucos**

Scientific advisor: Verega Grigore, MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** plasty techniques currently used in the treatment of the defects are largely standardized, but in clinical practice, quite often we are faced with patients who were undergoing radiation therapy for the treatment of certain lesion (malignant or benign ). In this category require reconstructive plastic surgery, patients, with major changes that produce ionizing radiation to tissues undergo radiotherapy.

**Clinical case:** This work reflect a clinical case of a man 61 years, that was submit to radiation therapy after tumoral excision, manifests itself at the level of the third upper part of the large intestine, rectum. At a distance of 2 years after radiotherapy, equivalent in the amount of 60 Gy in the sacral region treated actinic, there was an area of necrosis, about 20x20cm. The area that was actinic changed, was divided in 3 filed, the limit between them being visually determined by the intensity of the dystrophic changes, so the field 1 included the central area with the highest degree of necrosis, and the field 3 with marginal erythema. During surgery, have been included all the 3 field, that created a defect in sacral region, about 20x20cm. According to the presurgery plan, it has been done plasty defect with gluteal flap on the both parts, the donor place being closed by direct suture at the same stage. After surgery, the demarcated area were separated and studied histological for determination the viable area.

**Conclusion:** target area for histological examination is the area nr.II where examination is indicative in the damage of the skin and soft tissue. The integration of the tissues and organ transplant from another area in the case of actinic defect, may take place after exceeding the field II, histological appreciated with regenerative potential. A preoperative histopathology of actinic area determines the edge of the viable tissue, in some significant cases areas with important tissue.

**Key words:** actinic lesion, plasty, histological examination.

## 16. MUSCULOSKELETAL MANIFESTATIONS OF INFECTIVE ENDOCARDITIS

Vera Torgai, Natalia Spancioc, Elena Samohvalov, Ala Ivasi, Elisei Ceban

Scientific advisors: Alexandra Grejdieru, Associate Professor; Liviu Grib, Professor, Cardiology, Medical Clinics Nr.3, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Musculoskeletal manifestations in patients with infective endocarditis (IE) constitute 28-50%: artralgiias (30%), mialgiias (20%), lumbalgias (16%), artritis (5,4%) and sinovitis (2,8 %). In mitral valve implication the rate of mortality consists from 37%, but in IE that is complicated with congestive heart failure – 65-85%.

**Clinical case:** Pacient X, 71 years old, Diagnostics: active IE, stafilococical etiology, with MV affecting (vegetations 2,5 mm), MV failure III degree, TsV failure II degree. HF III NYHA. Osteoartrosis, nodular form, III degree in association with rheumatoid artritis, poliartritis III degree. ACVD. Ictus in medium cerebral artery in the left.

**Results:** subfebrility, palpitations, artralgiias, fatiguee. Objective: hemiparesis in the right, motoric afazy, morning stiffness – 2 hours, simetric artritis in the metacarpo-falangian region, proximal interfalangian region, palore of the skin. Cardiac sounds are rhythmic, BP-170/80 mmHg. FCC-96 b/min. Hemoculture - *Staphylococcus aureus*. Leucocitosis, limphopenia, ESR elevated. Biochemistry: Pozitive Latex test, hipercreatininemy, uremy, elevated range of transaminasis. Urine analisys: leucocitury, hematury. ECG: Synusal tahicardy 100 b/min, left ventricle hypetrophy. Computer tomography (CT): CT sighns for ictus ischemic on the left. Multiple consecuances of the lacunar infarction that was supported bilateral in external capsula.

**Treatment:** antibacterian, antimicotic, nonsteroidal antiinflamatory drugs, rheological, vascular, antiaritmnic, diuretics.

**Conclusions:** patients with IE with the background of rheumatoid artritis usually presents stafilococical *trigger*, affecting mitral valve, complicated with congestive heart failure, ictus and cerebral oedema, that fatal defavorisates the prognosis.

**Key words:** endocarditis, reumatiod, artritis, staphilococical

## 17. AGGRESSIVE APPROACH IN GLIOBLASTOMA MULTIFORMEA. RARE CASE OF LONG TERM SURVIVAL

Ioana Varvari

Scientific advisor: Laura Rebegea, MD, PhD, Department of Oncology, Galati County Emergency Hospital, Galati, Romania

**Introduction:** Glioblastoma is the most common and aggressive primary brain tumor and, as a result, carries a very poor prognosis. Although average survival period ranges from 6 to 12 months

depending on the patient's age, performance status and response to treatment, some cases of long term survival have been reported in the literature. The factors that influence long-term prognosis are not yet understood.

**Clinical case:** We report the case of a 63 year old man that gets diagnosed with Glioblastoma Multiforme (GBM), undergoes subtotal resection, but radiotherapy and chemotherapy are performed 4 months after the surgery due to patient non-compliance. In this 4 months the tumor increased in size becoming an inoperable tumor. After receiving adjuvant therapy consisting of radiotherapy concomitant with Temodal, followed by 12 courses of chemotherapy with Temozolamide, the tumor progression and size was reduced in the course of 27 months from 43mm to 35mm and is well managed today. The patient currently has an Eastern Cooperative Oncology Group (ECOG) score of 1 and has a rare 3-year long term survival as a result of the adjuvant therapy.

**Conclusion:** For a better understanding of the reasons behind long term GBM survivors, it is of vital importance to study and understand each and every case of the sort as it may provide crucial information for future treatment development.

**Key words:** Glioblastoma Multiforme, Long term survival, Temozolamide

## **18. EARLY PHYSICAL THERAPY IN INTENSIVE CARE UNIT IMPROVES OUTCOME IN AN ACUTE RESPIRATORY FAILURE DUE TO CHRONIC OBSTRUCTIVE PULMONARY DISEASE COMPLICATED WITH PNEUMONIA**

**Viorel Moise, Elena Lavinia Pastramoiu**

Scientific advisor: Monica Copotoiu, MD, PhD, Department of Physical Medicine, Rehabilitation and Rheumatology, Emergency County Hospital of Targu Mures

**Introduction:** Physical rehabilitation plays an important role in the management of critically ill patients. An early physical therapy intervention will improve mortality such improving survival, the quality of life – prolonged bed rest will lead to muscle atrophy and functional impairment. In order to monitor the benefits induced by physical rehabilitation we monitor the arterial blood gases and at the admission in the ICU the APACHE II (Acute Physiology and Chronic Health Evaluation II) and SAPS (Simplified Acute Physiology Score) scores to determine the mortality risks and the SOFA (Sepsis-related Organ Failure Assessment score) score was used for the management of the outcome, being a prediction score.

**Clinical case:** A 73 years old female patient known with atrial fibrillation, cardiac failure, hypertensive and chronic obstructive pulmonary disease (COPD) was admitted in the Intensive care Unit (ICU) with an acute respiratory failure due to a pneumonia. At the admission the patient was on ventilatory support with a Glasgow Coma Scale of 13. The APACHE score was 17 with a predictive mortality of 22% and the SAPS score was 45 predicting a mortality of 34.8%. An individualised physical training was established. The ends points of physical rehabilitation were: the maintaining of the pH to normal values, the lowering of the pCO<sub>2</sub> from hypercapnic to normal values, the amelioration of the

oxygenation values, the increasing of the pO<sub>2</sub>, the increasing of the saturation level of oxygen (SaO<sub>2</sub>) such the improvement of outcome. The SOFA score was 6 when starting the physical rehabilitation and was improved when scoring at day 7, 14, 22 and 28 decreasing by 4 points at day 7 and maintained. The evaluation of arterial blood gases showed at day 1 acidosis – ph: 7.31 and a normalized ph at day 28 of 7.43. The pCO<sub>2</sub> was improved as well from a value of 66.3mmHg to 47 at day 28 (a major improvement being seen at day 14 after physical rehabilitation pCO<sub>2</sub>: 52.7 mmHg). The pO<sub>2</sub> was 71 mmHg normalized at day 28 – a pO<sub>2</sub> of 99.2.

**Conclusion:** The physical therapy played an important role in the management of the case, improving the outcome of the patient. At this moment there isn't a standardised international protocol concerning physical rehabilitation (percussion/vibration, limb exercise, posture) for the critically ill patients, even though different benefits were noticed. This case is part of a pilot study that aims to validate a physical rehabilitation protocol in ICU.

**Key words:** ICU, physical therapy, mechanical ventilation.

## POSTERS

### 19. A SEVERE FORM OF HEMOPHILIA A ASSOCIATED WITH LEFT KNEE HEMARTHROSIS IN A CHILD

**Mihai Stanca, Paula Comes, Oana Coman, Oana Alexandra Fodor**

Scientific advisor: Chincesan Mihaela Ioana, University Lecturer, PhD, University of Medicine and Pharmacy, Targu Mures, Romania

**Introduction:** Hemophilia A, also called factor VIII (FVIII) deficiency is a genetic disorder caused by missing or defective factor VIII, a clotting protein. The gene for hemophilia is carried on the X chromosome. Although about 1/3 of haemophilia A cases are caused by a spontaneous mutation, a change in a gene. The severity of haemophilia A is linked with the level of FVIII in the blood - Severe: FVIII levels less than 1%; Moderate: FVIII levels of 1-5%; Mild: FVIII levels of 6-30%.

**Objective:** To present the case of a child suffering from a severe form of hemophilia A having the levels of FVIII less than 0,6% to which Associates multiple hematomas, knee hemarthrosis and subclavian giant bruise.

**Clinical case:** This is the story of a patient aged 1 year and 3 months, having a history with multiple bruises and hematomas occurred after repeated micro traumatism and epistaxis and no coagulopathy family history. He was brought by his presents at the emergency service for children for painful swelling in the left knee joint with functional impotence, in condition of apparent health. He was hospitalized in the Pediatric Orthopedic Surgery Department being suspected of septic arthritis, where he remains hospitalized for two weeks. During the hospitalization the doctors had decided the installation of a central venous catheter (CVC). After installing the CVC he develops a giant left subclavian hematoma, which is why it was raised the suspicion of a coagulopathy and he was transferred in our Pediatric Hemato-Oncology Department.

**Results:** There is a marked improvement in the current hemodynamic status as a comparison

with that of his first hospitalization under the replacement therapy with FVII. The bruising and hematomas had retired.

**Conclusions:** If a child especially if is a male has hemarthrosis in the large joints, had to be considered the possibility of having a coagulopathy even if he has no positive family history of any kind of coagulopathy.

Hemophilia A has an outburst evolution, their frequency is related to the concentration of the Factor VIII which is why the patient will require chronic replacement therapy with the avoidance of exercises and traumas.

Under the correct treatment, in terms of continuous prophylactic substitutions, life expectancy and quality of life was greatly improved, the risk of death caused by cerebral hemorrhage, internal bleeding or hemorrhagic shock had reduced to below 3 % of all the patients.

**Key words:** HEMOPHILIA A, KNEE HEMARTHROSIS, BRUISES, HEMATOMAS

## 20. A CASE OF APLASTIC ANEMIA COMPLICATED WITH SYSTEMIC ASPERGILLOSIS

**Mihai Stanca, Ufuoma Maureen Agadumo, Valentin Daniealopol, Noémi Julia Fori**

Scientific Adviser: Chincesan Mihaela Ioana, University Lecturer, PhD, University of Medicine and Pharmacy, Targu Mures, Romania

**Introduction:** Aplastic anemia is a rare disease in which the bone marrow and the hematopoietic stem cells that reside there are damaged. This causes a deficiency of all three blood cell types (pancytopenia). Aplastic refers to the inability of the stem cells to generate mature blood cells.

Aplastic anemia can be caused by exposure to certain chemicals, drugs, radiation, infection, immune disease, and heredity; in about half the cases, the cause is unknown. It may also occur due to a congenital inheritance or as well in the context of a constitutional predisposition.

**Objective:** The aim of this paper is to present the case of a 17 years old boy who developed aplastic anemia in the context of using sodium metamizol at home (Algoalmin) for 10 days without medical advice. Due to poor immune system the opportunistic fungus *Aspergillus* takes advantage of this situation and colonizes throughout the body leading to the condition called Aspersilosis.

**Clinical case:** We monitored the patient for a period of 33 days correspondently to the hospitalization in our Pediatric Clinic I - Hemato-Oncology Department of Targu-Mures.

**Results:** At the admission in our clinic, the first lab tests showed: a marked leukopenia (Leu/mm<sup>3</sup>- 440, Gran. 7/mm<sup>3</sup>) and trombocytopenia (PLT/mm<sup>3</sup>- 26.000) and the peripheral blood smear showed (Segmented 0%, Eo 0%, Ba 0%, Mo 1%, Lymphocytes 99%). The final diagnose was established on the bone marrow biopsy histopathology exam. Than it was performed the Anti *Aspergillus fumigatus* antibody: 1/320 (NV < 1/80) because of the persisting fever. Immediately it was implemented the antibiotic, antifungal and replacement therapy with a good result. After 33 days of hospitalization the lab tests showed a marked improvement therefore: the leucocytes reached the peak of 5890/mm<sup>3</sup>,

granulocytes 4090/mm<sup>3</sup>, PLT 384.000/mm<sup>3</sup>.

**Conclusions:** Due to the fact that the aplastic anemia is secondary to the treatment with Algalcalmin occurred in a previously healthy young patient, the bone marrow rehabilitation was achieved with the right treatment.

After 6 months after the discharge, the patient had been declared completely cured having both aplastic anemia and systemic aspergillosis extinguished.

**Key words:** aplastic anemia, aspergillosis.

## **21. A RARE CASE OF MULTIPLE MYELOMA IN A PATIENT WITH AN UNRESPONSIVE TO CHEMO-AND RADIOTHERAPY FRONTOPARIETAL GYGANTIC PLASMACYTOMA**

**Mihai Stanca, Suzana Ina Radu, Alina Elena Ticalo, Denis Pasc**

Scientific adviser: Dr. Candea Marcela, University Assistant, PhD, University of Medicine and Pharmacy, Targu Mures, Romania

**Introduction:** Multiple myeloma is a cancer of plasma cells, a type of white blood cell normally responsible for producing antibodies.

In multiple myeloma, collections of abnormal plasma cells accumulate in the bone marrow, where they interfere with the production of normal blood cells. Most cases of multiple myeloma also feature the production of a paraprotein - an abnormal antibody which can cause bone lesions and hypercalcemia. Plasmacytoma refers to a tumour consisting of abnormal plasma cells that grows within the soft tissue or bony skeleton in the context of multiple myeloma disease.

Objective: We will present the case of a 56 years old female patient admitted in the Medical Clinic I - Department of Hematology of Targu Mures, suffering from a rare hematological cancer - multiple myeloma of which onset was the appearance of a solitary extramedullary gigantic frontoparietal plasmacytoma which also did not responded at all to chemo-and radiotherapy treatment still increasing its size.

**Clinical case:** We monitored the patient over a period of 13 months and we will display the evolution chronologically.

**Results:** She was given 3 regimens of chemotherapy consisted in VAD, (Vincristine, Adriamycin, Dexamethasone), 7 regiments of PAD (Adriamycin, Epirubicin, Dexa.), one regimen of Velcade+Cytarabin+Dexamethasone in order to shrink the plasmacytoma but with no success. In the fall of 2015 she was presented at the oncology clinic for the administration of the radiotherapeutic regiments. After she recived a few radiotherapy still no reduction in the plasmacytoma volume. The oncologists stopped the therapy because the side effects were more significant than the improvements. The patient is currently hospitalized in our Hematology Clinic under the new treatment recently introduced with Caelix+Dexamethasone in order to reduce the level of plasma cells and the size of the frontoparietal plasmacytoma.



**Conclusions:** Usually radiotherapy provides excellent local and regional control of plasmacytomas, but in our case it had no positive effect. The patient is having an evolution which leads to an continue worsening without obtaining remission, therefore the long-term prognosis is reserved while the medium one is favorable.

**Key words:** multiple myeloma, plasmacytoma, radiotherapy, chemotherapy.

## 22. SEVERE ANEMIA OF UNEXPECTED CAUSE IN A FEMALE TEENAGER

**R. Stanca, N. Gimiga, C. Olaru, S. Diaconescu**

Scientific advisor: Smaranda Diaconescu, *Grigore T. Popa* University of Medicine and Pharmacy, Iasi, Romania

**Introduction:** In pediatric practice topiramate is used alone or with other medicines to treat certain types of seizures and to prevent migraine headaches in adolescents 12 years and older.

**Clinical case:** A 14 years-old female was admitted into the ER Unit after voluntary ingestion of 30 capsules (3000 mg) of topiramate. The drug was prescribed by her neurologist for migraines; the suicidal attempt was determined by a conflict with her mother. At admission she had dizziness, drowsiness, speech disturbances, abnormal coordination, vomiting and abdominal pain. Laboratory data showed severe anemia (Hb=4,3 g/dl), normochrome and normocytic, severe metabolic acidosis (HCO<sub>3</sub><sup>-</sup> = 6,6 mEq/L), hypoglycemia (37 mg/dl), hypercloremia (Cl<sup>-</sup>=121,7 mEq/L), hypernatremia (Na<sup>+</sup>= 150 mEq/L), hypokalemia (K<sup>+</sup> =1,71 mEq/L). The treatment included gastric lavage, activated charcoal, intravenous fluids, bicarbonate and blood transfusions. The clinical status improved within 24 hours, Hb level raise to 13,8 g/dl and no other laboratory abnormalities were found. The medical records of the patient showed she has no anemia previously. A CT scan performed in order to exclude an organic cause for her headaches was normal. The patient was dismissed after 10 days in good general condition; she presented mild epigastric pain and leave the hospital with proton-pump inhibitor and pshyologic counseling recommendations. Subsequently she had several hospitalisations for depression and suicidary thoughts treated with sertraline and she is followed by a pediatric psychiatrist.

**Conclusions:** This is a particular case of voluntary topiramate intoxication with particular side effects as severe anemia and metabolic disturbances, followed by long-term behavioral consequences.

**Key words:** seizure, topiramate, intoxication.

## 23. CLINICAL CASE. GRAVES' OPHTHALMOPATHY

**Elena Suvenco, Ana Rosca**

Scientific Adviser: Cristina Rizov, University Assistant, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Graves' ophthalmopathy (GO) is an autoimmune inflammatory disorder Associated with thyroid disease which affects ocular and orbital tissues.

**The objective** was to present a clinical case of patient with Graves' disease and GO.

**Clinical case:** Patient V.P. (45 years) was hospitalized in the Department of Endocrinology on the 16.03.16, with clinical manifestations: painful feeling behind the globe, redness of the conjunctiva, hyperlacrimation, exophthalmos and diplopia. In July 2014, patient was diagnosed with Graves' disease, treatment with ATS was initiated. In April 2015, supports a viral infection that leads to worsening general appearance of exophthalmos, decreased eyes motility, sensation of "sand" in the eyes, hyperlacrimation and decreased visual acuity. Patient diagnosed with GO and oral Prednisone was given in decreasing doses: 30 mg for the first week, after the dose was tapered off by 5 mg per week and GO ameliorates. In September 2015, after a virosis, clinical signs of GO becomes more severe and the patient resumes treatment with Prednisone. As a result of recently appeared flu (2-3 weeks), GO worsens and patient is hospitalized for pulse therapy. Clinical activity score was appreciated according to CAS=6. Family history: patient's sister and brother have Graves disease with severe GO. Hormonal tests: **05.15** FT4-16,8 pmol/L (*normal values range* = 12-22 pmol/L); **07.15** FT4-33,2 pmol/L; TSH <0,005 mIU/L (*normal values range* 0,27- 4,2 mIU/L); **09.15** FT4-10,8 pmol/L; TSH 0,011 mIU/L; **11.15** FT4-12 pmol/L; TSH 0,185 mIU/L; **01.16** FT4-58,5 pmol/L; TSH <0,005 mIU/L; **03.16** TSH 0,011 mIU/L; FT4 11,24 pmol/L; FT3 4,32 pmol/L (*normal values range* 3,1-6,8). MRI of the orbit: diffuse thickening of: m.rectus inferior to 1,0 cm (*normal values range* 0,49-0,57 cm), m. rectus medial to 0,85 cm (*normal values range* 0,41-0,46 cm), m. rectus laterale to 0,7 cm (*normal values range* 0,29-0,35 cm), m. rectus superior to 0,75 cm (*normal values range* 0,38-0,45 cm) with signs of edema.

The CAS wasn't determinate before and after Prednisone treatment and we can't appreciate the success of suppressive treatment. In etiology an important role has genetic predisposition (20-60% of affected individuals have a positive family history of thyroid disease), 21 % of the risk for developing GD is attributable to environmental factors (infectious agents). To confirm the genetic predisposition it would be ideal to identify the cytokines: HLA-DR3, CTLA4, PTPN22, CD40, IL-2RA, FCRL3, and IL-23R. Also, we can't ignore the influence of other factors in the pathogenesis of GO, such as female gender and the age 45 years.

**Conclusion:**

1. It is important to appreciate the clinical activity score of Graves' ophthalmopathy before and after the suppressive treatment.
2. Environmental factors, like viral infections had an important role in the evolution and severity of Graves' ophthalmopathy.

**Key words:** Graves' ophthalmopathy, Graves' disease, score CAS.

## **24. HYPOPITUITARISM SECONDARY TO UNRUPTURED INTRACAVERNOUS CAROTID ANEURYSM WITH SELLAR EXTENSION ASSOCIATED WITH IPSILATERAL BRAIN ABSCESS: A CASE REPORT**

**S. Toma, A. Sumleanski, S. Borodin**

Scientific advisor: Bodi Aureliu, MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The prevalence of intracranial aneurysms ranges from 0.4% to 3.6% in autopsy studies and from 3.7% to 6.0% in studies of patients undergoing cerebral angiography. Aneurysm projected into the sellar region account for 1% to 2% of all intracranial aneurysms and the hypopituitarism caused by them are very rare (0.17% cases).

**Clinical case:** A 73-years-old woman was admitted in the department of ophthalmology with headache, fever, painful proptosis of the right eye and visual loss. Her physical examination revealed nonpulsatile exophthalmos of the right eye with conjunctival hyperemia, complete loss of light perception and third nerve palsy. A head computed tomography showed a right-sided heterogeneous intracavernous mass extending to the sella. The patient's condition deteriorated due to hypotension accompanied by episodes of atrial fibrillation. She became comatose and was intubated emergently. Her hormonal investigations revealed hypopituitarism manifested of low serum free thyroxine and TSH, low ACTH and diminished basal cortisol. *Multiple sets of blood cultures confirmed Gram-negative bacteremia diagnosis.* She was placed on hormonal replacement therapy and empirical antibiotherapy.

The digital subtraction angiogram showed an unruptured intracavernous aneurysm (15 x 17 x 11 mm) of right internal carotid artery (ICA) with sellar extension. A repeat CT scan and MRI, discovered a brain abscess in the right temporal lobe (9 x 6 mm) *with perifocal edema.* Antibiotics were administered intravenously during the *hospitalisation* (3 weeks) followed by a course of oral antimicrobial therapy (3 weeks) adapted to culture results. After 24 days of hospitalization, the patient status improved and she was discharged home with treatment recommendations.

**Discussion results:** Most of the patients with intracavernous carotid aneurysms are asymptomatic. Symptomatic patients frequently present with the compression symptoms caused by the mass effect of an aneurysm (oculomotor palsy, trigeminal dysesthesia and optic nerve compression). Very rarely, unruptured intracavernous aneurysm with sellar extension may determine hypopituitarism due to mass-effect on the pituitary gland or the hypothalamo-pituitary axis. In our case, the initial diagnosis was difficult to establish due to its atypical features and presentation that may simulate other disorders. A *literature* review showed that hypopituitarism secondary to sellar ICA aneurysm is usually permanent in most of cases even after treatment of the aneurysm.

**Conclusion:** To the best of the authors' knowledge, this represents the first reported case in the literature of hypopituitarism secondary to unruptured intracavernous carotid aneurysm with sellar extension Associated with ipsilateral brain abscess.

**Key Words:** Hypopituitarism, internal carotid artery aneurysm, brain abscess.

## **25. CONGENITAL INFERIOR VENA CAVA HYPOPLASIA AND MUTIPLE VENOUS THROMBOSIS POSSIBLY CAUSED BY INHERITED COAGULOPATHIES DISORDERS.**

**Violeta Fridjoi**

Scientific advisor: Dr.Bogdan-Stefan Olteanu MD, PhD, Department of Radiology, *Grigore Alexandrescu* Emergency Children Hospital, Bucharest, Romania

**Introduction:** Inferior Vena Cava(IVC) hypoplasia is a rare anomaly that may be Associated with Deep Venous Thrombosis(DVT), particularly in pediatric patients. However, this case is special due to association of multiple venous malformations, renal agenesis, deep vein thrombosis and pulmonary embolism (PE) with late diagnosis at a child with inherited thrombophilia.

**Clinical case:** This paper reports the case of a 10 year-old-female patient, who was hospitalised for dispnoea, loss of weight and asthenia. No risk factors for deep venous thrombosis were evident, in particular, no immobilization, surgery, known coagulopathy, or family history.

Physical examination revealed dulness to percussion and diminished breath sounds of the right hemithorax, abdominal distension with presence of shifting dullness.

Labs results showed, microcytic anemia(Hb=10.2 g/dl), inflammatory syndrome(ESR=30 mm/h) and normal-range coagulation parameters.

Imaging was performed (chest x ray, followed by abdominal ultrasound, CT, echocardiography), revealing: pleural effusion, free intraperitoneal fluid, hepatomegaly, left pulmonary artery thrombus, interruption of the IVC with azygos-like continuation containing thrombus, right renal vein plexiform malformation with thrombi, cavernoma of the portal vein, right renal infarction, left renal agenesis.

Thrombophilia profile: mutations of MTHFR C677T, PAI1 4g/5g, EPCR-G4678C and factor XIII V34L.

**Treatment:** anticoagulation indefinitely at target INR 2-3

**Discussions:** The exact role of coexisting thrombophilic gene mutations is far from being completely understood. There have been reported in english literature 62 patients with IVC agenesis and DVT with typical characteristics. Also, we found that IVC malformation in association with thrombophilia it's an infrequent condition.

**Conclusion:** DVT and PE should be included in differential diagnoses even at pediatric ages. We should keep in mind these associations, coagulopathies being possible causes of various malformations. With the new imaging techniques, these anomalies can be diagnosed non-invasively. The absence of IVC segments can be discovered incidentally or as a result of a thrombotic event. In this case, because of the additive risk of coagulopathy and venous malformations, careful prophylaxis for recurrent DVT after treatment of complications is recommended lifelong.

**Keywords:** thrombophilia, inferior vena cava hypogenesis, multiple venous malformation, pulmonary embolism, pediatrics, DVT, imaging, cavernoma, renal agenesis

## 26. CLINICAL CASE: ACUTE AORTIC DISSECTION

**Olga Rotari, Elena Samohvalov, Marcel Abras, Anastasia Nani, Maria Mercaciova, Iulian Surugiu**

Scientific advisor: Grib Livi, MD, PhD, Professor, Cardiology Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Acute aortic dissection is the most common life-threatening disorder affecting the aorta. The immediate mortality rate in aortic dissection is as high as 1% per hour over the first several hours, making early diagnosis and treatment critical for survival. The most important predisposing factor for acute aortic dissection is systemic hypertension. The prevalence and incidence of thoracic aortic

disease is increasing, as are the number of operations for thoracic aortic disease. However, a timely diagnosis can be elusive in the event of an atypical presentation.

**Clinical case:** We report a case of a 51 years old male who presented with signs and symptoms of myocardial infarction and was later found to have aortic dissection. He was successfully managed with surgery. Patient V. admitted in PMSI MCH, „HOLY TRINITY’’, Acute Myocardial Infarction Department with the Diagnosis: Ischemic heart disease. Myocardial infarction anterior extended of LV. AHT II degree, High CV risk. IC II (Killip). His examination was remarkable for a blood pressure of 120/80 mm Hg, heart rate of 85 bpm, respiratory rate 18 bpm. The cardiovascular examination was notable for a soft systolic ejection murmur. The pulmonary and general examinations were unremarkable. ECG demonstrated sinus rhythm, HR=85/minute, LV myocardium hypertrophy, repolarization changes on the anterior wall of the LV. Repeated ECG with no visible changes. Chest x-ray was normal. His troponin levels were negative. EcoCG: it showed MCC. Bicuspid Ao Valve, dilated aortic root and the aortic arch, with aortic dissection signs, normal wall motion with normal systolic function, an ejection fraction of 57%. Patient was planned for cardiac catheterization and angiography. Angiography: Three-vessel atherosclerotic lesions. Moderate to severe stenosis on aCX II, (thrombus spree). Moderate stenosis in LAD II, LAD III, DIA I, OM I, RCA II.

He underwent a spiral computed tomography scan, which instead demonstrated an acute aortic dissection type I de Bakey (Stanford A) ectasia of the ascending thoracic aortic segment. The patient was planned for aortic root replacement with aortic valve conduit and reimplantation of coronary arteries, electively.

**Conclusion:** We report an unusual mode of presentation of a rare and often fatal condition. This case illustrates the importance of considering aortic dissection as one of the differentials in mind when a patient with signs and symptoms of myocardial infarction. It also emphasizes that non-invasive diagnostic methods such as CT and echocardiography should be performed promptly to rule out aortic dissection, which is a very severe life threatening condition.

**Keywords:** acute aortic dissection, computer Tomography

## 27. ANGINA DE NOVO IN DYSLIPIDEMIC PATIENTS, A CLINICAL CASE

**Victoria Gnaciuc, Alina Toma, Elena Samohvalov**

Scientific advisers: Livi Grib, Professor, MD, PhD; Grejdieru Alexandra, MD, PD, Associate Professor, Cardiology, Medical Clinic No. 3, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Angina is the most frequent pathology of coronary heart disease (CHD) with a prevalence of between 0.76 to 15.1 % for men and 0.73 to 14.4 % for women. Angina de novo represents 31% of total patients with unstable Angine, predominantly affecting patients 52-71 years old with concomitant pathologies: hypertension (HA) in 54.8 %, dyslipidemia (51.6 %), diabetes (DM) in 29.0 % and smoking (51.6 %). If we can reduce cholesterol levels by 25 % achieve a 50% reduction in the risk of acute myocardial infarction (AMI).

**Materials and Methods:** Patient X., 64 years Diagnosis: Ischemic heart disease. Angina de novo ( from 2/5/2016 ). Hypertension gr. II, very high additional risk. IC II NYHA st. B ACC / AHA. Subcompensated type 2 diabetes. Dyslipidemia.

**Results.** Accusations: constrictive chest pain triggered by minimal physical exertion, lasting 5 minutes ceding 1 nitroglycerin pill, inspiratory dyspnea, palpitations, congestion. The CBC: Hb-144g / l, Er.- 4.9x10<sup>12</sup> / l, L.- 9,2x10<sup>9</sup> / l, ESR - 31mm / hour. Biochemistry: Urea - 10.7 mmol / l; creatinine - 120 mmol / l; uric acid - 470 mmol / l; glucose - 8.7 mmol / l; Cholesterol - 7.9 mmol / l, triglycerides - 3.60 mmol / L, K - 4.9mmol / l; N & It; 146 mmol / l; Prothrombin - 90%, fibrinogen -3.5 g / l. The glycemic profile: 7<sup>00</sup>- 9 mmol/l, 13<sup>00</sup>-10.8 mmol/l, 17<sup>00</sup>- 10,7 mmol/l; 20<sup>00</sup>- 9,4 mmol/l. ECG: sinus rhythm with 75 b / min. Heart Axis - horizontal deviation. Repolarization disorders in region of LV; EcoCG: Ao gracious walls ascend., V.Ao VM. LA moderate dilatation. Moderate concentric hypertrophy LV. Pump function of LV is preserved. LVEF-53%. Echo-Doppler CS: Vmax-N. Etc Not. VM gr.II. Etc Not. VT gr. II. Doppler intima media - 0.9 mm. Coronary angiography: LAD stenosis at the bifurcation of DIAI 40-50%. IMA: non-dominant. IMA stenosis in the segment average of 70%. Stenosis of the proximal RCA 70-90%. Conclusion: trivascular atherosclerotic lesions, stenosis important IMA, RCA, LAD stenosis moderate.

**Treatment:** Percutaneous Coronary Intervention on RCA, IMA, Atorvastatin 80 mg / day, Plavix 75 mg / day, Bisoprolol 5 mg / day Ramipril 5 mg / day, Diaprel 60 mg / day

**Conclusions:** Patients with AP de novo in 76 % evolves AP stable and 24 % in AMI. AP de novo early detection, diagnosis by coronary angiography significant coronary lesions and facilitate prompt treatment prevent AMI development.

**Key words:** ischemic heart, angina de novo, dyslipidemia.

## INTERNAL MEDICINE I

### ORAL PRESENTATIONS

#### 28. EPIDEMIOLOGICAL, CLINICAL AND THERAPEUTIC CORRELATIONS BETWEEN DIABETES AND CANCER. ORIGINAL STUDY.

**Mihaela Andrei**

Scientific adviser: Laura Rebegea, MD, Associate Professor, Department of Oncology, *Sfantul Andrei* Emergency Hospital, Galati, Romania.

**Introduction:** Diabetes mellitus type 2 and cancer are two multifactorial, chronic diseases and their co-diagnosis in the same individual is very frequent. An association between the two conditions has been studied for many years but in the last decade significant epidemiological evidence have shown that their reciprocal influences may have a major impact on population.

**Materials and methods:** We observed in our retrospective study made between 2014-2015, 656 patients (male and female) with histologically confirmed neoplasms, including 96 cancers of the endometrium, 117 of the breast, 66 of the colon, 104 of the rectum, 108 of the oral cavity, 127 of the lung and 38 of the liver. A history with diabetes type 2 was reported by 17% of the patients (112 cases). We compared the incidence of diabetes in each type of cancer from our study. We also compared groups of age, sex, body mass index (BMI), glucose status, grade and histologic subtypes in cancer subjects with and without diabetes. For all the statistical analysis we used the software application IBM SPSS and Microsoft Excel 2007. We didn't analysed in our study pancreatic, kidney, prostate and urinary bladder cancers.

**Results:** A consistent percent of patients with cancer in association with diabetes was observed in cancer of the liver (21%), breast (27%), colon (33%), rectum (17%) and endometrium (27%). No consistent association between diabetes and lung cancer was observed in the study. In the majority of the patients with cancer, diabetes was diagnosed before the diagnosis of cancer and their treatment consisted of oral antidiabetic agents. None of the differences between groups of age and gender were significant at patients with both diseases.

**Conclusions:** Based on our study, diabetes and cancer have a very complex relationship that requires more clinical attention and better-designed studies.

**Keywords:** Diabetes mellitus type 2, cancer, neoplasms, correlation, epidemiology.

#### 29. LONG QT SYNDROME

**Iulia Balan, Rahela Manoli**

Scientific adviser: Braniste Tudor, PhD, Associate Professor, Chair of internal medicine, discipline Semiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Long QT syndrome (LQTS) is a heart rhythm condition that can potentially cause fast, chaotic heartbeats. These rapid heartbeats might trigger a sudden fainting spell or seizure. In some cases, the heart can beat erratically for so long that it causes sudden death. The frequency of long QT syndrome is unknown (possibly about 1 per 5000 population). The condition is present in all races and ethnic groups, although frequency may differ among these populations.

**Materials and methods:** This study represents various origins and manifestations of long QT syndrome, It has been studied and analyzed various journals, surveys and clinical anatomy works to correctly determine the cause of this disease.

**Discussion results:** According to previous studies was set that more than 50 commonly prescribed medications can lead to drug-induced Long QT syndrome (LQTS) and serious heart rhythm abnormalities known as cardiac arrhythmias.

Physicians, other healthcare providers and patients need to be aware of drug-induced LQTS. Physicians need to know:

- What drugs cause QT prolongation.
- How to identify patients at particular risk.
- How to monitor and protect patients taking a QT prolonging drug.

Patients need to know:

- What LQTS and its symptoms are.
- If they are at particular risk.
- What drugs cause QT prolongation.
- How to protect themselves.

**Conclusions:** From this survey we concluded that the best way to prevent long QT syndrome is to avoid or strictly monitor the use of drugs that may induce this syndrome and also run some genetic tests to be aware of our genetic predisposition and risk size. And also the best ways of treatment and increasing the quality of our patients life.

**Keywords:** QT interval, inherited, acquired, heart rhythm, arrhythmias, drug-induced.

## 30. RECURRENT LARYNGEAL PAPILLOMATOSIS IN CHILDREN

**Inga Banari**

Scientific Adviser: Cabac Vasile, MD, PhD, Associate Professor, Department of Otorhinolaryngology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Assessing the dynamics and structure of recurrent laryngeal papillomatosis common for children from Moldova compared to the results obtained in this research with general ones published in the sources specific to the problem.



### **Methods and Materials**

Historical: how the phenomena evolved in time during 1981-2013 in Republic of Moldova;

Chronological series: calculation of all comparable homogeneous values, that characterize the modification of a certain phenomena in a certain period of time;

Statistical Methods: quantitative and qualitative analysis of all data that were collected during the research.

### **Discussion Results:**

1. Children's recurrent laryngeal papillomatosis has a incidence from 0.2 to 0.7 for 100,000 children in Republic of Moldova compared to: Norway: 0.10-0.25 for 100,000 children, Sweden: 0.2-0.7 for 100,000 children, Denmark: 0,362 for 100,000 children, Canada: 1,11 for 100,000 children;

2. Average age to diagnose the disease is 4,4 years and is specific for both genders (masculine: femenin 1,2:1) in Republic of Moldova;

3. Rate of tracheotomy is between 1,8% and 64%, 30 average % is specific for children in Republic of Moldova

**Conclusions:** Our cohort of patients is similar to other cohorts regarding the sex distribution and age of onset. Clinical evolution of this disease is various. Some patients have early spontaneous remission; others, on the other hand, suffer from frequent and inexorable relapses lasting over decades to overlapping chronic complications that scar stenosis of the larynx with the imposition of a cannula tracheostomy or malignant transformation. Laryngeal papillomatosis has a huge impact on the life of children that are affected.

**Keywords:** Recurrent respiratory papillomatosis, human papilloma virus, incidence

## **31. OBESITY – THE MAIN PROBLEM RESPONSIBLE FOR METABOLIC DISORDERS**

**Natalia Onica, Irina Ghenciu**

Scientific adviser: Sarbu Oxana, University Assistant, *Nicolae Testemitanu* State Medical and Pharmaceutical University, Chisinau, Republic of Moldova

**Introduction:** The World Health Organization has identified obesity as a global epidemic problem, during the last decades the number of cases, which suffer from it - has grown very fast, as well in our country. It is the most significant cause of damage to the health. It became a public health issue due to the prevalence, costs and its effects. All attention and efforts are geared towards understanding and correcting environmental factors responsible for the increasing prevalence of obesity among the population.

**Materials and Methods:** In this project were investigated 80 persons with obesity. The control group consisted of 20 normal weight persons. Depending on the obesity degree, estimated by calculating the BMIs, the patients were divided in 4 groups: I group - 20 patients with overweight, II group - 20 patients with I degree of obesity, III group – 20 patients with II degree of obesity, IV group - 20 patients

with III degree of obesity. The basal glycemia was dosed by using the gluco-oxidasic method. Analysis of the lipid profile consisted of the determination of total cholesterol (Col), high-density lipoprotein cholesterol (HDL-col), triglycerides (Trig), determining the low-density lipoprotein cholesterol (LDL-col) and very- low-density lipoprotein cholesterol (VLDL). The obtained data assessment was performed with the „StatsDirect” statistical program.

**Results:** The analysis shows a high rise of glycemia ( $p < 0.001$ ) along with the increasing degree of obesity and abdominal circumference values (AC). The positive interrelationship of body mass index (BMIs), AC with values of systolic blood pressure (SBP), diastolic blood pressure (DBP) and glycemia, although low, but reliable, attests an existing risk for developing hypertension (HPN) and diabetes in obese patients, which is dependent on the gravity and type of obesity. Comparative research of lipid metabolism parameters in obese individuals attest a considerable increase of TGI, VLDL and decrease of HDL in patients with II and III level of obesity ( $p = 0.05$ ;  $p = 0.002$ ) compared to overweight patients. The cholesterol and of LDL values show a statistically reliable increase in groups of obese patients compared to control group ( $p < 0.0001$ ) but no indicative changes have been registered while performing a comparative research of both groups. It was discovered a highly significant correlation between AC and concentration of Trig, as well as a negative correlation with HDL concentration.

**Conclusion:** Obesity is the main trigger factor, which will lead to HPN increase and impaired carbohydrate and lipid metabolism. The positive correlation of BMIs, AC with the values of SBP, DBP, glycemia, TGI and negative correlation with HDL, although low, but reliable, can cause development of HPN, diabetes and dyslipidemia in obese patients.

**Key words:** Hypertension, glycemia, obesity.

## 32. ASSESMENT OF PATIENT SATISFACTION TOWARDS PMC SERVICES WITHIN PMSI HC IALOVENI

**Alina Bobeica**

Scientific adviser: Artiom Jucov, PhD, University Assistant, Chair of Family Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Patient satisfaction represents a patient's perception about the extent to which the requirements were satisfied and fulfilled. Researches in this area suggest that patient satisfaction depends on technical skills, intelligence and qualifications of medical staff. The objective of the study is the assessment of patient satisfaction on the quality of medical care in the Ialoveni PHI HC.

**Materials and methods:** The main aim of our study was to evaluate patients' expectations in the IMSP CS Ialoveni, regarding quality of care, satisfaction with the provision and access. The study was conducted on a sample of 80 respondents from Ialoveni. Basing on completed questionnaires, we found the quality of care received in CS Ialoveni and the level of patient satisfaction.

**Results:** From 80 people interviewed 34 of them are satisfied (42%), 39 are dissatisfied (49%) and 7 respondents are very dissatisfied (9%). The most frequent were registered patients aged between 30 and 55 years – 35 patients (44%). Patients aged over 55 years – 26 (32%) and patients aged to 35 years – 19 (24%).

**Conclusions:** (1) The study established that the population of Ialoveni has a low degree of satisfaction. (2) The research reveals that the increasing patient satisfaction can be performed by improving communication with the patient, and medical staff training.

**Key words:** medical care, patient satisfaction.

### **33. CLINICO-RADIOLOGIC AND ELECTROPHYSIOLOGICAL CORRELATIONS IN CERVICAL DISC HERNIA**

**Elena Eftodiev**

Scientific adviser: Marina Sangheli, Associate Professor, Department of Neurology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Cervical disc hernia is a frequently encountered disorder, affecting mainly the population between 25 and 55 years of age. It has a significant negative impact on the working capacity of the patients. Thus, correct diagnosis and proper treatment are necessary to ensure achieving the best results of therapy.

**Materials and methods:** 31 patients were assessed clinically, radiologically and electrophysiologically. The evaluated aspects (pain features and intensity, motor and sensory deficits, and radiological and electrophysiological data) were then analysed in order to highlight the existing correlations.

**Results:** We found a dependence between pain intensity and the size and type of the disc hernia. At the same time, there was a strong correlation between the clinical, radiological and electrophysiological data indicating the motor and sensory deficits.

**Conclusion:** Clinical, radiological and electrophysiological investigations have to be combined in order to establish a correct and complete diagnosis.

**Keywords:** cervical disc hernia, electrophysiology, pain, magnetic resonance imaging

### **34. SPECIFICS OF VIRAL HEPATITIS C IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA**

**Denys Boychuk, Oleh Tokarchuk**

Scientific Adviser: Alla Asaulenko, PhD, University Assistant, Vinnytsia National Pirogov Memorial Medical University, Vinnytsia, Ukraine

**Introduction:** Viral hepatitis C (HCV) is one of the most common disease that is characterized by severe consequences, including the rapid progression of liver dysfunction due to cirrhosis and development of primary liver cancer - hepatocellular carcinoma.

**Materials and Methods:** We analyzed 75 medical cards of patients with diagnosis "Acute Lymphoblastic Leukemia" during 2013-2015.

**Discussion results:** We found that among patients HCV infection was found in 50 cases (66.66%) of them - 4 suffered from acute viral hepatitis C (5.33%) and 46 - with chronic hepatitis C (61.33%). Among patients with ALL and HCV infection there was a division of the level of transaminases in the blood: 3 patients - the level of ALT and AST was in the normal range (6%) 12 - had increased level of ALT and AST in 2 times (24%), 18 - in 3-5 times (36%), 11 - in 5-9 times (22%) and 6 - in 10 and more times (signs of toxic hepatitis) (12%). According to the literature (V. Berezenko "Clinical and paraclinical aspects of chronic viral hepatitis C in children"//Pernatology and pediatrics 2(62), 2015) in HCV patients without comorbidity was observed following distribution: 28 patients (43.75%) - normal levels of transaminases, 20 (31.25%) - increased in 2 times, 16 (25%) - in 3-5 times, 0 - increased in 5 - 9 times, 0 - in more than 10 times. In patients with ALL and HCV statistically significant ( $p < 0,05$ ) that level of transaminases was higher than in patients without ALL, indicating a greater severity of cytolytic syndrome in children with ALL and HCV. In patients who were treated with chemotherapy, but not infected with HCV there was not observed expressed cytolytic syndrome.

**Conclusions:** In patients which suffer from ALL and HCV was observed more expressed cytolytic syndrome (increased ALT and AST) than in patients with HCV without comorbidity. In patients with ALL without concomitant HCV was not observed cytolytic syndrome during PCT treatment. Thus, the HCV infection causes more expressed liver injury in the presence of comorbidity, in this case, ALL, and increases the risk of toxic hepatitis in patients with ALL during PCT treatment.

**Keywords:** pediatrics, oncology, hematology, infectious diseases, hepatitis, HCV infection, acute lymphoblastic leukemia.

## 35. PROGNOSTIC VALUE OF GENE IL-28B IN TREATMENT OF CHRONIC VIRAL HEPATITIS C

**Denys Boichuk, Oleh Tokarchuk**

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**Introduction:** The problem of chronic hepatitis C (CHC) is one of the most pressing problems of modern health care. Each year between 3 and 4 million people are getting infected. Due to the rapidly spreading of infection, lack of specific vaccination, a high frequency of chronic infection, frequent adverse effects of the disease, expensive treatment of chronic hepatitis C and its complications - the problem is not only medical but also social and economic. One of the modern standards of treatment of chronic hepatitis C in Ukraine is using a combination of antiviral therapy (AVT) (Pegylated interferon  $\alpha$  and Ribavirin). Approximately 60% of patients achieve sustained virological response. Due to the possible risk of relapse after complete treatment, and side effects of antiviral drugs, the importance of determining predictors efficiency of AVT. In 2009 was published a first report on the existence of a specific IL28B-gene polymorphisms, which nucleotide sequence was different depending on the response to combined antiviral therapy.

**Materials and Methods:** We have analyzed 40 patients with chronic hepatitis C infected with genotype 1 virus. Among observed were more men - 25 (62.5%) patients. The average age of the patients was  $(38,46 \pm 2,4)$  years. All patients were on in/outpatient treatment in the Clinical Hospital №1 of

Vinnitsia and were treated with combined antiviral therapy (Ribavirin+PegIFN  $\alpha$ 2a) during 2014-2015 years. All patients with chronic hepatitis C were conducted molecular genetic analysis to determine IL28B-gene polymorphism using PCR.

**Discussion results:** According to the data obtained among patients with chronic hepatitis C more than half of the patients (21 patients - 52.5%) were carriers of C/T genotype. Genotype C/C of IL28V-gene occurred in 32.5% (13 patients). T / T genotype was observed only in 15% (6 patients). Analysis of the effectiveness of combination antiviral therapy in patients with chronic hepatitis C genotype 1 of the virus has set it differs depending on the genotype of the gene IL28V. Thus, was found that stable virological response (SVR) was observed mainly in patients with C/C genotype (at 75.33%) and occurred in 1.9 and 2.9 times higher in comparison with patients who were carriers C/T (39.9%) and T/T (25.9%) genotypes gene IL28V.

**Conclusions:** The presence of C/C genotype IL28V gene may be a prognostic predictors of efficiency dual combination antiviral therapy in patients with chronic hepatitis C genotype 1 of the virus (SVR was recorded at 75.3%).

**Keywords:** infectious diseases, hepatitis C, antiviral therapy, IL28B-gene polymorphism

## 36. THE THROMBOEMBOLIC RISK AT THE PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION

**Romanita Brinza**

Scientific adviser: Capros Natalia, PhD, Associate Professor, Chair of internal medicine, discipline of Clinical synthesis, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Atrial fibrillation is the most common cardiac arrhythmia and is Associated with a substantial risk of stroke and mortality. The prevalence of atrial fibrillation is related to age and is projected to rise exponentially as the population ages and the prevalence of cardiovascular risk factors increases. The risk of ischemic stroke is significantly increased at atrial fibrillation patients, and there is evidence of increased risk of stroke Associated with advancing age. The objective of the study is the determination of thromboembolic risk at the patients with non-valvular fibrillation with the CHA<sub>2</sub>DS<sub>2</sub>VASc.

**Materials and methods.** This study was conducted on 110 patients (aged 47 and 83 years old) with non-valvular atrial fibrillation, hospitalized in MCH, „Holy Trinity” during october 2014- march 2016. The study was made on 65 females(59,09%) and 45 males(40,91%). The factors that could influence the thromboembolic risk were analyzed. Were utilized the next tests: CHA<sub>2</sub>DS<sub>2</sub>VASc score and HAS-BLED score. Laboratory analysis: Total Cholesterol; HDL- cholesterol; Triglycerides; Glycemie; Body mass index.

**Results.** Patients with age less than 65 years: 11(10%-males:4,5% and females:5,5%); 65-75 years: 70(63,63%- males: 28,2% and females 35,5%); older than 75 years: 29(26,36% -males:8,18% and females:18,18%). At the patients with the following risk factors were identified: the low thromboembolic risk-0%; moderate – 2,73%; high – 97,2%. The predominant risk factors: arterial hypertension-93,63%(103); diabetes mellitus-24,6% (27); vascular disease( MI, PAD)-15,45% (17); stroke/TiA or thromboembolism-10,91% (12).

**Conclusion.** The prevalence of atrial fibrillation increases markedly with older age: about 5% of people over 65 years and 10% of people age older than 80 years suffer from atrial fibrillation. The CHA<sub>2</sub>DS<sub>2</sub>-VASc score can help estimate stroke risk in patients with non-valvular atrial fibrillation and determine which antithrombotic therapy is most appropriate.

**Keywords:** non-valvular atrial fibrillation, arrhythmia, thromboembolic risk, stroke.

## **37. A COMPARATIVE STUDY OF PATIENT SATISFACTION WITH MENTAL HEALTH SERVICES IN ARMENIA AND MOLDOVA**

**Domnica Balteanu, Petrosyan Diana**

Scientific Adviser: Tsovinar Harutyunyan, American University of Armenia, Yerevan

**Introduction:** Mental health is just as important as physical health to the overall well-being of individuals, societies and countries. It is accountable for 12% of the global burden of disease whereas global budgets of the majority of the countries allocate less than 1% of their total health expenditure to mental health care. Morbidity rates for psychiatric diseases in Republic of Armenia have increased from 228 per 100,000 general population in 2006 to 243.6 in 2009. Whereas the prevalence of mental and behavior disorders among the population of Republic of Moldova has grown from 2,599 per 100,000 people to 2,649 in 2009. This qualitative research study examines and compares patient satisfaction with mental health care services in Armenia and Moldova.

**Methods:** An exploratory qualitative study on patient satisfaction with mental health care services was conducted in Yerevan and Chisinau. The study collected data via in-depth interviews. The study population included caregivers of 18 to 65 years old mentally ill patients. A semi-structured in-depth interview guide was developed in English, and translated into Armenian and Romanian. A trained interviewer for Armenia conducted 21 in-depth interviews and one focus group, while for Moldova the student investigator conducted 24 in-depth interviews. Detailed notes were taken during the interview and later transcribed in English. The transcripts were coded by words, phrases and ideas, and analyzed by hand. Several ethics committees approved the study.

**Results and discussion:** Four domains expressing the main concerns that the participants had, that influenced their patients'/relatives' satisfaction and revealing information that would be more helpful to improve the quality of care in mental health were: financial access, commodities in hospital, medical staff qualifications and attitudes, and overall satisfaction of patient and relative. Part of the similarities between Armenia and Moldova is the fact that participants and patients were overall satisfied with the services, despite the shortage of drugs at times, additional expenses it caused and uncomfortable conditions within the hospital.

**Recommendations:** Based on the results of the study the following recommendations are made:

- I. Conduct regular patient satisfaction assessments in the mental health care sector;
- II. Use patient satisfaction assessments to inform mental health care policy and legislation development;
- III. Use the assessments of patient and caregiver satisfaction with mental health care as part of the overall evaluation of the sector to improve and maintain service quality;

- IV. Train mental health care providers on basic human rights/patient-provider communication;
- V. Control/improve the basic conditions for patients at the mental health care hospitals/dispensaries, including food, bedding, and recreation time/facilities;
- VI. Increase patients'/caregivers' awareness of their rights and standards of care;
- VII. Ensure social protection mechanisms for people with mental health disorders.

## 38. EPIDEMIOLOGY OF PERIODIC LIMB MOVEMENT DISORDER

**Elena Furdui**

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**Introduction:** Periodic limb movement disorder (PLMD) is characterized by periodic episodes of repetitive and highly stereotyped limb movements that occur during sleep, affecting the lower limbs, lasting 0,5 to 5 seconds and the pause between the episodes is about 20-40 seconds. Purpose of the study is studying the scientific literature about the prevalence of periodic limb movement disorder in different disorders.

**Materials and methods:** There were studied about 50 articles about the prevalence of periodic limb movement disorder.

**Discussion results:** Periodic limb movement disorder is frequently encountered among sleep disorders. Its prevalence is about 3,9% to 6% in general population. The prevalence in persons of age upper than 60 is 34%. In children periodic limb movements prevalence is 7,7%. In patients with sleep obstructive apnea, periodic limb movements prevalence is about 4-5%. In patients with insomnia periodic limb movement disorder is encountered in about 1 to 15 % of all patients.

**Conclusions:** Periodic limb movement disorder is a disorder with a high prevalence in general population. An appropriate clinical approach is still discussed. PLMD is frequently encountered in different pathologies and this finding may give a solution in finding a proper clinical approach.

**Key words:** Periodic limb movement, epidemiology, obstructive sleep apnea.

## 39. HYPOTHYROIDISM AND DYSLIPIDEMIA

**Ecaterina Pitel**

Scientific Adviser: Gheorghe Caradja, Associate Professor, Endocrinology Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Hypothyroidism is a relatively common endocrine disorder usually accompanied with changes in serum lipid profiles. Recent studies consistently demonstrate elevated levels of serum total cholesterol, low-density lipoprotein cholesterol (LDL-C), apolipoprotein B, lipoprotein(a), and possibly triglycerides in individuals with overt hypothyroidism, all of which are reversible with

levothyroxine therapy. The purpose of this study was to assess the association between dyslipidemia and hypothyroidism.

**Materials and methods:** The aim of this study was to evaluate the lipid profile of patients with different degrees of hypothyroidism. Initially, a cross-sectional study was performed with 96 participants [manifest hypothyroidism (MH) = 47 participants, and euthyroidism (EU) = 49 participants]. Women with manifest hypothyroidism and euthyroid women were enrolled in this study. Their lipid profile, fasting blood sugar, T3, T4 and TSH levels were measured and various parameters were compared.

**Results:** Correlation study revealed a significant positive correlation between Lp(a) and TSH levels in hypothyroid patients.

**Conclusion:** Thyroid dysfunction can have an important effect on lipid profile. Biochemical screening for thyroid dysfunction is critical in all dyslipidemic patients.

These results show that hypothyroidism is associated not only with elevated serum levels of LDL-C but also with elevated serum Lp(a) concentrations.

**Key words:** hypothyroidism, dyslipidemia, lipid profile.

## 40. EXPERIMENTAL MODEL OF ATRIAL FIBRILLATION INDUCED BY TRANSESOPHAGEAL CARDIAC PACING

**Doina Ghertescu, Elena Andreea Manescu, Teodor Grigoras**

Scientific adviser: Marcel Perian, Lecturer; Alina Scridon, Associate Professor, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction.** Atrial fibrillation (AF) is the most frequently encountered cardiac arrhythmia in clinical practice. Several studies demonstrated that pacing-induced rapid atrial rates result in sustained non-valvular atrial fibrillation, but this finding has been considered to be restricted to large animal models, while small rodents are generally considered refractory to such arrhythmias due to their small cardiac mass. The aim of our study was to develop an experimental model of spontaneous AF in rats using transesophageal cardiac pacing.

**Material and Methods.** Seven 15-week-old male Wistar rats were implanted with radiotelemetry devices to dynamically record ECG signals over 24-h. After 2 weeks of post-surgical recovery, three of the rats (AF group) were submitted to daily transesophageal cardiac pacing. Burst pacing was performed using 20 consecutive cycles of 30 sec (rate: 4,000 bpm, voltage: 14-16), with 5 min of recovery between the stimulation cycles. After 5 consecutive days of cardiac pacing, a 24-h ECG recording was performed in the rats from the AF group, as well as in the four rats assigned to the control (C) group. All arrhythmic events were analysed with dedicated software.

**Results.** During the cardiac pacing protocol, a total of 9 AF episodes were observed, with the highest incidence in the last day of stimulation. The first arrhythmic event was recorded in the third day of the study. All three stimulated rats presented at least one episode of stimulation-induced AF. On the 24-h ECG recordings, rats from the AF group presented a total of 76 atrial arrhythmic events, including



37 atrial extrasystoles (AES), 33 atrial couplets, and 6 short episodes of spontaneous, non-sustained AF, whereas only 10 arrhythmic events (i.e., 6 AES and 4 atrial couplets) and no AF episodes were observed in the C group.

**Conclusions.** The onset and the persistence of reentrant arrhythmias have been shown to depend on a minimum tissue mass. Accordingly, such arrhythmias have generally been considered to be restricted to large animal models. The present data demonstrate that spontaneous, non-sustained AF can be easily induced by rapid transesophageal atrial pacing in small rodents, providing a new experimental model for the study of the electrophysiological mechanisms involved in AF genesis.

**Keywords:** experimental model, rats, atrial fibrillation, transesophageal cardiac pacing.

## **41. CLINICAL CHARACTERISTICS OF HEADACHE IN PITUITARY ADENOMAS**

**Sergiu Ursachi**

Scientific adviser: Ion Moldovanu, MD, PhD, Professor, Department of Neurology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The prevalence of pituitary adenomas is 10.6%, most of them presenting with headache. Pituitary adenomas bear an important risk of generating severe consequences, such as endocrinological complications or pituitary apoplexy. Thus, highlighting clinical features of headache Associated with pituitary adenoma would provide invaluable information needed to enable the practicing physician to suspect this condition.

**Materials and methods:** 13 patients with pituitary adenomas were analysed. Data were collected regarding the clinical features of headache, the radiologic appearance of the tumour and its endocrine activity. Clinical features of headache in pituitary adenomas were described, and a comparative analysis between the headache phenotype in micro- and macroadenomas was performed.

**Results:** Our results showed that pituitary adenomas are Associated with headache which is moderate to severe in intensity (6.3 points) and frequent (5 days per week). At the same time, a higher frequency of migraine in the patients with microadenoma was found, while the proportion of tension-type headache in the groups of patients with macro- and microadenoma was comparable.

**Conclusion:** Our study provided some insights into the phenotypic characteristics of headache Associated with pituitary adenomas. We also found that migraine was more strongly Associated with an underlying microadenoma as a cause.

**Keywords:** pituitary, adenoma, headache, headache phenotype.

## 42. THE TOXIC HEPATITIS DRUG IN THE PEDIATRIC PATIENT

**Natalia Mirza**

Scientific adviser: Raba Tatiana, MD, PhD, Associate Professor, Department of Pediatrics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Currently, the number of cases of toxic Hepatitis drug (THD) in the pediatric patients is in the rise.

The most frequent cause is the children's treatment by their own parents without consulting a specialist. The drug's administration in large doses for a long period of time can have drastic consequences on child's health. They reported more than 900 drugs, toxins, herbs that can cause liver damage and can induce the appearance of an THD. According to the epidemiological statistics THD makes up 10 percent of all adverse reactions caused by the administration of medicinal preparations.

The purpose of this study is to determine the cause of toxic hepatitis drug and the category of children that are most commonly affected.

**Material and research methods:** In my study were involved 51 patients hospitalized in the Republican Clinic Hospital for Pediatric Patient "Emilian Cotaga", hepatology department. Were selected patients with preventive diagnosis of THD that were hospitalized from 13.01.2014 till 06.23.2015. Information for the study were taken from the medical history of the patient stationary form no.003/ e.

**Results and discussion:** According to data from the current history of the disease of 51 patients included in the study group I set the etiology THD to 33.34 % of the pediatric patients is due to an overdose of paracetamol at 11.76% due to overdose anthelmintics, and 54.9% of unknown etiology.

THD pediatric patient diagnosed are aged between 2 months and 5 years, I have determined a maximum incidence-25.50 %, on the infants aged between 2-4 months. 39.22% of the study group of pediatric patients are girls and 60.78% boys and depending on the city from rural areas there are 33.34% and 66.66 % from urban areas. To assess drug-induced liver injury type I calculated the ratio R (alanine aminotransferase/alkaline phosphatase) and determined in 97.43% of cases included in the study cholestatic lesion and 2.57% have type lesion mixt. At all of the patients included in the study were examined the hepatic's markers, the results being negative, this allow us to exclude a hepatitis viral etiology.

**Conclusion:** THD in the pediatric patients is most commonly caused by paracetamol and anthelmintics overdosage, is encountered more frequently at infants aged between 2-4 months more commonly affected is male, with a higher proportion of cases in urban areas.

**Keywords:** pediatric patient, drug, hepatitis.

## 43. ACUTE CORONARY SYNDROME WITH PERSISTENT ST- SEGMENT ELEVATION

**Elena Gutan**

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**Introduction:** After WHO dates annually, 2.5 million people are hospitalized in Department of Medical Emergency with diagnosis: Acute Coronary Syndrome (ACS). Annual incidence of morbidity in ACS constitutes 3 per 1000 inhabitants, mortality 3-5% (ESC 2011). According to the National Statistics Committee of US dates, 1 million patients are hospitalized with ACS every year in USA, while in Europe (France, Italy, and Germany) the number is over 750000. In 2014 the total number of requests to the Department of Medical Emergency about cardiovascular emergencies in Chisinau, constituted 21, 4%, where 23, 7% are major emergency requests. The frequency of ACS in major cardiovascular emergencies is 31, 2%, where 12, 4% are reserved for ACS with persistent elevation of segment ST.

**Methods and materials:** Study group enrolled 102 patients who addressed in Department of Medical Emergency in Chisinau in 2014 with diagnosis ACS with persistent elevation of segment ST has been investigated. The analysis of incidence and frequency of queries' people to the DME service was done and the structure of cardiovascular emergency; social analysis (age, sex, social state); analysis of the protocol of management and it's conformity to current standards; analysis of the prehospital complications. Patient's management with ACS with persistent elevation of segment ST was based on the recommendations of the Society of Cardiologists and clinical protocol of IMA 2014.

**Discussion results:** After the taken studies, it was found that 55367 requests have been done during 2014 in Chisinau, where 13101 are major emergency requests. From all of the cases of major emergencies 4078 (31, 2%) were with ACS requests, where 506 (12, 4%) cases with ACS with persistent elevation of segment ST. The mean age of patients as 65 years old. In our study 55 patients (53, 92%) had a cardiovascular history, where 55 cases the most common disease is hypertension. The execution of management protocol is carried out not in full volume and prehospital complications are about 36 cases (35, 29%), where 17 cases – cardiogenic shock, 9 cases – pulmonary edema, 10 cases – cardiac arrhythmias.

### Conclusion

1. The incidence of ACS with persistent elevation of segment ST in structure of population access to the service AMU and in structure of cardiovascular emergencies increases and needs immediate treatment, according to international guidelines and national clinical protocols for management of ACS in the prehospital phase.

2. ACS with persistent elevation of segment ST is encountered in all social groups and different sex since age 40: males of 60-69 years and women of 70-79 years.

3. The study shows that in reason of prehospital complication the first place goes to cardiogenic shock; II - cardiac arrhythmias; III - pulmonary edema. Severe complications were recorded in the groups where a treatment protocol has been partial violated or non-approved drugs have been prescribed.

**Keywords.** Acute coronary syndrome, persistent ST- segment elevation, cardiovascular emergency.

## 44. SEROLOGY IN EPSTEIN-BARR VIRUS INFECTION IN CHILDREN

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**Introduction:** The Epstein-Barr virus was found in 1968 as the major cause of infectious mononucleosis. Since then the diagnosis of EBV has gone a way from the nonspecific tests, such as the heterophile antibody test, to specific EBV antibody tests performed through IFA, the “gold standard”, different immunoassay techniques, additional tests, used for confirmation such as avidity test and Western blot, to PCR, mainly used in patient with immunosuppression. The seroprevalence in adult population is wide, ranging from 85% in developed counties to 95-100% in developing counties. By age 5 seroprevalence in the UK and USA is 50%. In RM the incidence of mononucleosis has increased from 0.97 in 1992, to 2.97 in 2007. Although laboratory diagnosis in mononucleosis is straightforward and available, it still imposes some questions, due to high variability of EBV serology.

The objective of this research is to study and discuss the challenges of laboratory diagnosis and staging of EBV infection based on serological profiles of the patients tested to EBV infection at the Hospital for Infectious Diseases in Children, in Chisinau, R. of Moldova during the year 2015.

**Materials and methods:** the materials used are blood serum or plasma samples from 311 patients from 5 months old to 17 years old from the Hospital for Infectious Diseases in Children, who were consulted or admitted with suspected mononucleosis or hepatitis of unknown origin. Blood was tested to EBV-CA IgM and IgG, EA IgG, EBNA-1 IgG, anti CMV IgM and IgG, anti HAV IgM. The testing system used is the enzyme immunoassay. The interpretation of the results given by reagent manufacturers is: 1) Primary infection VCA IgM positive, VCA IgG pos/neg, EA IgG pos/neg, EBNA IgG negative, 2) Past infection VCA IgM negative, VCA IgG and EBNA IgG positive, 3) Reactivation VCA IgM, VCA IgG, EBNA IgG positive.

Patients are categorized by their serology profile (VCA IgM and IgG, EBNA-1 IgG) in 3 main groups, patients with serology characteristic to acute infection, past infection, and patients with serology that can be interpreted either way.

**Discussion results:** 209 blood samples were found positive to at least 1 marker of EBV infection. 114 had VCA IgM negative, VCA IgG and EBNA IgG positive. 34 were VCA IgM and IgG positive and EBNA IgG negative. 12 were VCA IgG positive VCA IgM and EBNA IgG negative, 25 were VCA IgG and IgM positive, EBNA IgG positive, 19 were VCA IgM positive, VCA IgG and EBNA IgG negative, and 4 were only EA IgG or EBNA IgG positive.

**Conclusion:** 67.2% of samples were positive to EBV infection, which meant primary or past infection, 65.8% being children under age of 6 years. From them 54.5% had a serological pattern of past

infection, 25.3% had indicators of primary infection, the rest (19.6%) had serological patterns that might have benefit from additional tests, such as avidity tests, western blot or PCR.

**Key words:** infectious mononucleosis, children, laboratory diagnosis

## **45. THE ROLE OF BRAIN PLASTICITY IN THE PROCESSES OF RECOVERY OF MULTIPLE SCLEROSIS**

**Doina Ropot**

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**Introduction:** Neuroplasticity refers to the potential that the brain has to reorganize by creating new neural pathways to adapt, as it needs. Think of the neurological changes being made in the brain as the brain's way of tuning itself to meet your needs. The more you focus and practice something the better you become at the new skill that you are learning or an obstacle you are trying to overcome. By doing this new neural connections are created in the brain as synapses that don't usually fire together do, which help us to sharpen our new skill.

**Materials and methods:** Motor symptoms are common and disabling across the phases and forms of multiple sclerosis. Disease modifying treatments help to prevent their development, but most of their management is through rehabilitation. Current rehabilitation approaches are based on physical therapy tailored to the individual's needs. The efficacy of these approaches, however, is limited, as it is purely based on clinical grounds, and is largely unpredictable in the individual case, where several factors, including location, extent, and severity of multiple sclerosis damage, can contribute to individual variation in rehabilitation outcomes. Therefore, an improved understanding of the neural processes underlying functional recovery and driven by rehabilitation, as well as the development of novel recovery interventions that fully exploit the individual patient's potential to recover motor function remain a clinical necessity and a research priority.

**Discussion results:** Rehabilitation of the damaged brain can foster reconnection of damaged neural circuits in multiple sclerosis. Learning mechanisms play an important part in this. We studied a triage of post-lesion states, depending on the loss of connectivity in particular circuits. A small loss of connectivity will tend to lead to autonomous recovery, whereas a major loss of connectivity will lead to permanent loss of function; for such individuals, a compensatory approach to recovery is required. Empirical data are implemented in a neural network model, and clinical recommendations for the practice of rehabilitation following brain damage are made.

**Conclusion:** Cortical reorganization has been demonstrated in the motor network that mediates performance of a motor task in patients with multiple sclerosis. Rehabilitation of motor function is a major component of management that is supported by neuroplasticity, the brain's ability to adapt to multiple sclerosis damage or disability. The need for novel rehabilitation approaches, underpinned by promoted and enhanced neuroplasticity, challenges traditional experimental designs. This challenge can be addressed using methodological advances, especially in neuroimaging, which allow improved understanding of mechanisms and detection of intervention effects.

**Key Words:** Neuroplasticity, multiple sclerosis, cortical reorganization, rehabilitation.

## **46. GASTROINTESTINAL BLEEDING IN CHILDREN A SERIOUS PROBLEM OF HEALTH**

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Scientific adviser: Smaranda Diaconescu, *Grigore T. Popa* University of Medicine and Pharmacy, Iasi, Romania

**Introduction:** Gastrointestinal bleeding, especially in children is an alarming event for parents and children, sometimes with dramatic consequences requiring quickly diagnosis and therapeutic approach. The objective of the research is identification of clinical, endoscopic, etiological characteristic of children diagnosed with upper and lower gastrointestinal bleeding.

**Material and methods:** It was conducted a descriptive retrospective study over a 3 year period (January 2012 to December 2014) on 107 children aged 1-18 years hospitalized for gastrointestinal bleeding in "St. Mary" Children's Emergency Hospital, Iasi. The study group does not include gastrointestinal bleeding from surgical emergencies, infectious diseases, intestinal diseases with immunological or toxic mechanism. Individualized retrospective analysis included historical data, clinical, endoscopic and targeted for etiologic diagnosis of gastrointestinal bleeding. All patients were investigated by upper gastrointestinal endoscopy/colonoscopy after the procedure was explained and informed consent was obtained.

**Results:** From the batch of 123 children, (45.5%) presented with upper gastrointestinal bleeding (UGIB), and 68 (51.2%) presented with lower gastrointestinal bleeding (LGIB), in four cases the source of bleeding was not identified. The main etiological aspect of UGB was erosive gastritis 33.9%, oesophagitis in 10.71%, duodenitis in 21.42%, gastric 8.9%, duodenal ulcers 7.4% of cases, Mallory-Weiss syndrome in 5.3%, multiple etiology in 10 cases 12.5%. Causes of LGIB were colorectal polyps in 31.5%, ulcerative colitis 9.5%, nonspecific lesions in 25.3% anal fissures 14.2%, intestinal polyposis syndrome 4.7%. It was practiced concomitant endoscopic surgery for rectal polyps.

**Conclusions:** Lower gastrointestinal bleeding was the most common causes related to minor conditions: colorectal polyps, anal fissures, nonspecific lesions. Non-variceal gastrointestinal bleeding the most common form Associated with erosive gastritis, esophagitis, duodenal ulcer, gastric ulcer. Endoscopy proved to be a useful investigation in the diagnosis of gastrointestinal bleeding and a therapeutic useful tool in certain cases.

**Keywords:** gastrointestinal bleeding, children, etiology, endoscopy, colonoscopy

## 47. DEPRESSION AS A CARDIOVASCULAR RISK FACTOR

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Scientific adviser: Livi Grib, MD, PhD, Professor of Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Over the past 20 years, research has found that depression not only is more common in cardiac patients than in the general population, but depression is also a risk factor for cardiac morbidity and mortality, independent of traditional risk factors. This link between depression and cardiac morbidity likely involves both physiologic and behavioral effects of depression.

**Objectives:** To determine the association between risks of depression using Hamilton Rating Scale for Depression (HRSD) and cardiovascular (CV) events.

**Methods:** Our study included 84 patients (23 patients with cardiovascular disease and depression, 61 patients with cardiovascular disease without depression) hospitalized in the cardiology department. We divided patients according to Hamilton scale in 4 categories:

1. absence of depression: 0-1points;
2. mild depression: 8-17 points;
3. moderate depression: 18-25 points;
4. severe depression: >26 points.

Maximum score for Hamilton scale is 50 points.

**Results:** During the study has been identified the absence of depression in 37 patients (44%) where HRSD<7. Depression was mild (HRSD >7) in 24 patients (28,6 %), moderate (HRSD> 17) in 20 patients (23,8%) and severe (HRSD> 25) in 3 patients (3,6%). Stratification of comorbidities in patients with cardiovascular disease and depression: essential hypertension: 12 patients (52,2%). Chronic heart failure: 11 patients (47,8%). Acute Coronary Syndrome: 7 patients (30,4%). Stroke: 6 patients (26,1%). Ischemic heart disease. (Angina pectoris): 6 patients ( 26,1%)

The results observed predominance of patients with essential hypertension, chronic heart failure and acute coronary syndrome, depression, results that are consistent with international literature, where depression has a negative impact on CVD.

The Hamilton Depression Rating Scale (HAM-D) has proven useful for many years as a way of determining a patient's level of depression before, during, and after treatment. An experienced clinician while working with psychiatric patients should administer it.

**Discussion:** We found that baseline Hamilton scale had the strongest association with CHD. Key challenges in this line of research concern the measurement of depression, the definition and relevance of certain subtypes of depression, the temporal relationship between depression and CHD

**Conclusion:** Hamilton scale is detecting tool for depression in predicting cardiovascular disease. **Keywords:** Depression, coronary disease, risk factors.

## 48. PRIMARY BRAIN TUMORS: MULTIDISCIPLINARY TREATMENT APPROACH. A RETROSPECTIVE CASE STUDY.

**Ioana Varvari**

Scientific adviser: Laura Rebegea, MD, PhD, Associate Professor, *Dunarea de Jos* University, Galati

**Introduction:** Brain Cancer is one of the most aggressive forms of cancer and has without a doubt the most dramatic presentation leading to losing one's self awareness. Primitive brain tumors are a heterogenous group of tumors arising from cells originating in the brain. They are divided by the World Health Organisation (WHO) in high grade tumors and low grade tumors by how fast they are likely to grow.

**Methods and Materials:** We conducted a retrospective study of 209 patients from the Oncology Departement of „Saint Andrew” Conty Hospital suffering from primary brain tumors from 2006 to 2015. We analyzed data pulled from the archives using Microsoft excel and IBM SPSS.

**Results:** As a result of the expansive nature of brain tumors, 63% of patients presented with high ICP, motor disfunctions 43%, headaches 24%. Neuroimagistic examination was performed and identified 95% of the masses located in the supratentorial level. After histopatological examination 79% of tumors were identified as high grade and only 21% low grade; the most common tumor type found was astrocitoma (78%) which was also Associated with the highest rate of recurrence of 90%, of which 15% recured with a higher grade than before. Treatment depended on tumor type and size: 34% of patients underwent adjuvant ERT(Co60) and 56 % of them received concomitent ERT(Co60) with Temozolamide. 10% received palliative ERT. 21% developed hepatotoxicity after CMT and 33% developed gastrointestinal toxicity. 96% of patients developed asthenia as ERT side effect followed by 74% with encephalopathy. Maximum progresion free survival rate was 36 months for 12 patients who underwent total debulking.

**Conclusions:** Astrocitomas have the worst prognostic and the highest probability to recure even after optimal treatment. Chemotherapy with Temozlamide is a superior adjuvant therapy, with less side effects encountered compared to Co60 ERT which was Associated with quality of life altering effects.

**Keywords:** Primary brain tumors, astrocitoma, chemotherapy

## 49. PREVALENCE OF LIPID ABNORMALITIES AMONG YOUNG MOLDOVANS

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**Introduction:** Dyslipidaemia is a recognized modifiable cardiovascular risk factor, acting independently or together with other factors. Lipid abnormalities are well-studied in different age groups



(childhood, adolescence and adulthood), but its profile in young people is not enough documented. Young people tend not to appeal to health services, because they don't present clinical symptoms. Our purpose is to reveal the prevalence of lipid abnormalities in the cohort of young population in Moldova.

**Materials and methods.** The cross-sectional study was performed, involving 456 volunteers (144 men and 312 women), aged 18 – 29 years, apparently healthy and disease free, students enrolled in 2011 at State University of Medicine and Pharmacy “N. Testemitsanu”, in order to achieve the goal. Venous blood samples were collected after an overnight fasting. The serum was separated, aliquoted and stored at  $-70^{\circ}\text{C}$  until analysis, no later than 6 hours after collection. All of them were subjected to following biochemical lipid parameters determination: *HDL cholesterol*, *total cholesterol (TC)*, *triglycerides*, *non-HDL cholesterol* (calculated according to the formula  $\text{non-HDL cholesterol} = \text{TC} - \text{HDL cholesterol}$ ). The above assays were performed on BioTek Synergy H1 Hybrid Reader, USA, using reagents from ELITech Clinical Systems, France).

**Results.** Each biochemical parameter was characterized by the following statistical values:

- *HDL cholesterol* for women was  $1.30 \pm 0.245$  mmol/L and for men –  $1.24 \pm 0.230$  mmol/L, significantly different ( $t=2.77$ ;  $p=0.005$ ), but with similar variability ( $F=1.14$ ;  $p=0.388$ ).
- *TC* for women was  $4.36 \pm 0.620$  mmol/L and for men –  $4.23 \pm 0.586$  mmol/L, significantly different ( $t=2.19$ ;  $p=0.029$ ), but with similar variability ( $F=1.12$ ;  $p=0.444$ ).
- *Triglycerides* for women was  $1.47 \pm 0.460$  mmol/L and for men –  $1.45 \pm 0.240$  mmol/L, without significant difference ( $t=0.44$ ;  $p=0.662$ ), but with different variability ( $F=3.67$ ;  $p=0.000$ ).

Strong influence of gender on *HDL cholesterol* and *TC* parameters was identified.

The estimation showed that over 52% from the studied young population (241 subjects) were found to have lipid abnormalities. The prevalence of hypertriglyceridemia, hypercholesterolemia and low HDL cholesterol was 11.8%, 7.3% and 40.9%, respectively.

**Conclusion.** The prevalence of the asymptomatic dyslipidemia in young subjects in Moldova was estimated as high. This supports the need of implementation of the preventive strategies at young age.

**Key-words:** lipids, dyslipidemia, risk factor, young.

## 50. THE IMPORTANCE OF NEONATAL SCREENING IN PHENYLKETONURIA AND THE INFLUENCE OF SPECIFIC NUTRITIONAL THERAPY OVER PSYCHOMOTOR DEVELOPMENT

**Eduard Manuel Prisacariu, Ioana Adelina Clim**

Scientific adviser: Dana Teodora Anton-Paduraru, MD, *Grigore T. Popa* University of Medicine and Pharmacy Iasi

**Introduction:** Phenylketonuria (PKU) is an autosomal - recessive disorder caused by phenylalanine – hydroxylase deficiency. Management and control of phenylalanine (Phe) levels through dietary intake remains the standard treatment in PKU. The aim of this study was to determine the

relationship between early diagnosis (neonatal screening) Associated with early treatment and a favorable prognosis in PKU patients (prevention of neuro – motor delay).

**Material and Methods:** The study is a retrospective analysis of 15 participants' medical records (PKU patients aged 5 months to 10 years of age), who have been diagnosed in the period 01.01.2010 - 06.01.2015, at the "Saint Mary" Emergency Hospital for Children, Iasi. Values of phenylalanine ( Phe ) obtained at neonatal screening, age at the moment of diagnosis, treatment, family compliance and psychomotor development were studied.

**Results:** All 15 participants presented elevated Phe values at the initial screening (range between 3.47 to 41.09 mg % ). With the exception of two late diagnoses ( at that time this screening program was not introduced in Romania ), all participants were diagnosed during the first 6 weeks of life, a total of ten being asymptomatic at the time. Dietary intake of Phe was individually adapted (based on Phe tolerance). Patients who followed recommended treatment displayed normal neuro-motor development (10 cases ). Late diagnosis of PKU or failure to follow suggested diet led to varying degrees of retardation. Higher incidence of PKU between 2013-2015 ( 10 cases) compared to 2010-2012 ( 5 cases) was observed.

**Conclusion:** Neonatal screening and early treatment was correlated with a decrease in neuro-motor impairment.

**Keywords:** neonatal screening, phenylketonuria, diet, psychomotor development.

## **51. CONVULSIVE HIPERREFLEXIVITY “AND OTHER NEUROLOGICAL PHENOMENA IN ESTABLISHING THE PSYCHOLOGICAL STATE OF THE PATIENT**

**Natalia Tcaci**

Scientific adviser: Ion Moldovanu, MD, PhD, Professor, Department of Neurology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** There is a correlation between the emotional state of a person and some objective manifestations. As usual, the neurological exam doesn't permit us to make some concerns about the psychological state of the person. The aim for this study is to show if there is any relation between some neurological signs, especially patellar reflexes and the psychological state of the patient. The term “Convulsive hiperreflexivity “ is used to describe the state when the refractory period of the patellar reflexes is shortened to the degree that during quick successive beats the leg remains suspended in the air and doesn't return to it's original position. The term “Semiconvulsive hiperreflexivity” is used to describe the state when the refractory period is shortened to a observable degree, but the leg comes to its initial position after some period of time.

**Materials and methods:** The study was made upon 114 patients with mood disorders, from which 80 (70,2 %) women and 34 (29,8 %) men. They were divided into 5 groups, according to how intense were their patellar reflexes: low, medium, high, “semiconvulsive”, “convulsive”. There were analyzed their response to these questionnaires: SCL-90, Spilberger's anxiety test, Beck's depression

test, Nijmegen's questionnaire, questionnaire for somatoform reactions, questionnaire for respiratory dysfunction.

**Discussion results:** There was found that people with higher reflexes tend to have lower scores in SCL-90 and higher scores on Spilberger's anxiety test, Beck's depression test, Nijmegen's questionnaire, questionnaire for somatoform reactions and questionnaire for respiratory dysfunction, but there was obtained a significant difference only between people with "semiconvulsive" reflexes and "convulsive" ones on Nijmegen questionnaire (M=21,77 +-6,9 and M=27,46 +-11,7 respectively with  $p<0,05$ )

**Conclusion:** Although there are some visible tendencies in psychological tests for people with different intensity of patellar reflexes, there isn't a direct correlation between reflexes intensity and psychological profile in patients with mood disorders.

**Key Words:** reflexes, psychological tests, convulsive hiperreflexivity, Nijmegen.

## 52. BRUXISM AND ITS COFACTORS: PSYCHOEMOTIONAL, VEGETATIVE AND MOTOR ASPECTS

**Paula Fala, Gheorghe Bordeniuc, Romaniuc Dumitru**

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**Introduction:** Bruxism is a parafunctional activity, consisting of excessive teeth grinding and jaw clenching. It affects at least 15-20% of the general population, and it is estimated that 85-90% of people experience at least one episode of bruxism during their lifetime. Awake bruxism has a higher prevalence in women, in contrast to sleep bruxism, that is more prevalent in men. The objectives of our research are the following: analyzing the quantitative indices of awake bruxism under the influence of stress, nicotine, caffeine and alcohol; assessing the diagnostic possibilities for the fractal analysis of cardiac rhythm.

**Materials and methods:** There were studied 19 patients with awake bruxism and 19 persons without bruxism. The influence of bruxism cofactors was quantified. There were analyzed the quantitative indices of bruxism, the EMG activity of the masseter muscle and the fractal analysis indices of the heart rate (sample entropy - *SampEn*, correlation dimension - *D2*). There were used the *Polispectr-Ritm*, *Neuro-MVP* diagnostic equipment and the *Sleep Guard SG5* device (USA).

**Results:** All the studied cofactors had a higher intensity in bruxers than in non-bruxers, with the highest statistical significant difference observed for emotional stress ( $p<0,001$ ) and alcohol consumption ( $p<0,01$ ). Bruxers are more likely to smoke more cigarettes than non-bruxers ( $p<0,02$ ). Caffeine consumption is two-fold higher for bruxers in comparison to non-bruxers ( $p<0,03$ ). The surface electromyography has shown changes under the influence of all cofactors, the highest  $A_{max}$  value was recorded under the influence of alcohol ( $p<0,01$ ). The lowest influence on the bioelectrical activity of

the masseter muscle was observed for caffeine and nicotine. The most significant changes ( $p < 0,05$ ) for SampEn index were observed under the influence of alcohol. For the D2 index, the influence of alcohol and stress are more significant ( $p < 0,001$ ) in comparison to nicotine and caffeine ( $p < 0,05$ ).

**Conclusion:** In patients with awake bruxism, the intensity of factors increases in the following order: caffeine<nicotine<alcohol<stress; the number of episodes, their total duration and the bioelectric activity of masseter muscle increases under the action of the cofactors in the following order: alcohol<nicotine<caffeine<stress. Differentiated evaluation of the action of daily cofactors in patients with awake bruxism can be achieved based on the fractal analysis of the heart rate, which reflects the peculiarities of quantitative manifestation of awake bruxism episodes.

**Key words:** awake bruxism, instigating factors, fractal analysis

### **53. CHANGES OCCURED IN THE PSYCHOLOGICAL BEHAVIOR IN CHILDREN WITH A SURGICALLY CORRECTED CONGENITAL HEART DISEASE**

**Noémi-Julia Fori, Alina Elena Ticalo, Mihai Stanca, Denis Pasc**

Scientific adviser: Amalia Fagarasan, MD, PhD, Associate Professor, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction:** Congenital heart disease is a malformation of the heart, aorta or other large blood vessels, that is the most frequent form of major birth defect in newborns. The objective of the study is to analyze the psychological changes that occur in patients after corrective surgery for congenital heart disease and the relation between the type of congenital heart disease and the psychological symptoms.

**Material and Methods:** This is a retrospective study on a number of 43 patients admitted in the section Pediatric Cardiology III of Institute of Cardiovascular Disease and Transplant Targu Mures, between 01.01.2008-31.12.2015, diagnosed with congenital heart disease who undergo surgery and psychological evaluation.

**Discussion results:** 86% of the studied patients had complex congenital heart disease and only 14% presented simple congenital heart disease. 67% of them are males, 33% females and 60% were from an urban background and 40% from a rural background. In 88% of the patients occurred changes in their psychological behavior and the results show a correlation between emotional lability, hypersensitivity and female genders. No correlation was found between the type of the congenital heart disease and the psychological symptoms.

**Conclusion:** The type of the congenital heart disease has no effect on the psychological symptoms that occur in patients after corrective surgery for congenital heart disease.

**Key words:** congenital heart disease, psychological symptoms.

## 54. A COMPARATIVE STUDY OF VESICoureTERAL REFLUX IN INFANTS AND CHILDREN UNDER 5 YEARS OF AGE BETWEEN R. OF MOLDOVA AND ROMANIA

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**Introduction:** Vesicoureteral reflux is the most common urologic anomaly and is normally diagnosed after a urinary tract infection. VUR can be primary, due to congenital anomalous development of the ureterovesical junction or secondary due to a urinary tract malfunction, often caused by an infection. Secondary VUR is more frequently diagnosed in girls, while primary vesicoureteral reflux is more common in boys and it is often more severe than the pattern seen in females.

**Material and methods:** We performed a retrospective comparative analytic-observational study on 72 infants and children under 5 years of age, analysing the incidence of VUR in a hospital from R.of Moldova and one from Romania over a period of 3 years (2013-2015). 35 patients were diagnosed with VUR at Pediatric Clinic II Targu Mures, Romania and 37 patients at Uronefrology department at IMSP SCMC “V.Ignatenco” of Chisinau.

**Results:** The results showed that half of the children with vesicoureteral reflux belong to the age group of 1-3 years, girls are the most affected - 86.5% in Moldova and 54.3% in Romania (p=0.003). VUR is diagnosed in about 50% of the patients after repeated urinary infections but 33% after the first urinary infection. The diagnosis established by the age of 1 year - 61.1% (p=0.001) shows the congenital character of VUR. Unilateral damage is more common at a lesser degree of reflux, but with increasing VUR bilateral damage prevail - 66.7% in VUR grade 4 in Moldova (p=0.02) and 55.6% in Romania. The risk of developing reflux nephropathy is 9 times higher in children with severe VUR - 27% compared to children with low-grade VUR.

**Conclusions:** The first episode of UTI with positive urine culture in children up to 1 year and repeated urinary infections raise suspicion of reflux. Most of the affected children are girls who have a higher incidence in the development of UTI and this is supported by the statistically significant correlation found with our study (p value). This is explained by the physiological anatomy that favor infection of the urethra on a retrograde way. Early diagnosis and prompt treatment of VUR and UTI can prevent renal parenchyma infection, renal scarring and reflux nephropathy.

**Keywords:** vesicoureteral reflux, VUR, UTI, reflux nephropathy, renal scarring.

## 55. FEATURES CELLULAR LINK OF IMMUNE RESPONSE SCHOOL-AGE CHILDREN WITH LATE-ONSET ASTHMA, DEPENDING ON ACETYLATION POLYMORPHISM

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**Introduction.** Bronchial asthma is one of the most common diseases in the world. It is believed that the inefficiency of controlling asthma therapy, which is observed in almost half of patients due, in particular, the presence of different asthma-phenotypes.

Considering the literature data on the association of asthma with genetic polymorphisms N-acetyltransferase - an enzyme that determines feature metabolism, we thought it appropriate to assess the features of the state of cellular immunity in children with asthma late start, with their acetylation phenotypes.

Our aim is to optimize late-onset asthma control, to evaluate some indicators of cellular parts of the immune system in children, considering acetylation phenotypes.

**Materials and Methods.** Examined 72 children, late-onset asthma (disease first manifested itself in the age of 6 years). Over the course of the disease children were divided into two clinical groups. The first group included 34 patients who were evaluated slow type of acetylation (mean percentage of acetylated sulfadimezin in urine was less than 75.0%). The second clinical group formed 38 students, which was marked fast type of acetylation (mean percentage of acetylated sulfadimezin in urine was more than 75.0%). All children were tested for T-lymphocytes, T-helper cells and T killer/suppressor and B-lymphocytes blood.

**Discussion results.** In 66.6% children "slow acetylation" observed reduction of CD-3 in peripheral blood of at least 34.0%, while in the second group these indicators occurred only in 42.1% of cases ( $P < 0.05$ ). This slow type of acetylation in children with late-onset asthma was Associate with the decline of CD-3 in peripheral blood (less than 34.0%) relative to the group "fast acetylation" as follows: relative risk - 1.7 (95% CI 1,3-2,2) the odds ratio of 2.7 (95% CI 1,5-4,8).

Every second child (54,1%) for the slow type of acetylation phenotype of late-onset asthma reduced content recorded CD-8 (less than 18.0 g/l), while the comparison group - only 21,0% of patients ( $P < 0.05$ ).

The presence of slow acetylation phenotype in patients with late-onset asthma Associate with a decrease in the aforementioned content CD-22 cells in peripheral blood following: relative risk - 1.6 (95% CI 0,6-4, 1) at odds ratio - 3.6 (95% CI 1,3-10,1).

**Conclusion.** Most patients with slow type of acetylation course of late-onset asthma Associated with a decrease in the CD-3, CD-4, CD-8 in peripheral blood and B-lymphocytes, which indirectly indicates the severity of chronic inflammatory allergic process in this persons.

**Keywords:** Bronchial asthma, acetylation polymorphism, pediatrics.

## 56. ECHOCARDIOGRAPHIC DIAGNOSIS OF CONGENITAL HEART MALFORMATIONS

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**Introduction.** Clinical analysis of profile of children with congenital heart disease at the age of addressing as infant, depending on the type and severity of the heart defect, identifying those common clinical features in diagnosis of MCC, the complications in their evolution, cardiac defects that interventional or surgical correction was achieved, congenital anomalies Associated and the usefulness echocardiography in the diagnosis of MCC.

**Material and Methods.** The lot in the study consisted of 159 infants (30 days - 12 months) with MCC hospitalized in the Clinical Republican Hospital, Department of Surgery, in the period of Jan 2007 - Dec 2010. In this group were not included newborns with MCC, due to the particularities encountered in newborns. We made a "Paper MCC" in which was noted retrospective and prospective medical history, clinical, biological, radiological and echocardiographic investigations, treatment and outcomes in each case. Radiological examinations were performed as it follows: cardiopulmonary Rx for 58 infants and 79 infants followed echocardiographic examination. In our study we used specific research methods which helped to achieve the results.

**Discussion results.** MCC had a family history of 8 patients (11%). Depending on the presence of other organ malformations, patients were divided: non-Associated malformations - 60%, 42 cases; Associated malformations - 40%, 28 cases. In second group 18 cases (25%) were Associated with malformations of other organs or systems, without falling into a syndrome: 10 cases (14%) had genetic syndromes, 7 cases with Down syndrome (70%), 1 case of Proteus syndrome, 1 case of Potter syndrome, 1 case Werdnig Hoffmann syndrome. Regarding complications, seven developed heart failure (IC) (3 of those operated) and 4 pulmonary hypertension (PH) (2 of those operated). In evolution, five have developed PAH / IC and one died. None were operated.

**Conclusions.** The incidence of congenital heart disease in types was different from other statistics, ASD has met the highest percentage rather VSD and while both were above the rates found in other studies. CAP, SP and had also TVM percent higher and, CAV, AT and DVPAP approached the data found in the literature. MCC investigation which confirmed the diagnosis was EcoCG examination which was performed in all cases in the study group, the "gold standard" in determining the MCC.

**Keywords:** congenital heart defects, infant, echocardiography

## POSTERS

### 57. CLINICAL TOOLS IN DIAGNOSIS OF KNEE OSTEOARTHRITIS IN PRIMARY CARE

**Elena Popescu**

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**Introduction:** The knee osteoarthritis (OA), the most common chronic illness, has the potential to compromise the health and quality of life of not only in the patient but also affect family members and is challenging through the need to develop tools for diagnosis.

The aim was to assess the applicability of osteoarthritis index WOMAC and 30s Chair Stand Test (30s-CST) in patients with knee osteoarthritis in primary care.

**Materials and methods:** A cross-sectional study was performed according to the disease severity based on functional limitation in the absence of joint prosthesis. There were recruited patients from primary care that fulfilled the ACR classification criteria for knee OA (1991). All subjects completed the Osteoarthritis index WOMAC (Western Ontario McMaster Universities Questionnaire), Visual Analogue Scale (VAS) for pain and performed 30s-CST.

**Discussion results:** In the study were included 36 patients and 30 (83.3%) of which were females. The mean age of the study group ( $M \pm SD$ ) was  $58.6 \pm 10.3$  (range 37 to 65) years and disease duration ( $M \pm SD$ )  $5.6 \pm 4.0$  (range 1-21) years. The pain was present in 94.4% cases; the level of knee pain assessed by VAS ( $M \pm SD$ ) was  $66.9 \pm 21.2$  mm. The WOMAC index, showed a better result on the stiffness scale ( $1.43 \pm 2.46$ ) and the worsted on physical function ( $M \pm SD$ )  $33.2 \pm 2.54$  points. The result from 30s-CST test in the group was  $11.4 \pm 0.45$  s. The result of CST didn't correlate with pain intensity ( $r = -0.09$ ); meanwhile, we found a strong correlation with physical function ( $r = 0.7$ ). WOMAC index values from group were moderate influenced by radiographic severity ( $r = 0.5$ ). The duration of the medical consultation with utilization of these tools was ( $M \pm SD$ )  $20.2 \pm 3.4$  minutes.

**Conclusion:** The results of the test 30s-CST and WOMAC index correlated insignificantly with the severity of radiographic changes. Meantime, we observed trend of increase for test's screening power along with disease progression. The application of additional tools increases the duration of medical consultation, an option could be implemented some of them in triage room.

**Key Words:** knee osteoarthritis, diagnosis, primary care.

### 58. CORONARY INVOLVEMENT IN HYPERTENSIVE PATIENTS. CLINICAL AND IMAGING CORRELATION

**Cosmin Lilea, Madalin Lilea, Alexandru Braniste, Kovacs Otto**

Scientific adviser: Ioan Tilea, PhD, Associate Professor, University of Medicine and Pharmacy, Targu Mures, Emergency Institute for Cardiovascular Diseases and Transplantation in Targu Mures, Romania



**Introduction:** Hypertension is a long term medical problem in which the blood pressure is persistently elevated. Usually, high blood pressure does not cause symptoms, but long term hypertension is an important risk factor for coronary artery disease.

**Materials and methods:** A retrospective study was performed regarding to the period between september 2015 and february 2016 at Emergency Institute for Cardiovascular Diseases and Transplantation in Targu Mures, to assess coronary artery involvement in hypertensive patients. The study included a total number of 283 patients, males and females, with hypertension and coronarography intervention.

**Discussion results:** From the total of 283 patients, it can be observed a predomination of male patients (67,1%) and the mean age is 62,41 years and the standard deviation is 9,039. The study reveals that the degree of coronary disease is increased in patients with severe stages of hypertension and diabetes. In patient with stage one of hypertension only 3,18% presented coronary disease, while in patients with second stage of hypertension the percentage is 53% and 15,5% in patients with third stage of hypertension, counting a total of 71,68% hypertensive patients with coronary artery disease. In the study we identified 74 cases of patients with hypertension and diabetes, in which 89,1% have coronary disease.

**Conclusion:** Patients with hypertension have a higher risk for developing coronary disease and we can say that this risk increases further in the case of patients with diabetes.

**Keywords:** coronary hypertension diabetes stenosis.

## 59. RISK STRATIFICATION IN STABLE ANGINA PECTORIS

**Lidia Berzoi**

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**Introduction.** Stable angina pectoris has an impact on public health, which is explained by a large number of annually hospitalizations in the world. Risk stratification of patients is important to define prognosis, to guide medical management and to select patients suitable for revascularisation. Our objective is to study the particularities of risk factors in stratification in patients with stable angina pectoris.

**Materials and methods.** The prospective study included 45 patients with stable angina pectoris hospitalized in Institute of Cardiology. The men: women ratio was 1.5:1, the mean age being 67,04±0,02 years. The assessment included the history, physical examination, electrocardiography (ECG) at rest, stress testing and echocardiography (Eco-CG). According Duke scale the patients were divided into 3 groups: I - 16 ( 35.56 % ) with low risk, II - 15 (33.33 % ) intermediate risk and III group - 14 ( 31.11 % ) with high risk.

**Results.** Analysis of the data noted men predominance in high-risk group - 9 (64.28%) cases, while the most of women - 9 (56.25%) were in-group with low risk. Analysis of cardiovascular risk

factors detected prevalence of tobacco – 8 (57.14 %), sedentary – 12 (85.71%), obesity – 9 (64.28%) and dyslipidemia - 8 (57.14%) cases for the high risk and diabetes prevalent in those with intermediate risk - 13 (86.67%) cases. The distribution of functional class (FC) revealed that patients with FC III and IV prevails in high risk group with 5 (35.71%) patients in each. The radiation of the angina pain was more significant in high risk group – 10 (71.43%) cases comparing with 8 (53,33%) - in intermediate and 3 (18,75%) in low risk group. Improving pain at rest predominated in those with low risk - 12 (75 %) cases, while 10 (71.43%) with high risk cases needed administration of sublingual nitroglycerin. The ST segment deviation on ECG at rest was present in group II and III - in 13 (86.67%) and 11 ( 78.57%), respectively. Old myocardial infarction was identified also only in group II and III - 4 ( 26.67%) and 8 ( 57.14 %) cases. Left ventricular dysfunction was observed in 9 ( 64.28%) cases, only in those with high risk stratification.

**Conclusions.** High risk stratification in stable angina is characterized by presents of traditional cardiovascular risk factors: tobacco - 8 (57.14%), sedentary - 12 (85.71%), obesity - 9 (64.28%) and with variety of clinical tools: radiation of the angina pain - 10 (71.43%), administration of sublingual nitroglycerin -10 (71.43%), ST segment deviation on ECG -11 (78.57%) and left ventricular dysfunction in 9 (64.28 %) cases.

**Key words.** Stable angina pectoris, risk stratification, risk factors.

## **60. CLINICAL AND PARACLINICAL PECULIARITIES OF SENSORY CIDP AND DADS POLYNEUROPATHIES**

**Eugen Gavriliuc**

Scientific adviser: Vitalie Lisnic, MD, PhD, Associate Professor, Department of Neurology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.**Chronic inflammatory demyelinating polyneuropathy (CIDP) is an acquired disorder of peripheral nerves and nerve roots. The classic form of CIDP is fairly symmetric and motor involvement is greater than sensory. Recent series and epidemiologic data have shown that 35% of CIDP patients may have only sensory symptoms. The term distal acquired demyelinating symmetric (DADS) neuropathy was introduced by Katz et al. (2000) to describe a group of patients with predominantly distal sensory and ataxic demyelinating neuropathy. In our study we want to determine what are the most sensitive tests to perform in sensory CIDP and DADS, and what are the most frequent clinical findings in these patients.

**Materials and methods.** We selected 14 patients with definite or probable sensory CIDP and 6 patients with DADS neuropathy according to the EFN/PNS guideline at the Center of Peripheral Disimunitary Polyneuropahy, Hospital Pitie-Sapletriere, Paris in the period 2010-2015. Clinical examination included the following scales: Overall Neuropathy Limitation Scale – (ONLS), 9 hole peg test, MRC (Medical Research Council). Nerve conduction studies (NCS) were performed in all the patients. A full routine biochemistry, immunofixation of proteins, all spectrum of anti-myeline and anti-ganglioside antibodies, cerebral spinal fluid (CSF) microscopic examination were performed.

**Results.** There were 14 male and 6 female patients, ranging in age from 55 to 79 years. Evolution of disease is more sparing in sensory CIDP patients: 10 patients had stationary symptoms, while 5 DADS patients had a progressive course of the disease. All sensory CIDP patients had clinically pure sensory peripheral neuropathy and normal muscle strength according to MRC scale. In DADS group 3 patients had normal strength, and another 3 only distal weakness (MRC 95/100 points). Romberg sign was negative in 11 cases (78%) in sensory PDIC and positive in all DADS patients. Tremor was present in 50% cases of DADS, and only in 22% sensory PDIC patients. Average ONLS is  $1,85 \pm 0,286$  in sensory CIDP and  $3,6 \pm 0,240$  in DADS ( $p < 0.001$ ). In 90% cases with sensory CIDP or DADS deep tendon reflexes were diminished. Average level of proteins in CSF:  $0,63 \text{ g/l}$  in sensory PDIC compared to  $1,25 \text{ g/l}$  in DADS ( $p < 0.001$ ). Average distal motor latencies (DML) in DADS patients: median nerv–  $8,32 \pm 0,63 \text{ ms}$  ( $p < 0,001$ ); ulnar nerv–  $5,45 \pm 0,35 \text{ ms}$  ( $p < 0,05$ ); peroneal nerv–  $7,36 \pm 0,45 \text{ ms}$  ( $p < 0,05$ ). Only 30% patients with sensory CIDP had demyelinating findings on NCS.

**Conclusions.** DADS patients have a clinically sensory neuropathy with distal weakness, with ataxia as a predominant feature, frequent generalized areflexia and postural tremor. Gait ataxia is not common in sensory CIDP. NCS is not a sensitive test to diagnose sensory CIDP, in 70% cases motor conduction velocities were not affected. Uniform extensions of DML in all motor nerves on NCS is the key feature of DADS.

**Key-words:** sensory CIDP, DADS, polyneuropathy.

## **61. RENAL RESISTIVE INDEX AND CAROTID RESISTIVE INDEX MARKERS OF EARLY CARDIOVASCULAR DAMAGE IN HYPERTENSIVE PATIENTS**

**Irina Cabac**

Scientific adviser: Revenco Valeriu, PhD, Professor, Chair of Internal Medicine, Discipline Cardiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Resistive index (RI) is an useful tool for the evaluation of circulatory resistance and the presence of atherosclerosis with the use the Doppler ultrasound exam, but differences of the RI among various vascular beds have not been fully elucidated. So we decided to evaluate the relationship between renal and carotid artery RI and to compare the clinical implication and the potential use of these two parameters for an early detection of cardiovascular damage in the hypertensive patients.

**Materials and methods.** The article is based on international publication data and on-line materials.

**Discussion results.** Various studies showed a positive correlation between, pulse pressure (PP), and serum glucose level were positively correlated in the same time diastolic blood pressure (DBP) and creatinine clearance were negatively correlated with the RI of the interlobar arteries. It was found a positive correlation of sex (male) and PP, whereas DBP correlated negatively with the RI of the common carotid artery (CCA). The renal RI of was positively Associated with the carotid RI, even after adjustment for major cardiovascular risk factors. An particularly interesting fact was correlation between CCA RI and age, systolic blood pressure, heart rate, carotid intima-media thickness (IMT), left ventricle

mass index (LVMI), and the negative correlation of the diastolic blood pressure and ankle brachial index (ABI). Subjects with high values of the carotid RI showed a higher rate of left ventricular hypertrophy and peripheral artery disease (increased IMT, carotid plaques and lower ABI) compared with those with low RI. The analysis of multiple clinical trials revealed that age, systolic and diastolic blood pressure and LVMI independently influence carotid RI and have a good correlation with values of the renal RI in the hypertensive patients.

**Conclusion:** The results of various clinical trials suggest that the renal RI of and carotid RI increase in parallel in a certain manner. On the other side, risk factors for the increase of RI of the carotid and renal arteries have a partially different manner, suggesting that specific control of particular risk factors may also be necessary in the prevention of vascular damage in each vascular bed. So we can draw the conclusion that the quantification of these two parameters in complex could be particularly useful in the prediction of the cardiovascular damage, provide an accurate estimation of the global cardiovascular risk and an early prophylactic intervention for the prevention of cardiovascular damage in the large and heterogenic group of the hypertensive patients.

**Keywords:** hypertensive patients, vascular damage, renal resistive index, carotid resistive index.

## **62. CLINICAL MANIFESTATIONS - SOCIAL AND INTELLECTUAL IMPACT OF THE COLLECTIVE INTOXICATION IN CHILDREN**

**Mihai Casian, Cristina Oglinda**

Scientific adviser: Ana Oglinda, PhD, Associate Professor, Department of Intensive Care, Mother and Child Institute, Chisinau, Republic of Moldova.

**Introduction:** The performance of a correct triage, rapid assessment and initiation of immediate treatment is one of the major problems in case of mass intoxication that is more difficult in children than in adults. The golden rule in case of mass intoxication remains the performance of lifesaving maneuvers, first aid maneuvers along with decontamination if necessary.

The aim of this study is to determine the clinical manifestations and social and intellectual impact of the collective intoxication in children.

**Materials and methods:** The study group has constituted the medical records of 93 children, aged between 8 and 18 with various collective intoxication, who were admitted and taken to the Mother and Child Institute in the period of January 01, 2013 – March 10, 2016.

**Results and discussion:** As a result of the retrospective study we have noted the following: During this period in the Emergency Department of the Mother and Child Institute there were transported and admitted 93 children with exogenous mass intoxication. The group of children was divided into two study groups. The 1<sup>st</sup> group – composed of 54 children (58,0%), who received treatment in the Emergency Department and the 2<sup>nd</sup> group of 39 children (41,9%), who received treatment in the pediatric resuscitation and toxicology unit. During the study there was found out the following: in 2013 there were hospitalized 16 children with toxic plant (henbane, mandrake) intoxication; in 2015 - 25 children (26.8%) with acute intoxication by ethnobotanical inhalation; in 2016 - 28 children (30.1%) intoxicated

by irritant spray-gas inhalation of the respiratory organs and 24 children (25.8%) with dimethoate insecticide intoxication. The classification by age category; 15 children (16.1%) between 8-12 years old; 78 children (83.8%) between 13-18 years old. After the epidemiological research there has been specified the inhaled or ingested toxic substance, the treatment was initiated in the precocious and respective terms according to the protocol. The study has determined the circumstance of intoxication occurrence of 100 percent that took place in public environment: school, school yard and playground. We have also found out voluntary intoxication in 52 cases (55.9%) and the incidental intoxication in 41 cases (44.0%). The clinical manifestations had a wide variation depending on the toxicity entered the child's body. Of the total number of children we have noticed respiratory clinical signs in addition to the digestive and minor neurological ones in 54 cases (58.0%); neurological symptoms including hallucinations, seizures in 14 cases (15.0%); we have noted signs of damage to the cardiovascular system in 12 cases (12.9%). Of the total number of children with dimethoate intoxication 14 children (15.0%) who manifested the clinical signs of intoxication have required the antidote administration. The duration of treatment of children in the Emergency Department (54 children (58.0%)) was on the average of  $1.5 \pm 0.5$  days, and in the pediatric resuscitation and toxicology unit it was of  $3.5 \pm 0.55$  bed days. All the children were of school age and they have missed the school classes on the average of 4.7 days. The children in the study group had missed the teaching material of approximately 35 academic hours, and the material damage aside from the children's treatments that included the research, decontamination of areas, investigation committees, are difficult to determine. During this period from collective intoxication no child has died. From the abovementioned we can conclude the following:

**Conclusions:**

1. The clinical manifestations in collective intoxication are diverse and require a correct triage along with the decontamination of victims and spaces.
2. The material, social and intellectual damages aside from the treatment of children with collective intoxication, which included the research, decontamination of areas, investigation committees and the missed teaching classes are difficult to determine.

**Key words:** children, collective intoxication, manifestation, intellectual damage.

### 63. ASSESSMENT OF CYSTIC FIBROSIS SEVERITY

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**Introduction.** Cystic fibrosis (CF) is one of the most common hereditary diseases and being characterized by chronic lung injury, exocrine pancreatic insufficiency and nutrition disorders. In this disease the mutation of the CFTR gene lead to changes of sodium chloride metabolism inside and outside epithelial cells found in he lungs, liver, pancreas, digestive tract and reproductive system. Thus, the result of this malfunction is represented by sticky and thick mucus, salty taste of the sweat and thickened digestive juices which can clog the lumen and alveoli of the lungs (clinically difficult breathing, formation of the environment prone to bacteria growth) or may disturb (when the pancreas is mainly involved) the process or proper digestion and absorbtion of nutrients, leading even to organ failure in

severe cases (lungs, pancreas). Pulmonary involvement in CF reflects the severity of the disease and represents the major cause of death. Major criteria used to assess CF severity are based on the evaluation of the lung function.

**Materials and methods.** Our study included 60 patients (the average age  $9.08 \pm 1.01$  years) diagnosed with cystic fibrosis. CF severity was assessed using Shwachman-Kulczycki score, which is based on the following criteria: overall activity of the patient, physical examination results, nutritional status, and data of the chest X-ray examination. Each category was assigned from 1 to 25 points, while the total score ranged from 4 to 100 points maximum (severe  $\leq 40$  points, 40-55 points – moderate; mild – 56-70 points, 71-85 points – good, and excellent – 86-100 points).

**Results and discussions.** The Shwachman-Kulczycki score of just  $25.46 \pm 2.09$  points, that indicates a severe evolution of CF, was registered at 46.81% of children with severe malnutrition, but also in older patients with advanced lung diseases. For 25.92% of children the score was  $53.57 \pm 0.63$  points, that means moderate evolution of cystic fibrosis. In 15.6% of patients the Shwachman-Kulczycki score showed a favorable clinical evolution, with a summary of  $62.12 \pm 0.98$  points. Only 12.77% of children had mild form of the diseases with a good score of  $78.0 \pm 1.30$  points. In the study group there were no children identified to have with excellent clinical condition, because of the presence of changes in clinical status and paraclinical tests.

**Conclusion.** The Shwachman-Kulczycki score that includes clinical and imaging criteria, is a very simple to use tool, demonstrated to be highly informative in assessing the clinical status of patients with cystic fibrosis and is recommended to be used in the work of specialists in pediatrics.

**Keywords:** Cystic fibrosis, CFTR gene, pediatrics.

## 64. RISK FACTORS FOR COMMUNITY-ACQUIRED PNEUMONIA IN CHILDREN

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Scientific adviser: Oana Cristina Marginean, MD, PhD, Professor, Department of Paediatric I, Targu Mures County Clinical Emergency Hospital, Faculty of Medicine, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction:** In the last years our knowledge on epidemiology of community-acquired pneumonia has revealed: the number of annual community-acquired pneumonia (CAP) cases is difficult to estimate. Pneumonia is an infection that inflames the air sacs in one or both lungs. This disease can range in seriousness from mild to life-threatening. It is most serious for infants and young children, people older than age 65, and people with health problems or weakened immune systems.

**Methods:** Risk factors for community-acquired pneumonia were studied by collecting data and achieving a prospective study of 64 children, age ranged between 1-192 months, hospitalized in the Paediatrics I Clinic of Targu Mures County Clinical Emergency Hospital in November or December 2015, January or February 2016. We included newly diagnosed patients with pneumonia and using SPSS

software, descriptive statistics were applied to summarize the demographic and clinical data with laboratory indicator levels and medical imaging data.

**Results:** We prospectively investigated 64 patients and found a predominance of male 57.8 % (37). The mean age at diagnosis was 50.03 months with a standard deviation:  $\sigma = 58.75$ , between 1 and 192 months old. The air sacs may fill with fluid or pus (purulent material), causing cough with mucus 53.1 % (34) or pus 15.6 (10 cases), fever for 60.9% (39 patients) with a mean of 38.05°C where the minimum is 37.0°C and the maximum is 40.0°C resulting in a total of 7.8% (5 cases) of convulsions in febrile context. They presented also chills 15.6% (10), tachypnea 32.8% (21), rhinorrhea 68.8% (44) and intercostal retraction 42.4% (27). A variety of organisms, including bacteria, viruses and fungi, can cause pneumonia. The average level of leukocytes (WBC) was  $13.75 \cdot 10^3/\mu\text{L}$  with a minimum at  $4.6 \cdot 10^3/\mu\text{L}$  and a maximum at  $35.0 \cdot 10^3/\mu\text{L}$  and a standard deviation of 6.27, the mean of neutrophil was  $7.59 \cdot 10^3/\mu\text{L}$  and for erythrocyte sedimentation rate (ESR) was 27.14 mm/h with a maximum at 108 mm/h. Pneumonia confirmation was performed using auscultatory examination and chest radiograph where we founded characteristic pathological changes. Malnutrition was present in 37.5% (24) of patients and other significant risk factors were a history of recurrent respiratory infections 26.6% (17) such us: bronchopneumonia, bronchiolitis or recurrent wheezing, chronic diseases 23.4% (15): congenital heart disease, asthma or diabetes mellitus. 12.5% (8) have the house heating with the wood fire, 14.1% (9) of children come from a difficult social environment and 12.5% (8) living in a institutional care.

**Conclusions:** In fact, children who suffer from underlying chronic disease (*e.g.* asthma, recurrent wheezing, congenital heart diseases, neuromuscular diseases and seizure disorders, chronic disorder of the nutritional status) or who living in a difficult social environment are at higher risk for acquiring pneumonia.

**Key words:** pneumonia, children, risk factors.

## 65. TREATMENT OF PANIC DISORDER

**Veronica Briceag**

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**Introduction:** The article addressed the treatment of panic disorders with the purpose of optimizing the methods of treatment in order to obtain good lasting results.

**Materials and methods:** 15 patients (men and women) with panic disorders of different age were tested. Testing was performed before and after pharmacological treatment using questionnaires, with a 3 week follow-up.

**Discussion results:** Before and after the treatment were observed the following results among the patients: Hamilton scale - severe and moderate depression (66%) with turn for lack of depression after treatment (73%); Taylor scale - very high and high anxiety (93%) with change to mean anxiety after treatment (80%); Spilberger scale - high stable anxiety (80%) and moderate (20%), high reactive anxiety (20%), moderate (67%), post-treatment evolution to stable moderate anxiety (80%) and low

reactive anxiety (80% ); Chambless questionnaire with average loss of control anxiety (27%), concern for somatic symptoms - average (20%), post - treatment relieving symptoms (100%); Marks- Mathew questionnaire - high and mean value anxiety-depression (67%), high and mean value agoraphobia (37%), average social phobia (27%), wound and blood phobia (20%) after treatment anxiety-depression, phobia for wounds and blood and agoraphobia lack (7%) and social phobia (13%) average values; Meyer questionnaire - unrealistic anxiety (20%) with improvement after treatment (100%).

**Conclusion:** Structured Psychotherapy, particularly cognitive-behavioral ones, in line with their availability and patient preferences should be privileged to drug therapy. Pharmacotherapy is an important lever in improving signs and symptoms of panic disorders, its effect requires a period of 3-28 weeks to highlight.

**Key words:** Panic disorder, treatment, psychotherapy.

## 66. PECULIARITIES OF DEPRESSION IN DIABETES MELLITUS

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**Introduction.** Diabetes mellitus is a major cause of morbidity and mortality worldwide. Today depressive disorders occupy one of the first places among the causes of its disability. It is shown that the incidence of depression is 2-3 times higher in diabetics compared to non-diabetics. Moreover people with depressive disorders have a much higher risk of developing diabetes mellitus. The prognosis of both diseases in terms of disease severity, complications, treatment resistance and mortality is worse when they evolve together, than when evolving separately. This is a current problem due to an apparent decline of the quality of life of patients, which is lower, than the quality of life of the general population. Objective of the study is to evaluate the frequency of depressive disorders and diabetes mellitus depending on: sex, patients` residence area, type of diabetes mellitus, treatment of patients with type 2 diabetes mellitus.

**Materials and methods.** To achieve the objectives there were examined 85 patients with the confirmed diagnosis of diabetes mellitus. To assess depression in patients with diabetes mellitus the Beck Depression Test was used, the study being descriptive.

**Results and discussion.** Of the 85 patients with diabetes mellitus included in the study, 68% were identified with depressive symptoms. Of the 15 patients with type 1 diabetes mellitus, 80% were found to have depression, the percentage of patients with depression and type 2 diabetes mellitus being 66%. Depression was assessed in 71% of the 45 women included in the study, the percentage of women affected by depressive disorders being higher than that of men, accounting for 65% of the 40 subjects of the study. There were established differences on the trend of depression development in people with diabetes mellitus depending on the living environment. The number of depressed patients included in the study is higher in rural areas, it being 31 subjects (36.5%) versus 24 subjects (28.2%) in urban areas. Of the 70 patients with type 2 diabetes mellitus, 45.7% were taking oral antidiabetic agents, while 54.3%



were on insulin. The association of depression with diabetes mellitus was most commonly identified in diabetics receiving insulin (37% of 70 patients) compared to those taking oral medications (19%).

**Conclusions.** Depression is a comorbidity commonly occurring in patients with both type 1 and type 2 diabetes mellitus. The association between diabetes mellitus and depression is more common in women. Depression is most commonly diagnosed in patients with diabetes mellitus in rural areas. Patients taking insulin have a higher rate of depression than patients taking oral antidiabetics.

**Key words:** diabetes mellitus, depression, Beck Depression Test.

## **67. THE IMPACT OF EARLY INTERVENTION SERVICES ON THE QUALITY OF LIFE OF PARENTS WITH A CHILD WITH DEVELOPMENTAL DISORDERS**

**Adriana Niculita**

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**Introduction.** Quality of life is one of the most important areas which are examined within human well-being around the world. The term “quality of life” was first defined by World Health Organization as a life which reflects how people perceive their place in life, in culture and value system where they live and where they make relationships to objectives, standards or interests. (ISOQL, 2008). Currently, the concept of quality of life is associated with several possible approaches and various disciplines, such as economics, environmental science, medicine, sociology, psychology, political science and demography (Andrejovský et al., 2012). This multidisciplinary interest has resulted in the problem complexity and diversity of views on the quality of life, which enriches all parties involved, but also causes various problems. The concept of quality of life is not very consistent, which lacks consensus about its meaning (Hajduová et al., 2011). Effects of globalization and rapid economic changes result also in changes in quality of life.

We aimed to examine family quality of life (FQOL) of families having a child with a neurodevelopmental disability

The cohort included parents of 40 children ages (0-3 years), 1<sup>st</sup> group – 20 parents beneficiaries of ECI services programs more than 12 months, and 20 parents beneficiaries of ECI services less than 12 months.

**Materials and Methods.** For evaluation QoL of parents we have used the Questionnaire elaborated by Centre BEACH University of Kansas (2012). We have used more relevant 11 questions from the 25, because we concentrated on physical, psychiatric and social dimensions of QoL, only. Children’s diagnosis included Down syndrome (55%), cerebral palsy (22%), autistic spectrum disorder (15%), and intellectual disability (8%).

**Results.** According our data, Early intervention services had a relevant positive impact on the QoL of parents after 12 months of beneficiaries more than 12 months. In the group of parents with ECI experience less than 12 months 3 questions had a positive response (70-75%). In a group of parents using

ECI services more than 12 month in all 11 questions answer ws positive in all 11 questions (75-100% degree of satisfaction).

**Conclusion.** The test BEACH is an appropriate tool for estimation of QoL of parents with a child with disability. Because of heterogeneous degree of severity of disability in each group of children and the modest number of questioned parents the research should be continued for obtaining more precise data.

**Key words:** quality of life, early childhood intervention, disability.

## **68. NEW METHODS OF SCREENING OF AUTISM SPECTRUM DISORDER IN CHILDREN OF EARLY AGE. THE MODIFIED VERIFICATION SHEET WITH SUBSEQUENT ALGORITHM FOR AUTISM SPECTRUM DISORDER IN YOUNG CHILDREN (M-CHAT-R/F)**

**Emanuela Scutaru**

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**Introduction:** The early screening of autism spectrum disorder and the timely initiation of activities to stimulate development may significantly change the trajectory of child development. Over the years, multiple forms of autistic spectrum disorder screening have been used (chat; M-chat; M-chat-r/f). In Moldova, screening for autism spectrum disorders by chat is a required process, and it is implemented by the standards of childcare supervision by the family doctor at age 18-24 months (since 2012). Currently, several methods of early screening of autism spectrum disorder which would enhance the effectiveness of early detection of ASD are being discussed. One of these tests is M-chat-r/f. The study objective was to evaluate the efficiency of M-chat test in comparison with M-chat-r/f test.

**Materials and methods:** To achieve this goal, the test M-chat-r/f has been translated from English into Romanian language. The test was performed on a group of 15 children with suspected autism spectrum disorders. These children were selected based on complaints as well as observations of clinical signs received from their parents. The control group consisted of 15 children with suspected ASD, which have been tested with M-chat.

**Discussion results:** Five children from each group, have met the benchmark for ADOS (Autism Diagnostic Observation Schedule). ADOS-test confirmed the presence of autism spectrum disorder in all children from the first batch (5 children), while in the control group only 4 children have met the diagnostic criteria for ASD. In addition, it was found that the test application time of M-chat-r/f test (7-15 min), is approximately two times higher in comparison to the application of an M-chat test (5-7min). At the same time the M-chat-r/f test also enables a more effective communication with parents, which ensures a more detailed description of the child's behavior.

**Conclusion:** Currently in Moldova, given the low level of implementation of the ADOS test, the M-chat-r/f could become a valuable test in the diagnosis of autistic spectrum disorders. The research

will be extended to larger groups of children in order to show the utility of this test in the national implementation.

**Keywords:** ASD – autism spectrum disorders, ADOS – autism diagnostic observation schedule, Screening, M-chat-r/f

## 69. DRUG ABUSE HEADACHE

**Alexandra Calaras**

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**Introduction:** Drug abuse headache is encountered in about 1-4% in general population. Patients tend to use drugs to relieve pain, but drug use itself is the third major cause of headache after migraine and tensional headache.

The purpose of the study was to identify the correlation between chronic migraine with drug abuse and addictive brain.

**Materials and methods:** We took a lot of patients with chronic migraine diagnosed for minimum 1 year which use pain medication and analyzed their responses to Beck depression questionnaire, Spilberger's anxiety test, SCL-90, DES, LEEDS, DAST 10, CAGE test, AUDIT test, MAST test, Drug use questionnaire and headache questionnaire.

**Results:** In our study we observed the frequency of ergotamine is decreasing in contrast to triptan use which is more frequent. Patients who overuse antimigraine drugs tend to excessively use other drugs or have an addiction for certain activities.

**Conclusion:** Medical abuse is an important disturbing factor for the patient with chronic diseases. Medication overuse headache is an important global issue with an increasing prevalence. The more addictions a patient has, the more complicate the migraines' clinical features are, the longer the evolution and the treatment of migraine is.

**Key Words:** Headache, migraine, addiction, abuse.

## 70. TREATMENT COMPLIANCE IN ESSENTIAL HYPERTENSION

**Maria Costiuc**

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**Introduction:** Hypertension, the main risk factor responsible for 13% global mortality, is poorly controlled worldwide. Acces to treatment and compliance to it are the key factors in controlling

hypertension. The purpose of the study is to assess treatment compliance in patients with essential arterial hypertension.

**Materials and methods:** The prospective study included 23 patients with essential hypertension hospitalized in the Institute of Cardiology, the report women:men 1:1, mid age  $64 \pm 7,4$ . The assessment involved the investigation using Hill-Bone questionnaire, including 3 important behavioral domains of high blood pressure treatment: sodium intake, appointment keeping and medication taking. Resulting values placed within 14-56 points, with an average of 25,6 points.

**Discussion results:** Analysis of the obtained data showed an average score of 22,26 points, with similar results for both female and male (22.2:22.3points), close to the average result. Noncompliant were 6 (26%) patients, of which 4 women (17.4%) and only 2 men (8.6%), with a score higher than the average values. Compliance was proved similar in all 3 behavioral domains.

**Conclusion:** Compliance evaluation in patients with essential hypertension showed that 26% patients remain noncompliant to the treatment.

**Key words:** Hypertension, compliance, Hill-Bone.

## **71. THE PERSPECTIVE OF USING BINAURAL BEAT AUDITORY STIMULATION IN THE TREATMENT OF PAIN**

**Anastasia Siminenco**

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**Introduction:** In the past years there has been observed an evident direction towards making unpharmacological treatment a global priority. The correlation between altered states of consciousness and pain is demonstrated by beneficial influence of oriental techniques where the decrease in pain is obtained through meditation and altered states of consciousness. We have studied possibilities of inducing altered states of consciousness through binaural beat stimulation in therapeutic purpose. The objectives of this study are: analysis of binaural beat stimulation versus placebo; finding responsive persons for inducing altered state of consciousness; analysis of psychological differences between responsive and unresponsive persons for inducing altered state of consciousness; elaboration of criteria for selecting persons suitable to the treatment of pain through binaural beat stimulation. Binaural beats hearing appears when two slightly different and coherent sounds with nearby frequencies are presented to each ear separately. The human mind integrates these two sounds and creates the third sounds, inexistent in reality, called binaural beat. Hearing binaural beats is referred to “central hearing”. Binaural beats were discovered by H. Dove in 1839. R. Monroe has studied it in the 1950’s and founded The Monroe Institute - a modern center for studying the binaural beats effects.

**Materials and methods:** Ten adults with tensional cephalalgia were tested via symptoms check list SCL-90, Dissociative Experience Scale (28), Personality Inventory for DSM-5, Beck depression inventory, State-Trait anxiety inventory Spilberger and Somatoform dissociation questionnaire. Patients

listened to binaural beats in alpha, theta and delta frequencies (1-13Hz) for 30 minutes. Afterwards they have passed the 5-Dimensions of Altered States of Consciousness Rating Scale (5D-ASC).

**Discussion results:** The patients were divided into two groups, those in whom cephalalgia decreased less than 10% (N=2) and those in whom cephalalgia decreased for more than 10% (N=8). In the first group the levels of mental disorders (DSM-5), levels of dissociative experience (DES-28), somatoform reactions, levels of depression, hostility and psychotics (SCL-90) were higher than in the second group ( $p<0.05$ ). Altered states of consciousness were highly pronounced in the second group.

**Conclusion:** Binaural beat stimulation was more effective than placebo for inducing altered states of consciousness for all 5 scales of 5D-ASC scale. Persons with affective disorders are less sensible to inducing altered state of consciousness. Symptoms check list SCL-90 is the most informative questionnaire for selecting responsive persons according to our study. Inducing altered states of consciousness and using binaural beats for pain treatment is contraindicated in people with mental disorders. Binaural beats are more efficient in pain treatment for persons who are more responsive to inducing altered states of consciousness.

**Key words:** binaural beat stimulation, altered states of consciousness, pain treatment

## 72. RISK FACTORS EVALUATION IN PATIENTS WITH ACUTE CORONARY SYNDROME

**Cristina Gheorghiu, Andrei Grib, Artiom Surev**

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**Introduction:** Acute coronary syndromes (ACS) are a major health problem and account for a large proportion of the total number of hospitalizations all over the world. Conventional cardiovascular risk factors, such as hypertension, diabetes, smoking, and dyslipidemia, increase the risk of developing coronary artery disease (CAD). Primary prevention studies have shown that the early detection and aggressive treatment of risk factors prevent cardiovascular events. The objective of our study is to investigate the risk factors and angiographic features of acute coronary syndrome (ACS) in patients who underwent coronary angiography in the emergency room.

**Material and Methods:** We studied 151 patients with a diagnosis of ACS and significant CAD (with stenosis  $\geq 50\%$ , as shown on angiography) admitted to the emergency room of Institute of Cardiology in the last quarter of 2015.

Data collection was performed using medical records including following variables: sex, age, risk factors for cardiovascular disease, coronary angiography.

**Results:** A total of 151 patients were studied having mean age of 62,5 years  $\pm$  9,13 years, of which 74,83% were men. ST-elevation myocardial infarction was present in 26,49% of patients, non-ST-elevation myocardial infarction – in 6,62% and unstable angina – in 66,89%. The most frequent risk factor was hypertension, which was present in 83,44% of patients, followed by dyslipidemia (80,79%), obesity (34,44%) and diabetes (29,14%). These risk factors were more prevalent in both men and

women, whereas smoking was present as a risk factor only in men – 18,58%. We identified at least one risk factor in 98,01% of all patients, two or three risk factors – in 66,89%, and four or five risk factors – in 15,89% of patients. The lipid profile analysis revealed that the most frequent type of dyslipidemia Associated with CAD was high levels of low-density lipoprotein cholesterol (55.78% of cases). Single-vessel disease in coronary angiography occurred in 25,17% of all patients, two-vessel lesions – in 15,89%, and triple-vessel lesions – in 89 (58,94%) patients.

**Conclusions:** We found at least one conventional risk factor in 98.01% of patients with ACS and significant CAD. The most frequent risk factors were hypertension and dyslipidemia in both men and women. The lipid profile analysis revealed that more than half of cases had high low-density lipoprotein cholesterol levels. Triple-vessel disease in coronary anfiography occurred in 58,94% of total number of patients.

**Keywords:** acute coronary syndrome, risk factors.

### 73. SLEEP STRUCTURE IN PATIENTS WITH LOGONEUROSIS

**Igor Vornices**

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**Introduction:** Logoneurosis is a temporo rhythmical disorder of speech organization that occurs because of convulsive muscle contractions of the phonatory apparatus. It affects about 5-8% of children, 1% of adults and it is Associated with high levels of social anxiety. During childhood, in patients with logoneurosis, there are observed sleep disorders: startles before falling asleep, a restless superficial sleep, many dreams and nightmares. The objective of the research is to study the features of sleep in patients with logoneurosis.

**Materials and Methods:** We carried out a case-control study where were included eight patients with logo neurosis and another eight persons without any speech pathology. Patients and healthy individuals were assessed by using the Spielberger level of anxiety and Pittsburgh (PQSI) sleep quality rating questionnaires. In two patients with logo neurosis from the study group, was performed a cardiorespiratory polygraphy with a neuroport (GATES 7).

**Results:** Sex distribution in groups resulted a significant prevalence of the logoneurosis 3/4 or 75% in males (6), as compared to 25% (2) in women. After a statistical analysis, we obtained the following results: patients with logoneurosis had an average of 41.6 points of personality anxiety, compared to only 31.5 points in the control group, which indicates a significant difference ( $p < 0.05$ ); the average score of Pittsburgh inventory in patients with logoneurosis was 6.37 compared to 3.37 points from those of the control group ( $p < 0.05$ ).

Following the assessment by cardiorespiratory polygraphy with a neuroport, we obtained the following results: a prolonged sleep latency in both patients (31 and 37 minutes); a sleep efficiency of 71.9% and 87.3% (norm > 90%); in both patients was determined a significant growth of 38.37% and 16.09% (norm 5-10%) of N1 sleep phase on hypnogramme and a decreased N2 sleep phase duration

from 39.52% and 35.22% (norm 40-50%); in one patient has been observed an increase of periodic limb movements number in sleep and somniloquy.

**Conclusion:** Patients with logoneurosis have a higher level of personality anxiety and a very low quality of sleep compared to people from control group. Hypnogramme evaluation revealed a high sleep latency and sleep fragmentation.

**Keywords:** logoneurosis, sleep.

## 74. CLINICAL AND PARACLINICAL FEATURES OF STABLE ANGINA PECTORIS

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**Introduction.** Stable angina pectoris (SAP) is a widely spread disease and a cause of disability. An improper management could lead to worsening of the medical prognosis and it is evident that the problem of SAP is of current importance.

**Purpose.** To conduct a study of clinical and paraclinical features of patients with SAP.

**Materials and methods.** 35 medical histories of patients, who have been hospitalized (in “Sf. Archangel Michael” clinic) with SAP diagnosis between 2011-2013, have been analyzed. Data have been selected according to the questionnaire which has included general data and the results of instrumental and laboratorial investigations.

**Results.** Risk factors for SAP are dyslipidemia, obesity, hypertension, age (starting from 50), psychosocial stress, family history of premature cardiovascular disease, smoking. Clinical features of SAP include: retrosternal pain (60%) with constrictive pains (62,6%), accompanied by dyspnea (94,3%), headache (74,3%), palpitations (42.3%). Laboratory indices for SAP are a significant increase of triglycerides (55% of cases), cholesterol (45% of cases), serum glucose (40% of cases). On an electrocardiogram there were observed such changes as ST on isoline (51,4%), depression of ST segment (45,7%), atrial fibrillation (34,3%), left ventricular hypertrophy (17,1%), ventricular extrasystole (14,3%). On echocardiogram of the patients there were present zones of normokynesia (58%), hypokynesia (34%), also in some cases a decline of left ventricular function was noticed.

**Conclusion.** Knowing the features of SAP, we can diagnose this disease in time and avoid unwanted complications. Correcting the modifiable risk factors could lead to a more beneficial prognostic of the illness.

**Key words.** Angina pectoris, clinical, paraclinical data.

## 75. BACTERIAL NEUROINFECTIONS: PROGNOSTIC FACTORS, CLINICAL AND EVOLUTIVE FEATURES

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**Introduction.** We conducted a study in the National Institute of Neurology and Neurosurgery from Chisinau, to determine clinical and evolutive features, and major prognostic factor in adults with bacterial neuroinfections.

**Materials and Methods.** A descriptive study was performed based on the analysis of clinical cases with bacterial neuroinfections (BNI), admitted in Neuroemergency Unit (NU) during the period from Jan 2014 to Dec 2015. Selection criteria were clinical symptoms compatible with a diagnosis of neuroinfections, laboratory exams and imaging confirmation, while exclusion criteria were patients with noninfectious neurological manifestations and other etiology. The study included 29 cases selected from the total of 1745 patients. Outcomes were classified as unfavorable (defined by a Glasgow Outcome Scale score of 1 to 4 points) or favourable (a score of 5).

**Discussion results.** BNI accounted for 2% of all patients admitted in NU, and 55% of the total of neuroinfections of any etiology. All cases of BNI were grouped into four nosological forms: meningitis – 25 cases (87%), brain abscess – 1 case (3%), cerebral venous thrombosis – 2 cases (7%), and bacterial myelitis – 1 case (3%). Examination of cerebrospinal fluid (CSF) by Gram stain was performed in 45% of episodes (13 of 29 cases), of which 9 cases were negative, and only 4 positive with different types of bacteria. Acute onset of BNI was in 41%, and subacute in 59% of cases. The mean duration of time interval from onset of BNI symptoms and admission was 9 days, patients who were admitted after 5 days of onset had a poor outcome. The classic triad of fever, neck stiffness, and altered mental status was present in only 48%, being more specific to meningitis; however, 84% had at least two of the four symptoms of fever, neck stiffness, headache, and change in mental status. On admission, 17% of patients were comatose and 31% had focal neurologic deficit. The mortality rate was 28%. The outcome was unfavorable in 76 of episodes (22 patients). Risk factors for an unfavorable outcome were advanced age (> 60), presence of sinusitis or otitis (30%), pneumonia (34%), immunodeficiency (56%), a low score on the Glasgow Coma Scale on admission and an elevated ESR.

**Conclusion.** In adults presenting with BNI, the sensitivity of classic triad is low, but almost all patients present at least two of those four symptoms. Meningitis obviously predominates. The mortality associated with BNI remains high, an unfavorable outcome is more likely to occur in patients of advanced age, in the absence of meningismus, and in the presence of pneumonia, other extraneural complications, or a prolonged duration of illness prior to therapy (5 days).

**Key Words:** bacterial neuroinfections, unfavourable outcome, meningitis



## 76. DILEMMAS IN THE HYPERTROPHIC CARDIOMYOPATHY DIAGNOSIS

**Maria Pascal, Alexandra Grejdieru**

Scientific adviser: Igor Cemortan, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** hypertrophic cardiomyopathy (HCM) is the most common genetic heart disease, characterized by increased wall thickness of left ventricle (LV) and interventricular septum (IVS). The prevalence in adult population is 0,02% - 0,23%. The incidence in adults is 1:500, in children – 0,3-0,5:100.000. HCM is the primary cause of sudden cardiac death (SCD) in young athletes. Therefore, the right early diagnosis and treatment is the the main link in management of patients with this severe disease. The method of choice that allow to establish the diagnosis is two-dimensional echocardiography. In this article we propose to elucidate some electrocardiographic (ECG) characteristics of HCM that can lead to errors in its diagnosis.

**Materials and methods:** Patient X, 17 years old. Diagnosis: Asymmetrical hypertrophic cardiomyopathy without left ventricular outflow tract obstruction (LVOTO). Heart failure Class I-II (NYHA).

**Discussion results:** occasional, in a routine ECG for military service examination were identified signs of acute myocardial infarction (AMI) in inferior diaphragmal region: abnormal Q waves and ST segment elevation in D<sub>II</sub>, D<sub>III</sub>, aVF. He urgently arrive to the intensive care unit of Cardiologic Institute. Anamnesis: short episodes of chest pain, sometimes dizziness, weakness, dyspnea on strenuous exercise, marked fatigue. The markers of myocyte necrosis were normal. EcoCG: heart cavities are not dilated. Pump function of LV muscle preserved – EF 68%. Marked thickening of IVS – 28mm. LVPW – 8mm. Hypokinesia of IVS. Systolic anterior motion of mitral valve. Treatment: Metoprolol; Acetylsalicylic Acid; Pentoxifylline, with positive effect.

**Conclusion:** For asymmetrical HCM is specific deep, narrow (“dagger-like”) Q waves in left (V<sub>5-6</sub>, I, aVL) and inferior (II, III, aVF) leads, that can mimic a prior or an AMI. Therefore, a young patient with exertional symptoms, for a right diagnosis of HCM require an ECG and ecoCG examination, anamnesis and genetic testing.

**Keywords:** asymmetrical HCM, diagnosis, ECG.

## 77. CLINICAL FEATURES OF THE CHRONIC GASTRODUODENITIS IN CHILDREN

**Inna Belaia**

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**Introducton:** Chronic gastroduodenitis represents chronic inflammation of the gastric and duodenal mucosa and submucosa, with a tendency to progression. It remains one of the most important pathologies among the world pediatric population and forms 58 – 65% in the structure of

gastroenterological diseases. Only in 15% of children can be found an isolated impairment of stomach or the duodenum, for the rest 85 - 90% there is a combined damage of these organs, which shows the common mechanisms of development of gastritis and duodenitis. The main objective of the research is studying the clinical features of chronic gastroduodenitis in exacerbation in children.

**„Materials and methods:** The research was built on analysis of 140 medical records of children with chronic gastroduodenitis in exacerbation, hospitalized in the Gastroenterology Department of the Mother and Child Institute during the 2013 – 2015 years. The diagnosis was based on the case history with the determination of etiological factors, clinical and endoscopic examination. The study results were statistically analyzed and interpreted.

**Results:** Distribution of patients from the entire group studied by gender and age, demonstrates that chronic gastroduodenitis interests all age groups with a marked increase of incidence in adolescence - 46%, with the bigger proportion of females - 48 cases (74% of patients).

Girls tend more than boys to develop this condition at preschool age, the ratio is 2:1 and adolescent age – 2.5:1, and evens out at the age of 6 – 11 years – 1:1. The clinical picture was determined by the pain syndrome – 96%, dyspeptic syndrome – 100%, the astheno-vegetative syndrome – 80%. A nagging pain of moderate intensity localized both in the epigastric and periumbilical regions have a much higher frequency than the pain syndrome in separate areas.

During the endoscopic examination the *Helicobacter Pylori* infection was detected in 112 cases (82%), affecting mainly the children of adolescent age – 54 cases (40%). Also in this age, the gastroduodenitis is associated with the high levels of stomach pH in 77%. Hypoacidity prevails in children up to 5 years – 57% and in children aged 6-11 – 53.7%, which can be explained by the presence of the gastroduodenal reflux disease.

**Conclusion:** Chronic gastroduodenitis is more frequent in adolescence, affecting more girls than boys. The clinical picture of chronic gastroduodenitis is dominated by pain, dyspeptic and astheno-vegetative syndromes. The main cause remains to be the *Helicobacter Pylori* infection.

**Keywords.** Chronic gastroduodenitis, *Helicobacter pylori*, Children.

## **78. QUALITY OF LIFE AND COMORBIDITIES IN HYPERTENSIVE PATIENTS**

**Cristina Gheorghiu**

Scientific advisers: Lucia Mazur-Nicorici, MD, Associate Professor; Livi Grib, PhD, Professor; Cardiology Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** An important factor influencing the perception of health-related quality of life (HRQoL) is the presence of chronic diseases, especially polymorbidity. Comorbidities in hypertensive patients have been observed to reduce the effect of therapy and to decrease the HRQoL. Although the effect of comorbidities on the HRQoL in hypertensive patients is becoming apparent, only few studies have investigated this relationship in details. The primary aim of the study was to assess the relationship

between comorbidities and different aspects of HRQoL in patients undergoing treatment for hypertension.

**Patients and Methods:** A questionnaire-based study was conducted in a group of 50 unselected patients treated of hypertension. To assess the 10-year survival rate in patients with several comorbidities, we used the Charlson Comorbidity Index (CCI) scoring system. HRQoL was evaluated using the Medical Outcomes Study 12-item Short-Form Health Survey (SF-12).

**Results:** The study group consisted of 29 men (58%) and 21 women (42%), having the mean age of  $63,5 \pm 8,7$  years. Coexisting diseases were reported in 47 patients (94%), including dyslipidemia (20,8%), coronary artery disease (CAD; 19,8%), COPD (10,9%) diabetes (9,4%) and myocardial infarction (8,3%). The average of 10 years survival rate, according to CCI represents 77,5% and 42,3% for age related CCI. The correlation analysis between hypertension levels and physical functioning revealed a weak, negative association ( $r=-0,2$ ). There is a strong, positive association between CCI and physical functioning as a dimension of HRQoL ( $r=0,73$ ), meaning that 53% out of the physical functioning is determined by the comorbidity index variation. Also, the correlation analysis suggests a moderate, positive association between mental health and CCI ( $r=0,58$ ), resulting that 34% of mental health as a dimension of HRQoL depends on comorbidity index variation. Women reported higher HRQoL in both dimensions assessed by the SF-12 form: physical functioning (43,2% vs. 40,7%) and mental health (46,4% vs. 44,7%).

**Conclusions:** Chronic diseases concomitant with arterial hypertension affect negatively all of the HRQoL dimensions. The presence of complications and comorbidities influences the HRQoL in hypertensive patients more than hypertension itself. These findings suggest that prevention, early diagnosis and effective treatment of chronic diseases are important to preserve the HRQoL in patients with hypertension.

**Key Words:** arterial hypertension, comorbidities, health-related quality of life.

## 79. CYTOMEGALOVIRUS INFECTIONS IN CHILDREN

**Angela Racovet**

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**Introduction.** Cytomegalovirus Infection (CMV) is one the most common congenital viral infection and an important public health issue, which is widely spread in newborns, about 0.3% - 2.4%, characterized by symptomatic infection, clinical polymorphism, severe evolution and irreversible sequelae (mental retardation, hepatitis and deafness), persistent viral infections Associated with risks of reactivation of immunosuppressed states. The objective of the research is to study and highlight the clinical and diagnostic peculiarities of CMV infection in infants and young children.

**Materials and methods.** A retrospective study was performed on a group of 42 children at ages 1month-3years, most of them (29 children-69%) aged under 12 months were from rural areas. Presence

of specific anti CMV IgM and IgG (ELISA test) in serum and CMV DNA in serum or urine by means of PCR were confirmed in diagnosing CMV infection.

**Results.** The study results proved the presence of high risk perinatal factors for antenatal fetal infection in over 53% of pregnant women: area of origin, low socioeconomic level, previous abortions or mortality cases, infections during pregnancy, premature births in medical history. The current gestation ended with premature birth in 10 (23%) cases, 12 cases of born at term infants (35.5%) showed retarded intrauterine development. The clinical features of congenital CMV infection was multiforme-like. The reason for hospitalization was neurological, pulmonary and liver impairment. Neurological examination revealed the presence of a neuro-psychological retardation of varying degrees in 21 (50%) cases, periventricular calcifications in 10 (23.8%) children, microcephaly in 5 (12%) children. Liver damage was characterized by hepatosplenomegaly and cytolysis in 2/3 of children. The ophthalmologic examination revealed chorioretinitis in 5 (12%) children and optic nerve atrophy in 2 children. One child was diagnosed with sensorineural deafness. Most children suffered from interstitial lung- pneumonia. The disease diagnosis was confirmed by the presence of CMV-DNA in the serum of 7 children out of 11 investigations and DNA in the urine of 10 children out of 11 investigated ones. The serologic test results were positive for CMV IgM antibodies in 23 (55%) cases and anti CMV IgG in 27 (64%) cases.

**Conclusions.** According to the survey, more than 53% of cases resulted from pathological pregnancies. Interstitial pneumonia, hepatomegaly and cytolysis, periventricular calcification and microcephaly, chorioretinitis and optic nerve atrophy were the most common clinical manifestations of congenital CMV infection. The serologic positive results confirmed the diagnosis by presence of CMV IgM and IgG antibodies and CMV DNA in serum or urine.

**Key words:** CMV congenital infection, hepato-splenomegaly, intracranial calcifications, chorioretinitis.

## 80. RESULTS OF THE STUDY OF INTESTINE BIOCEANOSIS IN CHILDREN

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**Introduction.** Changes in intestinal microbiocenosis play an important role in the development of functional disorders of the digestive tract in children. The aim of the study was to determine the diagnostic value of bacteriological studies of intestinal dysbiosis.

**Patients and methods.** We performed a retrospective analysis of 127 results of fecal survey on dysbiosis in children aged 1 to 17 years with impaired bowel function, that turned to the Odessa Regional Children's Clinical Hospital in 2014-2015.

**Results.** According to our research, more of the analysis on dysbiosis was conducted in patients of younger age group of 1 to 3 years — 68,8% of all cases. In the same age group, 81.4% examined children were bacteriological signs of dysbiosis of transient nature. There was a seasonal correlation of the research, since 44.8% of analyzes were carried out in the period from February to April, due to an increase in functional disorders of the digestive tract in children during this period. For the majority of

patients (78.6%) fecal dysbiosis has been performed in occasion of functional disorders of the gastrointestinal tract. The most common conditional pathogens *St. Aureus* were detected in the youngest age groups: from 1 year up to 3 years – at 44.2%; 4 to 7 years old children – 42,3%. On the second place were sown fungi of the genus *Candida* and other yeast in 38.6% of patients, as well mainly in young children. On the third place - *E.cloaceae* (11,02%) and lactosonegative (10,8%) *Escherichia*, then *Kl. Pneumoniae* 9,4%, *P.aeruginosa* in 2.36% of patients, respectively. The remaining microorganisms disembarked in single cases. Results of analyzes, unfortunately, were ready on day 10, when was advanced clinical remission in patients and there was no need for a correction of infringements.

**Conclusions.** Violation of intestinal microbiocenosis is most characteristic for young children, is rarely correlated with clinical data and is transient. Are most commonly defined conditional Pathogens *St.Aureus* and fungi of the genus *Candida*. However, the diagnostic value of the study is reduced due to the timing of the tests.

**Keywords:** Intestinal microbiocenosis, pediatrics.

## **81. EFFECT OF INTRODUCING THE SCORE OF PREDICTION OF RISK OF UNFAVOURABLE FLOW OF NECROTIC PNEUMONIA ON CLINICAL OUTCOMES IN CHILDREN WITH BACTERIAL PNEUMONIA**

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**Introduction:** Purulent destructive pneumonia, massive necrosis of lung tissue, is a serious, often fatal, complication of lobar infiltrative pneumonia. Improvement in treatment of children with bacterial pneumonia may result in potentially preventable complications. It is necessary to identify patients at risk with easy assessable signs which can predict the development of complications.

**The goal** of this study was to develop and validate available and effective Score for predicting the risk of development of necrotic complications of lobar pneumonia in children. The aim was to collect physiological data which were prior to development of purulent – necrotic complications.

**Materials and methods:** The study was performed in Odessa Regional Children's Clinical Hospital. 150 retrospective cases of lobar pneumonia by the period from 2010 to 2015 were analysed in the study. It was developed the Score of prediction of risk of unfavourable flow of necrotic pneumonia using simple algorithms based on observations that include history of previous hospitalizations, saturation (SatO<sub>2</sub>), volume of affected lung (X-ray findings), quantity of white blood cells (WBC), pH of pleural liquid and level of  $\gamma$ -globulins. Data sets for which outcome (i.e. development of necrotic complication or hospital discharge) could be identified were included to the analysis. Data was analyzed using the Statistical Package for Social Sciences (Version 10, SPSS Inc., Chicago, IL). For normally distributed data, results are given as means and standard deviations (SD). For non-parametric data, medians and interquartile ranges (IQR) are given. Unpaired t-tests were used to compare mean variables in control and intervention groups and the Mann–Whitney U-test to compare medians in non-parametric

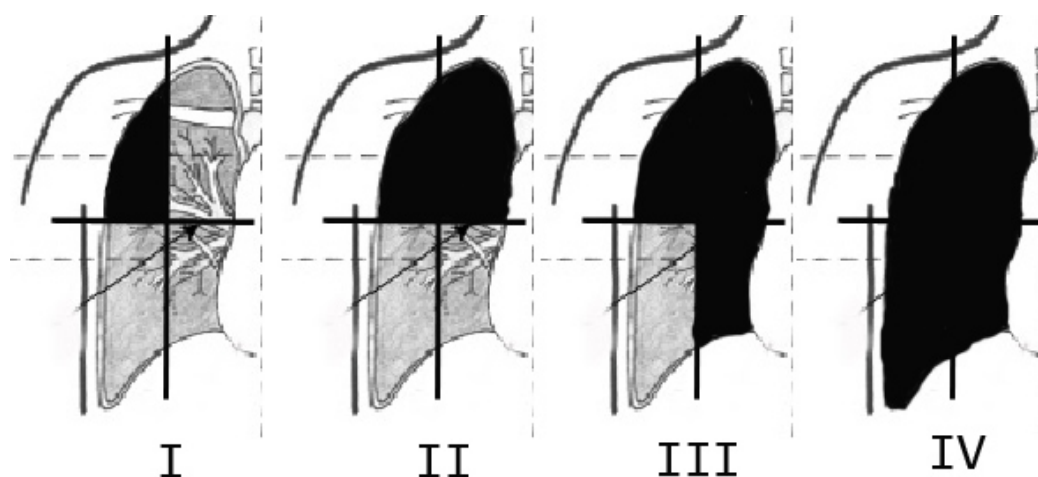
variables. The Chi-squared test and Fisher's exact test were used to compare categorical variables. A p-value of less than 0.05 was considered significant.

**Discussion results:** 138 (92%) children were delivered from the lower level hospitals (country side, city hospitals Etc.). In this group complications develops in 93 (67,39%) patients, and in those who were hospitalized directly from home – 12 patients, complications were observed in 1 (8,33%) case. The development of abscess was seen.

Among the patients with SatO<sub>2</sub> lower than 89% - complications were observed in 36 (24,0%). In case when SatO<sub>2</sub> was lower than 75% - 15 (7,5%) complications developed in all cases.

For evaluation the volume of affected lung we divided it in to four equal amounts.

Affection of one zone we evaluated as first degree (1 point), two zones – 2 degree, 3 zones– 3 degree, and four – 4 degree. (pic. 1.)



Picture 1. Volume of lung affection.

There were more complications in the group of children with leucopenia - 12(8,0%) and in those who have normal WBC count - 37 (18,5%). In group with high numbers of WBC amount of complications were lower.

Also decreasing of immune answer, which was seen by depression of level of  $\gamma$ -globulins to  $10\% \pm 2$  in 7 patients pleural cavity complications developed. With progress of purulent process the pH also decreased. So we evaluated it as pH 7,6 – 0 points, pH 7,5 – 7,3 – 1 point, pH 7,2 – 6,9 – 2 points, pH lower than 6,8 – 3 points.

#### Score of prediction of risk of unfavorable flow of necrotic pneumonia

Pleural pH	Volume of lung inflammation	WBC	SatO <sub>2</sub>	Previous hospitalization	$\gamma$ -globulins
pH 7,6 – 0 баллов	1 zone – 1 point	(15-22) 1 point	96-99% –0	No previous treatment -0 points	High level $\gamma$ -globulins - 0

pH 7,5-7,3 1 point	2 zones – 2 points	more than 23 2 points	90–94% -1	Home treatment more than 3 days - 1 points	Normalγ- globulins - 1
pH 7,2-6,9 2 points	3 zones – 3 points	Leucopenia 3 points	75– 89%–2	Driven from other clinic – 2 points	Low γ- globulins - 2
pH lower 6,8 3 points	Total affection 4 points		lower 75% -3		

12-17 points – high risk of local and generalized complications. 7–11 point – moderate risk. 0–6 points – the risk of development of necrotic complications of BP is almost absent.

It is reasonable to use specific pathogenic treatment to children with lobar pneumonia based on scale and stages of process, using a patented method of treating bacterial lung destruction with a local supply of antibiotics, and fractional washing the pleural cavity.

**Conclusion:** We are convinced that the Score of prediction of risk of unfavorable flow of necrotic pneumonia is a suitable scoring tool to identify children with lobar pneumonia at risk of development of complications. However, outcomes in medical emergency admissions are influenced by a multitude of factors. To impact on outcomes the Score of prediction of risk of unfavorable flow of necrotic pneumonia has to be placed into an educational context of improved training in emergency medicine. Systematic feedback of adverse outcomes and near misses might further enhance care and show the true potential of the Score of prediction of risk of unfavorable flow of necrotic pneumonia in the management of children with lobar bacterial pneumonia.

**Key words:** bacterial destruction of the lung, infiltrative form, lung abscess, empyema of pleura, pyopneumothorax, children.

## INTERNAL MEDICINE II

### ORAL PRESENTATIONS

#### 82. IS DURATION OF SLEEP INFLUENCE THE OVERWEIGHT? INTERNATIONAL SURVEY!

**Inesa Peltec, Toaca Natalia, Mihaela Ivanov**

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**Introduction:** Sleep is a basic need of the body. In Europe the duration of sleep for adult person (18-55 years) is 8 hours, but more than third of adult sleep less than 6 hours per night. Several studies have shown an epidemiological association between short sleep duration and high body mass index (BMI) Associated with obesity. In case when the sleep time is less than 5 hours at night, the risk of obesity increase by 60%. This impact is much greater than that of food take or lack of physical activity.

**Purpose and objectives:** We evaluate the correlation between the sleep duration and body mass index, depended of the sex and age.

**Materials and methods:** In study was included 111 persons, aged 18-28 years. Volunteers, medical students which was selected from 6 countries: Belgium, Germany, Moldova, USA and Romania. The international survey contains several parts: name, age, sex, anthropometric data (weight, height, BMI, waist circumference, sleep time (in hour), number of meals per day present of health problems and sport (min per day). In dependence of duration of sleeping participants were divided into two groups: group A with sleep duration  $\leq 8$  hours and group B with sleep duration  $> 8$  hours. Statistical analysis was performed using standard Excel functions. Overweight was characterized by more than 25 kg/m squared, and obesity by more than 30.

**Results:** Young adults group included in the study have had a mean age of  $21,19 \pm 2,17$  years. Group A have included 100 (90%) young adults with 44 (44%) men and 56 (66%) women, in group B 11 (10%) with 6 (55%) men and 5 (45%) women. In group A and B, the average age of men and women has been comparable, group A ( $21,2 \pm 2,13$ ;  $p > 0,05$ ) and group B ( $21,2 \pm 2,6$ ;  $p > 0,05$ ). The average sleep duration has been  $6,57 \pm 1,26$  hours for group A and  $9,45 \pm 0,68$  hours for group B. BMI among men who sleep less than 8 hours has been greater than in case of the optimal sleep than 9 hours ( $25,81 \pm 4,8$  vs  $23,04 \pm 4,65$ ;  $p = 0,009$ ). The same difference it is observed at women ( $24,19 \pm 1,2$ ) in group A ( $\leq 8$  hours) vs ( $19,9 \pm 1,90$ ) in group B ( $> 8$  hours).

**Conclusion:** The anthropometric assessment of young adults group selected from 6 countries, allowed us to evaluate the correlation between duration of sleeping and body mass index. BMI was higher among men with sleep duration less than 8 hours.

**Key words:** sleeping, body mass index, short sleep duration, obesity.



## 83. MANIFESTATIONS OF PORTAL HYPERTENSION IN LIVER CIRRHOSIS

**Nassar Suad**

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**Background:** Portal hypertension is a common complication of chronic liver diseases and is responsible for most clinical consequences of cirrhosis, which represent the more frequent causes of death and liver transplantation in these patients.

**Purpose:** Evaluation the clinical features, the para-clinical peculiarities and manifestatins of portal hypertension in patients with different stages of liver cirrhosis according to Child- Pugh score.

**Material and methods:** Thirty patients, ten with Child Pugh A (5 males and 5 females, with median age of 39,2), 10 with Child-Pugh B (6 males and 4 female, with median age of 52) and another 10 with Child-Pugh score C (4 males and 6 females, with median age 48,6) were observed, evaluated and investigated consecutively. Physical, biological and imagistic examination were performed for them to asses portal hypertension and its complications.

**Results.** The clinical presentation of patients with Chil-Pugh stage C of liver cirrhosis shows the predominance of sever-refractory ascites (70%), jaundice (90%) and splenomegaly versus patients with liver cirrsosis Child B and A which these events have a smaller share. Spleen and portal vein enlargement are more in Child Pugh C and this indicates portal hypertension. Regarding the esophageal varices in Child-Pugh A most of patients have no varices, in Child Pugh B most of patients have grade I or II and no one grade III; in Child-Pugh C most of patients are grade II and III; at 4 (40%) patients were performed endoscopic ligation of varices. Encephalopathy has not been regestered in Child Pugh A patients; in Child-Pugh B most of patients (70%) are with grade I and in Child-Pugh C patients present stage II and III of encephalopathy. Other Associated complications (variceal hemorrhage 30%, hydrothorax 20%, spontaneous bacterial peritonitis 40%, splenectomy 20%) were higher in Child-Pugh C compared to Child-Pugh B where bleeding from varices was registered in (10%), hydrothorax in (20%) and spontaneous bacterial peritonitis in 10%. In Child A thise complications are almost not regestered.

**Conclusions.** The most severe, life-threatening complications of portal hypertension were noted in Child-Pugh C and B stage of liver cirrhosis, and therefore these patients require closer evaluation and monitoring, the appropriate methods of treatment (endoscopic ligation, paracentesis) and determining the appropriateness and optimal timing for liver transplantation.

**Keywords:** cirrhosis, portal hypertension, ascites, encephalopathy, esophageal varices.

## 84. STUDY OF THE EFFECTS OF MONACOLIN K ON HYPERLIPIDEMIC PATIENTS

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**Background:** Monocolina K is a fermented product of rice and red yeast (RYR) (*Monascus purpureus*) and has been used by the Chinese for many centuries as a food preservative and for its medicinal properties. It is a potent inhibitor of HMG-CoA reductase and is known as substance, which lower serum cholesterol levels.

**Aim:** To investigate the hipolipimiant effect of Monocolina K in patient with hipercolesterolemia with moderate cardiovascular SCORE risk.

**Methods:** A total of 30 patients (mean age:  $47,8 \pm 1,8$  years, 52 % males) who had a total cholesterol level of  $> 5,2$  mmol/L were included in the study and allocated to receive a “No – Colest” which contain 10 mg of Monocolina K for 6 weeks. The 10-years risk of cardiovascular events was calculated according to cardiovascular risk SCORE before and after the treatment. As a primary outcome measure, we compared the before-after difference in lipid levels for patients included in the study.

**Results:** LDL (low density lipoprotein) cholesterol was lowered from  $4,19 \pm 0,22$  to  $3,51 \pm 0,14$  mmol/L.

(-16,2%) ( $p < 0,001$ ), total cholesterol from  $6,46 \pm 0,27$  to  $5,28 \pm 0,16$  mmol/L (-18,3%) ( $p < 0,001$ ), the TG (triglycerides) was reduced from  $1,89 \pm 0,27$  to  $1,61 \pm 0,14$  mmol/L (-14,8%) ( $p < 0,05$ ), and HDL (high density lipoprotein) have also been lowered from  $1,35 \pm 0,05$  to  $1,26 \pm 0,02$  mmol/L

(-6,7%) ( $p > 0,05$ ) in the intervention group. Any side effects haven't been noticed.

The lipid lowering effect resulted in reducing of cardiovascular risk as measured with SCORE chart, that changed from 3,85% to 2,5%.

**Conclusions:** The RYR formulation under study was well tolerated and effective in lowering LDL, total cholesterol and TG as well as the cardiovascular risk in this study population.

Trial registration: Clinicaltrials.gov, nr: NCT01558050

**Keywords:** Cardiovascular prevention, Statins, Red yeast rice(RYR), Cholesterol

## 85. HELICOBACTER PYLORI INFECTION AND PREMALIGNANT LESIONS OF THE STOMACH

Elena Lavinia Pastramoiu, Viorel Moise, Voidezan Septimiu

Scientific adviser: Eموke Fulop, MD, PhD, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction.** Premalignant condition and lesions of the stomach such as intestinal metaplasia or atrophy are very wide-spread nowadays and it seems to be determined by various factors. The aim of this study is to evaluate in which measure *Helicobacter pylori* correlates with premalignant lesions of the stomach in our area of the country.

**Materials and methods.** We included in the study a total of 792 patients, from whom we took gastric biopsies for different clinical symptoms, biopsies that have been evaluated in the Department of Pathology, Targu Mures County Emergency Hospital, between January and December 2015. We established if *Helicobacter pylori* infection is present, where the infection is localized at the level of gastric mucosa, the type of the gastric premalignant conditions and we also performed a statistical comparative study between the followed parameters.

**Results.** From a total of 792 patients, 243(30.68%) present the infection with *Helicobacter pylori*. We demonstrated that *Helicobacter pylori* infection is localized with predilection in the antrum of the stomach-154(63.4%), while only 22(9.1%) patients have infection in the body and 67(27.6%) both in the antrum and the body. From the patients diagnosed with *Helicobacter pylori* infection, 37(15.22%) of them present complete intestinal metaplasia, 41(16.87) incomplete intestinal metaplasia and 35(14.40%) atrophy.

**Conclusions.** Our results emphasize the fact that the number of the patients with *Helicobacter pylori* infection that were diagnosed based on biopsies is relatively reduced comparing with the total number of evaluated biopsies. In the cases where this infection is diagnosed, the association with premalignant conditions is statistically significant ( $p < 0.0001$ ).

## 86. EXTRAINTESTINAL MANIFESTATIONS IN INFLAMMATORY BOWEL DISEASE

Turcan Vitalie

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**Introduction:** Inflammatory bowel diseases (IBD) - ulcerative colitis (UC) and Crohn's disease (CD), have chronic progression evolution with frequent extraintestinal manifestations and increasing incidence in East Europe, inclusive in Moldova.

**The aim of the study** was to investigate the frequency and spectrum of extraintestinal pathology Associated with IBD in Moldova – the region with very high incidence of liver and articular disorders.

**Materials and methods:** The study was open prospective and included 126 patients with IBD (56% female, age of 18-67 years) who were treated in Republican Clinical Hospital in 2015. Diagnosis of ulcerative colitis or Crohn's disease was confirmed endoscopically and histologically. The following methods were used to diagnose extraintestinal manifestation: clinical, ultrasonography, X-ray, biochemical tests, immunological markers etc.

**Discussion results:** 114 (90,5%) patients were diagnosed with UC, 11 (8,7%) with CD and 1 (0,8%) with IBD type unclassified (IBDU). The most frequent extraintestinal manifestation was liver pathology, diagnosed in 30 (23,8%) patients. The spectrum of diseases was broad and included: chronic viral hepatitis B and C – 12 (9,5%), liver steatosis – 9 (7,1%), nonspecific reactive hepatitis - 5 (4,0%), drug induced hepatitis 2 (1,6%), primary sclerosing cholangitis – 1 (0,8%) and primary biliary cirrhosis 1 (0,8%).

Arthropathy was diagnosed in 18 (14,3%) patients. Peripheral arthropathy was more frequent than central arthropathy: peritheral oligoarthritis – 5 (4,0%), poliartthritis 7 (5,6%) in comparison with sacroiliitis – 5 (4,0%) and ankylosing spondylitis – 1 (0,8%). Skin and mucosal affectations were observed in 6 (4,8%) patients: aphthous stomatitis – 3 (2,4%), pyoderma gangrenosum – 1 (0,8%), nodular erythema – 1 (0,8%), and Sweet syndrome – 1 (0,8%). Ocular affectation was diagnosed in 4 (3,2%) cases. Extraintestinal manifestations were more frequent in association than as mono extraintestinal disorder – 22 (17,5%) and 12 (9,5%) patients respectively, and the common associations were liver-articular, skin-articular. It was not revealed significant interrelation between activity/extention/localization of IBD and severity of extraintestinal manifestation. Exception have made nonspecific reactive hepatitis, peritheral oligoarthritis, and pyoderma gangrenosum which was characteristic for a severe debut of IBD.

**Conclusion:** An essential number of IBD patients have Associated extraintestinal pathology (27%). Liver diseases were diagnosed more often and skin and ocular lesions less frequent in comparison with literature data.

**Key Words:** inflammatory bowel disease, extraintestinal manifestation

## **87. EVOLUTION OF RESISTANCE TO CEFEPIME IN PATIENTS WITH URINARY TRACT INFECTION**

**Alexandru Emil Baetu, Eموke Dragus, Anca Duca**

Scientific adviser: Adrian Maier, University of Medicine and Pharmacy Targu Mures

**Introduction:** Urinary tract infections (UTIs) are among the most common infectious diseases occurring in either the community or healthcare setting.<sup>1</sup> Uncomplicated UTIs typically occur in the healthy adult non-pregnant woman, while complicated UTIs (cUTIs) may occur in all sexes and age groups and are frequently Associated with either structural or functional urinary tract abnormalities. Examples include foreign bodies such as calculi indwelling catheters or other drainage devices, obstruction, immunosuppression, renal failure, renal transplantation and pregnancy

**Aim:** The purpose of our study is to highlight the alarming evolution of the resistance at Cefepime (the only cephalosporine of fourth generation) in patients with urinary tract infection.

**Material and Methods:** Records from 1041 patients were retrospectively reviewed. Antibiotic susceptibility of the isolated pathogens was tested for commonly-used antibiotics (including Cefepime) by Kirby-Bauer technique according to NCCLS guidelines. All statistical analyses were performed SPSS software. Statistical significance was considered for a p value < 0.05 (for Pearson Chi-Square test), and all p values were 2-sided.

**Results:** In 2012 Cefepime resistance was 31,85%, in 2013: 32,46% and in 2014 36,17%. Cefepime has good efficiency on urinary tract infection caused by E.coli comparing with the other cephalosporines (p<0.0001) but for Klebsiella pneumoniae Cefotaxime has the best results. (p<0.0001).

**Conclusions:** Cefepim resistance increased almost 5 percent these years. And this is a very big problem because is the only fourth generation cephalosporin that we have. In literature empirical treatment and self-medication is incriminated but we need further studies to provide accurate information.

## 88. IS PSORIATIC ARTHRITIS A RISK FACTOR FOR DIABETES MELLITUS?

**Andreea-Iuliana Miron, Alexandru Emil Baetu, Anamaria Romina Jugariu**

Scientific adviser: Monica Copotiu, MD, PhD, University of Medicine and Pharmacy, Targu Mures, Romania

**Introduction:** Three meta-analyses evaluated the role of psoriasis and/or psoriatic arthritis in the development of type 2 diabetes mellitus. The difference of the three studies consisted in evaluating different parameters involved alongside psoriasis (Ps) and/or psoriatic arthritis (PsA) in the onset of diabetes. The aim of our study is to find if psoriatic arthritis is an independent risk factor.

**Material and Method:** We enrolled 330 patients diagnosed with psoriatic arthritis according with CASPAR criteria in our observational study. The following variables were monitored: the presence of diabetes pre or post onset of psoriasis or psoriatic arthritis, the onset of the disease, the gender, the treatment – classical or biological disease-modifying anti-rheumatic drugs (DMARDs), corticotherapy, body mass index, alcohol intake, smoking habits, dyslipidaemia, active or inactive status in society. Graph Pad Prism 6.0 software was used to assess the statistically the data.

**Results:** Two-hundred and eighty-seven patients (pts.) with psoriatic arthritis and lack of diabetes were enrolled to the control group. Forty-three patients were associating type 2 diabetes mellitus. In the control group, we found a positive association between overweight (p: 0.008, r: 0.159), obesity (p:0.020, r: 0.138) and glucose intolerance and a protective role of methotrexate (p: 0.023, r: -0.134). In the study group, according with the statistics, all the patients that developed diabetes were obese and the onset was correlated with the skin lesions (p: 0.038, r: 0.317).

**Conclusions:** Obesity and skin disease seemed to play an important role in the onset of type 2 diabetes mellitus. A nutritionist should be involved in the management of the disease.

**Keywords:** diabetes mellitus, psoriatic arthritis, psoriasis.

## **89. RURAL-URBAN DIFFERENCES IN HEALTH RELATED QUALITY OF LIFE IN COPD**

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Scientific adviser: Alexandru Corlateanu, MD, PhD, Associate Professor, Division of Respiratory Medicine, Department of Internal medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background:** While geographic variation in health care access and quality may affect health status of patients with COPD. The influence of rural or urban residence on the health status of COPD patients is studied rather superficially.

**The aim** of the study was to evaluate the health status of COPD patients and to identify the main predictors of quality of life in these patients according to the rural or urban residence in Republic of Moldova.

**Methods:** 198 consecutive COPD patients were enrolled into the study. Spirometric data were analyzed (FEV1, FVC, FEV1/FVC) and BODE index (BMI, FEV1, MRC, 6 MWD). Health-related quality of life was assessed by the St. George Respiratory Questionnaire (SGRQ).

**Results:** The cohort consisted of 158 COPD patients from urban area with mean age  $64.6 \pm 8.9$  years and 40 patients from rural area with mean age  $63.6 \pm 8.7$  years. Patients in both groups had the similar severity of bronchial obstruction: FEV1 was  $42.5 \pm 13.6$  % versus  $38.5 \pm 15.4$  % ( $p=0.4$ ). There were no significant differences in SGRQ total score  $64 \pm 13$  % vs  $63.7 \pm 16.5$  %,  $p=0.9$ . Total SGRQ scores were the same but patients from rural area had worse scores in the symptom and impact domain. The forward stepwise regression analysis shows that the age and rate of COPD exacerbations are the important predictors of health related quality of life in COPD patients from urban area, which explain 32% of the total score of SGRQ ( $p<0.01$ ). In patients from rural area, BODE index explains 52% of SGRQ total score.

**Conclusion:** The age and rate of COPD exacerbations were found to be the major determinants of quality of life in COPD patients from urban area, mean while BODE index in patients from rural area.

**Key words:** COPD, quality of life.

## 90. PULMONARY ASPERGILLOSIS: NEW HORIZONS

**Ion Rotaru**

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**Introduction.** *Aspergillus* species are ubiquitous fungi, their spores being found anywhere in the environment. For humans, they play the role of opportunistic pathogens. Colonization, infection and disease develop in certain circumstances, in persons with predisposing conditions: modifications of the lung structure and function, allergy, neutropenia and immunodeficiency. According to foreign reports, aspergillosis is a relatively frequent complication for a range of underlying pulmonary and systemic disorders. Unfortunately, in our country, the number of diagnosed and reported cases of aspergillosis is insignificant. This is enhanced by lack of an integrated, single classification, used as a tool for diagnosing and treating; by failure to suspect the disease in at-risk patients. Therefore, the most of the patients are undiagnosed or misdiagnosed, thus, as a consequence, mistreated. This paper has the main objective to give clinicians and young doctors a tool to understand, suspect, then to confirm or rule out aspergillosis in patients with risk and highly suggestive clinical picture. A second objective was to present cases of pulmonary aspergillosis diagnosed in our country.

**Materials and methods.** The study includes review of literature on the subject: meta-analyzes, clinical guidelines, trials and articles addressing the broad field of lung aspergilloses, sometimes confuse, with overlapped clinical forms, with different terms used by clinicians, radiologists and morphologists to describe the same entity. We have analyzed the main types of pulmonary aspergillosis; their epidemiology, morphological, clinical and imaging aspects; current recommendations on treatment. For clinical cases we used the “Ch. Draganiuc” Pneumophthisiology Institute archive.

**Discussion.** The innovations brought by the research are: a new classification of pulmonary aspergillosis clinical forms with definite, integrated terms used for them; a comprehensive description of main clinical and imagistic aspects and the most up-to-date recommendations on treatment. Also, we have described 3 clinical cases of pulmonary aspergillosis: (1) a case of allergic bronchopulmonary aspergillosis, (2) a case of post-TB simple aspergilloma and (3) a case of subacute invasive aspergillosis, in a patient with a 20-year-old history of asthma.

**Conclusion.** The work presents a new, updated and integrated view on the issue and urges practitioners to take a closer look on the new horizons revealed in pulmonary aspergillosis.

**Key words:** pulmonary aspergillosis, neutropenia, immunodeficiency, allergy.

## 91. IS THE GENDER AN IMPORTANT VARIABLE IN EVALUATING THE PSORIATIC ARTHRITIS ACTIVITY WHEN USING STOCKERAU ACTIVITY SCORE?

**Anamaria Romina Jugariu, Razvan Gabriel Budeanu, Andreea-Iuliana Miron**

Scientific Adviser: Monica Copotoiu, MD, PhD, University of Medicine and Pharmacy Targu Mures, Romania

**Background:** In last decade, several disease activity scores for the inflammatory diseases such as rheumatoid and psoriatic arthritis were validated. Still, the auto - evaluation in real life is less utilised in clinical practice. A new score – the Stockerau Activity Score for Psoriatic Arthritis (SASPA), aimed to be used by the patients is to be validated.

**Aim:** to evaluate the gender as an independent variable for the SASPA score.

**Material and method:** A prospective, cross-sectional study was started on February 2016 in the rheumatology ambulatory settings. SAPSA activity score consisting of five questions aiming the tender joints, the degree of arthritis, the stiffness, the general health and the skin disease was completed by thirty - six (17 women, 19 men) patients diagnosed with psoriatic arthritis (PsA). Mann Whitney test was applied.

**Results:** All the patients completed the SAPSA in less than 2 minutes. No differences were observed concerning the tender joints (p: 0.6067), the arthritis overall evaluation (p: 0.6863), the general health (p: 0.5074) and the stiffness (p: 0.8951) comparing the results of women versus men. On the p scale we observed a tendency to achieve a differentiation when asked by the skin involvement (p: 0.0789), being with a delta of 0.4 more affected the women.

**Conclusions:** The skin involvement in association with the gender is to be carefully considered when applying activity scores in PsA.

**Key word:** psoriatic arthritis, activity score, gender

## 92. TUBERCULOSIS DETECTION IN CHILDREN OF TUBERCULOSIS OUTBREAKS

**Mariana Neculcea**

Scientific advisor: Iavorschi Constantin, MD, Professor, Department of Pneumology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** In the Republic of Moldova, the TB incidence in children is decreasing by 12% compared to 2013. In 2014, there have been registered 157 illness in children compared to 180 illness in 2013, the incidence of 22 and 24 to 100 thousand children.

**Objectives:** The particularities of finding out the tuberculosis in children from the centre of the tuberculosis. The evolution of the tuberculosis in children from the centre of the tuberculosis. The treatment efficiency at the children from the centre of the tuberculosis.



**Materials and methods:** Descriptive study about the children from the centre of the tuberculosis, which includes the analysis of 81 children from the centre of the tuberculosis from IMSP the municipal clinical hospital of the phthisiopneumology.

**Results:** The study result demonstrated that most of the children suffering from tuberculosis were diagnosed at contact prophylactic control. It was detected by prophylactic examination that intrathoracic lymph node TB prevails-54 (67%) children, followed 21 (26%) children with infiltrative pulmonary TB and 6 (7%) children with primary complex TB. The biggest coefficients had the risk factors as: contact with tuberculosis patients-81 children (28%), non-chemoprophylaxis - 76 children (27%), concomitant diseases - 42 children (15%), unsatisfactory conditions - 30 children (10%), incomplete families - 23 children (8%), lack of vaccination and bad vaccination - 11 children (4%), outbreaks of death - 10 children. Contact in home with parents and brothers - 75 cases (75%). Contact with mother has been found most frequently - 40 children (41%), with father-26 children (26%), with brothers-9 children (9%). Close contact was found at 24 cases (25%). The most frequent contact is with the grandparents - 12 children. Through prophylactic examination it was found that 75% of children are with a single post-vaccination scar, 15%-with 2 post-vaccination scars, but at 13% information is missing. The post-vaccination scar prevailed  $\geq 4$  mm to 50% of children.

**Conclusion:** Has been established that most of the children with complex tuberculosis were found out by examination as contacts with people which are sick of TB disease - 100% of cases. In the clinic structure of the extrapulmonary tuberculosis prevails the tuberculosis of the ganglia lymph intrathoracic-54 cases (67%). In 4% of the cases the children weren't vaccinated BCG after different medical indications.

### **93. THE HEREDITARY HEMOCHROMATOSIS HAS CHANGED OVER THE TIME?**

**Mwassi Basher**

Scientific adviser: Adela Turcanu, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background.** Being a genetic malady, clinically expressed during the adulthood years and frequently confused with other maladies, this disease creates a substantial medical-social impact. In this study we are approaching the old problem, revealed in 1935 by Sheldon, confronting it with the new clinical observations and scientific data, at the same time we'll try to define some practical and utile ideas for diverse specialists in the early screening of this disease.

**The goal and the objectives:** the clinical and paraclinical evaluation of the patients with hereditary hemochromatosis and the determination of the evaluative features of these maladies.

**Material and methods:** In the study have been involved 9 patients with hereditary hemochromatosis, who have been identified, during 2014 - 2015, of a sample of 105 patients with hypertransaminazemia and hyperferritinemia. All the patients have been screened for HBV, HCV, alcohol intake, hepatic steatosis. The patients who have had the serum ferritin level higher than 1000

ng/ml, have been done the saturation coefficient of transferrin, and those with a coefficient higher than 45 have been tested genetically.

Results: there have been identified 9 patients with hemochromatosis (including two brothers), the average age was  $43.5 \pm 2.4$  y.o, men/women— 8/1, with the bronz skin was 2/9, with VHC positive – 3 patients. Clinically the hepatomegaly has been noticed in 6/9 patients, splenomegaly 2/9, arthralgia 2/9, cardiomyopathies 1/9 patients. The laboratory paramethers have identified the high ALT level at 7/9 patients, elevated alkaline phosphatase 3/9, increased total bilirubin – 5/9, hyperglycaemia 2/9, increased serum iron 5/9, anemia 4/9, low seric albumin 4/9. The genetical testing has identified the homozygous mutation for C282Y – 3/9, heterozygous mutation for C282Y 4/9, heterozygous H63D – 2/9.

**Conclusions:** According to our results the hereditary hemochromatosis is necessary to be screened in all the categories of patients, especially with hyperferritinemia higher than 1000 ng/dl and saturation coefficient higher than 45, independently of the patient's age, the color of his skin, the presence of absence of diabetes or any other extrahepatic manifestations.

**Key words:** Hemochromatosis, genetics, mutation.

## 94. ORAL ULCERS AS EARLY MANIFESTATION OF SYSTEMIC LUPUS ERYTHEMATOUS

**Maria Pasali, Victoria Sadovici-Bobeica**

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**Introduction:** Systemic lupus erythematosus (SLE) is an autoimmune disease which develops at the base of imperfect immunoregulatory processes, genetically determined and Associated with overproduction of autoantibodies. The symptoms are heterogeneous and each of those present has a major importance for the diagnosis and prognosis of disease. Oral ulcers were included in the criteria for classification of SLE, SLICC 2012, representing one of the most frequent mucocutaneous manifestation at the onset of the disease. According to the latest scientific evidence, skin involvement represented by oral ulcers, acute and chronic cutaneous lupus are present in the initial stages of SLE in 19-30% cases.

**Materials and methods:** In performed cross sectional study were included patients that fulfilled SLICC classification criteria, 2012 and had a duration of the disease not more than 2 years. We were interested to find out the frequency of oral ulcers as initial sign of disease and its correlation with disease activity by SLEDAI. Patients were evaluated for the presence of oral ulcers as initial manifestation of the disease and correlated with disease activity at the moment of study entry.

**Discussion results:** In our study were included 51 patients, mean age of patients at study entry was  $37.2 \pm 13.2$  (range 18-67) years, 83.2% were female and mean disease duration was  $9.3 \pm 8.7$  months. The frequency of the oral ulcers was 33.3%. The mean SLEDAI activity of a disease was  $11.4 \pm 6.2$  points (high), but it didn't correlated with the duration of disease  $r = (-0.016)$ ,  $P = 0.9$ . We also were interested to evaluate if disease activity can be a risk factor for oral ulcers in early lupus if we divide our patients in 4 groups – with oral ulcers and without/ low and high disease activity (<or> than 8 points). In the result,

relative risk (RR) was 0.98 (low), with CI=0.4 to 2.25, P=0.9. When we appreciated the risk of ulcers in dependence of disease duration (<or> than 12 month) relative risk was 1.75 with CI=0.72 to 4.2, P=0.2.

**Conclusion:** Oral ulcers are common manifestation in systemic lupus erythematosus and frequently can serve as one of the initial symptoms of the disease. This manifestation should be appreciated when other characteristic signs are present in diagnosis of LES and can be appreciated as criteria for disease activity and its presence in SLEDAI score as independent descriptor. When we analyze the effect of two factors - disease activity and duration on ulcer appearance we can conclude that 1: disease activity and oral ulcers are independent factors, 2: risk of oral ulcers appearance raises with disease progression, but not statistically semnificant.

**Key words:** early systemic lupus erythematosus, oral ulcers.

## 95. CARDIOVASCULAR MANIFESTATIONS IN PRIMARY HYPOTHYROIDISM

**Iuliana Radu**

Scientific advisors: Liliana Groppa MD, PhD, Professor, Department of Internal Medicine, Rheumatology and Nephrology; Lorina Vudu MD, PhD, Professor, Chair of Endocrinology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** According to bibliographical sources (Bernadette B. 2012; Kleyln I. 2001; Andronati V. 2011) thyroid hormones have major effects on the cardiovascular system, being (representing) a major clinical problem. The aim of the current study is to highlight the cardiovascular events in patients with primary hypothyroidism.

**Materials and methods:** In the study were included 30 patients with primary hypothyroidism (HT), hospitalized in the department of endocrinology in the Republican Clinical Hospital. Methods: clinical, para clinical (ECG, EchoCG, lipidogram). The group of investigated patients: 90% - women, 10% - men, aged 20-60 years old. The average body mass index was 29.68 ( $\pm$  5.61) kg /m<sup>2</sup>, 6,7% of them - loss of weight, 3,3% - no change in weight and 90% - added weight. From the study were excluded patients with previous rheumatic and cardiac diseases, secondary HT, decompensated liver, lung, cancer, kidney diseases. The cause of HT in 63,3% of patients was autoimmune and 36,7% - postoperative. The mean duration of disease (hT) is 9,6 ( $\pm$  6,5) years old.

**Discussion results:** From the cardiovascular events were observed: dyspnea – 53,3% of patients, cardialgias (46,7%), pericardial effusion (26,7%), extrasystoles (3,3%), bradycardia (6,7%), tachycardia (0%), increased diastolic blood pressure (16,7%), deafened heart sounds (60%), heart failure (46,7%). Elevation of cholesterol (60%) and triglycerides (23,3%).

**Conclusions:** Significant changes in the cardiovascular system in patients with hypothyroidism according to incidence rank are: 1. deafened heart sounds, 2.dyspnea, 3.cardialgias and heart failure, 4. pericardial effusion. Also an important element in the diagnosis of impairment of the cardiovascular system in hypothyroidism is elevated cholesterol and less significant elevation of triglycerides. Early

identification ensures effective management of treatment with blurring or disappearance of cardiovascular manifestations.

**Key words:** primary hypothyroidism (HT), cardiovascular events.

## **96. IS EPSTEIN BARR VIRUS A RISK FACTOR FOR THE ONSET OF SYSTEMIC LUPUS ERYTHEMATOUS IN ADULT POPULATION?**

**Ufuoma Maureen**

Scientific adviser: Monica Copotou, MD, PhD, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction:** Epstein Barr virus is considered to be a risk factor for the onset of systemic lupus erythematosus (SLE). The epidemiology data are showing an estimated prevalence of Epstein Barr virus (EBV) of 4.471.110 referred to  $22 \times 10^6$  established population in Romania. The majority of the epidemiological studies published are showing a prevalence of 90% infections with EBV in paediatric population diagnosed with lupus. The main aim of our study was to evaluate the presence of EBV in adult patients diagnosed with SLE.

**Material and method:** A prospective, cross-sectional study was conducted. Twenty-six patients diagnosed with SLE passed the inclusion criteria. The variables monitored were: the presence of the IgG or IgM EBV, the onset of the disease, the presence of the antinuclear antibodies (ANA), DNAs antibodies, the anticardiolipin antibodies (ACL), the presence of cytopenia and the treatment followed.

**Results:** The mean age of the subjects involved in the study was 46.77 +/- 11.43 years old with a mean age at the onset of the disease of 39.04 +/- 10.51 years old and a disease onset of 8.173 +/- 5.975 years. We weren't able to prove a correlation between the presence of EBV and the disease ( $p > 0.001$ ) as well as with the presence of antibodies – ANA ( $p: 0.067$ ,  $r: 0.365$ ), DNAs antibodies ( $p: 0.463$ ,  $r: 0.330$ ), ACL ( $p: 0.779$ ,  $r: -0.040$ ). No correlations were found concerning the treatment ( $p > 0.001$ ) or the presence of cytopenia ( $p > 0.001$ ).

**Conclusion:** We couldn't prove the active role of EBV in the onset of SLE in adult population. It is to be considered different risk factors for the onset of the disease in adult populations versus paediatric ones.

## POSTERS

### 97. THE EVOLUTION PARTICULARITIES OF RAYNAUD'S SYNDROME

**Alina Brinza**

Scientific Adviser: Svetlana Agachi, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Raynaud's Syndrome is caused by vasospasm of the small vessels of the fingers, toes, nose, chin, ears, and other protruding parts of the body, triggered by cold and/or emotional stress. It consists of two or three phases (bi- or triphasic) characterized by an initial blanching (ischemia), followed by cyanosis (anoxia) and rubor (reperfusion). The medical importance of Raynaud's syndrome (RS) is to a large extent determined by whether it is a reflection of an underlying autoimmune rheumatic or connective tissue disease as Systemic Sclerosis, Systemic Lupus Erythematosus and Rheumatoid Arthritis.

**The aim** of this study was to assess the frequency and the particularities of Raynaud's syndrome in patients with Systemic Sclerosis (SSc), Systemic Lupus Erythematosus (SLE) and Rheumatoid Arthritis (RA) in Republic of Moldova.

**Material and methods.** We performed a retrospective study, in which were included 150 patients who were hospitalized in the Rheumatology department of Republican Clinical Hospital, during the years 2013-2015: 50 (49 women) of them with SSc, 50 (44 women) with SLE and another 50 (45 women) with RA. The average age of the patients with SSc was  $44,5 \pm 18$  years, with SLE –  $38 \pm 13$  years and with AR –  $39 \pm 8$  years.

The average activity of each disease was: for SSc (EUSTAR) –  $4,5 \pm 1,6$ ; for SLE (SLEDAI) –  $7,4 \pm 2,2$ ; for AR (DAS28) –  $5,1 \pm 2,6$ .

**Results.** The demographic, clinical features of underlying disease in relation to the Raynaud's Syndrome are shown in the Table:

Parameters	SSc	SLE	RA
Number of patients	50	50	50
With RS (%)	90	64	8
Female (%)	97,7	90,6	100
RS as first symptom	64,4	6,2	0

**Q** We found patients with SSc who were anti-centromere positive have a significantly longer duration until the next disease manifestation compared to those who were anti-Sc170 positive ( $6.4 \pm 0,8$  years vs  $3,2 \pm 0,6$  years). The digital ulcerations were found in 26,6% patients, and most of them (66,6%) were anti-Sc170 positive. The triphasic feature of RS was found in 11,1%, the biphasic – in 51,1% and the monophasic – in 37,7% patients with SSc. Thirty (93,8%) patients with SLE developed RS  $3,5 \pm 1,3$  years after the diagnosis of SLE was established.

Patients presented with RS a mean of  $4,1 \pm 1.2$  years after the diagnosis of RA.

**Conclusion.** The prevalence of secondary RS depends upon the underlying disease. RS secondary to autoimmune disease are more common in women than in men. In SSc the evolution of RS depends on the anti-centromere and anti-Scl70 antibodies. The triphasic feature of RS in SSc was found in only 11,1% patients. RS appears to develop relatively soon after RA and SLE diagnosis in the majority of cases.

**Key words:** Raynaud's Syndrome, systemic sclerosis, systemic lupus erythematosus, rheumatoid arthritis, digital ulcers.

## 98. EXTRINSEC DETERMINANTS OF PULMONARY TUBERCULOSIS

**Alina Gaina**

Scientific adviser: Evelina Lesnic, MD, Assistant Professor, Chair Pneumophysiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background:** Tuberculosis (TB) represents a classic example of an infectious disease linked with the social determinants of the health.

**The aim of the study** is the assessment of social, demographic, economical and hygienic characteristics of patients with pulmonary tuberculosis according to the spectrum of drug-resistance.

**Material and methods.** It was realised a retrospective and selective case-control study of 82 patients with pulmonary TB registered in the Municipal Hospital of TB during the period 1.1.2014 to 1.3.2014. Including criteria in both groups were adult patient (age > 18 years), the diagnosis of the new patient with pulmonary TB. Study design consisted in the division of cases in two groups: first group – included 49 drug susceptible TB; second group - 33 MDR-TB cases.

**Results and discussions.** Distributing patients by sex established the predominance of men in comparison with women in both groups: 32 (65.31%) men vs 17 (34.69%) women in 1st group, as well as in the 2nd group 19 (57.57%) vs 14 (42.42%) women,  $p < 0,001$ . Patients younger than 44 years prevailed in both groups 39 (79.59%) vs patients older than 44 years 10 (20.41%) in 1st group and 24 (72.72%) cases vs 9 (27.27%) cases in the 2nd group,  $p < 0.001$ . Low educational level prevailed insignificant in the 1st group 19 (38.78±6.96%) vs 11 (33.33%) in the 2nd group. Economically disadvantaged groups were most prevalent in both samples: 41 (83.67%) in the 1st group vs 26 (78.78%) in the 2nd group; single-civil status prevailed in the 2nd group 18 (54.54%) vs 12 (24.49±6.14%) in the 1st group. Tobacco smokers were two third of the patients: 38 (77.55%) in the 1st group and 24 (72.72%) in the 2nd group. Alcohol abusers were 12 (24.49%) in the 1st group and 4 (12.12%) in the 2nd group. Lack of health insurance was revealed at 32 (65.31%) cases in the 1st group and 20 (60.61%) patients in the 2nd group.

Assessing the type of household was revealed bad conditions in both groups: bad state private apartment owned 24 (48.98%) in the 1st group and 11 (33.33%) cases in 2nd group and old house in bad state 8 (16.32%) in the 1st group and 7 (21.21%) in 2nd group.

Multivariate logistic regression model assessing risk factors of drug susceptible/MDR-TB established that risk for developing drug susceptible TB: male sex OR=1.55 (95%CI:0.72-3.32), low educational level OR=4.56 (95%CI: 2.07-10.08); alcohol abuse OR=4.21 (95%CI:1.41-12.54) and for developing MDR-TB age<44 years OR=1.79 (95%CI: 0.78-4.09).

**Conclusions:** social interventions for reducing the risk of TB developing must target all social disadvantaged groups, especially men, young aged individuals, low educated, alcohol abusers.

**Key words:** tuberculosis, risk factors, social determinants.

## 99. FEATURES OF PULMONARY TUBERCULOSIS IN ELDERS

**Anastasia Ciornii**

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**Introduction.** At elders pulmonary tuberculosis develops most often due to the reactivation of endogenous tuberculous infection, but the exogenous infection predisposes the reactivation of latent TB infection. Diagnosis difficulties and errors, as well as comorbidities and hospital care worsen epidemiological indices.

**Objective of the study.** Assessment of clinical, paraclinical and treatment outcomes of pulmonary tuberculosis at elders.

**Material and methods.** A retrospective, descriptive and selective study was realized on 95 new pulmonary tuberculosis elder patients is > 65 years old, treated in IMSF SMF during 2013 year.

**Results.** Distribution by sex revealed a non-significant predomination of men (71,7%) vs women (28,3% ). Case management established that the most of them were detected by passive way (68,5%), with an AFB positive smear only in 27,2% cases. Pulmonary infiltrative TB was diagnosed at 79,3%, fibrocavitary TB – 1,1% at and disseminated TB at - 17,4%, with parenchimal destructions at 37,5%, affecting both lungs in 31,5% cases. The most frequent clinical errors were bronchitic (26,8%) and pneumonic (19,6%) masks, that determined the transfer from somatic hospitals into pneumophthysiological services. Bacteriologically was identified positive results on conventional medium at 48,9% cases, with molecular-genetic positive test GeneXpert RIF at 30,4% cases. Treatment outcomes reflect the epidemiological situation of tuberculosis, so successfully treated were 67,4%, lost from follow up-5,4%, dead-9,8% cases.

**Conclusions.** diagnosis difficulties and errors, expressed by high rate of passive detected cases and low rate of microscopic AFB identification demonstrates the epidemiological danger of elders patients, worsened by the medical care in other than phtysiopneumological services.

**Key words:** tuberculosis, elder.

## 100. SECONDARY HYPERTENSION INCIDENCE AT PATIENTS WITH CHRONIC PYELONEPHRITIS

**Alexandra Condrea**

Scientific adviser: Larisa Rotaru, MD, Assistant Professor, Department of Internal Medicine, Rheumatology and Nephrology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Hypertension (or high blood pressure) is a syndrome characterized by increase of the systolic and diastolic blood pressure above the normal values. It was found that 5% - 10% cases of hypertension (and almost 50% cases discovered under the age of 40), have obvious etiology is and most frequently of the renal genesis.

**Materials and Methods:** 50 patients with chronic pyelonephritis of the Republican Clinical Hospital, department of Nephrology, were examined retrospectively and prospectively. The average age of patients and the disease duration was 59.1 and 27.2 years respectively.

**Results:** The incidence of hypertension in bilateral chronic pyelonephritis reaches 58-65% worldwide, but in our study the incidence reached 82% (41 patients). We have determined that at 38% (19 patients) with chronic pyelonephritis, hypertension developed in more than 10 years of the pyelonephritis evolution. In 64% (32 patients) of patients with chronic pyelonephritis hypertension was detected before the age of 40.

**Conclusion:** Kidney diseases are the most common and frequent cause of secondary hypertension. It was found that conservative therapy at patients with chronic pyelonephritis normalizes blood pressure. Early diagnosis of acute and chronic pyelonephritis can provide effective and rational treatment and, consequently it can prevent secondary hypertension.

**Key words:** secondary hypertension, chronic pyelonephritis

## 101. THE EVOLUTION OF PULMONARY TB TO CONSCRIPTS

**Doina Cebotari**

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**Introduction:** The development of pulmonary TB in young people directly influences the social and economic status of a country, especially TB to conscripts. The aim of the study was to research the particularities of the evolution of pulmonary TB to conscripts.

**Materials and methods:** We examined a sample of 50 cases of pulmonary TB that were diagnosed during the military service of the recruits for the 2000-2015 periods.

**Discussion results:** The study sample showed that in 39 (78%) cases the average recruit was 18-19 years old. In 33 (66%) cases the pulmonary TB was diagnosed in the first 6 months of military work. The detection of TB in the recruits has been done by clinical symptoms in 20 (40%) cases, and through



routine X-ray examination in 30 (60%) cases. Obvious contact with TB patients was found in 20 (40%) recruits. A half of the diagnosed militaries were active smokers. After evaluation of the disease clinical types it was found 42 (84%) cases of infiltrative pulmonary TB, followed by 6 (12%) cases of nodular TB and 2 (4%) cases of TB pleurisy. Pulmonary destruction was radiologically described in 9 (18%) cases. Microscopic confirmation has been done in 8 (16%) cases, and 31 (60%) cases through culture test. MDR-TB was established in 2 (4%) cases. The treatment was according to the sensibility chart and the case complexity, thus in 30 (60%) cases it was successful, while 6 (12%) cases were lost out of direct supervision, and 14 (28%) – continue treatment.

**Conclusion:** The TB risk in military recruits is higher in the first 6 months of service, being mainly X-ray diagnosed. In most cases the treatment has been successful.

**Key words:** conscripts, pulmonary TB.

## 102. HEART'S LAYERS DAMAGE IN RHEUMATOID ARTHRITIS

**Romina-Bianca Gutu**

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**Introduction:** The clinical spectrum of Rheumatoid Arthritis expands on various extra articular manifestations, including the affecting of the cardiovascular system. There are numerous studies proving that all the heart's layers get involved sooner or later during the development of the disease. For example, Rheumatoid Pericarditis is a very often cardiac manifestation, but sadly it is found already in autopsies with a frequency from 30% to 50% of RA patients. The myocardium's involvement is represented by two forms: granulomatous and interstitial, both ending with a serious heart failure. It is important to also mention the conduction disorders, such as Atrioventricular Blocks, Ventricular Tachycardia, which happen quite often due to the rheumatoid nodules formed. Last, but not least, it is imperative to mention that the endocardium gets also affected and patients are diagnosed with Aortic or Mitral Valve Insufficiency.

**Materials and methods:** During this study, we used two groups of patients who were diagnosed with Rheumatoid Arthritis within one year at least. One of them has a number of 100 people hospitalized at the Republican Clinical Hospital from Rep. of Moldova. The other one has a total of 50 patients hospitalized in the CHU Amiens, France. As materials of search we used their laboratory and other medical tests such as: blood analyzes, EKG and heart ultrasound. Method of analysis we opted for the retrospective- descriptive one, since we used lots of their passed medical records.

**Discussion results:** After calculating the results, we obtained the following numbers: for the first group: an average DAS28 of 5.42 points. 58% (58 patients) were hypertension Associated, but the average blood pressure is 129/80 mmHg. During their EKG, 3% presented atrial fibrillation, 3% sinus bradycardia and 1% sinus tachycardia. At the heart ultrasound, we have found that 67% of patients had an induration of the mitral valve and 61% of the aortic valve; 16% also presented pulmonary

hypertension. For the second group of patients, we obtained an average for the DAS28 score of 2.92 and 32% (16 patients) were followed by their cardiologists for hypertension. At the EKG- 1 patient (2%) had a atrial fibrillation and 1 patient (2%) had a sinus tachycardia. The heart ultrasound showed that 4 patients (8%) had a Mitral Valve Insufficiency.

**Conclusion:** In the end, during our research we have arrived at the same conclusion that other international studies demonstrated and it includes that patients diagnosed with Rheumatoid Arthritis should be supervised very well and treated very carefully (for example: choosing biological treatment instead of the corticosteroids, NSAID), because if not, very frequently heart damage Associates and hastens the disease's bad evolution, leading to a higher risk of mortality.

**Key words:** Rheumatoid Arthritis, heart layers damage.

### 103. CLINICO-EVOLUTIONAL PARTICULARITIES OF THE METABOLICSYNDROME IN GOUT

**Manvelov Anastasia**

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**Introduction:** The prevalence of gout has increased in recent decades in most of the countries, but the growth of gout in the developed countries has been linked to changing lifestyles and refuse to traditional diet. Metabolic syndrome is Associated with many diseases, some of them have evolutionally grievous potential. It was found that metabolic syndrome exists in presence of gout. It is very important to know the risk factors, to take some measures for the disease prevention.

**Purpose:** to study clinical-evolutional particularities of the metabolic syndrome in gout and to determinate risk factors for such patients.

**Materials and Methods:** 50 patients were analyzed according to the gout classification criteria. Patients were hospitalized in Rheumatology and Arthrology Departments of Republican Clinical Hospital. Patients average age was 48.2, and the average duration of disease - 5.1 years.

**Results:** It was found that 50 (100%) patients had arthritis and 41 (82%) patients had metabolic syndrome. The following risk factors were identified: overweight and obesity in 41 (82%) patients, high blood pressure and drugs taking in 32 (64%) patients, alcohol - 29 (58%) and diet rich in meat - 26 (52%).

**Conclusion:** the gout diagnosis must be accompanied by thorough assessment of the metabolic syndrome components: high blood pressure, insulin resistance, dyslipidemia, abdominal obesity. It was determined that gout represents independent cardiovascular risk factor, which increase the risk of heart attack. Hypocalorical diet at patients who have dyslipidemia do not decrease only serum lipid level, but

also uric acid level; by increasing renal excretion of urate. Thus, change of lifestyle have a significant effect on the disease evolution, recommending to reduce purine-rich foods and alcohol consumption.

**Key-words:** gout, metabolic syndrome, obesity, high blood pressure.

## **104. SHARE OF SOME GENETIC AND NONGENETIC RISK FACTORS IN THE PATIENTS WITH PSEUDOTUMORAL CHRONIC PANCREATITIS FROM THE REPUBLIC OF MOLDOVA**

**Rodica Bugai**

Scientific adviser: Ion Tibirna, MD, PhD, Professor, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Chronic pancreatitis is a persistent and progressive inflammatory disease of the pancreas, with alterations of the exocrine and endocrine pancreatic functions and which may be caused by many environmental, endogenous and genetic factors.

**Materials and methods:** 21 patients with pseudotumoral chronic pancreatitis, m/f-18/3, median age - 47.90±1.73 years were part of the study. The chronic pancreatitis diagnostic was established in accordance to the specific clinical and paraclinical criteria. The molecular and genetic investigations of the SPINK1 (N34S), PRSS1 (R122C), CFTR (R117H) genes were conducted in the Molecular Genetics Laboratory of the Institute of Genetics of the ASRM. Venous blood was used as a biological sample; the polymorphism of the candidate genes was identified through the analysis of enlarged fragment length and restriction fragment length polymorphism (RFLP), with the use of the respective primers.

**Results:** Risk factors analysis showed a prevalence of food disorders – in 21 (100%) patients and alcohol – in 20 (95.24%), followed by smoking- in 19 (90.48%) patients, the presence of biliary pathology - in 19 (90.48%) patients, N34S mutation (SPINK1) - in 19 (90.48%) patients, including 9 (42.86%) – heterozygous and 10 (47.62%) - homozygous; R117H mutation (CFTR) –in 16 (76.19%) patients, including 12 (57.14%) – heterozygous and 4 (19.05%) - homozygous; R122C mutation (PRSS1) – in 15 (71.43%) patients including 11 (52.38%) – heterozygous and 4 (19.05%) - homozygotes, duodenal pathology - in 11 (52.38%) patients, previous surgery on the abdomen – in 11 (52.38%) patients, hypercholesterolemia- in 7 (33.33%) patients, noxious work conditions -in 7 (33.33%) patients, viral hepatitis – in 6 (28.57%) patients, hypertriglyceridemia – in 5 (23.81%), BMI> 25 kg / m<sup>2</sup> – in 3 (14, 29%) and pancreatogene drugs – in 1 (4.76%) patient.

**Conclusion:** Chronic pancreatitis is a polifactorial disease. In the patients with pseudotumoral chronic pancreatitis of the Republic of Moldova the major risk factors are food disorders, Associated with alcohol consumption and smoking; the genetic substrate is obvious by the presence of high levels of N34S (SPINK1), R117H (CFTR) and R122C (PRSS1) genic mutations.

**Key Words:** Chronic Pancreatitis, CFTR, PRSS1, SPINK1

## 105. EVOLUTION OF CYTOLYSIS SYNDROME IN CHRONIC VIRAL HEPATITIS

**Alina Iarovoi**

Scientific adviser: Ludmila Condratchi, Candidate of Medical Sciences, Associate Professor, Department of Internal medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** At a global level, viral hepatitis is responsible for 144 million deaths every year. Chronic viral hepatitis presents today one of the most serious health and socioeconomic problems in Moldova. Annually there are more than 10,000 illnesses, the incidence reaching - 150 cases per 100 thousand population.

**Purpose.** Analysis of cytolysis syndrome evolution in patients with chronic viral hepatitis B, C, D ambulatory and in the hospital.

**Materials ant methods.** The study included 126 patients, of which 102 were hospitalized during the years 2010-2015 in gastroenterology ward, Clinical Hospital Central Railway st. Chisinau and 24 patients ambulatory treated in the period September to December 2015 in CS Falesti. I have done a survey retrospectively and prospectively. Outpatients were treated only with hepatoprotective - silymarin administered for a month, and those in hospital administered for 10 days: silymarin, pentoxifylline (antifibrotic), ursodeoxycholic acid and Vit. C, B1, B6, B12.

**Results.** Using the distribution of HBV patients according to cytolytic indexes after treatment, inpatient was revealed that 11 patients (47.72%) out of those hospitalized with moderate hepatitis activity and 14 patients (50%) out of those with minimal activity, recorded values in the normal limits of enzymes ALT and AST at the discharge. Ambulatory, only one patient (9.09%) out of 16 patients obtained transaminases values within the norm. All 10 patients (100%) of those hospitalized with HCV minimal activity, showed values within normal levels of liver enzymes. Outpatient, no patient with HCV obtained positive dynamics of cytolytic syndrome. Patients with HBV + HCV discharged from hospital were all having minimum activity of liver enzymes. Outpatient there were not registered positive dynamics. Analyzing the distribution of patients with HBV + HDV in hospital, 3 patients (42.86%) out of the 7 patients that were hospitalized with moderate activity hepatitis, achieved minimum activity of enzymes ALT and AST. Outpatient – without any positive dynamics.

**Conclusions.** During the survey, I paid attention that the most obvious improvement of transaminases happened with the patients that were receiving inpatient treatment compared to outpatient treatment, although hepatoprotective treatment duration is longer in the ambulatory. But perhaps that including vitamins, ursodeoxycholic acid and antifibrotic medicaments into patients' treatment favored efficacy in reducing faster transaminases, which shows the necessity of treatment in hospital for patients with chronic viral hepatitis, which would bring only benefits for both patient's health and state economy by reducing human morbidity, as well with shortening disease treatment and time that patients spend on treatment process.

**Key words.** chronic viral hepatitis, cytolysis syndrome, treatment.

## 106. PREVALENCE AND PARTICULARITIES OF RAYNAUD'S PHENOMENON IN PATIENTS WITH AUTOIMMUNE DISEASE

**Mihaela Efremov**

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**Introduction:** Raynaud's phenomenon (RP) is an episodic reversible peripheral ischemia usually provoked by cold or emotion. The phenomenon is named for Maurice Raynaud, who, as a medical student, defined the first case in 1862 as "episodic, symmetric, acral vasospasm characterized by pallor, cyanosis, suffusion, and a sense of fullness or tautness, which may be painful". Secondary RP should be distinguished from primary RP (Raynaud disease). Raynaud disease is characterized by the occurrence of the vasospasm alone, with no association with another illness. Secondary RP is a designation usually used in the context of vasospasm associated with another illness, most commonly an autoimmune disease. Physical examination, nailfold capillaroscopy and immunological tests can differentiate primary from secondary RP. The prevalence of RP in most studies of the general population is between 3 and 5%. Primary RP is reversible vasospasm in peripheral arteries occurring in the absence of an underlying disease and accounts for 80–90% of cases. The prevalence of secondary RP is related to the underlying disease. Progression to secondary RP occurs in 14–37% of subjects with primary RP. Almost 99% of patients who progress develop an autoimmune disease.

**The aim** of this study was to evaluate the prevalence and particularities of RP in patients with autoimmune disease.

**Materials and methods:** All relevant information was obtained from the literature review.

**Discussion:** RP is common in the general population, but may also be a sign of connective tissue disease. RP occurs in 98% of patients with systemic sclerosis (SSc) and may be their most pressing clinical problem; it occurs in 85% of patients with mixed CTD, between 10% and 45% of those with systemic lupus erythematosus, 33% of those with Sjögren syndrome, and 20% of those with polymyositis, dermatomyositis. In individuals with rheumatoid arthritis the overall prevalence is similar to that in the general population (10%); however, symptoms tend to be more severe.

**Conclusion:** Prognosis of secondary RP is related to the underlying disease. Prognosis for the involved digit in these patients is related to the severity of the ischemia and the effectiveness of maneuvers to restore blood flow. Therefore it is important to look carefully for any underlying cause. More importantly, early intervention could improve the prognosis, such that, digital amputation caused of ischemic complications usually is not necessary if aggressive oral vasodilator therapy is initiated in patients with frequent or severe episodes RP.

**Key words:** Raynaud's phenomenon, Rheumatoid arthritis, Systemic sclerosis, Systemic lupus erythematosus.

## 107. RENAL AFFECTION IN GOUT

**Cristina Esanu**

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**Introduction:** Even from ancient times is known that uric acid is strongly Associated with renal disease. The disorders of uric acid metabolism lead to a nephropathy with variable clinical manifestations, defined as uric acid nephropathy. There are described the following kidney disorders in hyperuricemia: uric acid nephrolithiasis, acute hyperuricemia nephropathy, chronic urate nephropathy. Individuals with gout have a higher risk for uric acid stone formation due to the low urine pH, which creates an environment favourable for uric acid precipitation. Uric acid nephropathies are related to the increased produced amount or disposal in a low proportion of uric acid in the urine.

**Materials and methods:** Study population included 50 patients from Republican Clinical Hospital, Department of Rheumatology, with primary gout. The age of patients varied from 35 to 75 years. To appreciate the renal impairment in gout they were selected such examinations as ultrasonography, blood urea and creatinine, excretion of uric acid, blood levels of uric acid, renal urine concentrating ability and rate of glomerular filtration.

**Discussion results:** After the analyse of the results, it was made a classification of patients by the age of the disease. The patients with less than 10 years of gout presented: Uric acid nephropathy- 36.8%, Nephrolithiasis- 10.5%, Chronic kidney disease- 26.1%. Between the patients with a history of disease from 11 to 20 years it was observed next incidence: Uric acid nephropathy- 57%, Nephrolithiasis- 26,3%, Chronic kidney disease- 31.5%. The next group that included patients with gout from 21 to 30 years old presented the following data: Uric acid nephropathy- 71.4%, Nephrolithiasis- 85,7%, Chronic kidney disease- 42.8%. The last group of patients, with a history of more than 30 years of gout was divided like: Uric acid nephropathy- 82.1%, Nephrolithiasis- 60%, Chronic kidney disease- 40%.

**Conclusion:** The renal affection caused by the elevated levels of uric acid in gout is clearly defined in this study. Our results have shown that in a gouty population several aspects of kidney function may be significantly impaired. It was declared an evident correlation between disease's age and the evolution of kidney affection. This is consistent with a slowly progressive renal disorder, because the elimination of uric acid is reported to the renal good function and like this is creating a vicious circle. In conclusion, although the concept that uric acid might have a role in kidney disease once suffered a requiem, it has undergone a revival and seems deserving of additional, more developed study.

**Key words:** kidney, gout, hyperuricemia

## 108. MULTIDIMENSIONAL APPROACH TO EXACERBATION OF COPD

**Nadia Ginju**

Scientific adviser: Alexandru Corlateanu, MD, PhD, Associate Professor, Division of Respiratory Medicine, Department of Internal medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Chronic obstructive pulmonary disease (COPD) is not only an established major cause of mortality and morbidity but is increasing in worldwide prevalence despite current medical interventions. Exacerbation of chronic obstructive pulmonary disease has a negative impact on mortality, quality of life, leading to limitation of physical activity and also presents a significant burden. One of the tools for risk stratification of COPD exacerbation is BAP-65 which includes: elevated blood urea nitrogen, altered mental status, pulse > 109 beats/ minute, age > 65 years.

**Objective of the study** is to estimate the mortality risk of patients with COPD exacerbation using the BAP-65 score.

**Materials and methods:** We have evaluated 106 patients with COPD exacerbation, who were hospitalized in Institute of Phtysiopneumology "Chiril Draganuic" between 2014-2016. The average age being  $65.5 \pm 3.8$  years. We analyzed spirometry data, BAP-65 score, 6 minute walking test and quality of life was assessed by CAT test.

**Results:** The obtained data of the study group demonstrated the predominance of men 84 (80%) versus women 22 (20%). In the study group as BAP-65 score the patients were divided into 5 classes. The more patients were classified as class III – 36 (33.9%) and class I - ( 31.1%). The BAP-65 score determined the mortality risk in our study – 33 (31,1%) patients have a probable mortality risk of 0,50%, 19(17,9%) cases – mortality risk is 1,4%, 36(33,9%) cases have a mortality risk of 3,7%. A higher mortality risk of 13% have 16 (15,09%) patients and only 4(3,7%) patients have a probable mortality risk of 26,20%.

We performed correlation analysis between BAP-65 score and quality of life, exacerbations rate, 6-minute walk test. The BAP-65 score had strong correlation with quality of life assessed by CAT ( $r=0.83$ ,  $p < 0.01$ ) and good correlation with exacerbations rate ( $r = 0.62$ ,  $p < 0.01$ ). We did not find any statistically significant correlation between BAP-65 score and 6 minute walk test distance ( $r = -0.09$ ,  $p < 0.001$ ).

**Conclusion:** The BAP-65 score is a simple tool for multidimensional assessment of COPD exacerbation. The BAP-65 score correlates strongly with rate of COPD exacerbation and quality of life assessed by CAT.

**Key words.** Exacerbation, BAP-65 score, CAT test, mortality risk.

## 109. OSTEOPOROSIS IN SYSTEMIC LUPUS ERYTHEMATOSUS

**Galina Russu**

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**Introduction:** Systemic lupus erythematosus (SLE) is a chronic autoimmune disease with a multisystem involvement. The survival of patients with SLE has improved over the past 10 years grateful of the progress of the disease treatment scheme which now results in a fewer fatal complications. One of the most common and disabled complications of patients with SLE is osteoporosis. This work aimed on evaluating the prevalence of osteoporosis in a cohort of SLE patients and also the risk factors associated with osteoporosis.

**Materials and methods:** Patients with a diagnosis of SLE from Republican Clinical Hospital, Moldova. The following data were collected from clinical charts: sex, age, SLEDAI activity, disease duration, daily dose of glucocorticoids, menopausal status, bone mineral density scans (BMD). A total of 40 patients with a diagnosis of SLE include (women-35 and men-5); mean age  $48.8 \pm 5$  years. All the patients had been treated with glucocorticoids at a mean daily dose of 5.84mg.

**Discussion:** In the research process was observed the following demographic data and clinical characteristics of the cohort: the mean age of non-osteoporotic cohort is 41.14 years and 53.13 years at patients with osteoporosis. Also was observed a correlation between osteoporosis and disease duration. In non-osteoporotic cohort the mean disease duration is 9.27 years, while in osteoporotic cohort is 12.9 years. In accordance with the activity of disease, based on SLEDAI-2K score in our cohort: non-osteoporotic have 78.57% -23-34/105 and 21.42% - 68-77/105, while osteoporotic patients have 64.2%-27-39/105 and 35.8%-63-80/105.

Our data confirmed the association with the post-menopausal status. Only 7.14% of non-osteoporotic patients are in menopause, while 70% in osteoporosis. Based on the BMDscans we observed that more than 55% of our patients chronically treated with glucocorticoids had low bone mineral density and 29.3% had osteoporosis. In five of them experienced values of BMD corresponding to osteoporosis at the vertebral site. We established 2.42% in non-osteoporotic cohort and 6.9% in osteoporotic cohort an incorrect and incomplete uptake of the background medication in SLE or low compliance to the medical indications.

**Conclusion:** The osteoporosis in SLE is multifactorial. All of this factors determine the increase of bone turnover that raise the risk of fracture. Modifiable risk factors include the systemic inflammation and the medications used to control the disease. The results of the research confirm that our patients were treated chronically with low doses of glucocorticoids because it was considered safer or was no monitoring of the treatment and the mainly part of patients abandon on the initial stages. That's why prevention and treatment of osteoporosis should entail a multifaceted approach and it's required to treat SLE aggressively as soon as is diagnosed.

**Key words:** Lupus, osteoporosis, glucocorticoids.



## 110. QUALITY OF LIFE IN PATIENTS WITH SLE AND CUTANEOUS INVOLVEMENT

**Victoria Sadovici-Bobeica**

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**Objectives:** To establish the relationship between cutaneous involvement and Quality of Life (QoL) in patients with systemic lupus erythematosus

**Methods:** Cross-sectional study of SLE patients with cutaneous involvement, fulfilling SLICC/ACR 2012 classification criteria. Cutaneous involvement was assessed by Cutaneous Lupus Erythematosus Disease Area and Severity Index (CLASI), disease activity – by SLEDAI and SLAM and QoL by SF-8 questionnaire. The Pearson correlation coefficient was calculated between the variables.

**Results:** The study included 102 caucasian SLE female patients with a mean age of 42,4±13,3 yrs and a mean disease duration of 93,9±77,1 months. The mean age at the disease onset was 35,5±14,8 yrs and the mean SLICC/ACR criteria number - 6,1±2,8 points. The disease activity by SLEDAI and SLAM was appreciated as high with 1,24±10,4 and 12,1±8,6 points, respectively. The SLICC/ACR DI constituted 1,47±1,6 points. The cutaneous involvement by CLASI showed a mean activity of 4,7 points and a damage of 3,0 points, mean CLASI score being appreciated with 7,2 points. The QoL by SF-8 demonstrated low indices, compared to general population, in both domains: Physical Component Summary (PCS) and Mental Component Summary (MCS) with a mean value of 37,74 and 38,72 points, respectively. The analysis of Pearson coefficient between the QoL and CLASI did not show significant correlation ( $r < 0,2$ ,  $p > 0,05$ ). The PCS and the QoL correlated inversely with the disease activity ( $r = -0,58$  for SLAM and  $r = -0,45$  for SLEDAI,  $p < 0,05$ ) and the MCS correlated inversely with SLICC/ACR classification criteria ( $r = -0,45$ ,  $p < 0,05$ ). CLASI activity index correlated with SLAM and SLEDAI ( $r = 0,45$  for SLAM and  $r = 0,37$  for SLEDAI).

**Conclusion:** The QoL is decreased in SLE patients by both components: physical and mental. The severity of cutaneous involvement did not correlate with the QoL's indices. Meantime, CLASI activity score correlated with disease activity and the MCS of the QoL correlated with the number of SLICC/ACR 2012 classification criteria.

## 111. GASTROINTESTINAL MANIFESTATIONS OF SYSTEMIC SCLEROSIS

**Maria Spoiala**

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**Introduction:** Systemic sclerosis (SSc) is an autoimmune, multisystem disease of unknown cause characterized by diffuse fibrosis, degenerative changes, and vascular abnormalities in the skin, joints, and internal organs (especially the esophagus, lower GI tract, lungs, heart, and kidneys). After the skin, the most commonly involved organ is the gastrointestinal (GI) tract (in up to 90% of patients).

Although GI disease is a cause of death in only a minority of patients with SSc, GI dysfunction is a major contributor to morbidity and they contribute considerably to impairment in quality of life.

**Materials and methods:** We conducted a systematic review of observational studies that report GI problems in patients with scleroderma along with the Associated risk factors. Prevalence of each organ complication was extracted from studies in 2007-2015.

**Discussion results:** Digestive involvement in systemic sclerosis is frequent and serious. Malnutrition, diarrhea, and constipation are some GI complications that can stem from scleroderma, and they contribute considerably to impairment in quality of life. Approximately 20% of people with scleroderma develop secondary Sjogren's syndrome, a syndrome Associated with dry eyes and dry mouth. The most frequent visceral manifestation to be described was esophageal disease (70-90%). Oesophageal disorder is common with its main consequence: the occurrence of gastroesophageal reflux disease which could run into peptic erosive oesophagitis. Gastric involvement is rarely recognized but it is frequent in case of systematic investigation as well as small intestinal involvement which may provide a lot of complications: malabsorption, pseudoobstruction, bacterial overgrowth. At colonic level, anorectal involvement is frequent (50-70%) and leads to fecal incontinence and rectal prolapse. The symptomatic treatments must be systematic and improve the disease's overall prognosis. Although severe GI manifestations in SSc (defined as malabsorption, repeated episodes of pseudo-obstruction or severe problems requiring hyperalimination) are uncommon (8%), only 15% of such patients survived after 9 years of their diagnosis.

**Conclusion:** Almost every part of the GI tract can be involved. GI involvement is often diagnosed after severe complications occurred and management can be difficult. At present, few specific therapeutic options are available for the treatment of these patients, but relief of symptoms is often possible with appropriate knowledge and support. It is therefore particularly important to identify, monitor and manage these patients carefully, with a view to minimize further degeneration and maximalise quality of life.

**Key Words:** Systemic sclerosis, digestive involvement in scleroderma.

## **112. SIGNIFICANCE OF GENEXPERT MTB/RIF METHOD IN THE DIAGNOSTICS OF PULMONARY TUBERCULOSIS**

**Svetlana Gasnas**

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**Introduction:** In the published literature, it is awarded a great deal of importance to the subject of TB diagnostic with the GeneXpert/RIF method, this being a fully closed automated system for M.Tuberculosis and resistant to RIF through the REAL TIME PCR technique.

**Purpose:** The determination of the efficiency of the GeneXpert/RIF genetic-molecular method in the diagnosis of tuberculosis in comparison with the bacteriologic, microscopic methods.

**Resources and methods:** Overall in Chisinau in 2014 were investigated 413 new cases of pulmonary tuberculosis. In the research were introduced 361 patients examined with the GeneXpert/RIF method. The positive result of the test showed 174 cases (48.2%). There were determined 123 cases (70.7%) GeneXpert/RIF positive-sensitive and 51 cases (29.3%) GeneXpert/RIF positive-resistant.

**Results:** In comparison with the microscopic and bacteriologic methods, the sensitivity of the GeneXpert/RIF method was of 48.2%, specificity of 100%, 70.7% GeneXpert/RIF sensitive and 29.3% GeneXpert/RIF resistant.

**Conclusion:** Priority of Xpert MTB/RIF molecular- metode has been confirmed by high sensitivity to the sputum microscopy, speed determination of resistance to RIF to bacteriological method, and the possibility of early treatment initiation in patients with MDR TB.

**Key words:** TB, positive, GeneXpert/RIF.

### 113. ENDOTHELIAL DYSFUNCTION IN SYSTEMIC AUTOIMMUNE DISEASES

**Uliana Morari**

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**Introduction:** Systemic autoimmune diseases are characterized by inflammation, and this is hypothesized to be the driver fueling accelerated atherosclerosis observed in these diseases. Endothelial dysfunction is an early step in the formation of atherosclerotic lesions in patients with systemic autoimmune diseases and can be assessed by non-invasive methods.

**Objective of the study:** To evaluate endothelial dysfunction in patients with rheumatic diseases and its association with disease activity and inflammatory variables.

**Materials and methods:** The prospective study included 16 patients with rheumatic diseases hospitalized in Rheumatology department in the Institute of Cardiology. Patients were examined according to questionnaire that included general data, evaluation of traditional cardiovascular risk (CV) factors, diseases activity index and markers of endothelial dysfunction (low-density lipoprotein (LDL), circulating levels of C-reactive protein (CRP), ankle-brachial index, intima-media thickness of carotid artery (IMT) and flow-mediated dilation (FMD).

**Results:** The study group was represented by 16 patients: 5 with LES, 3-systemic scleroderma, 3-rheumatoid arthritis, 3-vasculitis and 1 with myositis. The average age was  $45,4 \pm 0,05$  (22-73 year old), the women: men ratio being 3:1 with the predominance of women. The disease duration was 11.8 year (2–36 year old) and high disease activity was attested in 9 (60%) cases. The distribution of CV risk factors relives: hypertension in 9 (60%), obesity – 2 (13,3%), family history – 6 (40%), smoking and diabetes mellitus in 1 (6.6%) cases. Analyzes of endothelial dysfunction markers show increase level of LDL in 11 (73,3%), abnormal CRP level in 7 (46.6%) patients. Ankle-brachial index was abnormal in 6 (40%). The IMT of carotid artery was increased in 5 (33,3%), and atherosclerotic plaque was identified in 5 (33,3%) patients, while the FMD of the brachial artery was decreased only in 2 (1,26%) patients.

**Conclusion:** Endothelial dysfunction is common in patients with systemic autoimmune diseases and is associated with traditional cardiovascular risk factors, more significant are, level of LDL in 11 (73,3%) and hypertension in 9 (60%). Among non-traditional risk factors we note the role CRP level in 7 (46.6%) and abnormality of ankle-brachial index - in 6 (40%) that correlates with the duration and activity of disease.

**Keywords:** Endothelial dysfunction, systemic autoimmune diseases, cardiovascular risk factors markers of endothelial dysfunction.

## 114. CORRELATIONS BETWEEN GASTROESOPHAGEAL REFLUX DISEASE AND OBSTRUCTIVE SLEEP APNEA

**Elena Burlacu**

Scientific Adviser: Dr. Sinziana Lovin, Lecturer, University “Dunarea de Jos”, Galati, Romania

**Introduction.** Obstructive sleep apnea (OSA), also referred to as obstructive sleep apnea-hypopnea—is a sleep disorder that involves cessation or significant decrease in airflow in the presence of breathing effort and is characterized by recurrent episodes of upper airway collapse during sleep. The negative intrathoracic pressure presented in apnea leads to gastroesophageal reflux.

Gastroesophageal reflux disease (GERD) occurs when the amount of gastric juice that refluxes into the esophagus exceeds the normal limit, causing symptoms with or without associated esophageal mucosal injury.

**Objective.** My objective is to make correlations between OSA and GERD in a group of Romanian and French patients with OSA and GERD symptoms.

**Materials, methods.** I studied 100 patients, 44 women and 56 men. The diagnosis of OSA was established by overnight polysomnography. The severity of OSA was estimated by IAH (apnea-hypopnea index). To evaluate GERD symptoms I used GERD questionnaire. Other parameters that were observed were the age, sex, alcohol consumption (g/day), body mass index (BMI), day somnolence expressed by Epworth scale and the activity by Dijon scale.

The statistics were made in Excel 2016 and SPSSv.20. The correlations were interpreted with the Pearson index (r).

**Results** In the studied group were 44 women and 56 men.

The average age was 52,32 years, average IAH for Romanian group was 32.56/h, average Epworth score for the whole group was 8.85 points, the average BMI = 29,4 kg/ m<sup>2</sup> (34,03 for Romanians), the average GERDQ score was 9,3 points and the average Dijon score was 12.3 points.

The correlation between GERDQ and IAH was significantly positive with  $r = 0.35$ .

IAH was strongly correlated with BMI ( $r = 0.525$ ).

GERDQ has strong correlations with BMI for Romanians but not for French patients ( $r = 0.45$  vs.  $r = -0.21$ ). The most powerful positive correlation was between GERDQ and the alcohol consumption ( $r = 0.428$ ) especially for the Romanian patients.

Epworth was correlated with BMI for the whole group ( $r = 0,3$ ) and with the age ( $r = 0.34$ ), especially for the French group. ( $r = 0.65$ )

Also GERDQ and Epworth scale were negatively correlated with Dijon scale.

**DISCUSSIONS.** Researchers in North Carolina conducted a study in 181 patients with sleep apnea and nighttime GERD symptoms in 2003 and the conclusion was that the treatment with nCPAP decreased the frequency of nocturnal GERD by 48%. Also there are studies suggesting that the treatment with IPP for GERD decreases the number of apneas.

### **Conclusions**

1. Obesity is a main risk factor for OSA and GERD.
2. Men present more severe GERD and OSA than women for the Romanian group.
3. GERD is more severe at the Romanian patients who drink more alcohol.
4. GERD is more severe if the patients have more severe OSA.

**Key words.** GERD, OSA, Pearson, BMI

## **115. CLOSTRIDIUM DIFFICILE INFECTION IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE: RISK FACTORS**

**Ioana-Adelina Clim, Eduard Manuel Prisacariu**

Scientific adviser: Anca Trifan, MD, PhD, Professor; Irina Girleanu, MD, PhD, Teaching Assistant,

*Gr. T. Popa* University of Medicine and Pharmacy, Iasi, Romania

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

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

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

with CDI and UC. Most of the patients with CDI and CD were older and had an active colonic form, anemia and increased level of leucocytes.

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

## **116. COMPLICATIONS OCCURRENCE DURING METHOTREXATE THERAPY IN RHEUMATOID ARTHRITIS**

**Virginia Zagornii**

Scientific adviser: Svetlana Agachi, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Methotrexate (MTX) is now considered the first-line DMARD agent for most patients with Rheumatoid Arthritis (RA). It has a relatively rapid onset of action at therapeutic doses (6-8 weeks), good efficacy and ease of administration. But it can also determine the appearance of side-effects, especially pulmonary and haematological. The objectives of the study are to reveal the most frequent complications that occur during the treatment.

**Materials and methods:** The research is based on the information from medical records of patients that have been hospitalized at Clinical Republican Hospital during 2015. A cohort of 50 RA patients (47 women, 3 men), aged between 32-74 years (with a mean age of 53 years), was studied for the occurrence of side-effects. 37 patients (74%) were on MTX treatment.

**Discussion results:** Adverse broncho-pulmonary side-effects were observed in 7 patients (18,9%), with a mean disease duration of 5 years. All of the cases were confirmed by the X-ray. Anaemia was present at 14 patients (37%), only 4 of them (28,5%) presented mild anaemia and 10 patients (71%) – moderate anaemia. The mean disease duration was of 6 years.

Four patients (10,8%) abandoned the treatment, three of which (8,1%) developed drug intolerance, and in one case for an unknown reason.

**Conclusion:** Pulmonary, haematological and other side-effects are not a rare event during MTX therapy in RA. Improved education of patients and physicians should certainly lead to a decreased number of complications by stopping the treatment as soon as the early symptoms of damage occur.

**Key-words:** Methotrexate, Rheumatoid Arthritis, side-effects.

## **117. HIGH-RESOLUTION CT QUANTIFICATION OF BRONCHIECTASIS: CLINICAL AND FUNCTIONAL CORRELATION**

**Marina Bejan, Oxana Munteanu**

Scientific adviser: Victor Botnaru, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** With the widespread availability of HRCT it has been realized that bronchiectasis remains a common and important cause of respiratory disease. To evaluate the relationships between the extent and severity of bronchiectasis on CT and clinical symptoms, spirometric abnormality, and sputum characteristics.

**Materials and methods:** We prospectively evaluated 40 patients with non-CF bronchiectasis confirmed by chest HRCT. Etiology, radiological modified Reiff score, microbiological profile and lung function tests were analysed.

**Discussion results:** Among the 40 enrolled patients (mean age was 56,32±14,7 %, men-48%) with bronchiectasis, the etiology was established in 70%. The most common underlying causes were past tuberculosis (32%) and COPD related (13%). In a smaller number of cases bronchiectasis were related rare causes (5%). Obstructive pattern was observed in 90 % (with a mean FEV1% 46±23,9%). Patients with cystic bronchiectasis (77%) were significantly more likely to grow *Pseudomonas* (23%) from their sputa and to have purulent sputa than were patients with cylindrical or varicose bronchiectasis. Patients with cystic bronchiectasis had significantly lower FEV1 (44±23,8%) and FVC (57±21,2%) values than did patients with cylindrical bronchiectasis FEV1 (65±21%) and FVC (72±13%). Reiff score correlated with FEV1 (  $r = -0.662, p < 0.05$  ) and with FVC (  $r = -0.656, p < 0.05$  )

**Conclusion:** In this patient population, we found weak but significant correlations between the degree of morphologic abnormality on CT and the extent of physiologic impairment. Cystic bronchiectasis was Associated with sputum purulence and with the growth of *Pseudomonas*. CT classification of the type of bronchiectasis may be useful as an index of severity of the disease.

**Key Words:** FEV1-forced expiratory volume in 1 second, HRCT- High-resolution computed tomography

## **118. PARTICULARITIES OF ROSACEA IN WOMEN. CONTEMPORARY METHODS OF DIAGNOSIS AND TREATMENT**

**Mariane Nicole Puscasu**

Scientific advisor: Vasile Tabarna, Assistant Lecturer, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** The main particularities of rosacea in women are the discomfort and uneasiness caused by the mild forms and their consequences (scars, pigmentation of skin), that can give rise to a considerable self-depreciation and, in turn, to a decrease in the quality of life. In such a way, this issue can lead to social inadequacy (or social inhibition) expressed into different degrees of evolution. The aim of this study is to assess the effectiveness of the topical treatment of women affected by rosacea using the dermatocosmetic MetroCreme Ivatherm.

**Materials and methods.** We have conducted a prospective, observational and descriptive study of 10 cases of papulopustular rosacea Associated with demodex, for ten women hospitalised and treated in IMSP SD si MC in 2015.

**Results.** The therapeutic results obtained after the application in association with standart treatment(tab.Doxiciclini 0,1 twice on day, tab. Metronidazoli 0,25 and Aevit three times on day),local treatment using MetroCreme Ivatherme twice on day, for two weeks, prove the quickly effectiveness of the remedy. After two weeks of daily application, the erythema on the cheekbones, as well as the feelings of itching and burning have disappeared, the eruptions have improved and the pustules receded. The sensations of burning and itching (pruritus) have totally disappeared for five out of ten women, and have reduced by 50% for the other five. All ten patients have described the MetroCreme Ivatherme as being effective, pleasant and easily tolerable. Only three patients have noted the adverse effect of skin dryness, which gently disappears after applying a moisturising cream.

**Conclusion.** Considering the rapid efficacy and the simple application of MetroCreme Ivatherm, it can be prescribed and easily used (or used without any difficulties) for the topical adjuvant treatment of rosacea.

**Key words.** Rosacea, MetroCreme Ivatherm.

## 119. ANALYSIS OF CLINICAL-EPIDEMIOLOGICAL AND LABORATORY PARTICULARITIES OF SALMONELLOSIS

**Cristina Stepa**

Scientific adviser: Stela Cojocaru, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Increase of salmonellosis morbidity, high infectiousness of the disease, antimicrobial resistance and socioeconomic impact emphasize the importance of systemic reevaluation of this problem.

**Materials and methods:** This study includes 66 patients with salmonellosis hospitalized during the period 2013-2015. In this way were created 3 age groups: I group- 1-6 years; II group- 7-18 years; III group- >18 years. Statistical aspects were analyzed by using the program Epi Info 7.0.

**Discussion results:** Seasonality: mainly in May- September (90%). The most frequent sources: meat products 63,64%, chicken eggs 27,28%. In evolution were certified 2 clinical forms:gastroentiric in 73% and gastroenterocolitis in 27%. In the II group the gastroenterocolitis was found in 5.56% (95CI 0,14-27,29). Repeated vomiting was characteristic to the II and III groups (56%, respectively 61%), but in the group 1-6 years only in 33%. I degree of dehydration 36,36% (95CI 24,87-49,13), II degree 56,05% (95CI 43,3-68,26), III degree 7,58 (95CI 2,51-16,8) without significant differences between age groups. Fever >39.5 was preponderant found out in the first group 1-6 years 20% (95CI 4.33-48.09). Ketonuria most frequent was in the I group 66,67% (95CI 7,79-55,10). Average value of leukocytosis in severe evolution: 6x10<sup>9</sup>/l, moderate evolution: 10,5x10<sup>9</sup>/l. Stool culture: *S. enteritidis* -91%, *S. gr. C* -2%, *S. typhimurium* -8%. Average duration of the treatment was 5 days -54,55%. Nifuroxazide, Ciprofloxacin (including combinations) were used in 71,21% and 53,03% respectively.

**Conclusion:** Patients age influenced clinical form of disease evolution and the degree of intoxication. Degree of dehydration was determined mainly by diarrhea and less by vomiting. There is



no correlation between disease severity and leukocytosis value. Antibiotics administration remains an everyday practice of salmonellosis treatment in localized form.

**Key words:** Salmonellosis, acute diarrhea.

## 120. PSORIASIS, COMORBIDITIES, BIOLOGICAL THERAPY

**Alina Turuta**

Scientific adviser: Gheorghe Muset, PhD, Professor, Chair of Dermatovenerology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Psoriasis is a chronic inflammatory systemic disease. Evidence shows an association of psoriasis with arthritis, depression, inflammatory bowel disease and cardiovascular diseases. Recently, several other comorbid conditions have been proposed as related to the chronic inflammatory status of psoriasis. The understanding of these conditions and their treatments will certainly lead to better management of the disease.

**Purpose.** Assessing the role of comorbidities in psoriasis and analysis of psycho-emotional status as a primary comorbidity in patients with psoriasis.

**Material and methods.** This study is a retrospective / prospective evaluation and based on analysis of historical data conducted on a group of patients with various forms of psoriasis and psoriatic arthritis. In the retrospective study entered 100 patients, on prospectively -20 patients who were evaluated using Zung self-assessment Scale and Hamilton Depression Rating Scale.

**Results.** An analysis of the study gives the following results: 34% of patients had hypertension, 22% diabetes, 18% psoriatic arthritis, 14% liver injury, 5% obesity, 1% chronic obstructive pulmonary disease and 1% Crohn's disease. Zung self-assessment depression scale determined that 20% of patients surveyed showed minimal depression, 20% moderate depression, 10% severe depression and 50% had only signs of depression. According to the Hamilton self-assessment depression scale 50% had minimum depression, 40% had no depression, 10% had moderate depression, and no one showed signs of severe depression.

**Conclusions.** Evidence increasingly suggest that there is a relation between psoriasis and several comorbidities. Affected patients show higher mortality and hospitalization rates, which indicates the need for a multidisciplinary approach in the management of these patients.

Finally, the integral approach of psoriasis should include the identification of cardiovascular risk factors and metabolic diseases, the adaptation of treatments to the existing comorbidities, as well as the evaluation of existing psychological/psychiatric disorders, in order to achieve a long-term control of the disease and improve the cumulative quality of life. Early and aggressive treatment of severe psoriasis, PsA and Associated comorbidities may influence the well-being and probably the longevity of patients.

## SURGERY SECTION I

### ORAL PRESENTATIONS

#### 121. THE ASSESSMENT OF THE PREVALENCE OF ENDOCERVICOSIS IN THE PATHOLOGICAL BACKGROUND OF THE CERVIX IN REPUBLIC OF MOLDOVA

**Diana Istratii**

Scientific adviser: Tudor Rotaru, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The background condition of the cervix at the present day makes up the basis of cervix pathology and is characterized by a progressive and long-lasting evolution, which ends in malignant views and deaths. In the Republic of Moldova, among background conditions, endocervicosis stands on the first place, which denotes a rate of advanced increase and with ranges in time, and which is often tracked down occasionally, because of a weak clinical view, insufficiency of medical staff, precarious social education, lack of economic resources and negligence. As a result of the progress of diagnosis methods, however the basic standard in tracking down endocervicosis in the Republic of Moldova still remains to be colposcopy, a fast, light, painless and cheap procedure, which, jointly with the cytological and histological studies, form the support of diagnosis in the genital pathology, which denotes the fact that patients, de facto, receive a final and certain diagnosis.

**Objective of study:** Establishment of women's share with endocervicosis during the year 2014, who were examined within the Consultative Department for Women of the Public Medical Sanitary Institution "Institute of Mother and Child". Determination of risk factors and comorbidities involved in the outbreak and evolution of endocervicosis in the Republic of Moldova.

**Material and methods:** There were analysed out-patient medical records of 418 patients aged from 21 to 57 years old who were diagnosed with endocervicosis, examined colposcopically during the year 2014 within the Consultative Department for Women of the Public Medical Sanitary Institution "Institute of Mother and Child". In order to exclude other pathologies or presence of dysplasia or malignant modifications, additional tests were also performed.

**Results:** Data of the current study denote that from the total amount of colposcopically examined women, 418 patients were diagnosed with endocervicosis. Among them, 68,3% aged up to 35 years old and 31,7 % aged over 35 years old. 78 % of the diagnosed patients were asymptomatic while stating the diagnosis. It was noticed a bigger share in diagnosis in: December (32); January (62); February (48); March (34), which confirms an increased number of visits in this period, and shows the socioeconomic and cultural levels of the population.

**Conclusions:** A major frequency of endocervicosis was found in women of reproductive age. As a risk factor in the RM, to our regret, the socioeconomic factor is also involved in the background pathology of the cervix and subsequently in the evolution toward malignity.

Early diagnosis of endocervicosis in women is a challenge in reaching success in the treatment and prophylaxis of oncological pathologies. Thus, in this context, it is necessary to implement in our

republic programs of information and awareness of women with regard to performance of routine examinations.

**Key-words:** background conditions, endocervicosis, colposcopy.

## **122. EFFECTIVENESS OF ANTIVIRAL THERAPY ON CIRRHOTIC PATIENTS AFTER SURGICAL APPROACH.**

**Marina Casian**

Scientific adviser: Vladimir Cazacov, MD, Professor, Surgery Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Aim:** The aim of this study was to assess the effects and risk-benefit of antiviral therapy in cirrhotic patients operated for portal hypertension.

**Methods:** This study included 38 patients with viral-related liver cirrhosis, out of whom 18 patients (Group A) received IFN and splenectomy and 20 patients (Group B) received only IFN therapy.

**Results:** The effects of splenectomy and IFN therapy on peripheral blood counts and liver function were evaluated. Platelet and leukocyte counts were significantly higher in patients with splenectomy compared to the group that received only antiviral therapy. The antiviral therapy was well tolerated with no severe complications in surgical group (group A): 16 patients had completed IFN therapy, one patient discontinued because of septic shock and one because of thrombocytopenia. While in group B from total of 20 patients, 9 subjects had discontinued: because of thrombocytopenia-5, and 4 because absence of viral response.

The viral response estimated at least 6 months after IFN therapy showed a sustained viral response in 55,5% of patients in group A and 25 % in group B.

**Conclusions:** IFN- based therapy following splenectomy had an advantage in the maintenance of higher platelet and leukocyte counts, and splenectomy caused an increase in adherence to antiviral therapy. The combination therapy of splenectomy and long-term IFN significantly improved survival rate in patients with advanced HCV-related cirrhosis and portal hypertension.

**Key words:** cirrosis, antiviral therapy, postoperative.

## **123. THE IMPACT OF BACTERIAL VAGINOSIS ON REPRODUCTIVE LOSSES AND SEPTIC COMPLICATIONS.**

**Elena Ivanova**

Scientific adviser: Codreanu Nadejda, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Bacterial vaginosis (BV), according to the Cochrane Library, is the reason of infectious complications and abortions at 31.8%.

**Purpose.** Assessment of the impact of BV on perinatal results (reproductive losses and septic complications).

**Materials and Methods.** The research was carried out retrospectively – there were studied 445 histories of disease of pregnant women with the miscarriage threat at 13-28 weeks of pregnancy (cervix <2 cm USG). Cases of BV were identified. There were excluded other reasons of complications.

**Results.** The BV part out of 445 cases of miscarriage threat is  $26.1 \pm 2.08\%$  (CI95%: 22.02-30.18). Reproductive losses made up  $30.2 \pm 4.26\%$  (CI95%: 21.85 – 38.55), from which 29.3% - abortion, 0.9% - neonatal death. The index of septic complications -13.2% (CI95%: 7.71 ~ 18.69): 5.3% - chorioamnionitis, 2.6% - endometritis postpartum, 2.6% - newborn`s omphalitis, 2.6% - early neonatal sepsis.

**Conclusions.** BV has a great impact on reproductive losses and septic complications in our country. The BV treatment is the preventive measures from those complications.

**Keywords:** bacterial vaginosis, reproductive losses, septic complications.

## 124. SURGICAL INSTRUMENTS

**Mihailisin Nicolae**

Scientific adviser: Suman Serghei, MD, PhD, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Surgical instruments – are weapons that lie in surgeon`s hand and are intended to produce some influence on patient`s tissue in order to eradicate the disease and also to restore the function of the body. The vast number of surgical instruments have the same construction, function and technique production as modern instruments and are known from the 16th – 18th centuries. There were a lot of outstanding events in the 20th century, one of them was the appearance of endoscopic and miniinvasive surgery. The technologies of endoscopic and miniinvasive surgery influenced the next step in the development of new techniques, that allow to perform radical interventions through the minimal traumas for the patient or without large cuts of skin and tissues.

**Purpose.** Definition, description and enumeration of surgical instruments according to the applied fields of modern surgery.

**Objectives.** In order to obtain fuller information, there were proposed following objectives: 1. To define the surgical instruments. 2. To classify surgical instruments. 3. To group instruments by their use in various surgical fields. 4. To describe instruments` shape, structure and composition. 5. To enumerate instruments` functions and methods of use in various surgical interventions.

Scientific novelty of the obtained results. Integrative analysis of obtained results represents a specific assessment of an indispensable multilateral components of surgical tools. The result of this work represents a source of original information that characterizes classical and modern tools, how to use them and other particularities of the activity of surgeon.

**Theoretical importance.** The theoretical significance of this work consists in the differentiation of surgical instruments, their correct and specialized use only in certain surgical techniques.

The applicative value of the work. This work can be used for teaching purposes, for familiarization of students and medical staff for right use of instruments in surgical practice. The introduction of new edoscopic instruments in place of the traditional instruments has its' importance to. It is relevant in some interventions, which decreases tissue traumas during surgical interventions, thus reducing the patient's post-operative complications, and postoperative nosocomial infections, including joining during the period of hospitalization of the patient.

## **125. POSTOPERATIVE SCAR ENDOMETRIOSIS OF THE ANTERIOR ABDOMINAL WALL**

**Vladislav Vasilev, Sergiu Zaharia, Diana Madan, Ana Mishina**

Scientific adviser: Mishin Igor, MD, PhD, Professor, *N. Anestiadi* Department of Surgery and Laboratory of Hepato-Pancreato-Biliary Surgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Postoperative scar endometriosis (PSE) is a rare pathology caused by gynecological-obstetrical surgery. The aim of the study was to assess PSE of the anterior abdominal wall.

**Material and methods:** The research included 26 consecutive cases of the anterior abdominal wall PSE surgically treated during 1991-2015.

**Results:** The mean age of the patients with PSE was  $31.1 \pm 1.1$  (95% CI:28.85-33.30) years. PSE developed after  $45.8 \pm 3.2$  (95% CI:39.27-52.34) months. PSE developed after caesarian section (88.4%, n=23), laparoscopic surgery (7.6%, n=2) and myomectomy (3.8%, n=1). A mass was found in the postoperative scar (n=28). Pfannenstiel incision (n=23), inferior median (n=2), umbilical (n=1). Monofocal vs bifocal PSE (92% vs. 8%,  $p < 0.0001$ ). PSE in the left corner of the postoperative scar in 76.9% (n=20). Cyclic pain was the main symptom (57.6%, n=15). The diagnostic workout included: ultrasonography with Doppler (n=9), CT and MRI (n=10). PSE was localized in the abdominal wall layers as follows: subcutaneous vs. fascia and muscles vs. rectus abdominis muscle vs. umbilicus (30.7% vs. 53.8% vs. 11.5% vs. 3.8%,  $p < 0.0001$ ). All the patients underwent enbloc surgical excision of the PSE. The aponeurosis defect was closed by: aponeurosis suture in 23/26 (88.4%) patients, abdominal alloplasty with synthetic meshes (n=3). Diagnosis was confirmed histopathologically and immunohistochemically (CD10, PR, ER $\alpha$ , CK7).

**Conclusion:** Imaging methods (ultrasonography with Doppler, CT and MRI) have an important role in establishing the diagnosis of PSE and surgical tactics. Definitive diagnosis is confirmed histopathologically and immunohistochemically.

## **126. POSTOPERATIVE MEDIAN INCISIONAL HERNIAS OCCURRENCE AND THEIR SURGICAL TREATMENT WITH RETROMUSCULAR PROLENE MESH AND HERNIAL SAC**

**Zsolt Zoltán Fulop, Emőke Dragus, Andreea-Iuliana Miron**

Scientific adviser: Tivadar Bara, PhD, Professor, University of Medicine and Pharmacy of Targu Mures, Romania

**Introduction:** Median incisional hernias are the most frequent postoperative complications in the surgical practice. They can occur in different forms and at different ages. Because of its high incidence rate, many surgical techniques are being used, but neither one is superior over the others. However some creative combined techniques show promising results.

**Aim:** Analyzing occurrence rates and types of postoperative median incisional hernias at different ages and genders. Evaluation of the efficiency of different surgery techniques.

**Materials and Methods:** We conducted a retrospective study at the 2nd Department of Surgery, Emergency County Hospital in Tirgu Mures, during January 2010 and January 2016.

**Results:** From 763 patients 517(67.76%) were females and 246(32.24%) were males. The highest incidence rate was noticed between the age of 60 and 70, at both genders (35.13%). We found in 18(2.36%) cases giant incisional hernias and in 98(12.84%) cases multilocular hernias. There were 48(6.29%) life threatening cases, caused by incarcerated incisional hernias. Recurrences appeared in 51(6.68%) cases. In most of the cases (485=63.57%) abdominal wall reconstructions were made with prolene mesh in retromuscular position, followed by primary suture repairs (211=27.65%) and finally (67=8.78%) prolene mesh in retromuscular position and hernial sac were used together in the surgical treatment. The two most common early complications were: rectus sheath hematomas and subcutaneous seromas.

**Conclusion:** Postoperative median incisional hernias have a high incidence and recurrence rate, especially between the age 60 and 70. Prolene mesh in retromuscular position or primary suture repairs are not always enough. Using prolene mesh in retromuscular position together with the hernial sac is a more secure and low cost proceeding, especially in cases of giant incisional hernias.

**Key words:** prolene, hernia, treatment.

## **127. ABDOMINAL WALL HERNIAS SURGERY IN PATIENTS WITH CIRRHOSIS AND ASCITES.**

**Sergiu Pisarenco, Tatiana Zugrav**

Scientific adviser: Gheorghe Anghelici, MD, PhD, Professor, Head of Chair of Department of Surgery N2, LCS Hepatosurgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background:** Management of abdominal wall hernias in patients with liver cirrhosis with massive resistance ascites is still under debate. The objective of this study was to compare the outcome in our series of urgently versus scheduled operated treatment of these patients.

**Methods.** In the period between 2011 and 2015, 102 patients with an abdominal wall hernias combined with liver cirrhosis and ascites were identified from our hospital database.

I group: 48 cirrhotic patients operated on urgently, including 36 (75%) - with hernia sac erupts with ascites fluid overflow and 12 (25%) with strangulated hernias. 9 (18.8%) patients was performed endoscopic hemostasis simultaneously for variceal bleeding. In 85% cases ascites fluid was present bacterial microflora. In all cases was installed abdominal drainage, for drainage ascites and lavage abdominal cavity. Group II: 54 cirrhotic patients with massive ascites and spontaneous eruption risk of hernia, operated scheduled after a thorough preoperative preparation, laparoscopic drainage of abdominal ascites and abdominal cavity lavage with antibacterials. In 55% cases ascites fluid was present bacterial microflora.

Plasty method - "tension-free no mesh". Prophylactic endoscopic variceal sealing was performed in 29 (53.7%) patients.

**Results.** 7 patients from the first group died postoperatively with hepatic insufficiency (14.6%), including 4 with variceal bleeding and 3 ascites-peritonitis. In group II was 1 (1.9%) death - hepatorenal failure. Postoperative eventration 3-6 months: I group - 10 (20,8%); II group - 2 (3.7%). Suppuration of postoperative wound: I group - 8 (16.7%), II group without complications.

**Conclusions.** Abdominal wall hernias in cirrhotic patients with ascites preferable operated planned. Laparoscopic abdominal drainage and lavage with antibacterials reduces the risk of ascites-peritonitis, improves wound healing. The preferably solution is hernioplasty "tension-free no mesh".

**Key Words.** Hernia, ascites, hernioplasty

## **128. REMOVAL OF XENOANTIGENIC GLYCOSYLATION PATTERNS FROM PORCINE PULMONARY HEART VALVE MATRICES IS DEPENDENT OF THE APPLIED DECELLULARIZATION METHOD**

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Scientific Coordontor: Dr, phil A. Hilfiker<sup>1</sup>, Hannover Medical School, Hannover, Germany.

**Introduction:** Matrix guided tissue regeneration (GTR) based on allogeneic decellularized matrices has been shown as an overall convincing method for heart valve replacement. Nevertheless, a substantial donor shortage prevents an unlimited clinical application of human GTR-valves. Utilization of porcine decellularized heart valve matrices could offer a possible solution for overcoming this considerable limitation. In the past, implantation of xenogeneic valve tissues considered to be acellular

into human recipients, however, mostly lead to severe immune responses usually ending up into graft rejection. This study addresses the question whether potential xenoantigenic glycosylation of extracellular matrix components, like the major xenoantigen  $\alpha$ -Gal, which served as model epitope for this study, can be removed by adjusted decellularization procedures.

**Materials and methods:** Fresh porcine pulmonary heart valve conduits were decellularized by application of different detergent- and enzyme-based decellularization protocols. Subsequent cleavage of remaining matrix-related  $\alpha$ -Gal epitopes was performed by enzymatic deglycosylation treatment on matrix samples of each decellularization group. Resulting tissues, mainly composed from insoluble extracellular matrix proteins, were afterwards divided into the relevant sections pulmonary artery wall specimens and pulmonary valve leaflets, frozen in liquid nitrogen, minced and finally solubilized by protease digestion. Evaluation of thus prepared solutions regarding to  $\alpha$ -Gal contents was finally performed using a novel designed lectin-based immunoblot technique.

**Discussion results:** Sole decellularization lead to significant removal of  $\alpha$ -Gal, substantial varying in strong dependency to applied protocols between 30 to 50% compared to  $\alpha$ -Gal contents of porcine native control tissues. An additional decrease of residual  $\alpha$ -Gal in a range of another 15 to 30% was achievable by additional  $\alpha$ -Galactosidase treatment. Combining decellularization and subsequent enzymatic digestion resulted in reductions of matrix related  $\alpha$ -Gal contents down to levels, which could be measured for respective pulmonary valve tissues of  $\alpha$ -Gal-KnockOut pigs.

**Conclusion:** Residual xenoantigenic carbohydrates are detectable on insoluble matrix components of porcine pulmonary heart valves, substantially varying dependent on applied decellularization protocols. Combined with glycolytic digestions, remaining glycosylation contents are reducible to background levels. Impacts of these novel insights have to be evaluated in further in vitro as well as in vivo studies.

**Key Words:** Xenotransplantation, Decellularization, Deglycosylation, Heart valves, Tissue Enigneering

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## 129. QUALITY OF LIFE INDICATORS ON A GROUP OF 20 BASICALLY „HEALTHY” SUBJECTS

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Scientific adviser: Vladimir Cazacov, PhD, Professor, Chair of Surgery Department II, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The concerns for the concept and the research quality of life (QoL) in medicine have met a growth. Considering that a correct measuring of the QoL of the patients with chronic diseases must be comparative patient - healthy subject, it appears the necessity of clear view about the QoL of



the healthy population. The purpose of this work was to evaluate the QoL of 20 basically healthy individuals using the SF-36 test.

**Materials and methods:** There have been questioned 20 healthy subjects which did not have health issues and agreed to participate in this study. The average age was  $27 \pm 5$  years, 75 % among the examined were women. For the QoL evaluation was used the SF-36 questionnaire. It includes 36 questions grouped in 8 levels: Physical condition; Health limitation; Somatic pain; General health; Vitality; Social function; Social limitation; Mental health. The results calculation was generated on the strength of the automatic program located on <http://www.sf-36.org/demos/sf-36.html>.

**Discussion results:** The achieved results prove that every single level of the SF-36 test has reached over 60 point values. Analyzing the data, we can notice that QoL has significantly decreased in „General Health” physical health compartment with only 65.1 points. The QoL psychic size appeared to be decreased at the „Vitality” and „Mental health” levels with 61.2 and 66,8. The other levels show a growth, being over 90 points. Looking at the results, we underline that this info is important for the statistical analysis comparative to data about the QoL determined at patients with different illnesses, including with chronic liver diseases.

**Conclusion:** The received data can be used for the comparative study with health quality indicators of patients with different chronicle diseases.

**Key words:** SF-36; Health-Related Quality of Life.

## **130. THE EFFECT OF EARLY DIAGNOSTIC OF ECTOPIC PREGNANCY ON THE MORBIDITY.**

**Adrian Brinza**

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**Introduction:** ectopic pregnancy represents the implantation of a fertilized ovum outside the endometrial cavity, it occurs in approximately 1.5 to 2.0% of pregnancies, and is potentially life threatening and account for 6% of all maternal deaths. This study has two major purposes: (1) to investigate the morbidity of woman who have suffered from ectopic pregnancy and (2) to demonstrate the utility of quantitative blood test of human chorionic gonadotropin in early management of ectopic pregnancy.

**Materials and methods:** A total of 161 women diagnosed with ectopic pregnancy were followed in a retrospective case-control study. The study took 1 year from 1st January 2014 till 31st December 2014. All patients were recruited as they came in, no specific sampling technique was used. Those with final diagnose of ectopic pregnancy within the period of the study were enrolled.

**Discussion results:** The most common clinical presentation in this study were lower abdominal pain 161 (100%) and amenorrhea 133 (82,61%), vaginal bleeding presented by 109 (67.7%). From 161 patients: 24 were diagnosed based on clinical examination + USG (absence of uterine pregnancy) + blood test of HCG (with a human chorionic gonadotropin over 1500 discrimination zone or double test

in 48 hours). From this 24 patients 7 used methotrexate, and 17 used laparoscopy, in 7 (41,18%) of them was identified hemoperitoneum and 5 (29,41%) had rupture vs 73 (59,35%) hemoperitoneum and 55 (44,72%) had rupture in the group of patients that used just USG.

**Conclusion:** After a review of the literature and our study results, we are in a position to recommend the following steps at three levels: public, primary healthcare, and specialist center. Aim should be early diagnosis and prompt treatment of EP without unnecessary delay in presentation, diagnosis, and treatment.

At public level we should lunch education program about the risk factors to all females through Mass Media. All these patients should register themselves at a specialist hospital for care of their pregnancy where specialist gynecologists and facilities for diagnosis and treatment of EP are available.

General practitioners working in primary healthcare centers should be educated to have a high index of suspicion for EP.

At specialist-level hospitals, all females (at their child-bearing age) presenting with hemodynamic instability or pain in the lower abdomen should be admitted and immediate investigations like pregnancy test,  $\beta$ -hCG, and ultrasound should be ensured even if there is no history of amenorrhea. Early diagnosis and prompt treatment are the ultimate goal to decrease the morbidity in the first trimester of pregnancy.

**Key Words:** Ectopic Pregnancy

## 131. CONTEMPORARY ASPECTS OF DIAGNOSIS AND TREATMENT OF CHOLEDOCHOLITHIASIS

**Sandu Brinzila**

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**Introduction:** Over the last decades the incidence of gallstones points out a major ascension. As a result we notice an increase of choledocholithiasis level, often being Associated with jaundice and angiocholitis. Optimal diagnosis and treatment evaluation, addressed to patients with choledocholithiasis on the basis and experience of Surgery Department No.2.

**Material and methods:** 41 patients with choledocholithiasis were examined, who were treated in the hepato-biliary-pancreatic department of the Republican Clinical Hospital during 2014-2015 years. Diagnostic algorithm included several consecutive steps: I step - biochemical testing, sonographic examination; II stage - biliary tree direct contrast running the endoscopic retrograde cholangiopancreatography ERCP. In cases of difficulty in diagnosis magnetic resonance cholangiopancreatography (MRCP) or computed tomography was made.

**Discussion results:** ERCP was confirmed to be an optimal method both in topic diagnosis establishment and in decompression of biliary tree realization for a preoperative preparation. So in 30

cases (73,17%) the full endoscopic extraction of stones with final recovery of patients was possible. In 4 cases (9,75%) the method allowed the CBP drainage over obstacle through a stenting with 7 Fr stent preparing patients for the second stage of the treatment of these 3 patients (7,31%) required choledochotomy with classical lithotripsy. And one patient (2,43%) had a megalocholedoch with multiple stones, but the situation was resolved by transection of choledoch with choledochojejunostomy on Roux loop. Postoperative complications were recorded in 3 patients being motivated by wound suppuration treated conservatively. Fatal outcomes in the study group were none.

**Conclusions:** Minimally invasive endoscopic technologies allow final settlement of choledocholithiasis with stones up to 15 mm, but for exceeded cases there is a stage of decompression and drainage of cholangitis, a preparation for surgical interventions calmly. For an up to 20 mm choledoch in the absence of duodenostasis or distal strictures choledocholithotomy is done. Megalocholedoch is an indication for choledochojejunostomy on Roux loop.

**Keywords:** Choledocholithiasis, ERCP, CRMN, stenting, choledochojejunostomy on Roux loup;

## 132. HEALING OF TROPHIC ULCERS WITH BIOPLASTIC COLLAGEN MATERIAL COLLOST

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Scientific adviser: Gutu Eugen, MD, PhD, Professor, Chief of General Surgery and Semiology Department, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** COLLOST™ is sterile bioplastic collagen material with preserved fibrous structure which activates regeneration of affected tissues. It is based on bovine collagen type I, which is close to human collagen by its composition and structure. The aim of the study was to assess the efficacy of COLLOST™ in treatment of the trophic ulcers, which have been refractory to previous treatment modalities.

**Material and methods:** In our study there were included 9 patients who had trophic ulcers in lower limbs with reduced or no response to standard treatment during a long time periods: from 1 month to 30 years. The etiology of trophic ulcer was diabetes mellitus (5 patients), osteomyelitis (1) and post-thrombotic syndrome (3). In 5 patients the wounds were closely covered by COLLOST™ in form of perforated membranes. In 4 patients the treatment was performed using both COLLOST™ 7% gel and perforated membrane.

**Discussion results:** All patients showed good response to the treatment. After the 2<sup>nd</sup> day of treatment the patients reported no pain. The edema and size of the wounds were reduced in the period from 7 to 14 days. The efficiency of COLLOST™ is determined by the following factors: high penetration of the cells; good adhesion to the wound; providing of tissue regeneration; no inducing of antigenic reaction, and has low risk in transition of viral or microbial infections.

**Conclusions:** Initial experience of using COLLOST™ in local treatment of trophic ulcers indicates on perspectives of its application.

**Key words:** COLLOST™, collagen type I, chronic leg ulcer.

### **133. PROPHYLACTIC MASTECTOMY AND SIMULTANEOUS RECONSTRUCTION**

**Cristina Besarab**

Scientific adviser: Ghenadie Contu, MD, PhD, Associate Professor, Department of surgery N1 "N.Anestiadi ", *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background.** Prophylactic Mastectomy (PM) meets several controversies which are especially: the value of PM for preventing breast cancer and also the extent of the mastopathy drug therapy that may reduce the risk of breast cancer without requiring PM.

**Materials and methods.** PM was performed on 7 patients, aged between 25 and 41 years. Preoperative examination included ultrasound, mammography, CT, MRI (two cases), cytology, tests BRCA-1 and BRCA-2. Subcutaneous PM was performed bilaterally in 5 cases. In two cases of breast cancer PM was performed unilaterally for contralateral gland. In 6 cases the operation was finished with reconstruction breast implant.

Each case of PM had an individual type of incision depending on the presence and location of previous scars after the sectorial resection of the breast and degree of breast sagging. Simultaneous breast reconstruction was performed in 5 cases with implants.

**Results and discussion.** Two patients had a pronounced ischemia of areola and nipple. The decrease skin and areola sensitivity was observed in all cases. There has been no extrusion of the implant, no breast inflammation or contracture in the postoperative period. The aesthetic result of breast reconstruction for PM "skin sparing" mastectomy after reconstruction is superior to classical mastectomy.

**Conclusions.** We consider defining the following criteria of PM: aggravated familiar history, previously supported contralateral cancer, multicenter and multifocal cancer, age of patient, histologic factor and positive BRCA 1 and BRCA-2 tests. The decision in favor of PM should be taken only after thorough examination and in full agreement with the patient.

Originality and scientific relevance of the presented study. Originality and scientific relevance of the presented study. Breast cancer is the most common form of malignancy in women that causes humanity a significant loss via not only important financial aspects, but also a high rate of physical and intellectual disability. Fibrocystic mastopathy is held responsible for increased risk of breast carcinoma, serving as prediction marker of histological lesion or malignancy. The question is whether prophylactic treatment alone is enough or surgery has to be carried out in order to eliminate unnoticed debutant cancer.

**Key words:** prophylactic, mastectomy, reconstruction

## 134. CONTEMPORARY DIAGNOSIS AND TREATMENT OF RECTAL CANCER

**Svetlana Zaica**

Scientific adviser: Tudor Timis, MD, PhD, Associate Professor, Department of surgery N2 "V.Hotineanu ", *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background.** The main arguments the scientific justification of the research problem is based on are the following: increased incidence of the rectal cancer (RC) in Moldova, the lack of a national strategy for the early detection of RC. The main purpose of the research was to elaborate the diagnosis and therapeutic management which should lead to the increase of the health comfort of the patients with rectal neoplasm.

**Materials and methods.** The study that constitutes the object of the present research was conducted on 287 patients with RC, admitted in the Municipal Hospital of Chisinau over a period of 5 years (2010 – 2014). Preoperative examination included: digital rectal examination, endoscopic (colonoscopy), radiological (barium enema), imagistic (ultrasound, computerized tomography) and biological explorations. 172 of these patients underwent open surgery, respecting oncological principles. Rectum amputation (Miles) was performed for tumors located in the lower and mid third of the rectum whereas for the tumors located in the upper third an anterior rectum resection (Dixon) was performed. A protective colostomy was performed in the cases in which the anastomosis was considered to be precarious.

**Results and discussion.** During the early postoperative period 33 complications were recorded, representing 19.18% of the total cases of operated RC. Out of these, 21 (12.20%) complications were specific, related to the surgical act and the basic illness, and 12 (6.9%) were unspecific, determined by the comorbidities and the patients' old age.

**Conclusions.** The main risk factors incriminated in the occurrence of CR are: diet, colorectal polyps and diverticula, inflammatory bowel disease, genetic syndromes (PAF, Lynch syndrome), RC in the history of relatives. Rectal cancer treatment is a multimodal one, surgical method being the primary therapeutic sequence, often combined with radio- and chemotherapy.

Originality and scientific relevance of the presented study. RC is one of the most common form of malignancy in the whole world bringing humanity a significant loss through important financial aspect, but also the high rate of physical and intellectual disabilities caused. Although medicine has made remarkable progress in the past 30 years, survival in RC remains a prospective issue of permanent interes.

**Key words:** RC, diagnosis, surgical treatment, prognosis and survival

## 135. AORTIC DISSECTION: MODERN ASPECTS OF DIAGNOSIS AND TREATMENT

**Andrian Ciubuc**

Scientific adviser: Alexandru Iliadi, PhD, Associate Professor, Chair of surgery 2; Batrinac Aureliu, PhD, Associate Researcher, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Aortic dissection (AD) is an acute aortic syndrome characterized by damage in the inner wall of the aorta, during which blood passes through a gap in the intimal wall of the aorta and fills a space formed by internal and medial wall of the aorta, forming a false lumen and true one. DA is a major cardiovascular emergency that has a big impact in the structure of causes of mortality and morbidity. The mortality rate of patients with untreated proximal AD increases by 1-3% per hour and reaches 25-50% on the first day from admission.

**Objective of the study.** In-hospital death risk stratification in acute period (first 14 days) of AD using prediction model developed based IRAD study.

**Material and methods.** Case-control retrospective study included 60 patients with final diagnosis of AD (acute or chronic) during 2000-2015. Statistics: calculate the frequency, average values, confidence interval (CI). The prediction model developed based on the IRAD study - score derived by summing the scores awarded to each of the following parameters:

- Age > 70 years (0.5 points);
- Females (0.3 points);
- Suddenly occurring chest pain (1, 0);
- ECG ST segment changes (elevation of the ST segment) – (0.6);
- Pulse deficit (0,7);
- Signs of kidney failure (1,6);
- Hypotension / shock / cardiac tamponade (1.1).

Subsequently, based on a graph and a chart specifically designed, accumulated score was converted into the hospital probability of death for patients with AD.

**Result:** During the acute episode 19 patients (31.7%) died. According to this score patients in this study were distributed as follows:

The patients that accumulated the lowest score ( $\geq 1, 5 - < 3.0$ ) = 4 (21.1% death rate, probability of death according to IRAD 33.4%) patients;

The patients with average score ( $\geq 3, 0 - < 4.0$ ) = 6 (31.6% death rate, probability of death according to IRAD 33.4%) patients;

The patients with the highest scores ( $\geq 4, 0 - < 6.0$ ) = 7 (47.4% death rate, probability of death according to IRAD 87.6%) patients.

**Conclusions:** According to the IRAD model, our study revealed that the most patients died (47.4%) when they accumulated the highest score (probability of death according to IRAD 87.61%). Thus, the model for predicting in-hospital death risk provided by IRAD study can be recommended for clinical evaluation of the patients with clinically suspected aortic dissection in order to prevent negative consequences and to assess the appropriate hospital management.

**Keywords:** aortic dissection. The prediction model IRAD

### **136. THE SURGICAL TREATMENT'S RESULTS OF HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY. THE EXPERIENCE IN REPUBLIC OF MOLDOVA.**

**Ana Clima**

Scientific Adviser: Batrinac Aureliu, PhD, Associate Researcher, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Hypertrophic obstructive cardiomyopathy is a genetic disease, autosomal dominant, characterized by ventricular myocardial hypertrophy, predominantly of the interventricular septum, with variable prodromes, often tempered, but involving a high incidence of sudden death. Global morbidity in adult society is averaging between 0.02-0.023%. In Moldova a complex surgical approaches in the treatment of HOCM has a history of about 5 years. It is steadily improving surgical techniques, being in touch with international protocols.

**The aim of study:** Presentation of national standards for complex surgical treatment of HOCM, familiarizing specialists from related fields of cardiac surgery (cardiologists, radiologists, general doctors), regarding the possibilities of surgical correction of HOCM.

**Material and methods:** During 2011-2016, in the Republican Clinical Hospital and International Hospital Medpark underwent surgery 32 patients, average age - 52.3 years. Postoperative period complicated with ischemic stroke - 1 patient, postoperative hemorrhage - 1 patient. The mean duration of hospitalization was 9.5 days.

**Conclusions:** The latest medical literature, relying on complex randomized studies unanimously are telling us that "gold" standard in HOCM treatment remains only radical surgical. The surgical approach in HOCM in combination with complex valvular correction, solves the problem of TEVS obstruction, but also decrease systolic anterior motion of the mitral valve and abolish it regurgitation.

**Key words:** Hypertrophic Obstructive Cardiomyopathy, Surgical Treatment, Ejection Tract Obstruction, mitral valve insufficiency repair, Morrow technique, Robert Dion technique.

### **137. COMPLETION THYROIDECTOMY, PART OF SURGICAL TREATMENT FOR THYROID CARCINOMA – EXPERIENCE OF 2ND DEPARTMENT OF SURGERY, EMERGENCY COUNTY HOSPITAL IN TARGU MURES**

**Valentin Daniealopol, Paul Proboteanu, Sabina Hadarig, Stanca Bogdan**

Scientific adviser: Daniela Tatiana Sala, Senior Lecturer, MD, PhD, Emergency County Hospital, Tirgu Mures, Romania

**Introduction:** Completion thyroidectomy is the surgery practiced in order to excise the residual thyroid tissue at patients who underwent isthmectomy or near-total thyroidectomy for a lesion considered initially benign. Completion thyroidectomy is indicated at short time post-operator after the final malignant histopathological examination result, or years away after first surgery because of benign or malignant relapses on residual thyroidian blunt. The objective of the study is to highlight the role of completion thyroidectomy in the surgical treatment of thyroid carcinoma.

**Materials and methods:** We conducted a retrospective study at the 2nd Department of Surgery, Emergency County Hospital in Tirgu Mures, during January 2011 and December 2015. During this period were performed 602 surgeries on thyroid gland, including 28 completion thyroidectomies. We analyzed data obtained according to: the surgery before completion thyroidectomy, histopathological diagnosis resulted from isthmectomy or near-total thyroidectomy, histopathological diagnosis resulted from completion thyroidectomy.

**Discussion results:** In the 28 cases for which completion thyroidectomy was practiced, final histopathology was: 21 cases of follicular variant of papillary thyroid carcinoma, 1 case of Wathin-like variant of papillary thyroid carcinoma, 3 cases of multifocal papillary thyroid cancer, 1 case of poorly differentiated carcinoma, 1 case of oncocytic variant of papillary thyroid cancer, 1 case of solid variant of papillary carcinoma with poorly differentiated carcinoma component. After completing the thyroidectomy, were revealed thyroid carcinoma lesions in 5 (17,85%) of the 28 thyroidectomies. Also, 9 of the 28 completion thyroidectomies were followed by lymphadenectomy, tumor metastases being present in one case.

**Conclusion:** Completion thyroidectomy is required as surgical treatment for patients with final malignant histopathology who underwent initially near-total thyroidectomy or isthmectomy.

**Key Words:** completion thyroidectomy thyroid cancer

### **138. STUDY REGARDING THE UTILISATION OF THE SF-LDQOL QUESTIONNAIRE IN THE CIRRHOTIC OPERATED PATIENTS QUALITY OF LIFE ASSESSMENT.**

**E. Darii, P. Bitiu, N. Negari, M.Ionescu, M Casian.**

Scientific adviser: Vladimir Cazacov, PhD, Professor, Chair of Surgery Department II, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova



**Introduction:** Cases of liver cirrhosis (LC) represent a major impact problem on the life prognostic, ground that imposes concerns on the quality of life (QoL) of the cirrhotic patient having a surgery. This study desires to create a complete image on the manner what LC and used treatment influences different compartments of QoL.

**Material and methods:** Using the retrospective study, we have analyzed over 53 patients diagnosed with LC and operated in Clinic 2, Surgery. There has been recorded information on the evolution of the LC, the volume of the surgery and its influence on QoL.

**Discussion results:** A quiz of the LC operated patients brought significant elements on QoL. Preoperative, the SF-LDQOL questionnaire results shows a significant decrease of the physical section and also the mental: 43 and 52. Postoperatively, the majority of LC scores show an important increase on all the smaller aspects that differ by the type of the surgery, the increase being although very low at the patients with complicated post-surgical evolution and also for the CHILD-C patients.

**Conclusions:** The obtained results show that the SF-LDQOL questionnaire short form, ensures the right interpretation, qualitative and quantitative of the cirrhotic patient's QoL and it also allows the orientation of the actions on therapeutical decisions.

**Key words:** Liver cirrhosis; Quality of life; Surgical treatment.

## 139. ANALYSIS OF METHODS OF TREATMENT IN THE VARICOSE DISEASE (SCLEROTHERAPY AND SURGERY)

**Marina Gaina**

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**Introduction:** The varicose disease represents 90-95% of chronic venous disease. Varicose veins affect up to 25 percent of women and 15 percent of men. Treatment of varicose veins is one of the most important directions of study due the high frequency, of clinical polymorphism and of subjective symptoms. Studying these theme is too important because currently there are a number of treatments but none of them do not resolve the problem, and recurrent varicose veins is an evidence of that. The purpose of the study is to compare sclerotherapy and surgery as treatment method of varicose veins and to establish the cases where it will give preference to one or the other.

**Materials and methods:** Is a retrospective study and is based on the analysis of the medical records of 589 patients. Patients had been divided into two groups depending on the treatment method applied. 470 of patients were treated through sclerotherapy method in CMF "Galaxia" and 119 surgical in SCM "Arhanghelul Mihail" in the period 2012-2014. Statistical data were obtained through statistical analysis of Microsoft Excel 2010 of Windows 8 operating system.

**Discussion results:** Varicose disease is predominant in women in both study groups (85,16% and 59,66%). The peak incidence of disease in patients is between 30 and 60 years. Patients treated with sclerotherapy more frequently had grade C2 (CEAP), patients treated surgical C2-C3 (CEAP).

Sclerotherapy procedure lasts on average 15-20 minutes and does not require hospitalization. Surgery takes 1-1,5 hours and requires an average of 7 days of hospitalization.

**Conclusion:** The current trend of treatment of anghes is selecting a method which solves the subjective symptoms, has a maximum aesthetic result, but also has an index of relapse minimum possible. Selection of the optimal method for the treatment of varicose veins depends on the degree of the disease, presence of complications, but also of patient's request. However varicose disease is a continually progressive pathology whatever the treatment method applied.

**Key Words:** varicose, sclerotherapy, surgical.

## **140. THE ENDOVASCULAR LASER OBLITERATION (EVLO) IN THE TREATMENT OF VARICOSE VEINS**

**Angelica Gutu**

Scientific adviser: Oleg Contu, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The varicose disease has a great impact upon human life and maintains leading positions among surgical pathologies of blood vessels. During the last years, phlebology supported significant changes in the approach of varicose veins, and one of the best achievements was the invention of the endovenous laser and the further development of EVLO.

**Materials and Methods:** Our study included 203 patients with varicose disease C2-C6 according to CEAP classification, treated with EVLO during 2011-2015 years, using a diode laser, model Velure S9 (980 nm wavelength). The research was based on evaluating the effectiveness of EVLO in the treatment of lower limbs varicose veins, as well as studying the in vitro laser impact on blood vessels' walls and blood components.

**Discussion results:** In the experimental part significant results were shown in case of the veins filled with heparinized blood. The blood boiled forming a gas and combustion products, which resulted in vascular ablation, in contrast with no change in other ones. In the clinical part we treated 203 patients with varicose veins, using EVLO combined with crossectomy and Müller miniflebectomy. All interventions were completed successfully. The average hospital stay was about 1 day. The most common early manifestations were low grade fever within first 24 hours and postoperative moderate pain, which were solved by administration of anti-inflammatory drugs, and hyperpigmentation of the skin, which have been solved independently during 1,5 to 6 months. The installation of aseptic phlebitis and skin hyperpigmentation was more frequently in patients with GSV diameter > 10mm. During late period, recanalization of GSV occurred in 4 cases (1,97%) and segmentary recurrences of varicose veins in 6 cases (2,96%), which was less than in the literature data. Also, our tactics and new techniques implementation allowed us to change and extend the indications.

**Conclusions:** (1) The endovenous laser has an effective action of coagulation and obliteration upon blood vessels, which allows to use it efficiently in the treatment of varicose veins. (2) EVLO allows the ablation of saphenian trunk in most cases, with a minimal trauma and fast recovery of the patient.

(3) The complications' rate, such as phlebitis and recanalization, increases with blood vessels' diameter, and it is also difficult to perform the procedure in case of sinuous veins. (4) In order to avoid complications and to increase the effectiveness of EVLO, it is indicated to perform it in association with crossectomy and miniflebectomy.

**Key Words:** endovascular obliteration, varicose veins, crossectomy, miniflebectomy.

## 141. MATERNAL AND FETAL MORBIDITY IN PREECLAMPSIA

**Mihaela Gutu, Olga Arama**

Scientific adviser: Codreanu Nadejda, MD, PhD, Associate Professor, Obstetrics and Gynecology Department, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Globally, preeclampsia complicates about 2-10% of pregnancies. Preeclampsia is a potentially life-threatening complex disorder. It contributes to maternal and perinatal mortality and morbidity worldwide.

**The purpose** of this study was to present the impact of preeclampsia on the structure of maternal and fetal morbidity and mortality, long-term maternal risk assessment as well as highlighting the need to implement the precocious modern management methods.

**Materials and methods:** The study was carried out in the Department of Obstetrics and Gynecology SCM-1, Chisinau during 2012.

The present study included 98 pregnant women whose pregnancy was complicated by various degrees of preeclampsia investigated according to the conducted questionnaire.

**Discussion results:** Considering the proposed criteria for analysis were obtained following: depending on age 34 patients out of 98 were aged between 19-24 years (representing 34.7 %), 33 patients – aged between 24-29 years (33.8 %), 17 pregnant – aged between 29-35 years (17.3 %) and there were 14 pregnant women (14.3%) older than 35 years. Therefore, there is a predominance of patients aged between 19-24 years. Ratio primiparous / multiparous was 3:1 (71 primiparous and 27 multiparous). Depending on the time of occurrence we observed a higher incidence of preeclampsia in pregnant women at gestational age below the term, 55 gave birth prematurely, 30 of them (30.6 %) at 34-36 weeks; 21 (21.4 %) – in the period of between 30-34 weeks and 4 patients (4.8%) gave birth at gestational age below 30 weeks. 43 pregnant women (44.8 %) gave birth between 37-41 weeks. Some maternal complications were appreciated: in 65 cases (66.3%) hypertensive angiopathy has been developed, in 37 cases (37.8%) – acute fetal distress, in 21 (21.4%) – HELLP syndrome, in 11 patients (11,2%) – abruptio placenta, in 10 (10.2%) seizures were recorded (either before or after hospitalization), disseminated intravascular coagulopathy syndrome was established in 7 cases (7.1%), respiratory distress syndrome – in 6 pregnant women (6.1%), antenatal fetal death – in 2 cases. The presented criteria show that in 71 (72.4 %) cases, severe preeclampsia were determined and in 27 cases (27.5 % ) – mild preeclampsia. Fetal complications were appreciated: intrauterine growth restriction in most of cases (74 pregnancies – 75.5 %), placental insufficiency – in 49 cases (50.0%), oligohydramnios – in 27 cases (27.6%), acute

fetal distress characterized by increased heart rate, exacerbate or reduced fetal movements – in 37 cases (37.8%) and perinatal death – in 4 cases (4.1%). Therefore, perinatal mortality was 4.08%.

Depending on the clinical and laboratory results, diagnosis of severe preeclampsia was established in 71 cases, the 27 others being mild. Among women who gave birth per vias naturalis in 11 women labor began spontaneously, in 6 cases was performed amniotomy. Epidural anesthesia was performed in 58 (71.6%), 23 cases (28.3%) being under general anesthesia (the ratio 3: 1).

**Conclusion:** This study showed that preeclampsia is Associated with an increased risk of maternal and fetal morbidity. Prematurity, intrauterine growth restriction have to be anticipated and dealt with in preeclampsia. A good neonatal intensive care unit will help improve neonatal outcomes.

**Key Words:** preeclampsia, fetal and maternal morbidity, complications in pregnancy.

## 142. TUMORS OF PELVIC BONES

**Iulia Isac**

Scientific adviser: Ion Mereuta, PhD, Professor, Oncology Department, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Bibliographic analysis of data confirms that incidence of tumor of pelvic bones is on the increase and remains a difficult and current oncology. The epidemiological survey, clinical and morphological research and surgical treatment of tumors of pelvic bones increases the vigilance.

**Materials and Methods:** To realize the purpose were subjected retrospective review the medical records of 53 patients treated in Oncology Institute in the department Musculoskeletal tumors and tissues tumors during 2011-2015. All patients were treated surgically. Postoperative material was taken for histological examination.

**Discussion results:** The most tumors pelvic bones tumors group were assessed as malignant (45.28%), the first being chondrosarcoma, (35.84%) are benign and (18.86%) pseudotumoral injuries. From the benign tumors chondroma is on first place, and from the pseudotumors prevails processes fibrous dysplasia of the coccygienne vertebrae. Report men:women in the group of patients with bone tumors of the pelvis is 1.4:1. In most cases affected was the age between 40-60 years. Depending on the location of the tumor process more frequently affects the body and the right wing of iliac bone, pubic bone and vertebrae coccygea. Ischial bone is rarely involved. In patients with benign tumors and pseudotumoral lesions commonly was biopsied and marginal resection of iliac bone. In 7 cases after removing tumors pelvic bones were used preserved allografts for substitution of the defect.

**Conclusion:** Between malignant tumors of pelvic bones the highest incidence has primary chondrosarcoma and metastasis without primary outbreak found. In most cases the neoplastic process involving pelvic bone and vertebrae as coccygienne. The pubic bone and bone sciatic are affected in unique cases. The surgery for tumors of the pelvis bone involve defect filling with allograft preserved. It is necessary to implement new methods of treatment with a view to improve the quality of treatment in tumors of the pelvic bones.

**Key Words:** tumors, pelvic bones, allograft.

### **143. DISTINCTIVE FEATURES OF A GUN SHOT THORACOABDOMINAL INJURY IN TANGENTIAL WOUNDING**

**Oleksii Lavrenchuk, Georgii Bohanov**

Scientific adviser: Volodymyr Kryvetsky, PhD, Associate Professor, Department of Surgery №1 with rate of endoscopic and laser surgery, National Pirogov Memorial Medical University, Vinnytsia, Ukraine.

**Introduction:** Thoracoabdominal injuries are the most serious injuries at the war or peace time, representing one of the most difficult problems of emergency surgery. Difficulty of the diagnosis, a significant number of tactical and diagnostic errors and complications in health care characterize them. The so-called tangential wounds are when there is a large destruction of bone structures, and internal organs, notwithstanding the fact that the wound channel extends longitudinally in the soft tissue of the chest and abdominal wall without damage to the diaphragm due to the high kinetic energy of the wounding element. They occur gunshot thoracoabdominal wounding.

**Materials and methods:** The analysis of 49 clinical cases of injuries in the area of anti-terrorist operation in eastern Ukraine, who were treated at the Military-medical clinical center of the central region. The diagnosis of thoracoabdominal injury was confirmed radiographically and intraoperatively.

**Discussion results:** All analyzed injuries related to severe group. The shape of the wound channel was observed: through injury in 20 (48.8%), blind in 24 (49%) and tangential in 5 (10.2%) patients. In all cases the tangential wounds in the chest and abdomen were deep linear wounds. There was not a violation of the integrity of the parietal pleura and peritoneum therefore, these injuries were non-penetrating. The inlet of the wound channel in 21 (42.8%) case was in the abdominal wall (abdominothoracal injured). Depending on the dominant pathological process in injuries surgery began with the chest in 4 (8.1%) or abdominal cavity in 45 (91.9%) cases. Injuries of abdominal organs was observed in all the wounded with thoracoabdominal trauma, including isolated damage, found in 15 (30.6%), combined - in 34 cases, the damage to two organs of the abdominal cavity in 23 (46.9%) patients, three - in 9 (18.4%), four - in 2 (4.1%).

Complications in thoracoabdominal wounds were in 34% of cases, which is twice greater than when isolated thoracic injuries had been observed. The mortality rate during thoracoabdominal injuries was 16.3%, whereas in isolated injuries it was about 5%.

**Conclusion:** Thoracoabdominal injuries are serious injuries with high morbidity and mortality. A special place in the structure of thoracoabdominal trauma occupies tangential wounds, which despite the fact that they are non-invasive require a rapid diagnosis and an active surgical tactics.

**Key Words:** thoracoabdominal injuries, tangential wounds, surgery, gunshot.

## 144. THE IMPACT OF PRACTICAL IMPLEMENTATION OF NON-OPERATIVE MANAGEMENT OF PENETRATING ABDOMINAL TRAUMA

Lisnic Irina, Odagiu Irina

Scientific adviser: Stanislav Tintari, PhD, *Nicolae Anestiade* Department of Surgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Although the selective conservative approach (SCA) was proposed in the '50s, the exploratory laparotomy (EL) is still the standard of care in penetrating abdominal trauma (PAT).

**Purpose:** To assess the incidence of major injuries in PAT, the need of surgical resolution, and a comparative evaluation of EL and SCA management in this kind of trauma.

**Materials and methods:** A 4-year retrospective review of patients sustaining a penetrating abdominal trauma hospitalized in Chisinau Emergency Hospital was performed. There were used the following approaches: SCA – in 37 patients, EL – 74, and in 11 cases the laparotomy was avoided by the use of a diagnostic laparoscopy. Rate of non-therapeutic laparotomies, complications, hospital stays and hospital charges were analyzed.

**Discussion results:** There were 122 patients with penetrating abdominal wounds. Fifty one (41.8%) patients had not any major intra-abdominal injury. In SCA group: there were 3(8.1%) cases of failed approach and 34(91.9%) patients were successfully managed without laparotomy. Patients successfully managed by SCA (34 cases) had significantly shorter hospital stay than those who underwent non-therapeutic laparotomy (3 patients),  $2,94 \pm 0,37$  vs  $8,0 \pm 2,47$  days, hospital charges  $868,0 \pm 200,1$  vs  $2466,5 \pm 753,5$  lei, and morbidity ( $p < 0.05$ ). Despite of longer preoperative time in failed SCA group,  $660 \pm 60$  vs  $90,05 \pm 7,22$  minutes ( $p < 0.001$ ), compared to the therapeutic laparotomy of EL group, they had better outcomes such as: hospital stay, 6 vs  $10,51 \pm 1,09$  days ( $p < 0.001$ ) and hospital charges  $2105,5 \pm 542,1$  vs  $4109 \pm 638,49$  lei ( $p < 0.05$ ).

**Conclusion:** The incidence of major injuries in patients with penetrating abdominal trauma does not exceed 58%, which determine the necessity to avoid the unnecessary laparotomy in 42% of cases. In patients with penetrating wounds without major injuries, the implementation of non-operative management is beneficial by: avoiding of non-therapeutic laparotomies, shortened hospital stays, reducing of complications and costs with negligible morbidity and null mortality rates. In patients with major injuries the non-operative management carries a risk of 8.1 % of delayed laparotomy, but it does not carry morbidity or additional charges.

**Key words:** Penetrating abdominal trauma, exploratory laparotomy, selective conservatism.

## **145. VAGINAL APPROACH OPPOSITE (VS) TO THE ABDOMINAL IN THE SURGICAL TREATMENT OF UTERINE MYOMA**

**Daniela Medinschi**

Scientific adviser: Codreanu Nadejda, MD, PhD, Associate Professor, Department of obstetrics and gynecology N2, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background.** Hysterectomy is the second most common surgery performed on women of childbearing age. There are several ways to remove the uterus: abdominally, vaginally, through an incision at the back of the vagina, or laparoscopically. The goal of our study is to compare the complications in total hysterectomy depending on used surgical approach.

**Materials and methods.** The retrospective study that constitutes the object of the present research was conducted on 1147 patients with uterine myoma and genital prolapse, admitted in the Clinic Municipal Hospital "Saint Arhanghel Mihail" of Chisinau over a period of 5 years (2010 – 2014). 142 of these patients (13% of cases) underwent total hysterectomy. Vaginal hysterectomy was performed at 82 patients and abdominal one at 60 patients.

**Results and discussion.** In the result of this study the advantages of vaginal hysterectomy were recorded: reduced postoperative recovery time, fewer days of hospitalization, reduced hospital costs, reduced surgery time. Among the intraoperative observation, the mean duration of surgery of abdominal hysterectomy was 98.8 min and that of vaginal was 87 min ( $p=0.0192$ ). Wound infection was the main cause for febrile morbidity in abdominal hysterectomy group where as urinary tract infection was the main cause for febrile morbidity in vaginal hysterectomy. There was one case of bladder injury and 1 case of ureteric injury in abdominal hysterectomy group while none in vaginal hysterectomy group. There was 6% of thromboembolic complications in abdominal hysterectomy and 1,5% in vaginal hysterectomy. There were 2 (4.0%) cases of postoperative hemorrhage in abdominal hysterectomy group and none in vaginal hysterectomy group.

**Conclusions.** This study showed that vaginal hysterectomy was Associated with less intraoperative complications and postoperative morbidities and complications as compared to abdominal hysterectomy. Only a physician can determine the best approach to hysterectomy in an individual woman.

**Key words:** vaginal hysterectomy, abdominal hysterectomy, surgical complications.

## **146. PREDICTORS OF RETRANSPLANTATION IN LIVER TRANSPLANT**

**Anatolie Mititelu, Sergiu Burgoci, Cristina Vladicescu**

Scientific adviser: Adrian Hotineanu, MD, PhD, Professor, Chair of Surgery Department II, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** A small subgroup of patients undergoing liver transplantation (LT) require retransplantation (RT), which is correlated with significantly higher morbidity, lower survival rates and increased medical costs. The purpose of the study is to determine the predictive factors of RT, following LT, clinical and laboratory findings were studied during the period from 2013 till 2016, effectuated by a medical team from Republican Clinical Hospital.

**Materials and Methods:** Liver transplant evidence was sourced from the National Transplantation Agency database starting with February 1st, 2013, to March 20th, 2016. Covariates selected from the database for inclusion in the analysis admitted: recipient's age, cold and warm ischemia time, donor's type (cadaveric versus living), body mass index (BMI), model for end-stage liver disease (MELD) score at transplant, albumin level at transplant, gender of the recipient and transplant year. Recipient hepatitis C virus (HCV) and hepatocellular carcinoma (HCC) status were determined by using United Network for Organ Sharing (UNOS)/Organ Procurement and Transplantation Network (OPTN) primary diagnosis coding. Generalized linear modeling was used to determine the odds ratios (ORs) for the risk of RT in liver transplant recipients. According to National Transplantation Agency of Republic of Moldova since 2013 were registered 212 potential brain death donors, but families of 99 (46,69 %) of them have refused donation.

**Discussion results:** A total of 19 patients underwent LT during the study period, with 5 patients needing RT and only one patient has undergone RT because of lack of donors. Results from the univariate analyses identified the following risk factors which predicted the likelihood of RT: age of the recipient, BMI, HCV status, HBV+HDV status, HCC status, MELD score, albumin levels, cold ischemia time and year of transplant. Multivariate analysis showed the following risk factors which predicted the probability of RT: recipient's age, gender, BMI, HBV+HDV status, HCV status, cold ischemia time, donor type and year of transplant. Importantly, female gender, higher BMI, HCV positivity, longer cold ischemia time and living donor LT resulted in higher odds for RT.

**Conclusion:** Our analysis identified several host and graft-related predictors of RT in liver transplant recipients. Efforts must be directed to reduce the significant number of RT in the era of donor shortage and ever increasing demand for LT. Both, the community and physicians should therefore approach organ transplant positively and objectively and treat ethical, social and religious issues as negotiable perspectives and not barriers to organ transplant.

**Key Words:** Living donor living transplant, Retransplantation, Predictor factors

## **147. DECELLULARIZED TISSUE ENGINEERED PERICARDIUM AS REPLACEMENT FOR TRICUSPID VALVE IN CARDIAC SURGERY.**

**D. Moscalenco, T. Goecke, K. Theodoridis, Z. Adibekian, I. Tudorache, A. Hilfiker, A. Haverich, S. Cebotari.**

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Scientific adviser: S. Cebotari<sup>1</sup>, PhD Dr. med., Hannover Medical School, Hannover, Germany.



**Introduction:** Tricuspid valve replacement is the last treatment choice in tricuspid valve pathology. The choice to insert mechanical or bioprosthetic valve remains controversial. Both prostheses have some limitations such as infection, risk of thromboembolism, need for life-long anticoagulation or limited durability. The following study aimed to develop a novel tissue-engineered tricuspid valve based on decellularized pericardium allograft.

**Materials and methods:** Fresh ovine pericardium was harvested at the local slaughter house and decellularized using detergents. For disinfection all samples were treated for 24h with Phosphate Buffered Solution supplemented with 1% gentamicin and 1% streptomycin. The effectiveness of decellularization was evaluated by histological staining (hematoxylin-eosin, Movat's Pentachrom and Van Gieson), Isolectin B4 staining (a-gal xenoantigen) and by DNA-quantification. Two valvular leaflets were manufactured out of decellularized pericardium and sutured ex-vivo into the tricuspid annulus of an ovine heart and suspended on papillary muscles. Hydraulic test were performed to prove valve competency.

**Discussion results:** After detergent treatment pericardial tissue has been converted in a cell-free scaffold as proven by standard histological analysis. Immunofluorescent examinations revealed the absence of a-gal xenoantigens. DNA-quantification showed a substantial reduction in DNA content compared to the normal tissue. The alignment of collagenous fibers in decellularized scaffolds appeared well-preserved and was not affected by detergent decellularization procedure as proven by histological staining. Graft disinfection and storage in antibiotic solution after decellularization did not affect the texture of the scaffold. Furthermore, two leaflet structure created out of decellularized pericardium and surgically sutured in tricuspid position of ovine heart resulted in a competent valve prosthesis.

**Conclusion:** The present results have shown successful decellularization of the ovine pericardium using detergents. Decellularized pericardial allograft can be used in cardiac surgery as a scaffold for valvular tissue engineering or for in-vivo guided tissue regeneration in tricuspid valve replacement.

**Key Words:** Tissue Engineering, Cardiac Surgery, Tricuspid Valve, Pericardium.

**Acknowledgements:** This study is conducted in the context of the ESPOIR project (European clinical study for the application of regenerative heart valves supported by the European Union's Seventh Framework Programme for Research, technological Development and Demonstration under Grant Agreement No. 278453) and supported by the DAAD (German Academic Exchange Service).

## **148. EVALUATION OF THE VARICOSE VEINS AS A SURROGATE MARKER OF THE THROMBOPHILIC DISORDERS IN PREGNANCY**

**Cristina Mursiev**

Scientific adviser: Nadejda Codreanu, MD, PhD, Associate Professor, Chair of Obstetrics and gynecology Department, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** A successful pregnancy outcome requires an efficient utero-placental circulation. It may be compromised by hemostasis disorders Associated with a prothrombotic state, such as thrombophilia. Thrombophilia includes a large spectrum of disorders that have been assigned to

pregnancy complications as: preeclampsia, recurrent fetal loss and other. Also, recent studies showed higher incidence of thrombophilia in people with varicose veins, suggesting an association between these diseases. As the screening of thrombophilia is expensive and the diagnosis is frequently established late, we aimed to evaluate in this study the relevance of using the varicose veins as an indirect marker of thrombophilia that could lead to an earlier diagnosis, reducing costs and morbidity.

**Materials and methods:** The case control study was based on the data of 140 pregnant women admitted in the Department of Obstetrics of The Institute of Mother and Child, in the period of 2011-2014. They were evaluated from the perspective of their obstetrical complications suggestive for thrombophilia.

**Discussion results:** The study of the anamnesis of the previous pregnancies revealed a large number of obstetrical complications in the group of women with varicose veins. Statistically significant data were obtained from the incidence of stagnated pregnancy, found 7 times more often (10% of women from the main group vs. 1,4% women from the control group,  $t=2,23$ ,  $p<0.05$ ) and preeclampsia, found 5 times more often (15.7% vs 2.9%,  $t=2.23$ ,  $p<0.05$ ) in women with varicose veins. During the current pregnancy, these women developed 3 times more often a hypertensive pregnancy disorders (17,1% vs 5,7%,  $t=2.88$ ,  $p<0.01$ ) and 5 times more often – venous thrombosis (15.7% vs 2.9%,  $t=2.23$ ,  $p<0.05$ ) and intrauterine growth restriction (IUGR) (20.0% vs. 4.3%,  $t=2.92$ ,  $p<0.01$ ). There were no pulmonary thromboembolism and abruptio placentae in control group. Evaluating the risks of developing complications, we found out that in the main group the risk was 3.41 fold higher to develop a hypertensive pregnancy disorder (OR=3.41, CI 95.0%: 1.043-11.169,  $p<0.01$ , AR%=70,7), 6.34 fold higher for venous thrombosis (OR=6.34, CI 95.0%: 1.35-29.761,  $p<0.01$ ; AR%=84.2), 5.58 fold higher for IUGR (OR=5.58, CI 95.0%: 1.527-20.415,  $p<0.01$ ; AR%=82.1), 7.7 fold higher for stagnated pregnancy ( OR=7.7, CI 95.0%: 1.118-24.061,  $p<0.01$ ); AR%=87.0) and 6.34 fold higher for preeclampsia (OR=6.34, CI 95.0%: 1.35-29.761,  $p<0.01$ ; RA%=84.2).

**Conclusions:** Women with varicose veins were more prone to develop thrombophilia Associated complications during pregnancy. This leads us to the idea of using the varicose veins as an early indicator /surrogate marker of a possible thrombophilic disorder, helping to establish the diagnosis and begin prophylaxis or an adequate treatment faster.

**Keywords:** thrombophilia, pregnancy complications, varicose veins.

## 149. DIAGNOSIS AND TREATMENT OF COLON POLYPS

**Radu Nastase, Viorica Nastase**

Scientific adviser: Toader Timis, PhD, Chair of Surgery, Faculty of Medicine N1, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Colon polyps are growths that develop in the colon or rectum. Most polyps are benign. A certain type of colorectal polyps (adenomatous) may be leading up to cancer. For this reason, regular screening is very important for people over age 50 or those at high risk of colorectal cancer.

**Objectives:**

1. Epidemiological study of colonic polyps in Moldova and worldwide;
2. Positive differential diagnosis of colon polyps;
3. Treatment strategy and the selection of optimal surgery;
4. Prevention methods of colon polyps.

**Materials and methods:** Scientific paper was conducted at Republican Clinical Hospital Department of Surgery No. 2 Medical University *Nicolae Testemitanu*.

To achieve this objectives of study were examined health records of patients who were hospitalized with colorectal polyps in colorectal surgery department during the years 2010-2015; 108 out of 8476 patients.

**Discussion results:** Based on the records of colorectal surgery department of surgical techniques used to remove small polyps, I concluded that small pedicle or sessile polyps up to 1 cm were removed by the method Electroexcision with diatermocoagulation. Polyps over 1,5-2cm were removed by Electrofragmentation and sessile polyps >2 cm, were removed by injection into the submucous with saline to raise the polyp from the plane lining (mucosectomy). Analyzing the clinical material I determined that colonoscopy is a screening method preferable for symptomatic patients and allows the doctor to inspect the entire colon to detect polyps during colonoscopy and practice polypectomy whenever polyps are detected and retrieve biopsy from the excised polyps for histological examination.

The scientific work was accomplished at The Republican Clinical Hospital Department of Surgery No. 2 Medical University *Nicolae Testemitanu*.

To achieve the objectives of the study were examined health records of patients who were hospitalized with colorectal polyps in colorectal surgery department during the years 2010-2015; 108 out of 8476 patients.

Statistical data

Year	Total patients treated	Polypectomies conducted	%
2010	1351	12	0,888231
2011	1138	13	1,142355
2012	1487	16	1,075992
2013	1484	39	2,628032
2014	1525	11	0,721311
2015	1491	17	1,140174
<b>Total</b>	<b>8476</b>	<b>108</b>	<b>1,27%</b>

I made the statistical analysis of the performed polypectomies conducted during 2010-2015

Which is 108 constituting 1.27% of total No-8476 treated patients in colorectal surgery department of Republican Clinical Hospital.

Incidence according to gender: From the data I collected, I observed that colorectal polyps have a bigger prevalence for men 54.63% to 45.37% women based on data analyzed from 2010-2015 in the colorectal surgery department of Republican Clinical Hospital.

Incidence according to age: Most of patients who have suffered polypectomies were aged between 51-60 years, 36 patients constituting 33.3%, total number of 108 patients.

Territorial spread of colorectal polyps: From the territorial spread of colorectal polyps in Moldova for 2010-2015, I observed the prevalence of colorectal polyps by 56% in the rural areas compared to urban areas by 44%.

The location of colorectal polyps: Based on the medical study records of patients with colorectal polyps in colorectal surgery department of the Republican Clinical Hospital, starting with January 2015-December 2015, I observed that most colorectal polyps are located in the sigmoid area (17 polyps), rectum (10 polyps), in the transverse colon (5 polyps), and in the descending colon (4 polyps).

Surgery techniques applied: I analyzed the techniques applied in 2015 for 17 patients. With a bigger use of the Diathermocoagulation electroexcization technique for 30 polyps out of 36 polyps for 14 patients. (In total 36 patients, 24 were hyperplastic - 66.7% and 12 adenomatous - 33.3%). Small sessile polyps or pedicle up to 1 cm have been removed by the Diathermocoagulation electroexcization method, sessile polyps >1.5-2 cm were removed by Electrofragmentation 2 polyps out of 36 sessile polyps. Polyps >2 cm were removed by injection of saline in the submucous to raise the polyp from the mucous plan and to be excised, technique called mucousectomy, 4 out of 36 polyps for 2 patients were excised

Clinical manifestations: Rectal bleeding- 2, Anemia-2, Constipation -7, Diarrhea-4, Tenesmus - 5, Abdominal pain-12, Abdominal discomfort-5.

### **Conclusion:**

Based retrospective study conducted on a sample of 108 patients with polypectomies conducted in 2010-2015, I found that polyps are prevalent more for men 54.3% than 45.37% for women.

Analyzing the clinical material I determined that colonoscopy is a screening method preferable for symptomatic patients and allows the doctor to inspect the entire colon to detect polyps during colonoscopy and practice polypectomy whenever polyps are detected and retrieve biopsy from the excised polyps for histological examination.

I concluded that the main group of patients in the study conducted by me with polypectomy are older than 40 years. The disease increases with age. Patients with polypectomy aged between 51-60 years is 33.3%.

I have examined the spatial spread of colorectal polyps in Republic of Moldova in the period 2010-2015 and observed prevalence of colorectal polyps by 56% in rural area vs. urban areas by 44%.

Based on the medical study records of patients with colorectal polyps I have noticed that most often localization in the sigmoid are- 47.22%, in rectum-27.7%.

Based on the study I concluded that most common clinical manifestations are: abdominal pain - 32%, constipation - 19%, tenesmus - 14%, diarrhea - 11%.

Rectal bleeding and anemia were found when large polyps were more than 2 cm.

Using more often methods for screening for the colorectal formations for asymptomatic patients between 40-60 years, attesting express stool occult bleeding, FOB test, sigmoidoscopy looming, FCS prophylactic chromoendoscopy, NBI colonoscopy, allows to detect early colon polyps and have excised them to prevent colorectal cancer development.

**Key Words:** colorectal polyps, screening, electroexcision with diatermocoagulation, electrofragmentation, mucousectomy.

## **150. COARCTATION OF THE AORTA IN CHILDREN – IS THERE A CURE?**

**O. Harsan, I. Branea, O.A. Fodor, L.A. Coman**

Scientific adviser: Amalia Fagarasan, MD, PhD, Associate Professor, University of Medicine and Pharmacy Targu Mures, Romania

Coarctation of the Aorta (CoA) is one of the Congenital Heart Defects (CHD) that can lead to heart failure in neonates or be asymptomatic in older children. The clinical outcome depends on the severity of the narrowing as much as the Associated lesions.

**Our purpose** was to follow-up on the evolutionary course of the different types of CoA We analysed clinical and echocardiographical data from patients admitted in the Cardiology III Children Clinic during 2008- 2015 and consulted the intraoperative notes o assess the intervention type. From the 131 patients diagnosed with CoA,65% male and 35% female, with a median age range from 1 month to 1 year, 34 % were patent ductus arteriosus-dependent (PDA), while 66 % were not, 9% of the 131 had simple CoA while 91% had Associated lesions. The data analysis was performed with Microsoft Excel Patients with postoperative recoarctation had a mean residual gradient of 59 as opposed to 24 in patients who did not develop recoarctation. From the 44 who had a PDA dependent CoA, 14 developed arterial hypertension, 16 pulmonary hypertension and 33 had valvular disease postoperatively with a mean residual gradient of 31. From the 65 patients with non PDA dependent CoA, 55 developed valvular disease, 41 arterial hypertension, 14 pulmonary hypertension, 44 left ventricular hypertrophy, 7 had dilated cardiomyopathy, 6 congestive heart failure with a mean residual gradient of 24. The type of intervention performed had small impact on the mean residual gradient. Our conclusions are that a high mean residual gradient can predict a possible recoarctation and the evolution is influenced by the PDA dependance of the CoA.

**Keywords:** coarctation, PDA, CHD

## **151. LAPAROSCOPIC CHOLECYSTECTOMY AND PERMISSIVE HYPERCAPNIC VENTILATION ANESTHESIA: PROSPECTIVE, RANDOMIZED STUDY**

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**Background.** Hipercapnic ventilation during general anesthesia was a disputed topic for researchers during last ten years. However there were observed potential beneficial effects of induced mild hypercapnia during the anesthesia on intraoperative and postoperative outcome: lower necessity in opioids, reducing the rate of wound infections,, accelerated wound healing.

**AIM.** Estimation of the effects of intraoperative induced mild hypercapnia (ETCO<sub>2</sub>=45-50 mmHg), on postoperative recovery after laparoscopic colecistectomy.

**Materials and methods.** Prospective randomized study (normocapnic lot, n=42; hypercapnic lot, n=58), written informed consent. Positive agreement of Ethics Committee. Anesthesia: induction – propofol, fentanyl, maintenance – sevofluran, relaxants – tracrium. Statistics: t-Student, Fisher exact test, Mantel-Cox test and ANOVA.

**Results.** Similar lots in terms of age, BMI, ASA, surgery and hospitalization period. Hypercapnic lot vs. normocapnic lot: length of awakening from anesthesia – median, 15 vs. 20 min ( $\chi^2=12,6$ ;  $p<0,0001$ ); postoperative ileus period – median, 28 vs. 30 hours ( $\chi^2=10,8$ ;  $p=0,001$ ); PONV risk, in favor of hypercapnic lot – OR=0,50 (95CI=0,24-1,05),  $p=0.0695$ . Neurocognitive tests (DCT, DSST, Wechsler, Stroop), similar results for both lots and for the pre and postoperative periods. Study limits: reduced sample, short period of surgery, mild hypercapnia.

**Conclusions:** The results of our research show a reduced period of awake after anesthesia, also a reduced period of ileus, and a minimized PONV risk, after laparoscopic cholecystectomy with induced mild hipercapnia with no hemodynamic and neurocognitive side effects.

**Keywords:** induced hypercapnia, intraanesthetic, postoperative recovery.

## **152. BARIATRIC SURGERY IN A TERTIARY CENTER- ANALYSIS OF AN INITIAL EXPERIENCE (2010-2013)**

**Crisitan Vintila, Calin-Traian Suta, Nicolae Stanciu, Asmaa Carla Barmou**

Scientific adviser: Radu Mircea Neagoe, Associate Professor, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction:** Obesity has increased alarmingly in modern society in particular in more developed countries and it also becomes more common in Eastern-European countries. In order to treat it efficiently, bariatric surgery developed as a stand-alone specialty. In this study we analyze the first 30 patients who underwent laparoscopic sleeve gastrectomy (LSG) in our clinic and follow their evolution on a period of 1 year.

**Material and methods:** Between 2010-2013 in Surgical Clinic number 2 from the Emergency County Hospital of Tirgu-Mures, Romania have been hospitalized and surgical treated a number of 30 patients (20 women and 10 men) who underwent LSG. Demographic features including age and sex, preoperative blood biochemistry, body mass index (BMI) before and after operation, duration of hospital stay, morbidity, mortality and complications were analyzed.

**Discussion results:** The average age of the patients was 44.4 years, the youngest was 20 and the oldest was 62 years old. Their average BMI was 46.06 kg/h<sup>2</sup> with a minimum of 44.94 kg/h<sup>2</sup> and maximum of 60.6 kg/h<sup>2</sup>. We used the ANOVA test to see the weight evolution of the patients and we obtained significant differences with a  $p < 0.05$  while comparing the original weight (G0) and the one at 3, 6, 9 and 12 months after surgery (G3, G6, G9 and G12). Analyzing the comorbidities before surgery we concluded that out of 27 patients, 81.5% (22) were suffering of hypertension and after 12 months 77.3% of them got normal values. Joint pain went away for 16 out of 18 patients. Out of 7 patients with diabetes mellitus 6 were in remission after 1 year.

**Conclusion:** In this study, we obtained similar results with other experienced medical centers which led us to consider bariatric surgery as a standard and stand-alone procedure in our unit.

**Key words:** Bariatric surgery, laparoscopic sleeve gastrectomy, obesity

## 153. COMPARISON OF ULTRASOUND DIAGNOSTICS AND LAPAROSCOPIC FINDINGS IN CASE OF ACUTE ABDOMINAL PAIN IN GIRLS

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**Introduction:** One of the most common reason for a visit to an emergency department of the girls of all ages is abdominal pain. Abdominal pain can develop due to many etiologic factors – both acute and chronic. However, several conditions need to be evaluated and treated in pressing manner, as they Associate with high morbidity and mortality.

**Aims:** To compare ultrasound and laparoscopic findings, and to evaluate the role of early laparoscopy management of abdominal pain in girls in a prospective, randomized, single-institution trial.

**Materials and methods:** The analysis of ultrasound diagnostics effectiveness of acute abdominal diseases Associated with abdominal pain inpatient girl age from 3 to 17 years in Odessa Regional Children's Clinical Hospital has been performed. 171 patients were enrolled in the analysis held from 2010 to 2015yr. Inclusion criteria were – presence of sharp abdominal pain lasting more than 6 hours and less than 5 days, without fever, leucocytosis, or obvious peritoneal signs and uncertain diagnosis after physical examination and baseline investigations. For all girls ultrasound (US) examination of abdominal cavity was performed. Condition of girls were observed in clinic for 3 to 6 hours, if diagnosis still was unclear with routine tests (US data were not taken into account), the laparoscopy was performed. The US data were compared with laparoscopy findings.

**Results and discussion:** During laparoscopy most often-acute appendicitis was seen – 98 girls (57,3%). Other surgical problems were: ruptured corpus of luteal cyst – 11 cases (6.4%), torsion dermoid cyst of ovaries – 2 (1.1%), pelvic primary peritonitis – 5 (2.9%) cyst of broad ligament – 1 (0.6%), echinococcus cyst of larger omentum – 3 (1.7%), pelvic adhesions -2 (1.1%), Meckel’s diverticulitis – 3 (1.8%), large bowel perforation with foreign body (rod for ballpoint pens, swallowed two days before case)– 1 (0.6%). During US in 27.5% (47 patients), no surgical pathology was founded. What was proven by laparoscopy in 45 patients (26,3%), in two cases (1.1%) torsion of ovary was seen. One case (0.6%) ovarioectomy. One case (0.6%), torsion was realised. The indices of informativeness of US method: sensitivity – 95%, specificity – 87%, overall accuracy – 78%, false negative response – 20%, false positive response – 13%, positive predicted value – 87%. Such characteristics of the abdominal ultrasound as noninvasiveness, sufficient informativeness and the ability to perform research in dynamics, lack of radiation exposure to both a patient and staff provide undeniable advantages over the other methods of study. The application of the sonography of abdominal cavity in the clinical practice permitted to improve reliably the results of diagnosis and treatment of patients without any invasion as well as to reduce the incidence of “unreasonable” appendectomies.

**Conclusions.** Sonography of the abdomen is an effective screening method for diagnosing acute surgical diseases in girls with abdominal pain. High operator dependence can be considered as a disadvantage of this method. In addition, due to diagnostic and treatment advantages, laparoscopic surgery is useful for majority of conditions underling unclear abdominal pain in girls. So the comparison of US and laparoscopic findings, and early usage of laparoscopic intrusions gives opportunity to avoid unnecessary surgical aggression in 27.5%. Moreover, 68.0% of patients, surgical problem was revealed and treated in early period. Early laparoscopy reduces the rate of surgical complications. Evaluation of symptoms severity should lead to laparoscopic intrusion if routine diagnostic methods have failed to yield results. A necessity to review some principles of specialists’ training for diversified general surgical hospitals has been appeared. It is expedient for surgeons to complete basic professional retraining with mastering of related specialties, particular ultrasound diagnostics and endoscopy.

**Keywords:** acute abdominal pain, ultrasound diagnostics, endoscopy, laparoscopy, unjustified appendectomy, ultrasound examination of the abdomen, diagnostic algorithm.

## 154. ANTIBIOTIC PROPHYLAXIS IN CESAREAN DELIVERY

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**Introduction:** In reproductive health, caesarean delivery occupies an important place, being the most common surgery in the field. The number of caesarean sections dramatically increases annually, according to the WHO, a caesarean section is recorded in 24.1% of births, in Europe and in 32.2% of total births in USA, in 2014. Although the incidence of maternal mortality and morbidity is about five times higher in caesarean section than due to vaginal birth and puerperal infections after cesarean are in 7 times more numerous than in vaginal birth. This causes a fierce need of a detailed study of puerperal infection prophylaxis according with certain indices. As well, an important issue is to avoid polypragmasy, which conditions a high increase in antibiotic’s resistance each year.



**Study's objective:** The importance of rational use of antibiotic prophylaxis in cesarean delivery, avoiding polypragmasy.

**Materials and methods:** A retrospective study was performed in municipal hospital Nr1, Chisinau, in three obstetrics sections (530 cases) according to questionnaire that includes specific indicators of puerperal infection and medical cards. We divided the total number of cases in two groups: first group includes women who received one dose of cephalosporin antibiotic before skin incision or after umbilical cord clamping (109 cases); in the second group are women who received several doses of antibiotics (421 cases). Statistical analysis was performed in Microsoft Excel. The data mean average value  $\pm$  standard error. The veracity of difference was assessed according to criteria Student, truthful the difference  $p \leq 0.05$ .

**Discussion results:**  $16.16\% \pm 1.17ES$  of women in the first group showed in the first 5 days after birth, any signs of infectious complications like increasing temperature, leukocytosis, redness or wound suppuration, wound's abscess. These indices were recorded in the second group in  $15.81\% \pm 0.56ES$  cases. Analyzing group I,  $13.79\% \pm 0.31ES$  of women who received a single dose of antibiotic 15- 60 minutes before skin incision, submitted evident signs of local infection and  $17, 43\% \pm 1.05ES$  of those who received a single dose of antibiotic after umbilical cord clamping.

These data confirm that preoperative administration of a single antibiotic does not increase the rate of puerperal infection.

**Conclusion:** For the prevention of puerperal infections after an uncomplicated cesarean delivery we should use a single dose of cephalosporin (Cefazolin 1g, intravenously) administered with 15-60 minutes before skin incision.

**Key Words:** caesarean delivery, puerperal infection, antibiotic prophylaxis, polypragma

## 155. THE USE OF METHOTREXATE FOR TUBAL ECTOPIC PREGNANCY

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**Introduction.** Ectopic pregnancy is a severe gynecological emergency, which can be fatal in case of not having a correctly and quickly established diagnosis, as well as an appropriate intervention. According to the data of literature, the incidence of ectopic pregnancy has significantly increased over the last 20 years, it ranks the top in the structure of the acute gynecological diseases, constituting about 47%. Approximately 95-96% of ectopic pregnancy are implanted in different segments of the fallopian tubes (ampullary, isthmus, pavilion, interstitial) and more frequently in the ampullary portion.

**Results.** Methotrexate is the first drug that was prescribed for the treatment of tubal ectopic pregnancy without surgery. It is still the mostly used today. Medicinal treatment with methotrexate is indicated to the patients with uncomplicated ectopic pregnancy, hemodynamically stable, with an initial level of  $\beta$ -HGC  $< 5000$  IU / L, inactivity of fetal heart, the diameter of the fetal egg of  $< 3.5$  cm and having minimal symptoms.

About 35% of women with ectopic pregnancy will meet the criteria for a medicinal treatment. For these women, the treatment with variable-dose of methotrexate therapy is as effective as laparoscopic salpingectomy.

**Conclusions.** Medical treatment with methotrexate is of less efficacy than surgical treatment, but its low cost and good effect on life quality in patients, makes it a good therapeutic option in treatment of tubal ectopic pregnancy.

Although the frequency of ectopic pregnancy has increased in the last 20 years, due of modern and affordable methods of diagnosis and treatment mortality has decreased.

**Key words.** Tubal ectopic pregnancy, methotrexate, treatment.

## 156. BIRTH AFTER IVF: CAESAREAN ONLY ?

**Radu Suzana Ina, Miruna Roxana Dandu, Smaranda Elena Popa, Mihai Stanca**

Scientific adviser: Dr. Molnar Varlam Claudiu, Lecturer, University of Medicine and Pharmacy Targu Mures, No I Obstetrics and Gynecology Clinic, Targu Mures, Romania

**Introduction:** Assisted reproduction technology ( ART )represents a current problem in the treatment of couple sterility ( feminine and masculin). In vitro fertilization ( IVF ) is an advanced method within human assisted reproduction. Being fond of this issue I have initiated this study.

**Object:** The identification of birth assistance modality at the after IVF pregnant women in the casuistry of Clinica Obstetrica – Ginecologie I, Targu Mures

**Materialy and methods:** The work represents a retrospective analytical study during the period between 01.01.2013 – 31. 01.2013 on the casuistry of SCJU Mures, No I Obstetrics and Gynecology Clinic.The inclusion criteria is formed by the assisted birth at No I Obstetrics and Gynecology Clinic,Targu Mures, during birth obtained with IVF. Their report was made at the total number of birth during the year 2013, depending on some parameters: total births 2013: 1095; total births at term: 916; total premature: 179; total vaginal births: 616; total caesarean births: 479. After IVF: total births: 13; total births at term: 6; total premature: 7; total vaginal births: 1; total caesarean births: 12. Inclusion criteria: after IVF and assisted birth at No I Obstetrics and Gynecology Clinic, Targu Mures.

**Results:** From the total number of births after IVF:: 7,69 % vaginal births; 92,30 % caesarean births; 46,15 % at term; 53,84 % premature. Caesarean indications because of obstetrical causes: 6 ( 50% ) and human assisted reproduction ( IVF ): 6 (50% ). The rate of vaginal births after IVF: 7,69 % from the total number of assisted birth during the period of the study.

**Conclusions:** 1.In the study group, the caesarean birth represents a rule almost. 2. The rate of vaginal births with IVF ist lower despite the multiple services dedicated to this problem 3.The prematurity ist higher possibly because of the multiple pregnancy.

## 157. BIRTH OF FETUSES WITH HEART DEFECTS: WHEN CAESAREAN?

**Smaranda-Elena Popa**

Scientific adviser: Molnar Varlam Claudiu, MD, PhD, Senior Lecturer in Obstetrics and Gynecology, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction:** Congenital heart defects are the most common type of congenital anomaly and represent all structural changes of the heart at birth, the result of a disorder in the cardiovascular embryonic development. Progress in ultrasound imaging techniques allowed the antenatal diagnosis of congenital heart defect. Antenatal detection is standard in reducing neonatal mortality. The aim of our study is to identify ways to assist at birth in pregnant women with fetuses with congenital heart defects, antenatal detected.

**Materials and methods:** The paper represents a retrospective study conducted at the Obstetrics and Gynecology Clinic No.1 in the TgMures Emergency County Hospital, between 01st January-31th December 2013. Inclusion criteria included births assisted pregnancies with fetuses with heart defects. The reference was done to the total number of births, depending on many parameters: vaginal/caesarean, mature/premature, the main indication of caesarean section.

**Results:** From the record we have identified 18 cases of pregnancies with fetal heart defects. Of all births of fetuses with hearts defects, 14 (77.8%) were mature, 4 (22.2%) premature, 17(94.5%) were completed by caesarean section and only one (5.5%) was natural birth. Of all births by caesarean 8(47%) cases had obstetric problems and only 9(53%) were due to congenital heart defects.

**Conclusions:** In the group studied, delivery by Caesarean section was almost a rule. Antenatal detection rate is increasing because the means of diagnostic (ECHO) and multidisciplinary teams (obstetrician gynecologist, a cardiologist pediatrician, neonatology, genetics, cardiovascular surgeon). Most of the cases diagnosed antenatal allowed carrying the pregnancy to term.

**Keywords:** congenital heart defect, antenatal, caesarian

## 158. ADDITIONAL BLOOD COLLECTION METHOD

**Mihai Savin, Anastasia Andreev**

Scientific adviser: Nicolae Curlat, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Today, millions of lives are saved due to blood transfusion. The main source of blood for transfusion are donors. According to “National Blood Transfusion Centre” our country is supplied about 80% with donor blood but daily in RM about 100 patients need blood transfusion. So the problem today consists in deficiency of necessary amount of donated blood for providing patient’s requirements. This problem can be solved in two ways 1. By increasing blood donors 2. To find other, non-traditional sources of blood for transfusion.

**Materials and methods:** Analysis of experimental studies made by S.S Iudin in, “Посмертная кровь в аспекте трансфузиологии” К. С. СИМОНЯН

**Discussion results:** Nontraditional possibilities for blood collection to ensure additional requirements of medical institutions.

From the literature we established:

1. In 1928 the surgeon Victor Samov, in experiments on animals demonstrated that in the first 2-6 hours after sudden death the blood keeps its curative abilities.

2. 86 years ago, on 23 March 1930, the surgeon Sergei Iudin first succeeded in transfusing blood to a young men with hemorrhagic shock, 400 ml of blood collected from a man of 60 years, who died of heart failure.

3. A study (morphological, bacteriological, toxicological) performed in a laboratory of “Sklifosovsky” institute in Moscow, determined that cadaver blood in case of sudden death (asphyxiation, acute cardiovascular insufficiency) which is collected in the first 2-8 hours after death preserves its curative abilities. Until the 60s of XX century in the USSR were transfused cadaveric blood.

**Conclusion:**

1. Cadaveric blood in first 2-8 ore after sudden death can be transfused to patients with severe hemorrhage.

2. Minimal difference between cadaveric blood and donated one show that this can be an additional solution for blood supplement.

3. Cadaveric blood (Defibrinated) does not coagulate and don't require substances for preserving it.

4. From one cadaver we can obtain 3000 ml of blood and can be used as for massive blood transfusion as for preparation of blood components (red blood cells, frozen plasma, albumin)

5. Nowadays we have a large number of traffic accidents, violent incidents, pathologies followed by blood loss. As well there are a big number of surgeries that require blood transfusions (resection of liver, transplant of organs). In this cases cadaveric blood can be used in addition to donor blood.

6. Juditial, ethical and psychological problems can be solved through a collaboration with judicial organs, public health, media from RM.

**Key Words:** cadaveric blood, donor blood, S.S.Iudin

## 159. DIAGNOSIS AND TREATMENT OF PATIENTS WITH POSTOPERATIVE PERITONITIS

**Adrian Negura**

Scientific adviser: Alexandru Iliadi, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** the importance and the relevance of the study is based on the high incidence of postoperative peritonitis among postoperative complications, long time of hospital care and high rate of postoperative morbidity despite the applied complex treatment.

**Materials and methods:** the study group included 43 patients with postoperative peritonitis (14 after surgical procedures on the organs of the supramesocolic space, 23 in the inframesocolic organs, 6 on the organs of the pelvic region. The range of patient's age varies from 30 to 71 years with the prevalence of 51-60 years (32.5%). The gender prevalence was slightly increased among feminine gender (53%), the most frequent causes of postoperative peritonitis were the anastomotic leakage(25%) and breakdown of the digestive suture(27%).

The diagnosis of postoperative peritonitis was made by mean of clinical symptoms and the most common were: abdominal pain (95%), fever (95%), bloating of the abdomen (83%). From laboratory findings the most common signs were found by: blood analysis (leukocytosis, increased sed rate); ultrasound investigation (increased amount of peritoneal fluid); x-ray findings (pneumatosis intestinalis and pneumoperitoneum). The diagnosis was confirmed by laparocentesis with laboratory examination of peritoneal fluid.

Therapy of postoperative peritonitis was complex consisting of antimicrobial medication, detoxifying therapy, surgical therapy. Antibiotic therapy started with broad spectrum antibiotics and was replaced after microbiological findings with a narrow spectrum antibiotic. Surgical treatment consisted of adequate source control realized by large median laparotomy and lavage of the peritoneal cavity with placement of drains. All this led to a successful outcome in 32 patients (74.4%). Postoperative mortality was 11 patients (25.5%), determined mostly by septic shock (4 patients), MODS (3 patients) and others (4 patients).

**Conclusion:** Despite the progress obtained in the fields of diagnosis, antimicrobial therapy, intensive medical care and advance surgical treatment, the morbidity of patients with postoperative peritonitis was of 25.5% of patients. Thanks to evolution of diagnostic imaging methods such as (CT,MRI) the diagnosis of postoperative peritonitis is not a difficult task. The mean efforts should be targeted on: finding new prediction factors which would predict the unfavorable evolution of postoperative period; reevaluation and completion the methods of treatment which will allow us to decrease the morbidity of the patients with on-going postoperative peritonitis.

## 160. THE DIAGNOSIS AND TREATMENT OF COLON CANCER

**Stela Popa**

Scientific adviser: Ghidirim Nicolae, MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Background.** Colon cancer is a major health problem in people aged over 50 years. In Republic of Moldova the incidence of colon cancer is 15.9 to 100000 population; the mortality is 31.2 to 10000 population. The most important diagnostic method is colonoscopy with biopsy. The majority of the patients undergo surgical treatment, but some of them suffer postoperative complications. Our objective is to evaluate the present situation regarding the diagnosis and treatment of colon cancer in Republic of Moldova.

**Materials and methods.** In our study were analysed 63 patients with colon cancer. We collected data from the patients' medical records regarding: age, geographic distribution of the patients, localization of the tumor, degree of differentiation, stage, surgical intervention, postoperative complications and outcome.

**Results.** 87% of the patients were aged over 50 years. 27% of the patients live in Chisinau (urban medium). The tumor is localized in the sigmoid region of the colon in 43% (27 patients), in the transverse-22%, in the descendent-14%, in the ascendent-11%, in cecum-10%. Most patients are affected by tumors with G2 degree of differentiation-48% (30 patients). The most frequently encountered stages were T4N0Mo (27%), T3N0Mo (19%), T4N1Mo (14%); TisN0Mo was found only in 1 patient (1.58%). Radical surgery was performed in 39 patients (61.9%), while palliative interventions-22 patients (34.9%); exploratory laparoscopy was performed with diagnostic purpose in 2 patients (3.17%). Postoperative complications occurred in 8 of patients (12.7%), out of this 4 patients (6.34%) died in the postoperative period.

**Conclusion.** Our findings indicate that most frequently were detected in late stages. A great proportion of the patients undergo palliative intervention. 12.7% suffered postoperative complications. Taking into consideration this result, we believe that in order to achieve a better prognosis in patients it would be necessary to take measures aimed at improving screening and earlier diagnosis of colon cancer. This would ensure a high efficiency of the surgical treatment and would decrease the number of postoperative complications.

**Keywords:** colon cancer, colonoscopy, surgery, stage, postoperative complication.

## 161. ANALYSIS OF FACTORS THAT LEAD TO CONVERSION DURING LAPAROSCOPIC CHOLECYSTECTOMY

**Victor Oprea, Victor Schiopu, Mihai Bolocan**

Scientific adviser: Rojnoveanu Gheorghe, MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Laparoscopic cholecystectomy is considered the “gold standart” for the surgical treatment of gallstone disease. However, this method is not risk-free, and in certain situations there is the need to convert to open cholecystectomy, the aim is to minimize the postoperative complications. Nowadays, the overall conversion rate is 1,5%-10% [Bender SJ, 2001].

**Materials and methods.** Analysis of 49 cases of conversion to open cholecystectomy out of 2620 laparoscopic cholecystectomies performed in our clinic from 2010 to march 2016. The F/M ratio was 23/26, the mean age was 60,15 (range: 26–88). The analyzed criteria were: the time period between the onset of acute cholecystitis and operation, the duration of gallbladder disease, intraoperative morphopathologic status and the results of histologic examination.

**Results.** The rate of conversion from laparoscopic to open cholecystectomy was 1,87% (n=49). Urgent interventions were performed in 37(75,51%) cases, scheduled – 12(24,48%). The postoperative diagnosis of acute cholecystitis was found in 31(64%) cases, while chronic cholecystitis in 18(36%). The deliberate conversions were 39(79,59%) cases, while conversions of necessity were 10(20,4%), p<0.01. The deliberative factors that lead to conversion were: billiary fistulas – 10(20,4%), plastron – 9(18,36%), destructive inflammatory process (perivesical abscess, gangrenous cholecystitis) – 9(18,36%), scleroatrophic gallbladder – 4(8,16%), purulent cholangitis – 2(4,08%), choledocholithiasis – 1(2,04%), pancreonecrosis – 1(2,04%). Conversion of necessity were due to: iatrogenies – 4(8,16%), hemorrhage – 3(6,12%), bile leakage – 3(6,12%). The results of histologic examinations revealed: acute forms – 26(53%), chronic – 21(42,85%), adenocarcinomas – 2(4,09%) cases.

**Conclusions.** The deliberative causes were the main reasons for conversion to open cholecystectomy. We consider that surgical attention should be focused on the remaining 1/5 of cases of conversions of necessity. The assessment of morphopathological particularities and surgical possibilities in these cases would minimize the intraoperative incidents and postoperative complications.

## POSTERS

### 162. POST TRAUMATIC AND POST SURGICAL SCIATIC NEUROPATHY

**Natalia Cucos, Alina Stoian, Oleseca Catarau**

Scientific adviser: Grigore Verega, MD, PhD, Professor, Chair of Department of Orthopaedics and Traumatology, Clinical aesthetic plastic surgery and reconstructive microsurgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Sciatic nerve neuropathy surgical related is an unpleasant event with repercussions on the patient and the surgical team. The precise localization and extension of the nerve lesion, the

determination of nerve continuity, lesion severity, and fascicular lesion distribution are essential for assessing the potential of spontaneous recovery and thereby avoiding delayed or inappropriate therapy. The aim of this study is to identify and detail posttraumatic and postoperative neuropathies.

**Material and Methods:** We identified 11 patients diagnosed with the posttraumatic sciatic nerve palsy, including postoperative one. We examined clinical data, trauma's information, surgery, symptoms and medical records.

**Discussion results:** From the group of patients involved in the study 9 patients were men. Patients' age ranged from 21 to 63 years old. We determined that 5 cases were during trauma or after surgery, and in 6 cases – at distance. Our data find their confirmation in literature data published by the authors: Farrell CM, Springer BD, Haidukewych GJ, Morrey BF.

**Conclusion:** Knowing the complications allows finding the preventive measures that are targeted towards monitoring the intraoperative neurophysiological complex depending on performed procedure.

**Key-words:** sciatic, neuropathy, posttraumatic, surgery

## 163. LAPAROSCOPIC TREATMENT OF OVARIAN CYSTS IN CHILDREN AND ADOLESCENTS

**Diana Madan**

Scientific adviser: Anna Mishina, MD, PhD, Department of Surgical Gynecology, Institute of Mother and Child, Chisinau, Moldova

**Introduction:** Ovarian cysts in children and adolescents are rare and mostly benign. The aim of this study was to evaluate the laparoscopic management of the ovarian cysts in this age group. Laparoscopic surgery has been accepted as the gold standard in the management of ovarian cysts.

**Materials & Methods:** During the last 15 years were performed 201 surgeries to children, all related to ovarian cysts in the age group between 8 and 18 years ( $15.62 \pm 0.15$ ). The surgical approach was the laparotomy in 138 cases (68.7%) and the laparoscopy in 63 patients (31.3%).

**Results:** A total of 63 patients with average age of  $15.8 \pm 0.25$  years (ranged from 9 to 18) were treated by laparoscopy. There was registered a significantly higher rate of unilateral mass compared to the bilateral ovarian lesions (93.7% vs. 6.3%,  $p < 0.001$ ). According to the ultrasound and radiology data the maximum diameter of the cyst was of  $8.07 \pm 0.4$  cm (95% CI: 7.2-8.8) and the min was  $6.6 \pm 0.3$  cm (95% CI: 5.9-7.3). By means of the laparoscopic approach was performed: cystectomy in 44 cases (67.7%), partial resection of the ovary in 13 cases (20%), adnexectomy in 7 cases (10.8%) and ovariectomy one case (1.5%). The ovarian-preserving surgery was a significantly predominant procedure (57/65 (87.7 %) vs. 8/65 (12.3 %)). In 19 (31.7%) cases was used the combined laparoscopic technique and extracorporeal enucleation of the cysts. Histopathological report revealed: simple cyst (n=45, 69.2%), ovarian dermoid cyst (n=5, 7.7%) cystadenoma (n=13, 20 %), endometrioma (n=2, 3.1%). There were no operative or postoperative complications.



**Conclusion:** This study has demonstrated that the laparoscopic ovary-preserving surgery and the use of the extracorporeal enucleation of the cyst is a safe and easy method of treatment of ovarian cysts in children and adolescents with short-term hospitalization, the minimum of analgesic dose and a good cosmetic result.

**Key words:** ovarian cysts, laparoscopic surgery, children

## 164. DIAGNOSIS AND TREATMENT OF ESOPHAGEAL DIVERTICULA COMPLICATIONS

**Ina Didic, Piotr Gorodetchi**

Scientific adviser: Gheorghe Anghelici, PhD, Professor, Chair of Surgery Department II, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The modern diagnosis and treatment of the complications caused by esophageal diverticula represent a major and little-studied problem of nowadays thoracic surgery. Generally, the actuality of this problem is closely related to its rare incidence within the pathology of alimentary duct, and particularly within the pathology of esophagus. The incidence of esophageal diverticula occurs at a frequency of 0,01% - 0,11% in the USA. Usually, it befalls between the 7th and 8th decade of a man life, and rarely before 40. This disease more frequently affects people living in Northern Europe. The appraisal of complex diagnosis principles of complications caused by esophageal diverticula. The appraisal of optimal methods of surgical treatment; and analysis of esophageal diverticula treatment results; and its complications in the early postoperative period.

**Materials and methods:** We present the clinical material which includes an analysis of 32 patients diagnosed with esophageal diverticula treated at The Republican Clinical Hospital, in Thoracic Surgery during 2010-2015.

**Discussion results:** The clinical state of these patients was dominated by severe dysphagia symptomatology, presented at 26 of the patients (81.25%), 6 (18.75%) patients had regurgitations. 13 of the patients (40%) presented symptoms of dyspnea, retrosternal pain and weight loss. The patients' state at the moment of hospitalization was assessed as being critical at 8 patients (25%), and medium severity at 24 patients (75%).

The diagnosis of esophageal diverticula was made on the base of objective and subjective data, laboratory data, and methods of invasive and non-invasive investigation. The diagnosis was assessed after a digestive barium swallow examination of all 32 patients (100%) and in combination with upper digestive endoscopy of 8 (25%) patients.

The strategy of surgical treatment of esophageal diverticula of all 32 patients consisted in diverticulectomy with surgical approach depending on the diverticulum localization. Postoperative evolution was favorable. The postoperative examinations which included meticulous anamnesis and imagistic examinations (digestive barium swallow, upper digestive endoscopy) had good results; it means improvement of symptomatology and a definite recovery of the esophageal wall.

**Conclusions:** Esophageal diverticulum, even if is a “benign” disease requires complex surgical procedures, encumbered with significant mortality and morbidity, the postoperative complication are redoubtable and difficult to control. The diagnosis is assessed by subjective complaints and easily confirmed thanks to imagistic examinations such as digestive barium swallow and upper digestive endoscopy. Surgical indications must be carefully set after a thorough clinical and laboratory examination.

**Keywords:** esophageal diverticula, complications, diagnosis, treatment.

## 165. CONTEMPORARY DIAGNOSIS AND TREATMENT OF SEVERE PANCREATIC NECROSIS COMPLICATIONS

**Piotr Gorodetchi, Ina Didic**

Scientific adviser: Gheorghe Anghelici, PhD, Professor, Chair of Surgery Department II, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The last years are characterized by a considerable increase of frequency of acute pancreatitis which ranks third (6-9 %) out of the number of patients with acute surgical pathology of abdominal cavity, yielding to appendicitis and acute cholecystitis. Destructive forms of acute pancreatitis are considered one of the most difficult problems of gastroenterological surgery because of its high mortality rates, ranging between 25 – 50 % and more. The appraisal of complex diagnostic principles of severe pancreonecrosis. The appraisal of optimal methods of surgical treatment; and analysis of severe pancreonecrosis treatment results; and its complications in the early postoperative period.

**Materials and methods:** We present the clinical material which includes the analysis of 22 patients diagnosed with severe pancreonecrosis treated at The Emergency Medicine Institute, in Septic-purulent Surgery during 2012-2015.

**Discussion results:** The clinical state of these patients was dominated by pain syndrome, presented at 22 patients (100%), being the first clinical symptom. Afterwards, the dyspeptic syndrome appeared at 18 patients (81 %). The patients’ state at the moment of internment was assessed as being extremely critical at 6 (27%) patients, critical at 10 (45) patients, medium severity at 6 (27 %) patients.

The diagnosis of pancreonecrosis was made on the basis of objective and subjective data, laboratory data, and methods of invasive and non-invasive investigation. Pancreonecrosis diagnosis was assessed based on ultrasound imaging at 12 patients (54,4%), based on computer tomography with intravenous contrast material at 8 patients (36,3%), based on laparoscopy at 2 patients (9%).

The strategy of surgical treatment of complications caused by pancreonecrosis of all 22 patients consisted in necro-sequestrectomy, drainage of the lesser sac, bursoomentostomy at 21 patients (95%). Cholecystectomy was conducted in 6 patients (27%).

**Conclusions:** The diagnostic algorithm of patients suffering from pancreonecrosis will compulsorily include clinical and biochemical analysis, ultrasound, computer tomography. Also, patients require special surgery treatment, necro-sequestrectomy and drainage of the lesser sac.

**Keywords:** pancreatic necrosis, diagnosis, treatment.

## **166. STANDARDIZED FOAM FOR SCLEROTHERAPY OF VARICOSE VEINS OF LOWER LIMBS: IS IT BETTER?**

**Cristina Ursoi, Valeria Turcan**

Scientific adviser: Vasile Culiuc, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Nowadays the foam sclerotherapy is becoming the top choice of the majority of vascular surgeons for varicose disease treatment, although a standardized method of producing SF has not been chosen yet.

**Aims:** To appreciate the difference between the half-life of the sclerosant foam (SF) obtained by using different types of syringes connected by a two-way connector, and the one obtained by using the Kreussler Pharma Easy Foam Kit.

**Methods:** In CCGS laboratory of USMF, „Nicolae Testemitanu” an experimental study was performed. By using Trombovar 3% and Etoxisclerol 3%, together with room air, different brands and volumes of syringes, siliconized and unsiliconized syringes, a two-way connector and Kreussler Pharma Easy Foam Kit, SF was obtained. The liquid-to-gas ratio was 1:4, with 20 passages.

**Results:** The SF half-life varied insignificantly when using both Trombovar 3% and Etoxisclerol 3%, as well as using Kreussler Pharma Easy Foam Kit did not increase the SF half-life, compared to the syringes connected by a two-way connector. The volume of the syringes used in the experimental study, had no influence on the SF half-life. However, the unsiliconized syringes seem to potentiate the durability of the SF.

**Conclusion:** SF formation is greatly influenced by the choice of the types of syringes, also unsiliconized syringes are to be preferred for obtaining of SF.

## **167. SURGICAL TREATMENT OF AFTER SCARS EXCISION WOUNDS IN CHILDREN**

**Olesea Prisacaru, Ion Prisacaru, Valentin Bernic**

Scientific adviser: Eva Gudumac, MD, PhD, Professor, Academician, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The ability of the primary wound healing, and hence the probability of formation of scar with favorable characteristics depends on how modern principles of surgery are implemented.

**Materials and methods:** During last 3 years (2013-2015), in PMSI "Emilian Cotaga" Clinic, in the Department of burns, plastic and reconstructive surgery, 162 surgeries of scar excision and plasty with local tissues were performed.

**Results and discussions:** Principles of surgical treatment of wounds are: (1) Preservation of blood supply in the tissue forming the wound wall at a satisfactory level. Solving a specific surgical task is always associated with the separation of tissues, and in plastic surgery very often with the formation of skin-fat flaps. In cases when tissue blood flow does not have a distinct axial direction, the alimentation of the flap is considerably reduced. (2) Accurate approximation of the wound walls, especially of the skin edges. This presumes the presence of a relatively smooth and adequate, in terms of dimensions, to each other wound surfaces, which allows closing the wound or without cavities formation with a smooth surface in the area of sutures. (3) Fixing the wound edges in tight contact during the entire period of scar formation. (4) Minimal action of the sutures on the skin surface. If separate sutures are applied too tight, next to the suture develop small foci of necrosis, and the scar take a rail road appearance. This significantly impairs the external characteristics of the scar, and often makes it impossible for effective correction.

**Conclusion:** It is necessary to apply the stitches so that after the operation would not remain any significant cavities in the wound that will increase the risk of infection. For this, first, wound layers must be precisely connected to the corresponding layers (muscle, fascia, subcutaneous fat, skin). The second important principle of wound closure: skin edges should be very close approximated by applying deep, subcutaneous stitches. This allows to close the wound with cutaneous sutures with a minimum tension, and thus with the lowest exposure of skin surface to sutures.

**Keywords:** injury, scar, tissue, sutures.

## **168. BARRET ESOPHAGUS. ETIOPATHOGENESIS. DIAGNOSTIC AND THERAPEUTIC ASPECTS.**

**Alexandru Predenciuc**

Scientific adviser: Gheorghe Ghidirim, Academician of Academy of Sciences of Republic of Moldova, Professor, Head of "Nicolae Anestiadi" Surgery Chair, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Barrett's esophagus is a attractive pathology in gastroenterology for two fundamental reasons. Although its true prevalence is unknown, due largely asymptomatic cases, the widespread introduction of endoscopy allows us to assert that Barrett esophagus is a relatively frequent. Esophagus surgery presents particular technical difficulties compared to other organs, because of its position, difficult -to reach and relation with a number of vital organs.

**Purpose and objectivities:** studying the risk factors, the oldness of the pathology, studying subjective and objective clinical signs, endoscopic and radiological analyse.

**Materials and methods:** This research is based on analysis of 154 patients with gastro-esophageal reflux disease and Barrett esophagus, examined in Public Healthcare Institution, Republican Center of Medical Diagnosis, during 2014 year. The patients were divided into 2 groups: first with 140 (90%) patients with gastro-esophageal reflux disease and the second that included 14 (10%) patients with Barrett esophagus.

**Results:** The clinical examination included 154 patients to which was revealed: GERD, esophagitis and Barrett esophagus. The male sex was predominant and represented 104 (67.5%) patients and female sex represented 50 (32.4%) patients.

The clinical signs were determined by heartburn that was revealed at 130 patients (92%) from the first group and 2 patients (14%) from the second group. The second sign most commonly found was belching that was revealed at 20 patients from the first group (14%) and 9 cases from the second group (64%). The endoscopic examination was the basic examination of all patients. At 103 patients from all (70%) was found evident signs of incapacity of inferior sphincter of esophagus, and namely the hiatal cardia, and its opening to a light air blast, but at 43 patients was not found these signs, despite of presence of clinical and endoscopic sign of esophagitis reflux. At 48 patients (32.9%), endoscopy set nonconfluent island hyperemia at lower region of the esophagus, which corresponded to the first level of reflux esophagitis after Savary Miller. At 57 patients (39%) was revealed hyperemia and confluent mucosal erosions that corresponded to the second level of reflux esophagitis after Savary-Miller. The third level after Savary-Miller was found at 29 patients (19%) and the fourth level at 12 patients (8%). The radiological examination was performed at 106 patients from which 104 patients was with gastro-esophageal reflux disease, and 2 patients with Barrett esophagus. At patients with GERD-78 cases was found with radiological signs of reflux, but at 24 patients was not found any signs.

**Conclusions:** Barrett esophagus was found mostly at male sex, the average age being 45-50 years. The most common clinical signs were heartburn 89% cases, followed by epigastric pain and belching-78%. At 103 patients from all (70%) was found evident signs of incapacity of inferior sphincter of esophagus, and namely the hiatal cardia, and its opening to a light air blast, but at 43 patients was not found these signs, despite of presence of clinical and endoscopic sign of esophagitis reflux.

## **169. SINUS-SAVING MODIFICATION OF EVERSION CAROTID ENDARTERECTOMY AS A METHOD OF STABILIZATION PERIOPERATIVE ARTERIAL HEMODYNAMICS**

**G.A. Treiger**

Scientific adviser: Fokin A. A., MD, Professor, Department of Surgery, Faculty of Additional Vocational Education SUSMU South Ural State Medical University, Russia

**Introduction:** In surgery of the carotid arteries, from all known techniques of carotid endarterectomy, eversion technique has several important advantages. It helps to avoid the longitudinal arteriotomy, patch angioplasty and reduces the length of operation. However the standard version of it is attended with damage of carotid sinus nerve, which has a negative impact on perioperative arterial hemodynamics with a tendency to hypertension. Our goal is to develop an operative technique that could let us avoid intersection of the carotid sinus nerves, which reduce the risk of complications thanks to a more manageable blood pressure, due to decreased sympathetic influence on the regulation of vascular tone.

**Materials and methods:** The research included 193 patients operated on carotid arteries in Chelyabinsk Regional Clinical Hospital since 2012 to 2015. Groups are even in age, sex, initial

neurological and cardiac status and contralateral blood flow. The first group included 98 patients with eversion technique with the intersection of the carotid sinus nerves. The second group included 95 patients who had been used a modified technique, with saved carotid sinus nerves. On the 1st and 4th day after surgery the state of the autonomic regulation was assessed by analyzing heart rate variability.

**Discussion results:** In the group of patients with saved carotid sinus nerve on the 1st day after surgery was more than noticeable decrease sympathetic influence on the rhythm, with a tendency to restore autonomic regulation on the 4th day.

**Conclusion:**

1. Obtained results show lower activity of the sympathetic and the higher activity of the parasympathetic system in the group with non-damaged carotid sinus nerves.
2. Application glomus-saving technology in carotid surgery reduces the risk of patient complications Associated with postoperative hypertension.

**Key words:** eversion carotid endarterectomy, carotid sinus nerve, sinus-saving modification.

## **170. CHARACTERISTICS OF PLACENTAL COMPLEX IN ABRUPTIO PLACENTAE**

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Abruptio placenta (AP) is one of the causes of massive bleeding in 2<sup>nd</sup> and 3<sup>rd</sup> trimester of pregnancy, causing high maternal mortality and fetal morbidity rates.

**The purpose of the study:** Determining the characteristics of placental complex in case of premature separation of a normally situated placenta in pregnant women with gestational age more than 22 weeks.

**Materials and Methods:** A prospective study included 50 cases of AP that occurred in two tertiary level maternity hospitals in Moldova during the years 2015-2016. The comparison group consisted of 50 obstetrical cases without AP. Groups were matched by sex, term of pregnancy and age. Totally 100 placentas were subjected to organometric and macroscopic analysis.

**Results:** The study included a number of 50 women who gave birth after 22 weeks of pregnancy. Several variations in placental morphology were observed in 65,6% cases in the main group and only 16,0% cases in the control group ( $p < 0,05$ ) like: single lobed discoid placenta, bilobed placenta, placenta with succenturiate lobes, circumvallated placenta and circummarginate placenta. Abnormal umbilical cord insertion (eccentric, marginal or velamentous) was identified in 64% of cases compared to 10% in the control group, ( $p < 0.001$ ). Placental venous lakes were observed in 50%, compared to 18% in the

control group, ( $p < 0.001$ ). More frequently the hematoma was localized retroplacental or marginal - 82.0% of the cases and only 18.0% - central.

**Conclusion:** The examined placentas from women with AP, revealed evident organometric differences in comparison with placentas obtained from normal deliveries: variation in placental morphology with atypical shapes of the placental disc, abnormal umbilical cord insertion, increased presence of placental venous lakes, signs of placental infraction with blood clots of different size.

### **Placental complex in abruptio placentae**

Macroscopic analysis by organometric and macro measurements established that the lesions characteristic to abruptio placentae, especially of the retroplacental hematoma, occurred with preexisting vicious placentation presented by pathological insertion of the umbilical cord, pathological forms of placenta disc, placenta marginata and placenta circumvalata, and the presence of aneurismal caverns between cotyledons with ischemic infarcts in adjacent areas; statistically significant changes were obtained in the study group ( $p < 0.05$ ).

## SURGERY SECTION II

### ORAL PRESENTATIONS

#### 171. THE IMPORTANCE OF METABOLIC EVALUATION IN PATIENTS WITH NEPHROLITHIASIS

**Pavel Balica**

Scientific adviser: Pavel Banov, University Assistant, Urology and Surgical Nephrology Department  
*Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Nephrolithiasis has a significant social and financial burden. However, the impact of this disease can be diminished by the appropriate metabolic evaluation of recurrent stone formers, in order to identify the risk factors for recurrent stone events. The significance of biochemical screening in stone formers has been a debated topic. This study was conducted to investigate the rate of metabolic abnormalities in our recurrent kidney stone formers so that this information would help in assessing the value of biochemical screening in our practice. Purpose: To investigate the frequency of metabolic abnormalities in patients with nephrolithiasis.

**Material and methods:** Over a fifteen-month period, recurrent kidney stone disease patients had one random blood specimen and one random 24-hour urine collection, analyzed for metabolic abnormalities. Serum was checked for calcium, uric acid, urea, phosphate and creatinine. The urine was measured for volume, pH, urea, creatinine, calcium, magnesium, oxalate, citrate, crystals and urine culture.

**Results:** Out of a total of 110 patients, 85 (77,27%) had some urinary or blood abnormality. The highest number of abnormalities was in urine. Low volume 37 (43,52%), hypercalciuria 34 (40,08%), hyperoxaluria 20 (23,52%), hyperuraturia 21 (24,14%) and positive urine culture 18 (21,17%) were the main urinary abnormalities. Elevated serum creatinine in 9 (10,58%) patients was the commonest blood abnormality. Females had significantly higher frequencies of urinary infection (44,68% vs 12,5%,  $p < 0,001$ ), low urinary volume (46,81% vs 20,0%,  $p < 0,01$ ), hyperoxaluria (36,17% vs 10,0%,  $p < 0,01$ ) and hypocitraturia (36,17% vs 0%,  $p < 0,001$ ).

**Conclusion:** A high frequency of urinary metabolic disorders in recurrent nephrolithiasis highlights the significance of metabolic evaluation in this category of patients. Most of the biochemical abnormalities, if treated, can considerably lower the recurrence rate of recurrent stone disease, one thus concludes that for rational, efficient and specific urolithiasis management, biochemical screening and particularly urinary screening should be practiced. Such diagnostic evaluation would help in providing precise treatment and efficient prophylaxis.

**Keywords:** metabolic evaluation, recurrent nephrolithiasis



## 172. EVALUATION OF HEMODYNAMICS DURING THE FORMATION OF THE ANASTOMOSIS DURING RENAL TRANSPLANTATION

Ludmila Trusova, Maxim Makotnykh

Scientific adviser: Boris Yaremin, MD, University Assistant, Samara State University

**Introduction.** Today, the need for kidney transplantation has increased steadily. As we all know is impossible without transplantation of the donor organ Number of young patients is steadily growing, growing and having a history of infection transmissivnye. Currently, patients need to provide this type of aid is satisfied by 17 %. One solution to this problem is to use maximum pool of deceased donors as a resource for getting kidney. Optimize transplantation technique. Forming an anatomically correct arterial anastomosis during renal transplantation - one of the ways of such optimization.

**The aim** is to explore options for the anatomy of the iliac artery graft ( branch sheathe iliac artery), is used to evaluate the possible options for their use in the revascularization of renal graft using computational methods hemodynamics.

Materials and methods 1. Morphological stage of work was performed on the anatomical material ( 35 cases) Otpreparovannye materials PPA branches covered antialiasing powder scanned using 3D - Scanner Solutionix Rex Scan 3c post-processing in the application Leos.diametr utochnalsya vessels using morphometry. The resulting transformed polygonal model - optimized polygonal structure, reduced the number of polygons in Autodesk Maya application. 2. Radiological profile of the work carried out on the basis of the regional archive medical images of the Samara region. The study selected studies of the abdomen and pelvis without pathology of blood vessels made with intravenous contrast. Total produced 75 studies. DICOM data reconstruction was carried out with the help of the product BEAM-C, developed by a team of Samara State Medical University in the framework of the work under a state contract

3. The data loaded into the anatomy Flow Vision application (OOO "Tesis", Moscow) Hemodynamic parameters were calculated using the "Breeze" computing cluster SSMU (14 teraflops)

**Results.** The results of variant anatomy of the iliac arteries match ADACHI classification (1926) for the AL Talawah-Soames Three-dimensional models of all variants of the anatomy of the iliac arteries and performed their anastomozirovanie virtual models of renal bed. The findings of various embodiments of forming anastomoses allow appreciated that embodiments VPA relevant in predicting the blood flow volume in the graft. In the case of option I, IIA, IIB, IIIA options WPA uses for the formation of arterial anastomosis is a good prognostic value. In other cases, the more favorable is the use of the PPA to form an anastomosis.

**Conclusions.** Using options vascular structure is important in the choice of ways to revascularization of renal graft. Necessary clinical data evaluation computer hemodynamics. Virtual modeling vascular reconstruction in this zone can be effective in determining the affinity of therapeutic strategies.

## **173. MANAGEMENT AND SURGICAL OUTCOMES IN PATIENTS WITH LATERAL SKULL BASE PARAGANGLIOMAS**

**K.M. Diab, D.S. Kondratchikov, O.A. Pashchinina, A.G. Zukhba, A.E.Mikhalevich, A.A. Hijazi, E.G. Varosyan**

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Lateral skull base paragangliomas (LSBPs), also known as glomus jugulare tumors, are rare slow growing tumors with high vascularization, frequent invasion of the temporal bone, into the posterior cranial fossa, and the upper neck. Depend on their location, size, and extent, they have been classified by Fisch into four categories.

Treatment of LSBPs still remains controversial. Radiosurgery in some cases as the primary treatment revealed high rates of tumor growth control. However, radical resection of these tumors with preservation of the lower cranial nerves is the treatment of choice. Good visualization of the jugular bulb, internal carotid artery, parapharyngeal space and lower cranial nerves is relevant to completely remove of the tumor classes C and D. This can be achieved through infratemporal fossa type A and petro-occipital trans-sigmoid approaches.

In our retrospective study, we present surgical treatment, follow-up management, and long-term results for 16 patients with LSBPs treated at a single center at period from 2014 to 2016. 4 patients with class C paragangliomas underwent surgical treatment via infratemporal fossa approach type A.

**Materials and methods.** Endovascular occlusion of LSBPs is performed by superselective catheterization of the supplying branches and transarterial embolization. During the surgery sternomastoid muscle was detached from mastoid and the muscle was dissected along its anterior border. The major vessels of the neck (common carotid artery, internal (ICA) and external carotid arteries and internal jugular vein) and cranial nerves (VII, IX, X, XI and XII) are dissected. Sigmoid sinus is skeletonized, and the retrofacial cells are removed. Facial nerve was decompressed from geniculate ganglion to the stylomastoid foramen and then rerouted anteriorly. Subtotal petrosectomy is done. Tumor with jugular bulb are removed using bipolar cautery. We used neuromonitoring to identify the VII, X, XI cranial nerves. Also we used electromagnetic navigation system to facilitate orientation while removing tumor tissue along petrous segment of the ICA and from infralabyrinthine space.

**Results.** The use of the proposed approach allowed to obtain good functional results, managed to maintain the function of the lower cranial nerves. The function of the facial was preserved at 2-3 degrees on the scale House-Brackmann in the postoperative period. Recurrence of the tumor has not occurred in the postoperative period (maximum observation period about 12 months).

**Conclusion.** Management of lateral skull base paragangliomas requires a good knowledge of the temporal bone and cervical as well as intracranial anatomy to evaluate the extent and progression of the tumor and the type of surgical approach required. Improved surgical techniques have considerably decreased surgical morbidity. The combined studiosness of neck surgeon, otosurgeon, and interventional radiologist is mandatory for successful surgical treatment of LSBPs.

**Keywords:** paraganglioma, infratemporal fossa type-A.

## 174. DIFFICULT CASES OF COCHLEAR IMPLANTATION

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**Background.** Currently there is a tendency to addition of cochlear implantation indications (CI) in patients with inner and middle ear malformations, cochlear ossificans and Meniere's disease. Also, CI after canal wall down mastoidectomy is difficult clinical case in ear surgery.

**Aim.** Improve postoperative auditory performance of patients with profound sensorineural hearing loss (deafness), and complicated pathology of the inner or middle ear through the optimization of cochlear implantation surgical tactic.

**Materials and methods.** 42 patients with profound sensorineural hearing loss who underwent CI were analyzed. Cases were divided into four groups: 12 patients with cochlea ossification after meningitis (group 1), 19 patients with inner ear malformation (group 2), 9 patients underwent canal wall down mastoidectomy (CWDM, group 3) and two patients with Meniere's disease (group 4). Surgical techniques differ depending on the pathology. In all cases were performed intraoperatively implant telemetry and stapes reflex registration. Postoperatively the mastoid cavity was controlled.

**Results.** Stapes reflex was registered intraoperatively in 8 patients of the first group. Number of input electrodes depended on the degree of cochlea ossification and the type of inner ear abnormality. The CSF leak occurring in 10 cases of inner ear anomalies was successfully repaired and completely stopped. The using of proposing CI technique in patients after canal wall down mastoidectomy gives good results of performed cavity healing, no cases of electrode extrusion or protrusion in the long term follow up period. Patients with Meniere's disease and bilateral sensorineural hearing loss who underwent simultaneous operations (endolymphatic sac drainage and cochlear implants), showed satisfactory results audioverbal rehabilitation and marked decreasing of vestibular symptoms.

**Conclusion.** Using the proposed surgical techniques allow to maximal electrode insertion into malformed and ossified cochlea. The performed tunnels and cartilage electrode covering in postoperative cavity of patients after CWDM prevent cases of extrusion and protrusion of the electrode. Simultaneous CI and endolymphatic sac drainage gives a good results in patients with late stage Meniere's disease and profound bilateral sensorineural hearing loss

**Key words:** cochlear implantation, inner ear malformations, cochlear ossificans, Ménière's disease, tympanomastoidal cavity

## 175. DIAGNOSIS AND TREATMENT ALGORITHM FOR INFLAMMATION OF THE RHINOSINUSOTUBAL AREA

**Anna Bervinova**

Scientific adviser: Galina Lavrenova, First Pavlov State Medical University of St. Petersburg, Russia

**Introduction:** Inflammation of rhinosinusotubal area is a clinical situation, characterized by inflammation in the paranasal sinuses, nasal cavity, nasopharynx and Eustachian tube, in which dripping of infected discharge from the nasal cavity towards the Eustachian tube leads to the inflammation and obstruction of the latter. This complex of symptoms significantly impairs the quality of life. That's why it is so important to improve diagnostic methods and develop a treatment algorithm for such simultaneous pathology of the paranasal sinuses and Eustachian tube.

**Material and methods:** A total of 27 patient (19 women, 8 men), aged from 34 to 55 years, were enrolled in our study. Main complaints were prolonged autophony and hearing loss (10 days and longer), which did not improve after the standard treatment. All patients underwent the following examination: ENT examination, rigid endoscopy of the nasal cavity and nasopharynx by endoscopes 0 and 30 grade, cone-beam 3D Sirona middle and upper faces areas to examine the condition of paranasal sinuses and audiological assessment (pure tone audiometry, tympanometry).

**Results:** After a thorough examination of patients we found that all of them had different forms of sinusitis. Acute bilateral sinusitis was diagnosed in 56% of patients, 34% - had acute unilateral sinusitis and the last 10% - hemisinusitis. According to the results of pure tone audiometry 78% of patients had insignificant hearing loss, 10% had 1-2 grade conductive hearing loss, 12% had mixed hearing loss 2-3 grade with prevalence of conductive component. According to the study results we developed a diagnostic and treatment algorithm for the inflammation of rhinosinusotubal complex.

In addition to standard diagnostic methods it is necessary to use: plain X-ray or cone-beam computed tomography of the paranasal sinuses, audiological examination (pure tone audiometry, tympanometry), endoscopy of the nasopharynx. The treatment should include drainage of involved sinuses and restoration of the Eustachian tube function. This can be achieved by maxillary sinus puncture with instillations of antibacterial solutions and Eustachian tube catheterization. Pathogenetic treatment with mucoactive drugs, including herbal remedies, elimination therapy and hyposensitizing drugs for mucociliary clearance improvement is also of a great importance.

**Conclusion:** We recommend the use of plain X-ray or computed tomography of the paranasal sinuses for all patients with inflammation of rhinosinusotubal area to exclude possible "covert" sinusitis.

**Keywords:** Inflammation of rhino-sinostubal area, diagnosis and treatment, algorithm.

## **176. EARLY CLINICAL RESULTS WITH THE CORTICAL BONE TRAJECTORY PEDICLE SCREW FIXATION OF THE LUMBAR SPINE, USED FOR THE SURGICAL TREATMENT OF THE DEGENERATIVE SPONDYLOLISTHESIS**

**Serghei Borodin, Alexandru Sumleanski**

Scientific adviser: Bodi Aurel, MD, PhD, Professor, Department of Neurosurgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Low bone mineral density in patients undergoing lumbar spinal surgery with screws is an especially difficult challenge because poor bone quality can severely compromise the

maximum achievable purchase of the screws. Wide posterior approaches to the lumbar spine, exposing lateral to the facet joints and onto transverse processes causes an additional degree of muscular damage and blood loss not present with a simple laminectomy. A cortical bone trajectory (CBT) of the pediclescrew has been proposed as an alternative to prevent screw pullout and decrease the morbidity associated with the wide posterior approach to the spine. The CBT screw follows a lateral path in the transverse plane and caudocephalad path in the sagittal plane. This technique has been advocated because it is reportedly less invasive, improves screw–bone purchase and reduces neurovascular injury.

**Materials and methods:** Between January 2016 and March 2016, seven patients (2 men and 5 women) underwent transforaminal lumbar interbody fusion (TLIF) using the cortical bone trajectory instead of traditional pediclescrew fixation for degenerative spondylolisthesis of the lumbar spine. The cortical screws were placed with the assistance of the BrainLab Curve navigation system and the Siemens Artis Zee multi-purpose system.

**Results:** The average patient age was 63,5 years (range 55 – 72 years). Prior to surgery, all patients underwent MRI, CT and DEXA scans. Low vertebral bone mineral density (osteoporosis and osteopenia) was found in three cases. The L3 to S1 levels were instrumented. For the L3 and L4 pedicles, we used 5,5x35 mm polyaxial screws, for L5 - 6,5x35 mm screws. For S1 we used a different trajectory of the screw, oriented to engage with the high-density bone by penetrating the S1 superior endplate. This insertion technique allowed a larger 7,5 x 40 mm screw to be used, thus increasing the stability of the instrumentation construct. We obtained good postoperative results in all seven cases. Considerable improvement in both back and leg pain was achieved. In terms of complications, one case of pedicle fracture at the insertion site on the facetectomy side occurred. No dural tear, superior facet violation or screw misplacement were encountered. The mean operation time, radiation exposure and blood loss was significantly less than in the traditional lumbar fusion surgery.

**Conclusion:** We present early clinical results of a new technique that appeared to have a better fixation profile in laboratory testing. The CBT represents a good alternative option to obtain fixation for the lumbar spine, even in case of low bone quality.

**Keywords:** cortical bone trajectory, pedicle screw, degenerative, spondylolisthesis

## 177. COMPLICATIONS AND THEIR PREVENTION AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY (ESWL)

**Andrei Bradu**

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**Introduction:** Approximately 80-90% of reno-ureteral stones have for treatment indication Extra Corporeal Shock Wave Lithotripsy (ESWL). Like a therapeutic procedure, extracorporeal lithotripsy may be accompanied by complications. Most of these are minor complications, but in a lower percentage, major complications can appear.

**Materials and methods:** The study was made in the Urology and Nephrology Department of the Republican Clinical Hospital, during January 2015 and November 2015, on a group of 120 (65 male and 55 female, mean age 41,3 years) patients diagnosed with reno-ureteral lithiasis and treated with ESWL. The dimension of the calculi has varied between 0,6 and 15 mm. Were analyzed the complications after ESWL.

**Results:** Hematoma is the most serious complication of extracorporeal lithotripsy, with a low incidence (0,83%). Acute pyelonephritis (3,33%) occurs either due to a pre-existing urinary infection, or by the release of germs located into the calculi during fragmentation. Flanc pain (98,3%) was the most common symptom was on the side were was made de ESWL. The pain disappear after 2-3 days with non-steroidal anti-inflammatory drugs. „Steinstrasse” (5.83%) was another complication and was resolved by administration of conservative treatment.

**Conclusions:** ESWL is a safe method to treat stones when proper indications are followed. But when we have the complication after ESWL we must as soon as possible to find this complications and to treat as well.

**Keywords:** urolithiasis, ESWL, treatment

## 178. THE TREATMENT OF SUPERFICIAL BLADDER TUMORS WITH BCG

**Alexandru Braniste, Mariana Braniste, Mihai Stanca, Ioan Serban Fanfareț**

Scientific adviser: Daniel Porav-Hodade, MD, PhD, Senior Lecturer, Urology Clinic of Targu Mures County Hospital, Romania

**Introduction:** Bladder cancer is the 5th most common type of neoplasm regarding to incidence. Smoking is the primary risk factor in developing bladder cancer. Previous studies have shown that approximately 70% of the bladder tumors are nonmuscle invasive bladder cancer (NMIBC). Mycobacterium bovis bacillus Calmette-Guerin (BCG) is currently the standard conservative treatment of NMIBC.

**Material and methods:** We performed a retrospective study, conducted during 6 years from 2010 to 2016 at the Urology Clinic of Tg-Mures County Hospital with a total of 78 patients diagnosed with NMIBC. We analyzed the following variables: age, gender, histopathological result, the number of BCG infiltration, in the first six weeks one every week, at three and six months, cystoscopy and the rate of relapse, the main criteria of evaluating the results of the treatment.

**Results:** In the study that we conducted we had a number of 15 women (19,2%) and 63 men (80,8%). At the end of the first six weeks 89,7% of the patients completed all six infiltrations, 70,5% at 3 months and only 60,3% at 6 months. The results of cystoscopy were normal at 70,5%, 25, 6% did not have a cystoscopy performed. Patients were called for investigations first at three months, six months in the first year after finishing the therapy and then every year. In 63,8% of the patients who had the 6 month therapy, no relapse tumor was found in favor of 14,9% with relapse tumor.

**Conclusion:** The treatment with BGC infiltration is a conservative treatment with a high success rate.

**Keywords:** bladder cancer, BCG, NMIBC, therapy

## **179. THE TREATMENT OF THE DIAPHYSEAL BONES DEFECTS USING THE METHOD OF INDUCED MEMBRANE (PRELIMINARY STUDY)**

**Dumitru Chelban**

Scientific adviser: Grigore Verega, MD, PhD, Professor, Department of Orthopaedics and Traumatology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The management of segmental long-bone defects is a challenge. The literature has described many techniques, but each is fraught with specific difficulties. Masquelet's technique of induced membrane is now a reference surgical procedure for the treatment of complex lesions requiring bone regeneration. The concept of induced membrane was introduced by Alain-Charles Masquelet in 1986. The Masquelet method consists in formation of an induced membrane by a foreign body which has secretory properties, influencing positive on the regeneration and strengthening of the cancellous bone grafts. Aim: to investigate the morphological properties and characteristics of induced membrane which was modeled in an experimental group of rabbits in order to assess and to optimize the effectiveness of the Masquelet method in the clinic.

**Materials and methods:** Experimental work was done using a group of rabbits (n=10) with the weight  $5,5\pm 0,5$ kg and the age 5 months. The investigation had 3 steps. The first step of the study consisted in creating the bone defect, filling it up with an antibiotic-impregnated cement spacer and stabilizing it with a plate. The second step of the study was 21 days later, consisting in incision of the induced membrane, removing the spacer and filling up the space with cancellous bone chips collected from iliac crest. At this stage we sacrificed 5 rabbits in order to perform the histological and morphological examination. At the sixth week we switched to the third step – ablation of metal construction and the radiological control exam. At this stage we sacrificed 5 rabbits to study the morphological aspect of the healed bone.

**Results:** The histo-morphological examination performed at the 21 days demonstrated the presence of an inflammatory process characterized by neutrophilic, eosinophilic elements and regeneration's elements – fibroblasts. Also, it was determined a pseudo synovial metaplasia and a villous hyperplasia with formation of an synovial epithelium on the internal face of the induced membrane. The histo-morphological exam performed at the 6 weeks has demonstrated the continuation of the neoforming process and of the bone modelation, the regeneration process prevailed over the inflammatory one. The morphological aspect was formed by agglomerations of fibroblasts, myoblasts and collagen and numerous vascular buds, that promote a good neoangiogenesis and osteogenesis of the bone.

**Conclusion:** The morphological study demonstrated an intense process of cell proliferation and differentiation, which highlights the biological role of induced membrane by foreign body with secretion of the osteoinductive factors, promoting the vascularization and corticalization of the bone. The

Masquelet method is an effective method that allows getting the consolidation of the bone in case of critical size bone loss.

**Keywords:** Masquelet technique, bone defects, induced membrane technique.

## **180. ADHERENCE TO TYROSINE KINASE INHIBITORS TREATMENT IN PATIENTS WITH CHRONIC MYELOID LEUKEMIA: SINGLE INSTITUTION EXPERIENCE**

**Adrian-Stefan Chiuzan, Mihai Stanca**

Scientific adviser: Smaranda Demian, University of Medicine and Pharmacy, Targu Mures, Romania

**Introduction:** Treatment adherence is an important element in the management of every chronic disease. For the patients with chronic myeloid leukemia (CML) treated with tyrosine kinase inhibitors (TKI) the remarkable benefits brought by the medication may be significantly undermined by the patient low adherence to treatment.

**Materials and methods:** We conducted a qualitative and observational study, which was performed between October 2015 and December 2015, on patients diagnosed with CML under treatment with TKI at I-st Medical Clinic-Hematology, Clinical Emergency County Hospital Targu Mures, Romania. The sampling of patients was simple-random, consisting of 32 patients with CML-chronic phase, >18 years old, with >12 months of treatment with TKI, median age was 55 years, 67.47% of the patients were males and 62.5% of the patients were treated with imatinib 400 mg/QD. Physician-reported adherence (observed adherence) was evaluated, for the last 3 months, using the Proportion of Days Covered (PDC) method and patient-reported adherence (experienced adherence) using a self-reporting questionnaire with 10 items regarding adherence to treatment; demographic data were collected too. The following statistical analysis was used: descriptive statistic, Fisher Exact test, unpaired t-test.

**Results:** PDC was <0.9 (low adherence) in 3 patients and 0.9-1 in 5 patients (medium adherence); Total lower adherence (low + medium) was 25%, patients being younger ( $p=0,044$ ), but adherence was not correlated with gender, TKI treatment length, urban/rural place of living ( $p>0.05$ ). 46.88% of the patients admit omission of doses, 73.33% of them attributing it to forgetfulness (33.33% rarely forgot, 40% sometimes), the other 26.66% to medication adverse effects or to a sense of feeling sick.

**Conclusion:** PDC estimation of adherence was more optimistic compared to experienced adherence. Due to the unavoidable errors Associated with patient self-report, the rate of non-adherence is probably underestimated. Because the adherence to chronic medication in general and to TKI in particular is multifactorial, further quantitative, multiparameter and multicenter studies are necessary.

**Keywords:** chronic myeloid leukemia, treatment adherence, tyrosine kinase inhibitors.



## 181. THE MANAGEMENT OF PATIENTS WITH POLYCYSTIC KIDNEY DISEASE TREATED WITH PROGRAMMED HEMODIALYSIS

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Scientific adviser: Adrian Tanase, MD, PhD, Professor, Department of Urology and Surgical Nephrology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Polycystic kidney disease (PKD) is the most common potentially life-threatening monogenic disorder in humans, characterized by progressive development and expansion of fluid-filled cysts in the kidneys and other organs. The progressive evolution towards chronic kidney failure, focuses patients straight to profile clinics and dialysis center, that requires great expense for medical care. PKD is not just an public health problem but also actual scientific subject because of genetics were discovered the PKD etiopathogenetic mechanism.

**Materials and methods:** The objectives are to describe clinical and laboratory particularities at PKD patients with chronic renal insufficiency, treated with hemodialysis. Studying general data, clinical parameters (kidney size, period of treatment with hemodialysis), uremic intoxication, the degree of anemia, electrolyte disturbances and the role of hemodialysis in treatment at patients with PKR were found following results: were examined 20 patients (75% women, 25% men) the mean age - 51.4 years, mostly from rural area - 13 patients versus 7 patients from urban environment. Length of stay to hemodialysis is 4,35 +/- 3,7 years. The kidneys size are: left kidney - 20,56 cm<sup>2</sup>, right kidney - 19,39 cm<sup>2</sup>. Hemoglobin - 8,93 +/- 1,27 g/dl (at initiating therapy) and 10,7 +/- 1,27 g/dl (during the treatment). Hematocrit - 25,22 +/- 4,4 % vs 30,85 +/- 4,2 %. Red blood cells - 2,64 +/- 0,13 x 10<sup>12</sup>/L vs 3,79 +/- 0,56 x 10<sup>12</sup>/L. Urea (32,8 +/- 6 mmol/l), creatinine (1030 +/- 38 umol/l) at initiating therapy, decrease during treatment: urea (22,3 +/- 4,4 mmol/l), creatinine (749 +/- 32,3 umol/l). Potassium from - 5,7 +/- 0,6 mmol/l to 4,7 +/- 0,5 mmol/l. Sodium from - 137,9 +/- 3 mmol/l to 146 +/- 5,4 mmol/l. Calcium from - 2,3 +/- 0,4 mmol/l to 2,4 +/- 0,28 mmol/l. Phosphorus from - 2,69 +/- 0,5 mmol/l to 1,99 +/- 0,4 mmol/l.

**Conclusions:** The treatment with hemodialysis of patients with PKD allowed them to survive, live support-by correcting anemia, electrolyte disorders, hyperazotemia and parameters influencing hyperazotemia. PKD with End Stage Renal Disease (ESRD), requires treatment with dialysis, which one have a contribute at sustainable contingent survival. To ensure a suitable treatment being on dialysis, it is necessary a continuous monitoring of patients, evolving diuresis, urea, creatinine, hemoglobine, hematocrit, red blood cells, electrolytic dynamics. Hemodialysis scheduled treatment contributes to survival, as well at preventing of major complications of hemodialysis patients.

**Keywords:** PKD, cysts, hemodialysis.

## 182. CHRONIC RHINOSINUSITIS: CONTEMPORARY METHODS OF DIAGNOSIS AND TREATMENT

**Cumpanici Cristina**

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**Introduction:** The rhinosinusitis is a primordial health issue, which frequency is increasing with the increase of allergic rhinosinusitis, that leads to major expenses for the whole society. One of the reasons, why it's important to pay attention to this disease is represented by the great impact it has toward the lower airways and the pulmonary parenchyma. Purpose: the target of this article is to introduce in the journal the new diagnostic and treatment procederes of the chronic rhinosinusitis, analysing the advantages and disadvantages of every therapeutical procedere from the section of: Functional Surgery, Phonoaudiology and Otorhinolaryngological Rehabilitation.

**Materials and methods:** The retrospective study of 721 patients, who suffered from chronic rhinosinusitis (with polyps or without), rebelled to standard drugs therapy, to which the endoscopic treatment was carried out. The information, on which this research was based, is represented in the papers of clinical observations of the patients and in the operator's protocols.

**Results:** The retrospective study was made in the section of Functional Surgery, Phonoaudiology and ORL recuperation in the IMSP SCR during the following time: 05.02.2015 - 02.02.2016. There are 721 patients with the diagnostic of chronic rhinosinusitis (with or without polyps), that had had the surgical rhinosinusal endoscopical intervention. The endoscopic interventions were: endoscopic polypectomy, maxilar antrostomy right or left, etmoidotomy anterior\right\left\bilateral, the bipolar cauterisation of the inferor nasal cornets, the ultrasonographic desintegration of the nasal inferior cornets, partial or total conhtomie with electrocoagulation.

**Conclusions:** After analysing this study, was determined that cronic rhinosinusistis affects predominantely the adults, with a peak at 45-54 years, more oftenly among men (57%). The most frequent surgical rhinosinusal endoscopic intervention made in the section of Functional Surgery, Phonoaudiology and ORL recuperation in the IMSP SCR is the endoscopic polypectomy, reaching in 2014 (38.4%) and in 2015 (49.51%) form the total number of endoscopical interventions.

**Key words:** chornical rhinosinusitis, endoscopy, laser, ultrasound, radiofrequency

## 183. PECULIARITIES OF SURGICAL TREATMENT IN TROCHANTERIC FRACTURES

**Vitalia Elpujan**

Scientific adviser: Vitali Chirilae, University Assistant, MD, PhD, Orthopedics and Traumatology Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Trochanteric fractures are common for elderly and young patients. Around 50% of hip fractures are the trochanteric ones. The average age of the patients with this type of fracture is 75-79 years old. The purpose of this study was to evaluate the treatment of trochanteric hip fractures with different surgical techniques. Treatment goals for most of these patients included early mobilization with restoration of the anatomic alignment of the proximal part of the femur and the maintenance of the fracture reduction.

**Materials and methods:** This prospective study includes 52 patients with trochanteric fractures, 15 men and 37 women hospitalized in the 2-nd department of the Clinical Hospital of Orthopedics and Traumatology, Chisinau, from January 2014 to March 2015. All the patients were treated surgically. The average patient's age was 69 years, the youngest one was of 18 years old and the oldest one was of 83 years old. Using the Evan's system of classification, 10 patients had an Evans II, 6 patients had an Evans III, 14 patients had an Evans IV and 22 patients had an Evans V. In our study patients were treated using mainly 2 methods: 24 patients with trochanteric fractures were treated using 95° blade plate and 22 patients using hip arthroplasty. Other implants were used as follows: Dynamic Hip Screw at 2 patients, Gama Nail at 2 patients and Dynamic Compression Screw 1 patient, and 130° blade plate at 1 patient.

**Results:** The research was based on 52 medical cases. The hip arthroplasty was performed in patients over 70 years, with a marked degree of osteoporosis and unstable trochanteric fractures. The hip arthroplasty in trochanteric fractures was made using the following types of prosthesis: Zimmer Total Cimented - 2 patients, PAVI-ATLAS Total Uncimented – 4 patients, Zimmer cemented bipolar – 10 patients and Austin Moore – 6 patients. All the implants were well accepted and none of patients had significant difficulties while sitting or lying.

**Conclusion:** In our study the surgical treatment remains the method of choice in the treatment of trochanteric fractures and it is welcomed to be performed, although it is difficult to make any type of internal fixation technically. Hip replacement is a successful procedure for the elderly persons with osteoporosis and unstable trochanteric fractures. The use of hip arthroplasty (total or hemiarthroplasty) in the treatment of trochanteric fractures made possible to accelerate patient's mobilization and movement, therefore we have maximized the patient's functional recovery.

**Key words:** Trochanteric fractures; hip arthroplasty; internal fixation.

## 184. THE INFLUENCE AND IMPACT OF THE LOCAL AND GENERAL ANESTHETICS ON PATIENTS WITH NEUROLOGICAL DISEASES

**Ruslan Faina, Doina Ropot**

Scientific adviser: Diana Boleac, MD, PhD, Assistant Professor, Department of Anaesthesiology and Reanimatology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** In the medicine practice anesthesia is an induced, temporary state with one or more of the following characteristics: analgesia (relief from or prevention of pain), paralysis (extreme muscle relaxation), amnesia (loss of memory), and unconsciousness. Several surgical treatments can be employed for the patients with neurological disorders, such as multiple sclerosis, Guillain-Barré syndrome, Parkinson's disease, Alzheimer disease and spinal cord injury. It is possible that anesthesia related complications are induced in these neurologically complicated patients in the postoperative period. Respiratory dysfunction and autonomic nervous system dysfunction are most common in this population. Respiratory muscle weakness and bulbar palsy may cause aspiration pneumonia. Sometimes, postoperative ventilatory support is mandatory in these patients. Autonomic nervous system dysfunction may cause hypotension secondary to postural changes, blood loss, or positive airway pressure. Patients with motor neuron disease should be considered to be vulnerable to hyperkalemia in response to a depolarizing muscle relaxant. Although preoperative treatment guideline for most neurologic disorders has not been reported to lessen postoperative morbidity, knowledge of the clinical features and the interaction of common anesthetics with the drug therapy is important in planning intraoperative and postoperative management.

**Materials and methods:** Performing general anesthesia in patients with preexisting neurologic or neuromuscular disease remains controversial. However, studies of significant size to confirm or support the safety of regional anesthesia in these patients continues to remain scarce. Specific guidelines regarding the use of anesthesia techniques in the setting of neurologic disease are difficult to define because of these limitations. Therefore, the goal of this chapter is to review several of the more common neurologic disorders that an anesthesiologist may encounter and outline what information currently exists to help guide the use of general anesthesia.

**Results:** Every year, millions of people affected by disorders of the central nervous system (CNS) undergo various diagnostic, therapeutic and surgical procedures requiring administration of anesthetic agents. Anesthetics exert their anesthetic, amnesic and analgesic effects by acting on multiple neuronal membrane proteins in the CNS. While some of the causal anesthetic targets have been identified, a large number of anesthetic targets remain unknown. The consequent longterm effect of anesthetic agents on expression of these various molecular targets has been implicated in mediating potentially long-lasting adverse effects.

**Conclusion:** The selection of appropriate anesthesia drugs and protocol is mandatory, especially in individuals with pre-existing central nervous system disorders, so as to maximize anesthesia efficiency, avoid occurrence of adverse events, and ensure patient safety. This review aims to summarize and consider the effects and potential risks of commonly used anesthetic agents in patients with compromised CNS function. We provide a comprehensive review of the established as well as the

implicated effects of anesthetic agents on the elderly as well as on the pathology and progression of common neurological conditions.

## **185. THE DIAGNOSTIC ROLE OF ULTRASOUND IN SINONASAL PATHOLOGY**

**Oana Alexandra Fodor**

Scientific adviser: Adriana Neagos, MD, PhD, Associate Professor, Otorhinolaryngology, University of Medicine and Pharmacy of Targu Mures, Romania.

**Introduction:** The rhinosinusal pathology represents one of the most frequent diseases in Otorhinolaryngology. The ultrasonography investigation methods applied to the anterior facial sinuses are frequently used to diagnose, especially as a screening test for nasosinusal pathology. They rely on the reflection of ultrasonic beams of the targeted organ, respectively on the analysis of the reflected beams. The sinusal ultrasonography especially addresses to the anterior facial sinuses, the maxillary sinuses, the anterior ethmoidal sinuses and the frontal sinuses. It does not apply to the posterior ethmoidal cells, respectively the sphenoidal sinuses which are a part of the posterior facial sinuses. The objective of the study is to demonstrate the usefulness of ultrasonography in current rhinology examination, for ambulatory evaluation of patients with inflammatory rhinosinusal pathology.

**Material and methods:** In the study, the group of patients with inflammatory rhinosinusal pathology were subjected to nasal endoscopy afterwards to rhinosinusal echography. B mode ultrasonography was used utilizing the soft tissue convex probe. Patients suffering of chronic and acute rhinosinusitis as well as other inflammatory sinusal pathologies underwent ultrasonography investigations.

**Results:** The clinical and ultrasonographical examination represented the main method of ambulatory investigation for patients suspected of acute and chronic sinusitis. The average age of patients was 56 years, 40.75% of them were female and 59.25% male, 97.54% suffered of sinusitis and 2.46% of other sinusal pathologies. 28.39% of the patients that underwent ultrasonography were ulterior investigated using sinusal computer tomography (CT) scan.

**Conclusion:** Sinusal ultrasonography represents a screening method in diagnosing rhinosinusal pathologies. For a complete and complex diagnosis this method should be followed by a CT scan.

**Keywords:** ultrasonography, computer tomography, rhinosinusitis

## **186. OPHTHALMOLOGIC MANIFESTATIONS OF ZIKA VIRUS INFECTION**

**Lilia Gorcenco, Cristina Revenco**

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**Introduction:** Zika virus is a mosquito-borne flavivirus transmitted mainly by infected *Aedes aegypti* mosquitoes. These can also transmit dengue and chikungunya virus and are found throughout most of North, South and Central Americas including some parts of the US.

Objectives: to evaluate the ocular findings in infants with microcephaly Associated with presumed intrauterine ZIKV infection globally.

**Materials and methods:** This study is based on analysis of statistics from countries affected by the virus Zika. A detailed clinical history was obtained, including the prenatal and postnatal history and maternal systemic history.

**Results:** The ocular lesions consisted of focal pigment mottling and chorioretinal atrophy with a predilection for the posterior pole, especially the macular area, as well as optic disc abnormalities. No signs of active uveitis or vasculitis were observed. The current data suggest the possibility that even oligosymptomatic or asymptomatic pregnant patients presumably infected with ZIKV may have microcephalic newborns with ophthalmoscopic lesions. The frequency of eye lesions in the world are: retina and chorioretinal atrophy (54,7%); optic nerve abnormalities(37,1%); bilateral iris coloboma (6,1%); lens subluxation (2,1%).

**Conclusion:** In summary, congenital infection due to presumed ZIKV exposure is Associated with vision-threatening findings, which include bilateral macular and perimacular lesions as well as optic nerve abnormalities in most cases. This study can help guide clinical management and practice, as we observed that a high proportion of the infants with microcephaly had ophthalmologic lesions. Infants with microcephaly should undergo routine ophthalmologic evaluations to identify such lesions. In high-transmission settings, such as South America, Central America, and Brazil, ophthalmologists should be aware of the risk of congenital ZIKV-Associated ophthalmologic sequelae.

**Keywords:** Zika virus, microcephaly, the ocular lesions

## **187. CHILDREN NASAL SEPT DEVIATION: CONTEMPORARY METHODS OF DIAGNOSIS AND TREATMENT**

**Mirela-Veronica Iovdii**

Scientific adviser: Mihail Maniuc, MD, PhD, Professor, Department of Otorhinolaryngology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Deviation of the nasal septum is the most common malformation, such that over 75% of world population presents septum deviation from the midline. Our target is however the pathological deviation, when it causes obstruction of nasal passages with the side effect of poor ventilation of the nose, sinuses and pharynx, causing sinusitis repeated otitis etc. The present study makes an attempt to review its incidence and its Associated pathology, having as a purpose determining the risk factors and the initialization of better treatment timing, a contemporary and optimally effective one, as well as addressing the postoperative conduit.

**Materials and methods:** A retrospective study was conducted in the period between 2013-2015, when 275 children were investigated for nasal septum deviation, the IMSP treated at the Institute Mother and Child Clinic "Emilian Cotaga". Targeted by this were the children aged 1-18 years.

**Results:** In this study I have divided all patients into four age categories, the highest incidence was found for cases of ages between 16-18 years, in the number of 127 patients and 46%. I have taken into consideration the presence of one or more symptoms of the four that were studied (headache, nasal obstruction, wheezing, fever) susceptible to give a rhinosinusi's pathology. What about the sex distribution, we can mention a prevalence of male gender in all the years of research in number of 193 patients and 70%. Elective is the surgical treatment in the deviation of the nasal septum, because of drug treatment is often administered improperly and secondary inducing to a drug hypertrophic rhinitis.

**Conclusion:** The most common presentation in overall patients were nasal obstruction 80% and headache 50%. Nasal septal deviation was more prevalent in males. Nasal obstruction was the most common presenting complaint in all over types of nasal septal deviation. So, early diagnosis and intervention can avoid the related complications and thus help normal life and learning.

**Keywords:** nasal sept deviation, diagnosis, septoplasty.

## 188. METHODS OF CULTIVATION OF SKIN FIBROBLASTS AND KERATINOCYTES IN VITRO

**Tatiana Malcova, Diana Cirimpei**

Scientific adviser: Viorel Nacu, MD, PhD, Professor, Laboratory of Tissue Engineering and Cells Culture, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Replacement of skin has long been the ultimate task for surgeons facing skin-resurfacing challenges such as thermal burns and chronic ulceration. After data world statistics the thermal injury frequency in children varies from 3,4 to 36,0% and in adults from 5,6 to 10,0%, fatal outcomes are recorded in 4,9–14,5%. In Republic of Moldova during the period 2006–2013 frequency of thermal trauma ranged between 178-82 cases per 100,000 population, with a significant decrease in recent years; the general mortality decreased too, from 6,3 to 5,0% in adults and from 2,5% to 1,4% in children. It's noted the risk of death depends on the total area of affected skin - for burns over 30% TBSA lethality reaches 31-54%, and it is not usually possible to cover the entire burns with autologous grafts, and another alternative cover is needed as tissue-engineered skin replacement: cultured autologous/allogeneic keratinocyte grafts, cultured autologous/allogeneic fibroblast grafts, autologous/allogeneic composites, acellular collagen matrices etc. The main objective of this study are studying and determining the optimal methods of in vitro cultivation of fibroblasts and keratinocytes for burned patients.

**Materials and methods:** In the present study, we developed procedures for establishing confluent layers of cultured human fibroblasts on the surface of gelatin scaffold. The culture methods for propagation of keratinocytes obtained from human skin were developed too.

Fibroblasts were isolated from normal human tissues and then cultured in nutritive medium that contained growth factors necessary to sustain cell growth and an antibiotic/antifungal mixture to prevent culture contamination. The cells' growth and proliferation were evaluated by culture examination in phase-contrast microscope. In normal circumstances, fibroblasts appeared as spindle elongate cells with clear cytoplasm.

**Results:** The study showed that by cultivation of isolated skin dermal cells in an adequate nutritive medium in a month can be obtained a confluent layer of fibroblasts that completely cover the culture dish. The final concentration of the cells in the culture was  $5,0 \cdot 10^4$  cells/cm<sup>2</sup>. Also study demonstrated that gelatin scaffold is necessary to growth of fibroblasts by ensuring better cells attachment to the flask surface. Keratinocytes are involved in the intricate mechanisms of initiation, maintenance, and completion of wound healing; also they stimulate fibroblasts to synthesize growth factors, which in turn will stimulate keratinocyte proliferation in a double paracrine manner.

**Conclusion:** Cultured skin cells are a valuable material for the treatment, including burns and chronic wound. Fibroblasts are critical in supporting normal wound healing, involved in key processes such as breaking down the fibrin clot, creating new extra cellular matrix and collagen structures to support the other cells associated with effective wound healing, as well as contracting the wound. It is necessary to rapidly grow optimal number of cells with desired potency, optimal harvest site identification based on desired therapeutic indication, cultivation, storage and transport of the cells for clinical application.

**Keywords:** wound treatment, fibroblast, keratinocyte, culture, nutritive medium.

## 189. PREVENTION OF SCOLIOSIS

**Eugenia Mustea**

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**Introduction:** Scoliosis is a progressive disease, characterized by one or more lateral curvature of the spine. The incidence of scoliosis to children is 10,2- 27.6 % of orthopedic pathology. Particularly, affects girls (75-80 % of cases in most statistics) and usually occurs at the age of puberty or even several years before it. 2-3% of scoliosis appears at birth due to malformations of the vertebrae or ribs, and 6-7 in a hundred is due to other causes: neuromuscular disease, neurofibromatosis, cerebral palsy home. Scoliosis does not occur because of incorrect position but is caused by genetic or hormonal factors. Therefore, early detection is required when the degree of curvature of scoliosis is low, to prevent the apparition of significant changes in the spine and chest with repercussions on cardiorespiratory function and balance disorders. Purpose: selection of reliable methods for prevention of scoliosis and arguing their advantages and practical role.

**Materials and methods:** To demonstrate the importance and effectiveness of this method we performed prophylactic examinations of scoliosis during 17.11.2015-20.11.2015, on a group of 68 children-46 girls and 22 boys, aged between 11-15 years from the Cismea Orhei Gymnasium. Using the



screening method we analyzed: the spine in the frontal, lateral, symmetry of scapula, symmetry of shoulder, symmetry of hips, triangles waist. Also, was performed Adam's method: patient leans forward having the basin right and is noticed if one part of back is higher than the other.

**Results:** Out of 68 children examined, four girls accused back pain, a boy has spinal deformities lumbar lordosis and kyphosis type thoracic emphasized.

**Conclusions:** Although the disease of scoliosis does not manifest pains, though was recommended to submit children to specialist to confirm or infirm out the presence of scoliosis, and if necessary to receive an appropriate treatment. The presented screening method is non-invasive and does not require sophisticated equipment. They can be carried out by the family doctor or by the doctor from the child's school network to guide the child to a specialist.

**Keywords:** scoliosis, prevention

## **190. STERNOCHONDROPLASTY WITH METAL BLADE RETAINERS LOCATED RETROSTERNAL EFFICACY IN PATIENTS WITH PECTUS EXCAVATUM**

**Maria Ruxandra Oancea, Vasile Bud, Calin Molnar, Constantin Copotoiu**

Scientific adviser: Suci Bogdan Andrei MD, PhD, Associate Professor in Anatomy, State Medical and Pharmaceutical University Targu Mures, Romania.

**Introduction:** Pectus Excavatum (PE) is a deformity of the anterior chest wall, in which the sternum and rib cartilage presents an abnormal development. In these cases, the anterior thoracic wall presents a concave shape depression. Surgical treatment of this condition is a great need for patients, because symptoms are often severe and affect the quality of life of these patients. Objective: Present study aims to objectify early and late postoperative complications after it was performed sternochondroplasty with metal blade retainers located retrosternal.

**Material and methods:** We conducted a retrospective observational study over a period of 20 years (1.10.1995-1.10.2015). In this regard I used casuistry of Surgical Clinic no. 1 of SCJU Mures. We introduced in the study 68 patients (41 male, 27 female) diagnosed with PE, on whom we practiced sternochondroplasty with metal blade retainers located retrosternal.

**Results:** Mean age of the patients in the study was 17.4 years, with a range between 8 and 20 years. Most common symptoms on this patients were recorded: palpitations (n=23), exertional dyspnea (n=15), cough (n=15), chest pain (n=22) and dysphagia (n=2). Also 29 patients at clinical examination presented deformations of the spine (12 patients – kyphosis; 17 patients- scoliosis). The degree of deformation was evaluated by measuring the angle formed by the body of the sternum and the manubrium towards the spine. Thereby, we obtained the following results: 42 patients had an angle of 10 to 15 degrees; 20 patients had an angle of 15 to 20 degrees and 11 patients with an angle greater than 20 degrees. Of the total number of operated patients, 11 had immediate postoperative complications, as follows: 3 hematoma patients, 4 patients with bilateral pneumothorax, 3 with unilateral pneumotorax and one patient experienced hemorrhage at cartilage section. Late complications were represented by 2

cases of thoracic deformity recurrence and 4 cases of patients with keloid scars. In the study group we observed that early complication rate was 16%, while the late complications rate was 9%.

**Conclusions:** Surgery is the only treatment able to lead to improvements of symptoms in patients with PE. Sternochondroplasty with metal blade disposed retrosternal represents a viable surgical method of treatment of these parietal chest defects.

**Keywords:** sternochondroplasty, Pectus Excavatum, metal blade.

## **191. THE USE OF AMNIOTIC MEMBRANE AS TEMPORAR BIOLOGICAL DRESSING IN SURGICAL TREATMENT OF SEVERE BURN INJURIES**

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Scientific adviser: Verega Grigore, MD, PhD, Professor, Department of Orthopaedics and Traumatology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Burn injuries represent a major problem of public health due to high incidence of lethal cases, and due to severe medical and social consequences, causing long term hospitalization, patient's mutilations and invalidity. Deep burns cause dermo-epidermic defects, which don't heal per prima intention, requiring specialized medical care. Promotion of wound regeneration, structure's restoration and function's recovery using temporal biological substituents represents a true challenge for clinicians. Aim: determination of clinical effectiveness of use of amniotic human membrane (AHM) as biologic dressing in patients with severe burns; of influence on pathology's evolution; of regeneration's time of the wounds and patients hospitalization.

**Material and methods:** It was performed a descriptive retrospective study in a group of 11 patients with 3rd and 4th degree burns treated with AHM as temporal biologic dressing. At the same time was studied a control group with severe burns, treated with standard methods.

**Results:** The study group was formed by 4 men and 7 women. In 7 cases AHM was applied on skin's donor sites, in 4 cases – on post burn wounds after tangential surgical debridement. Results were compared with those obtained in use of standard treatment methods in patients with similar diagnostics.

**Conclusions:** Using AHM on debrided wound diminishes pain, electrolytic and protein losses, stimulates production of granular tissue and promotes epithelization reducing regeneration's time. Using it as biologic dressing of donor site, promotes wound's epithelization with formation of a new, thin and gentle epithelium.

**Keywords:** burn, skin's substituent, amniotic membrane.

## 192. ACROMIOCLAVICULAR DISJUNCTIONS: SURGICAL TREATMENT OPTIONS

**Denis Pasc, Hadari Sabina, Noemi Julia Fori, Mihai Stanca**

Scientific adviser: Ivanescu Adrian, PhD; Chindea Radu, MD; Scoupi Norbert, MD; Cioanca Florin, MD; Oprea Bogdan, MD, M1 Department, University of Medicine and Pharmacy, Targu Mures, Romania.

**Introduction:** Acromioclavicular disjunctions occur most commonly in active or athletic young adults and it is one of the most common shoulder problem, accounting 9% of all shoulder injuries. The aim of our paper is to present several surgical techniques.

**Material and methods:** We conducted a retrospective analysis of the cases of acromioclavicular disjunction from the orthopedic department. It was found that from a total of 42 cases, 15 had surgical indication and the rest were either treated conservatively or refused treatment.

**Discussion:** The two most used surgical techniques were Weaver - Dunn and Dewar – Barrington. Weaver - Dunn is a technique whereby the coracoid tip is fixed to the collarbone with a screw. Dewar - Barrington is a technique that consists in transferring the end coracoacromial external ligament of clavicle.

**Conclusion:** Treatment of acromioclavicular disjunctions has been a subject of debate. In general, surgical management should be offered acutely only to those who require high-level upper extremity function and late to those with significant shoulder pain and/or dysfunction refractory to nonoperative treatment. The orthopedic surgeon has the freedom to choose from a variety of techniques.

**Keywords:** disjunction, coracoacromial, surgical techniques.

## 193. NONDISMEMBERED PYELOPLASTY

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**Introduction:** Despite of wide spread of dismembered pyeloplasty, in some cases like lengthy ureteral stricture and a poorly accessible intrarenal pelvis this type of pyeloplasty are not favorable. Nondismembered techniques like Foley Y-V and Fenger, being technically less demanding and intuitively less traumatic to the ureter's nerves and vasculature in selected cases may have some advantages over dismembered techniques. This study was undertaken to document our experience with nondismembered pyeloplasty in adults; the primary aims were to determine the indications and overall success rate.

**Materials and methods:** This study included 10 patients (6 male and 4 female, mean age 36,1 years, range 21 -62) who underwent nondismembered pyeloplasty in the Department of Urology from Clinical Republican Hospital between January 2009 and November 2014. Preoperatively, all patients

were evaluated with intravenous urography and isotope scans. The uretero-pelvic junction obstruction (UPJO) was corrected by either Fengerplasty (4) or Foley Y-V plasty (6).

**Results:** In all cases nondismembered pyeloplasty were performed in patients with small symptomatic hydronephrosis. When the etiology of UPJO was a high ureteral insertion we performed more often Fenger (75%) then Foley Y-V pyeloplasty (16,7%). In the presence of congenital stenosis the first choice was Foley Y-V pyeloplasty (83,3%). The mean operative time was 93,7 minutes. No intraoperative complications were seen. Mean postoperative hospitalization 13,3 days. The only postoperative complication was a case of pyelonephritis that occurred in a patient with UPJO and concomitant urolithiasis. After 12 months of follow-up there has been no evidence of obstruction, complete resolution of clinical symptoms was achieved in all patients.

**Conclusions:** In selected cases nondismembered pyeloplasty could be a good treatment option for patients with UPJO. Being simpler from technical point of view they allow us to achieve same high result as dismembered techniques.

**Keywords:** uretero-pelvic junction obstruction, nondismembered pyeloplasty, Foley Y-V pyeloplasty, fengerpyeloplasty.

## 194. TOTAL HIP REPLACEMENT IN DEVELOPMENTAL HIP DYSPLASIA

**Dina Plesca**

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**Introduction:** Hip dysplasia is a congenital disorder of the hip joint, when femoral head is not sufficiently covered by acetabulum, wich leads to a premature degradation of the joint cartilage, a severe degree of osteoarthritis and need of total hip athroplasty at an younger age. Each 3<sup>rd</sup> case of osteoarthritis and 10<sup>th</sup> hip arthroplasty in USA is dysplasic. The study shows us some aspects of patients with displastic hip comparatively with hip osteoarthritis from other origins.

**Materials and methods:** This comparative study, involves 106 patients wich supported a total hip replacement, in period between 01.2014 and 04.2015 in the 2<sup>nd</sup> and 8<sup>th</sup> departments at the Clinical Hospital of Orthopaedics and Traumatology, Chisinau, Republic of Moldova. The research was divided into two groups, study group: patients with displasic hip osteoarthritis (n=53) and the control group with osteoarthritis from other causes (n=54), 62 females and 44 males.

**Results:** The mean age of patients in the study is 56,3 +/-11,5. From all 106 cases evaluated, 61,3% are rurals and 39,7% urbans. The mean age in the 1<sup>st</sup> group is 53,1 years but in control group 59,8 years. Woman from the 1<sup>st</sup> group represent 72,2% (n=39) but in the 2<sup>nd</sup> group 36,5% (n=19), compared with mens 27,7% (n=15) in the 1<sup>st</sup> lot and 61,5% (n=32) in the 2<sup>nd</sup>. In the rural area distribution of developmental hip dysplasia was 59,25% and in the urban area 41,7%. Coxarthrosis from other cause had 55,7% in rurals and 42,3% in urbans. Duration of hospitalization in both groups is almost similar. The study group includes 30 cases of left hip endoprosthesis compared with 16 cases in the control

group. Predominant left hip affection is confirmed by an earlier wearing down of the left hip, in 18% cases the right hip prosthesis was preceded by the left (n=10).

**Conclusion:** In our region the mean age of total hip replacement in developmental hip dysplasia is approximately 53 years and is similar with datas from other geographical regions; dysplastic hip needs endoprosthesis with 7 years earlier comparative with other coxarthrosis. Predominantly woman affection (sex ratio 4:1) confirms the hypothesis of higher ligament laxity of the girls but prevalence of rural cases presumes a late diagnostic and a higher mechanical stress for the joints. Probable due to preferable left hip stretching due to baby's position in the uterus the left hip joint is two times more frequently affected. Considering maternal inheritance of the hip dysplasia, orthopedic examination of the descendents of the female patients that supported an arthroplasty would be useful, in order to make an efficient prophylaxy for preserving the joint.

**Keywords:** dysplasia, osteoarthritis, hip arthroplasty.

## **195. EXTRACORPOREAL LITHOTRIPSY (ESWL) CONTEMPORARY METHOD IN TREATMENT OF KIDNEY STONES**

**Dragos Popov**

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**Introducing:** Urolithiasis occupies an important place in the structure of urological pathology, being highlighted as both theoretical discipline and practical field of urology. This phenomenon is linked to increased incidence, significant and geographical distribution of disease. In Republic of Moldova, from 2005 urolithiasis ranks first in urological pathology of the hospitalizations, with a frequency of 70% in patients 20-50 years of age. Stones reduce the average life span of 5 to 20% of patients, and recurrences are found in 50-67% of cases. Frequency of pathology, clinical cases, the possibility of complications occurrence, difficulties arisen in diagnosis and treatment, emphasizes the need of further studies related to urolithiasis.

**Materials and methods:** Studying reviews, was evaluated the disease incidence in Moldova and its particularities. I studied the lithotripsy extracorporeal principle, reviewed the history of the pathology, shock waves system as well as gallstones tracking, highlighting side effects of ESWL, highlighting indications and contraindications and monitoring of ESWL complications.

**Results:** Lithotripsy or shock therapy increased the rate of success in treatment of urinary stones in last 30 years. The development of extracorporeal method Associated with endoscopic surgeries has made an important gain. Statistics show that between 75% and 90% of patients requiring treatment are now undergoing extracorporeal shock wave treatment. Being a minimally invasive treatment, it is well tolerated by patients and requires minimal cost compared to surgical methods. Also, the endoscopic therapy reduces length of hospitalization and duration of work incapacity.

**Conclusions:** In our research we determined the importance of proper indications and contraindications for treatment of kidneys stones by ESWL. ESWL is "gold standard" in the treatment

of kidney stones with sizes less than 2cm, obstructively. Success rate is up to 90%. Establishing proper treatment with ESWL procedures to decrease the rate of complications and a significant decrease of difficult cases of urinary stones.

**Keywords:** urolithiasis, kidney stones, ESWL

## **196. THE USE OF AMNIOTIC MEMBRANE IN THE TREATMENT OF CORNEAL ULCERS AND OCULAR SURFACE DEFECTS**

**Vitalie Procopciuc, Lilia Dumbraveanu, Valentina Lupan**

Scientific adviser: Cusnir Valeriu, MD, PhD, Professor, Department of Ophthalmology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The human amniotic membrane (HAM) has been proved to possess a vast variety of beneficial effects (stimulation of epithelialization, antiangiogenic, antibacterial and antiinflammatory effects), which can be very useful in many ophthalmological indications, such as corneal trophic ulcers resistant to medication and some cases of ocular surface destruction. This paper is an attempt to introduce the HAM transplantation indications in ophthalmology, to present the methods and techniques of HAM application on the human eye, to describe our experience with the amniotic membrane and to analyse the transplantation outcomes in patients with corneal ulcers of diverse etiology.

**Materials and methods:** A total of 19 patients were included in the study. All of them underwent HAM transplantation at the MCH „St. Trinity”. The patients presented corneal ulcers of various complexity and etiology and were distributed in 3 main categories: group A (n=14), which included patients with corneal erosions in dry eye syndrome (n=5), viral keratitis (n=6), persistent epithelial defects after corneal abscess (n=2) and chemical burns (n=1); group B (n=4), which included patients with severe stromal thinning and imminent corneal perforation; group C (n=1), with one case of symblepharon and extensive corneo-conjunctival adhesions. The HAM was prepared from a fresh placenta of a seronegative pregnant woman and stored at -80°C. The amniotic membrane was applied on the ocular surface using the „patch” technique.

**Results:** The cornea regenerated satisfactorily in 11 patients out of 14 in group A, but the epithelial defect recurred in 3 of them. In the second group the transplantation was less effective - 2 patients out of 4 needed further tectonic corneal graft and 1 penetrating keratoplasty was performed. The HAM transplantation showed good results in symblepharon surgery, facilitating epithelialization and preventing corneo-conjunctival adhesions in the group C.

**Conclusions:** The HAM transplantation showed good results in facilitating corneal healing and regeneration in patients with persistent epithelial defects, as well as preventing corneo-conjunctival adhesions following symblepharon surgery. Nevertheless, in some cases, further surgery was needed for ocular surface reconstruction, as the HAM transplantation wasn't effective enough to prevent the tectonic corneal graft if severe stromal thinning and impending corneal perforation were involved.

**Keywords:** corneal ulcers, human amniotic membrane

## **197. THE PROPORTION OF RADICAL NEPHRECTOMY VERSUS PARTIAL NEPHRECTOMY IN PATIENTS WITH UNILATERAL RENAL CELL CARCINOMA**

**Igor Rogac**

Scientific adviser: Popescu Constantin, MD, PhD, Assistant Professor, Department of Oncology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The goal of this review is to compare the proportion of Radical Nephrectomy (RN) vs. Partial Nephrectomy (PN) in patients with unilateral Renal Cell Carcinoma (RCC).

**Materials and methods:** We reviewed the charts of 146 patients with a single, small (less than 5 cm), localized, unilateral, sporadic RCC and a normal contralateral kidney who underwent Radical Nephrectomy and Partial Nephrectomy respectively from January to December 2014. We excluded any patients with tumors bigger than 5 cm.

**Results:** The sex ratio is the following: male-86 (57%) and female-66 (43%). The mean age by gender is  $57,05 \pm 8,49$  and  $57,72 \pm 9,31$  years, male and female respectively. The average length of hospitalization after radical nephrectomy is  $14,23 \pm 3,87$  days and  $15,79 \pm 3,37$  days after partial nephrectomy. 57 (39,04%) of 146 patients were diagnosed with RCC smaller than 5 cm, they were treated with either radical nephrectomy  $n=42$  (73,68%) or partial nephrectomy  $n=15$  (26,31%).

**Conclusion:** Based on current available oncological and Quality of Life (QoL) outcomes, localized renal cell carcinoma is better managed by Partial Nephrectomy rather than Radical Nephrectomy, irrespective of the surgical approach according to the European Association of Urology. We hope that more surgeons will choose Partial Nephrectomy as a first surgical treatment for patients with tumors less than 5 cm as it is more efficient than Radical Nephrectomy.

**Keywords:** renal cell carcinoma, radical nephrectomy, partial nephrectomy.

## **198. MODERN ASPECTS AND METHODS OF DIAGNOSTIC AND TREATMENT OF THE ACUTE PYELONEPHRITIS IN PATIENTS WITH DIABETES MELLITUS**

**Marcel Rosca**

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**Introduction:** The importance and the relevance of the study is based on the high prevalence of diabetes mellitus (DM) in the general population and on the high risk of these patients to develop urinary tract infections, but also on serious complications (kidney abscesses, emphysematous pyelonephritis, necrotic papillitis, urosepsis etc.) that can occur due to late diagnosis. The factors which contribute to the increased risk of UTIs are: the immunological defects, the development of vesicoureteral reflux as a result of diabetic neuropathy, increased levels of glucose in the urine, which support the colonization of the micro-organisms.

**Materials and methods:** The study group included 42 patients with acute pyelonephritis (22 with DM, 20 without DM). There were 28 women (15 with DM, 13 without DM) and 14 men (7 with DM and 7 without DM) with age from 26 till 75 years (the average age 51,8 years). The distribution by the type of diabetes: 16 patients had Type 2 diabetes and 6 patients had Type 1 diabetes.

**Results:** The clinical manifestations were dominated by general signs of toxicity (weakness, headache, fever) inclusively nausea, with scarce local manifestations. The diagnosis was confirmed using laboratory and instrumental methods: besides the classical methods (urine analysis, urine culture etc.), a major role in early establishing of diagnosis had ultrasonography (100% of patients), intravenous urography (27,2%) - these had an important role in the differential diagnosis of non-destructive and destructive-purulent pyelonephritis. Also the computed tomography (22,7 % of patients) was very useful – it was important in difficult cases for the differentiation of serous and purulent forms of acute pyelonephritis. For diabetic patients was typical the prevalence of destructive-purulent forms (77,2%) compared to serous forms. The treatment was conservative and surgical (the conservative treatment: urinary drainage with ureteral catheter “Pigtail”(45,4%), antibacterial therapy, detoxifying therapy, antidiabetic therapy and the plasmapheresis (35% of patients) has proved its efficacy with a decreased mortality compared with the control group. The basic criterion of differential diagnosis of purulent forms of acute pyelonephritis in patients with DM is the efficacy of conservative treatment. The absence of positive dynamics usually indicate a purulent complication and requires surgery on the affected kidney. Eight (40%) patients with purulent complications were operated–nephrectomy-4 patients(18,2%), the drainage of kidney abscess–3 patients(13,6%), the drainage of paranephrium -1 (4,5%).

**Conclusion:** Pyelonephritis in patients with DM is a complex problem with an increased rate of purulent complications which aggravate the patient’s condition, with a poor prognosis. The diagnosis plan at these patients requires simultaneous use of clinical, laboratory and instrumental methods for the appreciation of kidney’s function disorders and for early detection on purulent complications. The use of plasmapheresis in the complex treatment of these patients has significantly contributed to the increasing of the treatment efficacy, which justifies it’s practical application.

**Keywords:** Pyelonephritis, diabetes mellitus, diagnosis, treatment.

## 199. RENAL CALCULI CHEMICAL COMPOSITION

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**Introduction:** Nephrolithiasis is a multifactorial pathology, placed first among urinary tract pathologies. Increased incidence of urolithiasis is determined by multiple factors such as lifestyle, diet, migration of population from rural areas cooler in warmer urban areas. The method of surgical treatment of urolithiasis previously applied, may also influence the risk of disease, more than how both patients with fragments outstanding calculi in the kidneys have a higher risk of recurrence. Although the incidence pathology is very high, some patients may produce only a single stone in their lifetime. It's



important knowledge of regional peculiarities of the chemical composition of kidney stones, to select the correct therapeutic strategy. The impact of the disease can be reduced by administering a prophylactic treatment of patients with recurrent urolithiasis. For now, there is no information about the characteristics of the chemical composition of urinary calculi in the Republic of Moldova. Aim of the study: Calculi chemical composition research in patients with recurrent urolithiasis in the Republic of Moldova.

**Material and methods:** Prevalence descriptive study. 160 kidney calculi were analyzed using chemically modified method by Hodgkinson and infrared Spectroscopy with Fourier transformant.

**Results:** Phosphate stones have been identified in 33 (20.9%) cases: calcium phosphate - 15 (9.37%), struvites - 17 (10.62%), brushitis - 1 (0.62%) cases. Calcium oxalate calculi (n=61, 42.49%): whewellites - 39 (24.37%); weddelites - 22 (13.75%) were determined, being followed in frequency of uric acid-42(26.25%). In 24 (15%) cases calculi of mixed composition: whewellites + apatite carbonate - 6 (3.75%), whitlockites + protein - 6 (3.75%), whitlockites + weddelites 2 (1.25% ), whewellites + uric acid - 6 (3.75%) cases were detected. Other calculi types were rarely found (2,5%).

**Conclusions:** Kidney calculi from calcium oxalate, uric acid and calcium oxalate and uric acid mixed calculi are the most frequently found in Moldova. Relatively high incidence of infected calculi (27.4%) justifies the necessity of appropriate antibacterial therapy in the pre- and postoperative period. Addressing a healthy lifestyle and instructing patients using this information a substantially improve the results of primary and preventive measures to prevent recurrence of urolithiasis. The information obtained about chemical composition of kidney stones, identifying specific risk factors for Moldova would benefit and healthcare professionals in planning preventive measures to reduce the high incidence of this disease.

**Keywords:** chemical composition, recurrent urolithiasis, infrared Spectroscopy.

## 200. IMPORTANCE OF THERMOMETRY IN MONITORING OF THE FLAPS

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**Introduction:** Complications highlighted in the postoperative period remains to be one of the current problems of reconstructive surgery, which has a relatively increased incidence (5-17%). Aim: evaluation of diagnostic value of local thermometry of flaps for early detection of complications.

**Material and methods:** The study group was 36 patients treated in the period 2014-2015 within the IEM, women - 10 (27.8%), men - 26 (72.2%). The limits of age were 16-70 years, with mean age 44.7 years. The thermometry was performed with an electronic thermometer with an accuracy of 0.1 0C and the data were recorded in the form of thermal curves. The temperature of the receiving areas were considered baseline values that were compared to the thermometric values of the flaps. Duration of monitoring was from 1 postoperative day to 1 year, at 2-3 months range. Data were statistically analyzed using the "step by step regression" with truthful coefficients.

**Results:** In the study group were 30(83.3%) island flaps, free – 6 (16.7%) cases. Thermometric differences in the postoperative period ZR/ZD >20C were found in 6 (16.7%) cases: island flaps – 4 (13.3%) cases, free – 2 (33.3%) cases. If the island complications occurred in 8( 26.7%) cases, free – two (33.3%) cases. Free flap complications: venous insufficiency due to anastomosis's thrombosis (n=1), marginal necrosis (n=1) and insufficiency of anastomosis due to adjacent tissue's edema (n=1). Complications of island flaps were: marginal necrosis (n=4), vascular insufficiency due to edema (n=3) and loss of the flap (n=1).

**Conclusions:** In the early postoperative period thermometric difference >20C indicates a flap's vascular suffering that requires urgent actions. In the case of island flaps the thermometry has a sensitivity of approximately 85%, while in the case of free - 95%, the specificity is 98% in both.

**Keywords:** thermometry, complications, flap, monitoring

## **201. IMPLEMENTATION OF FRAMELESS STEREOTACTIC BRAIN BIOPSY: A PRELIMINARY EXPERIENCE**

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**Introduction:** Frameless stereotactic neuronavigation has proven to be a feasible technology to acquire brain biopsies with good accuracy and little morbidity and mortality.

**Materials and methods:** The present study reports our experience with intracranial biopsy procedures performed using BrainLAB® Varioguide frameless stereotactic brain biopsy systems. From March 2015 to February 2016, five patients aged from 37 to 54 years with supratentorial brain tumors underwent frameless stereotactic brain biopsy. The inclusion criteria for frameless stereotactic brain biopsy were: tumors localized in the eloquent brain area, deep-seated lesion or poor general condition with high risk for open surgery. All biopsies were performed using the frameless stereotaxy protocol under general anesthesia and head fixation in a three-point Mayfield clamp.

**Results:** In all patients, VarioGuide and multimodal neuronavigation were successfully integrated into the biopsy procedure. No VarioGuide-related adverse events were reported. The mean operative duration was 105 min. The overall diagnostic yield was 100 %. A discrepancy between smear results and conclusive diagnosis was detected in one case. The major reasons for the discrepancy were necrosis and improper quality of the preparations. Following each operation, a control headCT was routinely performed to confirm and document the proper targeting and to exclude postoperative intraparenchymal bleeding. Three cases of bleeding within the lesion or along the biopsy trajectory were observed on postoperative CT scans but were Associated with transitory headaches. No mortality and morbidity occurred postoperatively.

**Conclusion:** The frameless stereotactic biopsy with neuronavigation systems is an effective, safe and important technique for histological diagnosis of brain lesions, particularly for multifocal and corpus callosum lesions.

**Keywords:** biopsy, frameless stereotaxy, neuronavigation, brain neoplasm.

## 202. SURGICAL TREATMENT OF STRABISMUS IN ADULTS

**Alina Surguci**

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**Introduction:** Strabismus is a condition in which the eyes are not properly aligned with each other. According to specialized literature the estimated prevalence of strabismus in the general population is 4%. Normal binocular vision is required for many occupational tasks and other activities in daily life. Prompt diagnosis and treatment of strabismus are critical for minimizing the adverse effects of strabismus and enhance the patient's quality of life.

**Materials and methods:** The base of this research is a retrospective study of 56 patients with convergent squint who were treated in the Ophthalmology Section of Clinical Republican Hospital, Chisinau in the period 2013 – 2015. Examination of patients was performed by collecting the following dates: probable time of onset of strabismus, nature of onset, frequency of deviation, previous treatment (if any, type and results). In addition, all patients were exposed to an ocular examination that included appreciation of: visual acuity, ocular motor deviation, monocular fixation, accommodation, sensorimotor fusion and refraction.

**Results:** The average diagnostic age of patients was 28 years, with limits between 18 and 62 years, the biggest incidence of strabismus was in the age group between 20-29 years. 34 (60%) from patients were female and 23 (40%) were male. There were 42 cases of convergent strabismus neglected from childhood, 8 cases of sensory esotropia and 6 cases of consecutive esotropia. According to visual acuity 19 patients (38%) presented isoacuity, 17 patients (34%) presented amblyopia, the incidence of amblyopia of 64,8% in esotropia and 35,2% in exotropia. The preoperative mean degree of deviation was -38,2PD. Postoperative success rate was 79,7% (degree of deviation up to 10 PD) with binocular vision amelioration (Bagollini positive) in 21% of cases.

**Conclusions:** Strabismus surgery in adults is not only cosmetic. It is reconstructive, and it has marked functional benefits, including the restoration of normal alignment and binocularity.

**Keywords:** strabismus, adults, surgical treatment

## 203. SURGICAL TREATMENT OF ANKLE FRACTURES

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**Introduction:** Ankle fractures represent a significant part of the trauma related to the professional activities 64%, it consists 9% of all fractures. The incidence of this fractures is about 187 fractures per 100,000 people each year, and the most of them 60-70 % are uni-malleolar, 15-20 % are bi-malleolar, and 7-12 % are tri-malleolar fractures. The aim of the study was patients evaluation with ankle fractures according to data from medical records, determination of specific parameters of ankle fracture, type of implants used and final outcomes.

**Materials and methods:** This work includes evaluation of 64 patients with ankle fractures, just treated surgical, 34 men and 30 women hospitalized in period of time between final of 2013-2015. According to our results the ratio male/female was 3:1 in age group between 18-30 years; while a significant increase was certified in women aged 50 years, where ratio male/female is 1:2. Our data corresponds to international literature data, with increasing number of affected women after 50 years because of the menopausal osteoporosis. In 48% of cases were determined uni-malleolar fractures, and 52% bi-malleolar, 77% of all patients were operated in first 7 days after fractures, 16% of them between 8-14 days, and 7% of patients operated more than 15 days with a period of hospitalization longer than 16 days. Distribution of the patients according to Danis-Weber classification was: 7 patients with fracture type A, 49 patients with type B fracture, and 8 patients with type C fracture. The types of implants used in surgical treatment: in 64% was applied only 1/3 tubular plate to fix lateral malleolus, 16% from the total number of patients was used wire and K-wires, in another 16% was used a combination between K-wires+screw+wire, in 2% of cases fixation was done with 1/3 tubular plate+K-wires+wire, the remaining 2% was fixed just with K-wire.

**Results:** Interpretation of results was done according to the Ankle -Hindfoot Scale and showed that 8% of patients had excellent results, 60 % of patients had good results, 24,0 % of patients with rather good results and 8,0 % of patients presented poor results. The poor results were recorded in patients who addressed to orthopedist more than two weeks after the trauma.

**Conclusion:** Malleolar fractures have a great impact on the public health system and the whole society, because it affects patients able to work, and this indicates that the studies should focus on specific groups that are most commonly diagnosed with this type of fracture for prevention and applying appropriate treatment to ensure good functional results.

**Keywords:** ankle fractures, osteosynthesis, plate

## **204. OUR EXPERIENCE IN CONTEMPORARY TREATMENT OF LACRIMAL DRAINAGE SYSTEM**

**Mihaela Tifoi, Alexei Sauschin**

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**Introduction:** The diagnosis and treatment of lacrimal drainage system is an important compartment in ophthalmology. Currently, in the literature is presented numerous methods and techniques for restoring lacrimo-nasal drainage both drug-conservative as well as surgical, each presenting advantages and disadvantages. Diagnosis and treatment of disorders of the lacrimal pathways

although successful, but at the same times a complicated problem and not solved until fine. The data presented in the literature and our daily activity dictates the need of a deeper examination of patients with tearing, early diagnosis of catarrhal and purulent dacryocystitis as manifested by a cosmetic and functional discomfort in patients lives. The aim: to study etiopathogenesis and effectiveness of conservative and surgical treatment of lacrimal drainage system pathology and analyzing the results.

**Methods:** It was a retrospective study of 244 patients from the Ophthalmology Department of the Municipal Hospital “Sfanta Treime” during the years 2009-2014

**Results:** The most common diseases remain: punctal stenosis (n=91), chronic dacryocystitis (n=76), dacryoadenitis (n=18), phlegmon of the lacrimal sac (n=59). 116 patients were examined preventive in polyclinic. They represented: punctal stenosis- 62.93%; chronic dacryocystitis- 33.62%; dacryoadenitis- 1.72%; phlegmon of the lacrimal sac-1.72% cases. In emergency department were examined 111 patients with phlegmon of the lacrimal sac, of which 102 cases have required hospital treatment (91.89%), remaining patients (8.11%) received outpatient treatment. All patients received conservative treatment and/or surgery. Thus, patients treated conservatively were punctal stenosis (37.29%), chronic dacryocystitis (31.14%); dacryoadenitis 97.37%), lacrimal sac phlegmon (24.18%). 205 patients (84.01%) of 244 hospitalized with pathology of lacrimal drainage system required surgical intervention. Thus, punctal stenosis were 86 interventions (35.24%), chronic dacryocystitis- 60 interventions (24.59%), phlegmon of the lacrimal sac - 59 interventions (24.18%).

**Conclusions:** Most of hospitalized patients with the lacrimal tract pathology received surgery treatment. The most frequent intervention was dacryocystorhinostomia (DCR) which represent the standard method in surgery of the lacrimal drainage system pathology. Endonasal dacryocystorhinostomia would be a perfect method of substitution of classic dacryocystorhinostomia because it include the lack of a skin incision, shorter operating time, minimal blood loss and less risk of cerebrospinal fluid leakage. However, the success rate of 75% in endonasal DCR compared with a success rate of 90 % set in DCR classic favors resolving cases through conventional surgery.

**Keywords:** dacryocystorhinostomia, lacrimal drainage system, endonasal dacryocystorhinostomia

## **205. BASIC PRINCIPLES OF THE ELECTRORETINOGRAPHY AND THE NECESSITY OF ITS CLINICAL IMPLEMENTATION IN THE REPUBLIC OF MOLDOVA**

**Irina Turcanu, Ecaterina Pavlovschi**

Scientific adviser: Gheorghe Ivanov, MD, PhD, Assistant Professor, Department of Ophthalmology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The electroretinogram represents an essential tool in evaluation of the functional integrity of the retina. Its usefulness covers a wide variety of pathologies, especially used in preterm infants, in children with unexplained visual loss etc. The purpose of the present review describes the principles of functioning, the application and the clinical significance of the electroretinography (ERG) in ophthalmological practice in the Republic of Moldova.

**Materials and methods:** Bibliographical sources were analyzed also recent retrospective studies that described relevance of ERG for clinical evaluation and vision research.

**Results:** Electroretinography evaluates the functioning of the retina by measuring the retina's response to different light stimuli. ERG is a mainstay of clinical ophthalmic diagnostic testing, frequently being a relevant diagnostic test in pediatric ophthalmology and neurology. The electroretinogram provides an objective, quantitative measure of retinal function and allows the clinician to monitor the function of rod cells, cone cells, and ganglion cells in each eye. ERG can set out the presence or the absence of a global retinal dysfunction, also clearly establishing its importance in the evaluation of pediatric patients with visual dysfunction. The pathologies that give us an unexplained visual loss where ERG is of a highly significance are: Leber congenital disease (LCA), achromatopsia, cone-rod or rod-cone degeneration. The electrophysiological features are: for LCA- a non-recordable or highly attenuated ERG; for achromats- a complete absence of cone response with normal rod-mediated components. The ERG findings do not change with time as children get older. ROP is the leading cause of preventable childhood retinal dysfunction, that's why we decided to pay an especial attention and to include it as a major indication for ERG. ROP has less effect on the cone than on the rod photoresponses. This suggests that cones are more resistant to the ROP disease. The similar shape of the b-wave stimulus-response function in preterms evidences that ROP does not alter the balance of ON and OFF signals in the cone pathway. Information provided by this test in a clinical setting has been used extensively to characterize the retinopathy of prematurity, congenital retinal disease, visual loss with unknown etiology nor clinical association, provided by neuroretinal disease, optics or even a functional visual loss. Nevertheless, the goal of using the ERG is to characterize and diagnose as soon as possible retinal deficits, such therapeutic approach can ensure rapid, targeted and designed to improve the quality of life of both the child and family.

**Conclusion:** Over the years ERG recording techniques have become progressively more sophisticated in clinical practice. With a basic understanding of ERG techniques is now possible a more precise mapping of dysfunctional areas of the retina. This test has a huge value in establishing the presence or absence of global retinal dysfunction in children. The evaluation of the pediatric patients with visual dysfunction represents a diagnostic challenge. For this reason, ERG represents a real value for improving the children's life quality in the Republic of Moldova.

**Keywords:** electroretinography, retina, preterm, unexplained visual loss.

## **206. BIOMECHANICAL PROPRIETIES OF DECELLULARIZED UMBILICAL CORD VESSELS**

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Scientific adviser: Nacu Viorel, MD, PhD, Professor, Laboratory of Tissue Engineering and Cells Culture, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Each year Cardiovascular Diseases (CVD) are causing over 4 mln deaths in Europe, 47% from total deaths. The high level of deaths caused by vascular pathology and the deficit of

autografts, because of comorbidities and other causes, and deficit of synthetic grafts with small lumen (ID<6mm) as well, creates objectives for using tissue engineering in obtaining compatible alo-xenogenic vessels, after decellularization-recellularization principle. Aim: determining an optimal method of blood vessel decellularization by maximal preservation of it's biological proprieties.

**Material and methods:** Study object – human umbilical artery (n = 24; 18 – being decellularized, 6 – control lot). The decellularization was done by following methods: enzymatic – 0.25% Trypsin solution; chemical – 1% SDS solution, combined method – 0.25% Trypsin solution + 1% SDS sol. The decellularization efficiency was established through microscopical study of the histological slides.

**Results:** After decellularization pure matrix was obtained just through combined and chemical method (using SDS sol.), partial decellularization - through enzymatic method (using Trypsin sol 0.25%), being proved histologically. The results for vessel stretch test:  $1,8\pm 0,03N$  – combined method;  $1,53\pm 0,02N$  – enzymatic method;  $1,83\pm 0,11N$  – chemical method and  $2,33\pm 0,22N$  for intact vessels. In swelling test all the vessels resisted to maximal pressure, that was possible to obtain by our device – 280 mmHg.

**Conclusion:** The most effective decellularization was obtained through combined and chemical method. Analyzing the stretch and swelling test results, we can deduct that the vessels obtained through these 2 methods can be used as biological grafts.

**Key-words:** umbilical artery, decellularization, matrix, allograft.

## 207. RESULTS OF COMPLEX TREATMENT OF CONCOMITANT STRABISMUS IN CHILDREN

**Mihaela Vatamaniuc**

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**Introduction:** Diseases of the oculomotor apparatus are one of the causes of disturbances in visual function in childhood. According to the generalized data, concomitant strabismus affects about 2-3% of children. Treatment of strabismus in children is important to be done timely and durable. That determined the purpose of the study. The goal of the study is emphasizing the role of the complex treatment (pleoptic, surgical and orthopto-diploptic) of strabismus in children with functional and aesthetic purposes.

**Materials and methods:** For observations were taken in Ovisus Clinic 45 children with strabismus (26 girls and 19 boys). According to diagnosis were taken as evidence the following children: with convergent alternating strabismus -15,6%; monolateral for the right eye -33,3%, monolateral for left eye 37,8%; divergent alternating strabismus- 8,9%; monolateral for the right eye 2,2%; monolateral for left eye 2,2%. The angle of deviation present in the studied patients before surgery: 11-20\* -64,4 %; 21-35\* -26,7 %; >36\* -8,9%. Preoperative visual acuity in patients is as follows: 0,9-1,0- 24,4%; 0,7-0,8- 37,8%; 0,5-0,6- 20%; 0,3-0,4-15,6 %; 0,1-0,2- 2,2%. The binocular vision was monocular for 51,1%,

simultaneous vision 26,7%, binocular vision 22,2%. During preoperative period 29 (64,4%) patients received active pleoptic treatment. 16 patients (35,6%) were taken under surgery without pleoptic treatment. Surgical correction of strabismus was performed in all children. Age surgery is as follows: from 1.4 to 4 years - 6 children (13,3%) of 4-7 years - 20 children (44,5%) of 7 to 10 years - 15 children (33,3%) aged over 10 years - 4 children (8,9%). Ortopto-diploptic postoperative treatment was performed in 39 patients (86,7%).

**Results:** In the postoperative period was reached ortoforie for 28 patients (62,2%), 3 \* -5 \* residual angle was kept for 13 patients (28,9%) in the remaining 4 cases (8,9 %) residual vertical deviation is observed. For the second stage of surgery were taken 11 patients (24,4%). Visual acuity of patients was increased by: 0,1-0,2-33,35%; 0,3-0,4- 40%; remained the same (0.9-1.0)- 24,4%; remained (0.1-0.2) – 2,25%. The binocular vision became monocular for 15,6 %, simultaneous vision 22,2%, binocular vision 62,2%. According to the degree of fusion of 28 patients (62,2%) who carried out the exercises at sinaptofor were achieved good results: 0\*- 33,3%; +1+4\*-13,3%; +5+9\*- 8,9%; >10\*- 2,2 %; indefinite - 4,5 %.

**Conclusion:** Surgical treatment is not unique to squint in children, but only one step in the complex treatment. Result of the treatment is based on pre- and post-surgery methods.

**Keywords:** visual acuity, binocular vision, angle of deviation

## POSTERS

### 208. CARPAL TUNNEL SYNDROME IN THE FIST ARTHROSIS, THE CLINICAL EVALUATION AND APPROACH OF THE TREATMENT STRATEGY

**Sergiu Ursu, Stefan Cojocari**

Scientific adviser: Capros Nicolae, MD, PhD, Professor in Orthopedics and Traumatology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The clinical evaluation in patients with carpal tunnel syndrome in association with fist arthrosis, approach of the treatment strategy.

**Material and methods:** We have proposed a study of patients with carpal tunnel syndrome (CTS) in association with fist arthrosis (FA) which were in treatment in 6 Section of Traumatology and Orthopedics Clinical Hospital, Chisinau in the period 2011-2015. All patients present clinic of carpal tunnel syndrome unilateral, and were examined by ultrasound studies both wrists, determining the difference the narrowing percentage of the median nerve in the region of entrapment (N%MN, %). All results were presented as mean  $\pm$  standard deviation ( $\pm$ SD).

**Results:** We proposed analysis of 60 cases, that were divided in four groups: I group carpal tunnel syndrome unilateral – 20(33,3%) patients; II group carpal tunnel syndrome in association with fist arthrosis without traumatic etiology– 8(13,33%) patients; and III group carpal tunnel syndrome in association with fist arthrosis and traumatic etiology – 32(53,33%) patients. We established these trends,



from 60 patients, 24(40%) were male and 36(60%) woman, the ratio right / left draw up 3,3:1,0. There was no significant difference between the ages of the CTS patients (mean  $47.8 \pm 11.80$  yr) We found that in 58 healthy hands the USG studies show N%MN mean=  $6,06\% \pm 10,80$ . In according with stage of CTS in 60 hands the USG studies show N%MN mean: II:  $31,57\% \pm 3,33$ ; III: N%MN mean=  $49,64\% \pm 4,51$ ; IV:  $79,59\% \pm 16,38$ . Clinical evaluation of FA patients in the search for neuropathy is difficult since neuropathic symptoms are confused with arthrosis. Various physical maneuvers designed to stress the median nerve in the carpal tunnel may exacerbate the symptoms. Surgical interventions: in 52 cases was performed excision of the carpal ligament with median nerve decompression with/or without other surgical interventions., in 8 cases was performed incision of the carpal ligament with median nerve neurolysis and as an component of operation. Remote results were based on the Michigan Hand Outcome Questionnaire classified as good in 41 patients, satisfactory in 19 patients, results are greatly influenced by the basic pathology.

**Conclusions:** Therefore, the diagnosis of CTS in FA patients is difficult because of such clinical findings. If the narrowing percentage of the median nerve in the region of entrapment N%MN is higher  $6,06\% \pm 10,80$ , it confirm CTS diagnostic.

**Keywords:** Syndrome, carpal tunnel, fist arthrosis, arthrodesis.

## 209. PERCUTANEOUS NEPHROLITHOTOMY IN THE TREATMENT OF UROLITHIASIS

**Cristina Draganel**

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**Introduction:** Percutaneous nephrolithotomy (PCNL) was proposed by W. E. Goodwin in 1955. This year, Goodwin made the first percutaneous pielostomie in hydronephrosis, and subsequently to propose this method for the surgical treatment of minimally invasive kidney stones. The first intervention was performed by Fernstrom and Johansson in 1975, extracting a kidney stone using an endoscope. Due to technical progress and improving technique, it was possible to improvement and reduce complications method with a success rate of about 98-99%.

**Objective:** Analysis of contemporary method of treatment of kidney stones by percutaneous nephrolithotomy, indications, contraindications and benefits of this method compared to open surgery, lithotripsy extracorporeal shock wave under reference study. Reviewing progress specialized surgical techniques and instrumentation that continues to improve PCNL as contemporary method of treatment of urolithiasis.

**Material and methods:** Percutaneous nephrolithotomy (PCNL) is a miniinvasive method of treatment of nephrolithiasis and/or ureteral lithiasis. The method consists of pointing an inferior or medium calyx, with further dilatation and creation of a path for lithotripsy and extraction of stone via the percutaneous path. In this study are analyzed the indications, contraindications, advantages and different authors opinion on NLP in lithiasic kidney surgery. The “stone free” rate is comparable with

the successes of open surgery. Nowadays this is one of the elective methods in treatment of nephrolithiasis and/or ureteral lithiasis.

**Conclusions:** Minimally invasive percutaneous approaches offer the benefits of reduced blood loss, rate decrease residual fragments and a return to normal activity of the patient faster. Regarding the rate of "stone free" in the literature showing a rate of about 85% with a 30% recurrence for proper stones larger than 2 cm. PCNL is an effective method of treatment of stones renoureterale. The advantages of the method are minimal trauma, decrease morbidity and length of hospital stay, postoperative complications rate decrease. Improving methods of intraoperative lithotripsy (ultrasound, laser, hydraulic) make PCNL be a method of choice in the treatment of kidney stones.

**Keywords:** nephrolithiasis, ureteral lithiasis, percutaneous nephrolithotomy, lithotripsy.

## **210. CONTEMPORARY ASPECTS OF TREATMENT OF NEPHROLITHIASIS - THE ADVANTAGES OF PERCUTANEOUS NEPHROLITHOTOMY**

**Ecaterina Gorgan**

Scientific adviser: Bradu Andrei, Assistant Professor, Urology and Surgical Nephrology Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The stone disease is a major public health problem with increasing incidence and predominantly affecting active social segment (20-50 years). Nephrolithiasis determine through its complications a high rate of disablement (~ 11%) and decreases life expectancy in (5-20%) of cases. The aim of the study was to analyze current treatment strategies for patients with urolithiasis with more detailed evaluation of the benefits of percutaneous nephrolithotomy (PCNL).

**Material and methods:** For the study and realization of the purpose of this work were selected 116 bibliographical sources relevant to these issues. We reviewed data from the articles from (1980-2012) of medical data base research PubMed, EMBASE, HINARI. The search is based on National Clinical Protocol provisions "Urolithiasis in Adult" (2009, updated in 2011) and complies with the actual provisions of Guidelines of European Association of Urology and American Urological Association.

**Results:** After the analysis of special literature we found that, worldwide, in the treatment of urolithiasis, the most common are 4 ways: extracorporeal shock wave lithotripsy (ESWL), percutaneous nephrolithotomy (PCNL); retrograde ureteroscopy (URS) and "open" classical surgery. The most rational method to treat complex forms of urolithiasis is percutaneous nephrolithotomy by: the preservation and restoration of renal function with minimal damage, morbidity {transfusion of blood (5-53%), fever (12-64%), pneumothorax (12%), septic complications (2%)}, the decrease of hospitalization time (about 9.5 days) and increased patient quality of life (full recovery in 21 to 30 days). PCNL is safety and efficacy in use for stones management in various renal anomalies (horseshoe kidneys, solitary kidney, polycystic kidney); in large and staghorn calculi; in cases of spinal deformities; in compensated diabetes; including children and old people.

**Conclusions:** Nephrolithiasis is a major health and social problem. The most common methods in the treatment of urolithiasis are considered: ESWL, PCNL, retrograde (URS) and "open" classical

surgery. The elective method in treatment of complex forms of urolithiasis is PCNL through: minimal invasion, reduction of hospitalization and morbidity, decreased complication rates. PCNL is useful in many cases of urolithiasis, in all ages.

**Key words:** nephrolithiasis, urolithiasis, PCNL, ESWL, URS.

## 211. CHRONIC FUNGAL RHINOSINUSITIS

**Inesa Gutan**

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**Introduction:** Fungal rhinosinusitis, long regarded as a rare pathology, is recognized and reported with increasing frequency in the last two decades throughout the world. The purpose of the paper is to highlight the characteristics of chronic fungal sinusitis and determine fungal ball's etiological, pathological, clinical and treatment aspects.

**Materials and Methods:** To achieve the objectives of the work was carried out a study which included 12 patients diagnosed with fungal-ball, hospitalized in Otorhinolaryngology Department of the Municipal Hospital "Sfinta Treime" during the period 2014-2015, data were taken from observations sheets of patients in hospital archive. For statistical processing of the data was used Microsoft Office Excel 2013.

**Results:** According to the distribution of patients by age, we find that 41.66% who are aged between 50-55 years suffer from fungal-ball, between 45-50 years-25%, between 40-45 years-16.66% of patients. Meets lower incidence in patients aged 35-40 years and 25-35 years- 8.33% each of all patients with mycetoma. At the age up to 25 years it has not been found no patient with mycetoma. According to the distribution of patients by gender, there was a predominance of the female-66.66%, the male gender- 33.33%. According to the involved sinus, we find that most commonly affected is the maxillary sinus, being affected in 75%, followed by sphenoid sinus which was affected in 16.66%, only 8.33% was found the affection of ethmoidal sinus. The frontal sinus was not affected in any patient of these examined. Based on the batch of 12 patients, we observed specific symptoms of mycetoma: facial pain, encountered in all patients- 100%, followed by difficult nasal breathing- 91.66%, rhinorrhea- 83.33%, headache- 75%, anosmia- 58.33%, cough-16.66%, epistaxis- 8.33%. Has revealed that the pathogen most often implicated in the appearance of mycetoma is *Aspergillus fumigates*, met in 75%, followed by *Aspergillus Niger*- 16.66%, and *Aspergillus Flavus*- 8.33%.

**Conclusions:** Fungal rhinosinusitis has approximately 10% of patients requiring surgery on the nasal cavity and sinuses, and between 13.5 and 28.5% of all sinusitis are caused by fungi or combination of bacteria and fungi. I noticed that mycetoma meets more often in older people, between 45-55 years. By gender, it was observed a predominance of the female gender (2: 1). According localization is determined that most often affected is maxillary sinus. From the obtained results we concluded that the most common symptoms are: facial pain, difficult nasal breathing, rhinorrhea, headache; the most rarely encountered are anosmia, cough; and from the nonspecific rarely encountered it is epistaxis. Mycological

examination revealed that the pathogen most often implicated in the appearance of mycetoma is *Aspergillus fumigatus*.

**Keywords:** chronic fungal rhinosinusitis, fungal- ball, mycetoma, sinus.

## 212. CHRONIC HYPERTROPHIC NON-ALLERGIC RHINITIS

**Mariana Istrati**

Scientific adviser: Maniuc Mihail, MD, PhD, Professor, Department of Otorhinolaryngology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Chronic hypertrophic non-allergic rhinitis is an important public health problem that affects about 5% of world population. The evolution of chronic hypertrophic rhinitis is slow and gradual, sometimes occurring complications that lead to respiratory, emotional and social failure, and to prevent this, it is necessary to identify risk factors and to apply proper treatment, as early. Purpose: to detect high-risk factors in the development of chronic hypertrophic non-allergic rhinitis, contemporary useful and appropriate treatment.

**Materials and methods:** In the ward „Otorhinolaryngology”, „Em. Cotaga” Clinic, between 2011-2015 were hospitalized 84 children with chronic hypertrophic non-allergic rhinitis, with ages between 0-18 years. Based on patient records from the archive „Em. Cotaga” Clinic was effectuated a retrospective study determining risk factors and methods of treatment for hypertrophic rhinitis. The children were treated surgically: to 48 children (57%) was performed electric cauterization, to 22 children (26%) was carried out conchotomy, to 13 children (16%) was performed vasectomy, and 1 child (1%) was applied to laser therapy.

**Results:** The patients with chronic hypertrophic non-allergic rhinitis are affected by environmental factors as: place of residence (urban: 56 children- 67%), the result is conditioned by the fact that air pollution in cities is due to a higher level of exhaust gases and of chemicals from factories, due to dust's nefarious action, due to reduced green spaces; the cigarette smoke (smoking parents to 59 children- 70%), it's a clear relationship between rhinitis prevalence and presence of cigarette smoke; the temperature and humidity (winter and spring were hospitalized 52 children- 62%), specific for chronic hypertrophic non-allergic rhinitis is seasonal exacerbation during the change of temperature and humidity. An essential role in the rhinitis' pathogenesis have concomitant diseases that favor or complicate its development (45 children- (54%) with chronic hypertrophic non-allergic rhinitis, also suffer from deviation of the nasal septum). The surgery is the first choice in chronic hypertrophic non-allergic rhinitis because drug treatment, often, is administered improperly inducing secondary drug rhinitis, complicating the first one. The intervention of choice in chronic hypertrophic non-allergic rhinitis in children is electrical cauterization, because this method preserves the integrity of mucosa and allows maintaining normal function of the respiratory epithelium.

**Conclusion:** We can conclude that chronic hypertrophic non-allergic rhinitis is a frequent pathology in adolescents. An important role in promoting, producing and developing chronic hypertrophic non-allergic rhinitis have environmental factors. The way of solving the respiratory problem in hypertrophic rhinitis is surgery.

**Keywords:** chronic hypertrophic non-allergic rhinitis, risk factors, treatment.

## **213. THE CEREBROSPINAL FLUID FLOW QUANTIFICATION IN PATIENTS WITH HEADACHE**

**Natalia Lisnic**

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**Introduction:** Headache disorders are among the most common disorders of the nervous system. Migraine on its own is the cause of 1,3% of all years of life lost to disability. The aim of this study was to determine whether there are disorders in cerebrospinal fluid dynamics in patients with migraine according to its severity. The objectives were to evaluate the cerebrospinal fluid flow parameters in patients with migraine and affective disorders and also between different subgroups of migraine.

**Materials and methods:** Sixty patients hospitalized in the Institute of Neurology and Neurosurgery were included in this study: 44 patients with migraine and 16 patients with affective disorders (as case control). Subjects were divided in the following groups: by diagnosis (migraine or affective disorders), by the type of migraine (episodic or chronic, with or without drug abuse), by age (19-25 years, 26-44 years and  $\geq 45$  years), by sex, by the disease duration (1-5 years, 6-15 years and  $\geq 16$  years). At this level, peak flow velocity (cm/s), average flow velocity (cm/s), volumes in cranial and caudal directions (ml), net volume (ml) and aqueductal area (mm<sup>2</sup>) were studied.

**Results:** There was a statistically significant difference in forward volume between the diagnosis group of migraine and affective disorders; in peak velocity and forward volume between the chronic and episodic migraine. Statistically significant differences were not detected in flow parameters between migraine with or without drug abuse. Also there was a statistically significant difference in peak velocity, forward volume, reverse volume and net volume between the age group of 19-25 years and the older age groups; in peak velocity and reverse volume between the sexes group; in peak velocity, forward volume and reverse volume between the disease duration group of 1-5 years and other disease duration groups.

**Conclusion:** When using cine - phase contrast MRI in the cerebral aqueduct the flow parameters were higher in subjects with migraine (only the forward volume showed a statistically significant difference), especially chronic migraine (only peak velocity and forward volume showed statistically significant difference between type of migraine groups), in subjects aged 19-25 years than those in older age groups (peak velocity, forward, reverse and net volumes showed statistically significant difference), in male subjects (peak velocity and reverse volume showed statistically significant difference) and in subjects with disease duration of 1-5 years than those in older groups (peak velocity, forward and reverse volumes with statistically significant difference).

**Key words:** cerebrospinal fluid flow, migraine, phase - contrast MRI.

## 214. SURGICAL TREATMENT OF RECURRENT SHOULDER DISLOCATION

**Stefan Maximciuc**

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**Introduction:** Management of recurrent shoulder dislocation remains to be a challenge for orthopedics. Recurrent shoulder dislocation is present in 16,3% of all joint trauma cases. Maximal frequency is between 20 and 30 years old men (80%) in 90% of cases. Anatomical repair addressing the underlying pathology is the preferred method. In this study we will present the hypothesis that Bristow-Latarjet procedure is effective in most of recurrent shoulder dislocations cases.

**Materials and methods:** A total of 36 patients with recurrent shoulder dislocation were treated with Bristow-Latarjet procedure between 2013 and 2015. The patients were classified by: gender, age, trauma localization (right or left), etiology of first dislocation, place of residence (rural or urban), patient's profession. Age of patients was between 17 and 75 years. Ratio men/women was 2:1 (men-24, women-12). Trauma localization is most frequently met on the right side of the shoulder (25 vs. 11) in 24 cases right is working hand. Recurrent shoulder dislocation is 72 % (n=26) in rural society and 28% (n=10). All patients were treated with open Bristow-Latarjet procedure, after intervention all patients were immobilized with Dessault cast splint for 3 and 4 weeks. The clinical outcome was measured with Constant and Murley Score.

**Results:** The clinical outcome was excellent in 25 (69,44%) patients; good in 8 (22,22%) patients and well in 3 (8.33%) patients.

**Conclusion:** Recurrent shoulder dislocation is a problem that still needs to be solved. Modified Bristow Latarjet procedure is indicated in almost all types of recurrent shoulder instability, especially in patients with large Hill-Sachs lesions and glenoid bone loss, with good and excellent results. Open Bristow Latarjet procedure ensure restoration of joint functionality and long-term absence of recurrences.

**Keywords:** Bristow-Latarjet; dislocation; shoulder; surgery.

## 215. FACTS ABOUT STARGARDT DISEASE: ADVANCES AND OBSTACLES

**Ecaterina Pavlovschi, Djina Borovic, Irina Turcanu, Rodica Bilba**

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**Introduction:** Stargardt disease is the most common juvenile macular dystrophy and hereditary frequent cause of central visual dysfunction in young patients. This disease, whose prevalence is 1:8000, according to other sources 1:10000, was first described in 1909, by Stargardt. According to recent studies, Stargardt disease was the cause of low vision at 13.94% people, aged under 16. Stargardt's disease can occur in one of every 20,000 children, aged equal or greater than 6 years and is usually diagnosed before the age of 20 years.

**Materials and methods:** The purpose of this article was to highlight the general aspects of Stargardt's disease and also to present a clinical case of a boy aged 6, who came in 2013 at the Medical Center, with the following complaints: decreased in both eyes (OU) of the visual acuity (VA), detected in a prophylactic control.

**Results:** Presentation, clinical features and progression of Stargardt disease varies greatly from patient to patient. From complaints, appears a difficulty in recognizing faces, reading, writing, distinguishing colors and other work that is done nearby, so that the affected person can see objects only from the "corner of his eye" (peripheral vision or sight "side"). Children can be misdiagnosed for a psychological loss of vision, because macula initially appears normal. Over time, characteristic changes occur in the retina that help facilitate the diagnosis.

**Conclusion:** Being present in a marked phenotypic variability, the impact of this disease on visual function is highly variable. It is known that VA declines most often to a level of 20/200 or worse, but usually stabilizes after reaching this level. Although some patients maintain a good VA over several years, others may experience a precipitated loss of VA. A comprehensive and interdisciplinary approach for the vision rehabilitation, can help most patients learn to use the remaining visual capacity to a maximum.

**Keywords:** Stargardt disease, manifestations, treatment, rehabilitation

## 216. EARLY CHANGES OF KERATOMETRY AND POSTOPERATIVE ASTIGMATISM SECONDARY CATARACT SURGERY

**Mihaela Postolache**

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**Introduction:** The purpose was to study the cataract cases operated by the Extracapsular cataract extraction and Phacoemulsification from the viewpoint of postoperative astigmatism and keratometry.

**Materials and methods:** This prospective study is based on 77 patients with senile age (51-86 years) of both sexes diagnosed with cataracts, during the years 2015-2016. Surgeries were performed in Ophthalmology department of the Republican Clinical Hospital. The study includes only cases that showed no postoperative complications. Each patient was evaluated by the following criterias: (1) general patient information (gender, age, residence); (2) preoperative assessment: laboratory examination, cardiologic examination with ECG; (3) preoperative evaluation: all the symptoms and medical history of the patient, examination of the visual acuity, intraocular pressure measurement, keratometria, ocular biometry, the determination of dioptric implant artificial lens; (4) diagnosis (the affected eye); (5) determining the type of intervention; (6) postoperative evaluation: visual acuity without optical correction, keratometria, comments from the patient himself (satisfaction, light sensitivity etc.).

**Results:** All 77 patients are aged between 51 and 86 years, with a mean age of 68.75 years. Women age limits were from 51 years up to 79 years, with a mean age of 67.93 years; Age limit for men

were hospitalized in are the 59 years up to 86 years, with average age of 70.85 years ( $p = 0.05$ ). The distribution by sex: 29 women - 37.66% and 48 men - 62.34%.

**Conclusions:** Postoperative astigmatism depends on many factors more or less predictable. Practicing in the small incisions during cataract surgery in clear cornea, minimizes postoperative complications and corneal damage that can compromise the functional outcome after surgery, leading to a dissatisfaction both: the surgeon and the patient. Such incisions also reduce the time required visual rehabilitation, restoring independence for patients, allowing them to resume their normal activities more quickly.

**Keywords:** postoperative astigmatism, keratometry, extracapsular cataract extraction

## **217. PECULIAR FEATURES OF BACTERIAL CORNEAL ULCERS CAUSED BY CONTACT LENSES**

**Ekaterina Timoshevskaya**

Scientific adviser: Berdnikova Ekaterina Victorovna, University Assistant, South Ural State Medical University, Russia Department of Eye diseases

**Introduction:** Myopia takes the 3-d place as a reason of adult disability in Russia (15,7%) and the 2-d among children. Contact lenses is one of the most popular way of its correction (95%). Though there are lots of advantages, this method of treatment has also a lot of disadvantages. Contact lens divides the precorneal tear film on epi- and sublens parts, making cornea more sensible for the inner and outer infection agents. It was also determined that persons, using contact lenses all the time, have three times more bacteria, among which there are those that are normally found only on the skin of eyelids.

**Materials and methods:** Studies were based on the ophthalmic branch of the Chelyabinsk Regional Clinic №3 in the period from 2015-2016. The study involved 101 people who were divided into two groups. The first group (46 people) contains bacterial corneal ulcer as a result of wearing contact lenses, the second (55 people) group has other reasons of ulceration. We compared such characteristics as: age, ulceration reason, ulcer location, the presence of descemetitis, hypopyon, the infiltration, time that treatment had taken. The average age of patients in the I-st group was  $28 \pm 2$  years old, in the II-d group  $47 \pm 3$  years. Treatment time averaged  $6 \pm 2$  days in the first group and  $9 \pm 4$  days in the second. Statistical analysis was performed using Statistica program 10.0 Testing Statistical Hypotheses performed at the critical significance level of  $p < 0.05$  using the Mann-Whitney test and Spearman correlation analysis.

**Results:** All things considering, bacterial corneal ulcers, caused not by contact lenses evolve much harder (descemetitis and hypopyon were diagnosed oftener). These ulcers are usually located in the optic zone of the eye. However, bacterial investigations of the cornea of the second group in more than half of the cases gives no results. While in the first group in 32.2% of cases seeded *Klebsiella pneumoniae*, a 21,4% *Pseudomonas aeruginosa*, as well as *St. Aureus*- 10.7%. Patients using one-day lenses, have a mistakes in carrying mode as the main cause of ulceration. The main reason among the people using contact lenses during the month, is a failure to observe good personal hygiene before handling lenses.



**Conclusion:** Patients with bacterial corneal ulcers, caused by other reasons –are people of the great age with other somatic pathologies. Contact lenses are the reason of ulceration among teenagers and young active people. The main infection agent in the first group is Klebsiella pneumonia. Nowadays 80% of its cultures have antibiotic resistance. The main reasons of ulceration in the 1-st group are mistakes in carrying mode and in personal hygiene. So we can conclude that the public education of the simple directions for use of contact lenses could significantly reduce the level of this disease.

**Keywords:** cornea, ulcers, lenses, infection.

## **218. THE ENDOVASCULAR TREATMENT OF ACUTE ISCHEMIC STROKE - A PERSPECTIVE FOR REPUBLIC OF MOLDOVA**

**Vladicescu Cristina, Mititelu Anatolie, Gudumac Veronica**

Scientific adviser: Zapuhlih Grigore, MD, PhD, Professor, Department of Neurosurgery, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The endovascular approach as an elective method of treatment for acute ischemic stroke, gained rapidly its popularity, practical application and legal consent after major international trials. Purpose and objectives: this study represents a review of international clinical trials outcomes containing the up to date and comprehensive recommendations regarding the acute ischemic stroke endovascular treatment.

**Methods and materials:** Cases of 5 international trials were reviewed in order to accomplish a view, contending the best approach for the patients that fitted: therapeutic window (from 6h to 12h); proximal arterial thrombosis confirmed by angiographic CT; a National Institutes of Health Stroke Scale(NIHSS) evaluation (from 8 up to 29), age 18-80 and the most important reference – used technique: mechanical maneuvers (thrombectomy, thrombaspiration, mechanical rupture, entrapment or the temporary endovascular bypass) versus both thrombolysis (thrombolytic agents with adjunctive therapy) and mechanical actions.

**Results:** Best outcome were registered for the patients that have been treated both with thrombolysis and using the mechanical approach as well: high scores for Barthel index and **great rating for an early reperfusion, CT confirmed.**

**Conclusion:** Involving the data of an increased rate for the acute ischemic stroke, raising by years, in the Republic of Moldova, as well as the abominable long term effect on the patient's life quality, an endovascular intervention is requested. Considering the speed of development of endovascular neurosurgery, rational premises could be made equally in our republic with the foundation of endovascular specialists, exploiting the full capacity of CT and availability of the essential drugs. Consequently, the education of the population is needed to determine the early symptoms of an ongoing stroke, so on they could fit the therapeutic window for the endovascular engagement, starting with basic thrombolysis, in order to diminish the potential irreversible impact on the patient's health.

**Key words** endovascular, stroke, thrombolysis, proximal thrombosis

## PUBLIC HEALTH

### ORAL PRESENTATIONS

#### 219. THE MOST PREFERRED REPRODUCTIVE HEALTH TOPICS AMONG YOUTH IN LITHUANIA

Artūras Jacinavičius, Guoda Juškevičiūtė

Scientific adviser: Kristina Jarienė, Lithuanian University of Health Sciences

**Aim.** To determine the most preferred reproductive health topics among youth in Lithuania and to identify the most attractive sources of information.

**Methods.** The original questionnaire was distributed by e-mail and Facebook social network to the students councils of 20 Lithuanian universities and 23 colleges. 762 responses were reviewed, the data of 742 (97,4%) questionnaires were analyzed. 20 questionnaires were excluded, as they did not match the inclusion criteria – the responders had to be 15 – 29 years old. The questionnaire had 5 questions, setting the age, gender, social status, the most preferred reproductive health topic and the most attractive source of information.

The data of n=107 (14,42 %) males and n=635 (85,58 %) females were analyzed. n=131 (17,65 %) of the respondents were after the graduation, the others were still studying (n=611; 82,35 %). All the respondents were divided into three groups: 15-19, 20-24, 25-29 years old, n=81 (10,91 %), n=538 (72,50 %) and n=123 (16,59 %), respectively.

The data were analysed using “SPSS 23.0” and Microsoft Excel programs. The statistical significance between sub-groups was determined using Chi-square test and Z test.  $P < 0.05$  was considered to be statistically significant.

**Results.** The males were significantly more often interested in the „visit to the urologist“, while the females in the topics „visit to the gynaecologist“, „pregnancy“, „childbirth“, „breastfeeding“, „menstruations“, „contraceptives“, „human papilloma virus infection“, „sexually transmitted diseases“ ( $p < 0,05$ ). Where was no statistically significant difference between the gender and the following subjects: human anatomy and physiology, abortion, infertility and sexual harassment.

The most interesting topic to the youngest age groups was “contraceptives”, while the age group of 25-29 years was more interested in “pregnancy” ( $p > 0,05$ ).

The most convenient and attractive way to get the information for females was “short lectures”, for males – “educational films” ( $p < 0,001$ ).

The most convenient way to get the information for highschool or university students, males and the age group of 20-24 years was “educational films”, while for females, the age group of 15-19 years and students of highschool or university – short lectures ( $p < 0,05$ ).

For respondents who had finished their education and the age group of 25-29 years the most acceptable way to get the information was a discussion in special website ( $p < 0,05$ ).

**Conclusions.** The only topic the males were interested about was „the visit to the urologist“. The age group of 25-29 years was more interested in pregnancy, while the other ones in contraception. Males wanted to get the information by educational films, while females by short lectures. Post graduated and the oldest respondents wanted to get the information by discussion in special internet website.

**Key words:** Reproductive health, Sex education.

## **220. METHODS FOR ASSESSING THE ACTIVITY OF BACTERICIDAL LAMPS (BUV) IN PRACTICE.**

**Valentin Bernic, Ion Prisacaru**

Scientific adviser: Garbuz Alexandru, MD, University Assistant, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Basic.** In order to air disinfection of medical objectives in areas with special hygienic sanitary and aseptic type is using BUV lamps. The cleaning of the rooms atmospheric air is usually performed in lack of staff and patients by direct irradiation, except in special cases.

When calculating the required amount of UV radiation for the reclamation of atmospheric air in the room using a formula which shows the relationship where every m<sup>3</sup> of room volume it was for no less than 0.75 - 1,0W lamp type BUV capacity.

Irradiation spaces with UV lamps should be carried out 3-4 times per day. The total time of irradiation of the rooms must not exceed 8 hours per day with duration of action of 30 min.

Bactericidal lamps can be placed on the ceiling or walls so that the flow of ultraviolet radiation should be directly sent down, capturing maximum and uniform amount of air space, preferably distributed evenly throughout the room or directly on workspaces.

**Materials and methods.** To assess the quality of air disinfection by ultraviolet irradiation method in rooms with specialized sanitary-hygienic regime type will use multiple methods:

Chronological method, or decreasing time evaluation of UV irradiation source activity. For each source of ultraviolet radiation there are periods with maximal efficiency. When installing the UV lamps, every working hour is written in a registry so it monitors sanitation regime and the working term of ultraviolet irradiation source.

The second method is widely used, named arbitrary bacteriological control, that evaluate the quality of air disinfection method of sowing air samples collected or control biological samples after destruction. Unfortunately these methods can not be used with absolute application, experts in the field consider that direct evaluation by instrumental method sources would be a good solution. It will assess the effective power of radiation in (Watts) per (m<sup>2</sup>) multiplying to the room volume (m<sup>3</sup>). This assessment can be done using the TKA-PKM-12 device.

**Results.** We evaluated the activity of bactericidal lamps and got a gap of ultraviolet irradiation potential. Evaluation allows us to say that the efficiency of some lamps is not so good.

**Discussion results.** We compared the results were assessed with the European legislative framework in the field of public health and determined that in some cases is not satisfy the special requirements of power source, but if we look at this moment through the old regulations, calculate the average power at room volume, such a situation emerges in the regulations.

**Conclusion.** This speaks about possible insufficient action sources of ultraviolet irradiation for aseptic spaces. It is proposed to deepen the study by having wider assessment of ultraviolet irradiation facilities, and a next step to determine the wavelength of the radiation spectrum bactericide, it is also an attribute of quality efficiency of these sources of ultraviolet light.

**Key word:** hygiene, ultraviolet radiation sources, public health, aseptic regime, nosocomial infections.

## 221. THE MUNICIPAL PUBLIC TRANSPORT MICROCLIMATE IN CHISINAU DURING THE WARM SEASON

**Valentin Calugareanu**

Scientific adviser: Garbuz Alexandru, University Assistant, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Basic.** Municipal public transport has been and is very current. Daily, in Chisinau, the transportation of 800 thousand passengers is made with the help of 280 electric cars and 200 cars with internal combustion engine. In Republic of Moldova the conditions of work and the health of workers in the field of public transport are insufficiently studied. The importance of the topic increases given that many women are working in the field, therefore emphasizing the need for the study.

**Materials and methods.** We evaluated the microclimate parameters in the saloons of public transport from Chisinau using the apparatus Meteoscop M. Basic indicators such as air temperature, relative humidity and velocity of currents which was considered constant (0.1 m/s) were examined in accordance with the rules. Three sets of measurements were performed in order to record the transition from the cold season to the warm season which included 50 electric cars per day, and then the Sigma method was used in order to analyze the statistical average of the measurements. The quality index of the microclimate was evaluated, namely the Actual Temperature, Thermal load and the Wind Chill. Then these results were compared with the regulatory framework in the given domain.

**Discussion of the results.** We compared the results of the Actual Temperature with European regulatory framework nomograms in the field of occupational health and environmental health (89/654/EEC and FRR 2.2.2006-05; RNI 2.2.4.548 -96) and we determined that the actual temperature exceeded the maximum required in 2 cases. In April the index of actual temperature falls within the normal range, and in May and June it exceeded the normal temperature of 29.1 ° C with 1.5 ° C, and respectively, 7.2 ° C.

**The conclusion.** This fact speaks about very hot working conditions during the warm season of the year, and as a result diseases of the cardiovascular system may occur.

**Key word:** microclimate, public transportation, actual temperature, employees, public health.

## **222. BEHAVIOR ASSOCIATED WITH MOBILE PHONE USAGE AND ITS EFFECT ON HEALTH. NOMOPHOBIA**

**Aliona Catana**

Scientific adviser: Ovidiu Tafuni, PhD, Associate Professor, Deputy Chair of General Hygiene, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction** Smart phones today have become an important part of our techno-culture, especially among the younger population. Discomfort, anxiety, nervousness or anguish caused by being out of contact with a mobile phone is termed as "Nomophobia"-no mobile phobia.

**Materials and methods:**This study is a synthesis of different scientific concepts, bibliographic studies, thesis, extract from statistical publications. A observational descriptive study was carried out in 560 respondents

**Discussion results.**Study included 357 (64%) male students & 203 (36%) female students. Only 10% of the respondents are having less than 4 years of smart phone usage tenure, while 90% of respondents found to use smart phones from more than 4 years.

Along with the normal usage like calling (100%) & texting (32%), the various reasons for smart phone usage are Email (23%), Gaming (73%), internet surfing for information (97%), study related use (67%), social sites (100%), various apps (100%) & music (100%) are found be the most likely reasons for having smart phones in respondents. More than 94% of respondents spend more than 100Rs a month on internet (72% of respondents spend more than 200Rs per month), while only 6% respondents are found to spend less than 100Rs on internet. Less than 7% of respondents mentioned that, in a day approximately 3-4 hours are spent on mobile, while the large crunch of respondents (93%) found to spend more than 3 hours in day on smart phones, in that 79% of respondents are found to spend more than 5-6 hours on smart phones. Out of 560 respondents, 82% of the respondents agreed to irritability in their behavior, 61% of respondents said to become anxious quite often, 78% reported to lack of sleep (due to gaming mainly), aggression was reported by 65% of respondents while stressful conditions, loneliness & loss of interest in studies were reported by 54%, 31% & 63% respectively.

**Conclusion:** \*Smartphone's are technologically superiors, while providing various applications with which many things are become easy to do, connectivity with the world etc.

\*Unknowingly the dependency is leading to irritability, aggression, lack of sleep, loss of interest in studies, stress, which is actually related to development of psychological conditions if not well controlled in time. More over such conditions are very silently progressing, to which students are unaware.

\*Diverting students from such applications is very difficult, but making them aware of its future health & psychological conditions, is the need of time. This can be done by the society or family members by limiting the use of smart phones.

**Key words:** Nomophobia, mobile phone dependence, phone addiction.

## 223. THE METHOD OF EVALUATION OF HEALTH STATUS USING BIOLOGICAL AGE

**Diana Cerempei**

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Basic Health - is the most precious human resource, which determines the ability of the organism. Depending on lifestyle than, health can be maintained, strengthened or weakened. A person leading a healthy lifestyle usually the biological age of the person matches the passport, and those who do not protect their health, biological ahead of the chronological age.

Biological age - is the biological status of body development level respectively, where as the primary indicator is the work of physiological systems, which are characteristic of quantitative health, all specific elements to determine chronological age. Biological age is defined by all metabolic reactions, structural, functional adjustment and adaptability of the body. Biological age may differ from the chronological age. Chronological age - the time from birth to now or at any other time of calculation.

**Materials and methods.** Using the calculation method to estimate the integral health of the individual, we can identify groups at risk of illness or health problems that occur as a result of risk factors habitual or at work. As an overall assessment of individual human health, using the concept of "biological age". Health index a self - sum of answers "yes" to questions 1-24 and answer "no" to questions 25-27. If the answer to question 28, "poor" or "very bad", added the result is still one. The formula for calculating biological age after Voitenko: Men:  $VB = 27 + 0.22 \times TS - 0.15 \times 0.72 \times IAS$   
 $DRR + - 0.15 \times BS$  Women:  $VB = 1.46 + 0.42 \times 0.25 \times TD + MC + 0.7 \times IAS - 0.14 \times BS$

Determination of the biological age by the method Voitenko not require the use of any diagnostic equipment and can be carried out in any environment.

To determine the biological age need the following data:

1. Systolic blood pressure (TS) and systolic TD;
2. Duration retention of breath (DRR);
3. Still Rocking (SB);
4. body mass (MC);
5. Index rating their health status (IAS)

The index of subjective health according to a questionnaire containing 28 simple questions. Then, according to the scale of assessment and biological age formula is obtained depending on the results of the assessment of subjective health and functional few simple tests.

**Results.** It conducted the study of biological age to 51 students from the University of Medicine and Pharmacy *Nicolae Testemitanu*. Analyzing the results of self-evaluation, biological age of students it can be concluded that people aged 40 years show more advanced care to their own health than the

group assessed. The low indices of physiological reserves at students age 25 years due to failure to meet the skills of healthy way of life.

**Conclusion.** The study results are alarming. We have to repeat the study on a larger group of students and structured according to years of study. Another thing that is desirable to do is promote a healthy lifestyle among students.

## **224. A STUDY OF THE KNOWLEDGE OF THE ROMANIAN INSURANCE SYSTEM**

**Liana Coman, Oana Harsan, Alexandru Braniste, Oana Fodor**

Scientific adviser: Ceană Daniela Edith, MD, University Assistant, University of Medicine and Pharmacy Tirgu Mures, Romania

**Introduction:** High-quality health care affects health and wellness. A health insurance policy is a contract between an insurance company and a policy holder intended to safeguard against high and unexpected health care costs. In Romania, the health system is based on health insurance, a benefit provided through a government agency, private business, or a non-profit organization, which assures the patient full medical services when needed.

**Material and method:** The aim of this study is to evaluate the knowledge of the health insurance system in Romania among adults from different counties. In order to perform this study, we developed a questionnaire which includes 15 items reflecting various characteristics of the Romanian health system. The questionnaire was completed by 93 persons, males and females, aged between 18 and 75 years old. We have analyzed the subjects answers to the 15 items and included them in a data base, which served as the bases for the descriptive statistical analysis.

**Results:** From the total number of 93 subjects who participated at this study, the majority was represented by females, 58%, while males were just 42%. Regarding to the age epidemiologic criterion, we observed that 50% of the respondents were between 18 and 29 years old. We have also noticed that more than a half from the total number of persons, 52%, mentioned high school as their highest level of education, while 45% of the total were students during the period of this study, and only 30% were employed and in contract with different health insurance policies. We analyzed the statistical differences between genders using the questionnaire calculated scores, 1 point for each item, totaling a maximum of 15 points; most of the subjects had a score of at least 10 points. We have compared the scores for males (mean of 9.48) and females (mean of 11.01) obtaining a P value of 0.0166, which is statistically significant.

**Conclusion:** The majority of the respondents, according to the calculated scores, had at least a moderate level of knowledge about the Romanian health insurance system. Also, there are differences between genders, regarding the level of information about the health insurance system, which are statistically significant, females being more informed than males.

**Key words:** health system, insurance, public health, gender, Romania

## 225. ELABORATING AN INTEGRAL INDICATOR FOR EVALUATING THE OCCUPATIONAL ENVIRONMENT

**Alexandru Garbuz**

Scientific Adviser: Ovidiu Tafuni, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Basics.** One of the difficulties in the modern hygienic evaluation is studying the multitude factors of occupational environment. A standard environment does not give rise to any problems, but for a dynamic environment a feasibility study should be carried out, because sometimes in some sections of time a factor may exceed the allowed limit, but its action is not harmful because other factors of occupational environment are far from this limit.

From a groundless point, the occupational environment is composed of several factors that are a part of more groups of factors and indicators that can be assessed by the different regulatory frameworks. Based on the given rules 89/654/CEE and FRR 2.2.2006-05; RNI 2.2.4.548 -96 or on each component of the occupational environment from the normative documents for each factor as for example Noise, Lighting, Temperature, Humidity, Vibration, ultrasound, Infrasound, actual temperature, CO<sub>2</sub>, CO, and others.

**Methods.** In the hygiene-based literature (Ким Дж, Мьюллер Ч. У., Клекка У.Р. 1989) lies the idea of creating the so-called "integral Indicator for evaluating the occupational environment" (ИЕАО) that he believes should be determined after a canonical relation of a discriminant type, and constitutes a multiple unidimensional parameter that represents the action of factors that determine the occupational environment.

$$\text{ИЕАО} = -30,87 + 0,19 \text{ Noise} + 0,24 \text{ Vibration} + 0,006 \text{ Infrasound} + 0,0065 \text{ C.U.}$$

This indicator characterizes the total action of the harmful factors of the environment. The value of this indicator changes depending on the intensity of the action of these factors, in other words the higher the action of the factors the lower the total value of the indicator for the occupational environment is, but if the negative action decreases and the occupational environment becomes more comfortable for the activity-the value of the following indicator increases and can be classified according to the sanitary regulation in three groups (Bobrov A. F., Mironica I. N., 1998).

**Results.** Basically, if the indicators of different occupational environment parameters differ a lot, then the multiplicity of results can be analyzed by the deviation method through Sigma which shows an effective average of the given fact. We have tested the working environment of the Chisinau municipal public transport drivers and through 20 complex measurements of all activity environment factors we have concluded that the work in the given branch is in class III-B, according to the rules 2.2.4.548 -96 RNI.

**Conclusions.** The sample should be widened up to 150 evaluated cars under the statistical control formula. It has also been discovered the need to carry out wider measurements, namely to perform the calculation at smaller intervals throughout the year in all seasons, and at every hour of activity. Another useful thing that has to be performed is the assessment of all the factors of the occupational environment at the same time.



**Key word:** public transportation, occupational environment, hygiene, factors, IIEAO.

## 226. THE HYGIENIC APPRECIATION OF THE NOISE

**Ana-Maria Ghilas, Mihai Chilimicenco**

Scientific adviser: Garbuz Alexandru, University Assistant, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

The "noise pollution" represents the presence of noise in the environment, which causes discomfort. From the physical point of view, noise is a succession of sounds with different frequencies and intensities. The noise is based on the sound, which can be defined as the change in pressure detected by the human ear. Sound is a vibratile phenomenon, which broadcast as waves, and it is transmitted through different media at different speeds. Sounds can be simple or compound, harmonic or disharmonic. From the medical point of view, noise is any sound that causes discomfort for the human body. Noise pollution has a negative impact on the entire human body, causing from mild fatigue to serious neurotic states and even auditory organ trauma. The most affected because of the noise is the neurovegetative balance. People get tired faster, get nervous, sleep disturbances occur, headache, permanent migraines, loss of appetite and anemia. After a certain period of time, the persistent noise can affect circulatory functions, heart rate and blood pressure, can cause stomach neurosis. Other consequences of noise are states of fear and discomfort, malaise and diminishing attention. Injuries caused by noise concerns eardrum rupture or damage of the organ of Corti. Auditory organs are in a strong link with the central nervous system, in this way different types of noise can affect any tissue of the body.

**Methods and materials.** For noise measurements we used the sound meter RIFT-004 which allows mobile and dynamic noise assessment of the external environment. Measurements conducted in Chisinau on the trolleybus route 22, which are represented in the table below show that the noise level exceeds accepted standards and sanitary norms.

Measurement address (station)	Time (first, rest day)	Level (dB)	Time (second, workday)	Level (dB)
Gradina botanica	8.10	63	11.10	77
Valea Crucii	8.20	65	11.20	74
Str. Burebista	8.35	67	11.36	76
Bd. Cuza-Voda	8.50	8.50	68	11.53
Bd. Decebal	9.00	9.00	64	12.04
Str. Zelinski	9.10	9.10	68	12.15
Spitalul Municipal 1	9.15	9.15	70	12.20
UNIC	9.30	9.30	70	12.35

PMAN	9.40	9.40	71	12.45
USMF	9.50	9.50	71	12.55
Ion Aldea- Teodorovici	10.00	10.00	69	13.05
Str. Ion Pelivan	10.15	10.15	68	13.20
Sos. Balcani	10.30	10.30	67	13.35

**Discussion results.** Measuring and calculating the average noise levels are made in accordance with

SM GOST 31296.2-2006 (ISO 1996-2:2007), IDT " Noise. Description, measurement and assessment of noise." According to the legislation the maximum level of noise pollution must not exceed 70 dB. We conducted two sets of measurements-one in a rest day and the second in a working day. In both cases we attest overruns of the background noise in Chisinau areas.

**Conclusion:**It is important to implement some measures to combat the background noise, such as keeping windows in closed position and limiting the exhibition to noise action. In this way we can prevent negative action of the noise on the human body.

**Key words:** hygiene, noise pollution, physical factor, background sound.

## 227. SOCIAL ECONOMIC LIVING CONDITIONS OF PUPILS FROM MOLDOVA

**Veronica Gisca**

Scientific adviser: Zepca Victor, PhD, Associate Professor, National Center of Public Health, Chisinau, Republic of Moldova

**Introduction:** Socio-economic living conditions can influence the health of young generation.

**Materials and methods:** The study included a sample of 783 pupils from Vth-VIIIth grades (358 boys and 425 girls) from 10 high schools from rural areas from Moldova. Study instrument was a questionnaire that included 9 questions about socio-economic living conditions of pupils.

**Discussion results:** Pupils Vth-VIIIth grades from rural areas of the Republic of Moldova have their own room in parental home in a proportion of 67.9% (73.1% boys and 63.6% girls,  $p < 0.05$ ) and their separately bed - 89.3% of pupils (91.5% boys and 87.3% girls). Houses of 52.2% of surveyed pupils (57.9% boys and 60.1% girls) are supplied with cold water from the aqueduct and with hot water - 12.6% of pupils (14.9% boys and 10.7% girls). Have bathroom 65.5% of pupils (70.5% boys and 61.2% girls,  $p < 0.05$ ) and WC - 26.5% of pupils (28.7% boys and 24.5% girls). The houses of 80.9% of pupils have only heating stoves (80.3% boys and 81.4% girls). Homes of 15.9% of pupils are connected to the centralized sewerage (17.4% boys and 14.6% girls), concrete pit lid is used with the role of sewage by 49.3% of pupils (48.0% boys and 50.5% girls), while 34.8% pupils (34.5% boys and 34.9% girls) house is not provided with sanitation. 50.9% of pupils said that are satisfied with the financial condition of

their family (54.2% boys and 48.2% girls), not very satisfied - 38.6% of pupils (38.4% boys and 38.8% girls) and 10.4% of pupils are not satisfied (7.3% boys and 13.0% girls).

**Conclusion:** socio-economic living conditions of pupils from rural areas of Moldova are relatively satisfactory, 2/3 of them have their own room, more than half are connected to the aqueduct, 2/3 have bathroom in the house and 1/4 have WC, over 3/4 heat their homes in cold season with stoves, however just 10.4% of respondents are not satisfied with the financial condition of the family.

**Key Words:** socio-economic conditions, pupils, rural areas.

## 228. INTERDISCIPLINARY COLLABORATION BETWEEN PRIMARY HEALTH CARE AND OCCUPATIONAL HEALTH SERVICES

**Elena Gurghis, Livia Tapu, Alina Ferdohleb**

Scientific adviser: Ion Bahnarel, MD, PhD, Professor, Head of Department General Hygiene, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Employees' poor health is a major problem both nationally and globally. Healthy workers are the backbone of a prosperous economy, thus in preserving and strengthening employees' health is interested not only the employer but also the state.

**Objective of the study:** Analysis of interdisciplinary collaboration between primary health care and occupational health.

**Materials and methods:** Bibliographical-descriptive, analytical and comparative study of literature in occupational health and primary health care field.

**Results:** Occupational health and primary health care have close similarities in disease prevention and health promotion, early notification of professional diseases and vocational rehabilitation. According to WHO, the level of occupational and work-related diseases is growing, while globally only 10-15% of employees have access to occupational health services and the other 85-90% benefit only of primary health care services. So physicians are not only the connecting link between the patient / employee and occupational health specialist, but, in countries with rudimentary occupational health services, is the sole provider of occupational health services. It has been demonstrated that the major share of physicians have diagnosing professional illness as weakness due to the omission of the patient's occupation and lacks of knowledge about new technologies in the work processes. Unfortunately, in Moldova, there is a minimum intersection between occupational health and primary health care services in daily practice and in continuing medical education. Moreover, with population aging and the increase of retirement age we can expect a growing number of health problems among these economically active persons. Both occupational and habitual factors are important in determining health risks of a worker. Thus, physicians must understand the occupational health services and vice versa. This makes vital the productive collaboration between medical specialists in occupational health with physicians, organizing courses for physicians in the fields of labor hygiene and occupational diseases. An integrated approach of occupational health services and primary health care services will have a greater impact on the health of the working age population.

**Conclusions:** Physicians and specialists in occupational health are the main actors involved in the provision of occupational health services. The key to success in this area is initiating, maintaining and enhancing interdisciplinary collaboration between occupational health and primary health care services, and the consolidation of occupational health services.

**Key-words:** occupational health, employees, primary health care.

## **229. ADOLESCENT MOTHERHOOD AND ITS PUBLIC HEALTH IMPLICATIONS**

**Ioana Georgescu, Mihaela Roxana Huhu, Maria-Luiza Butoi, Octavian Ioghen, Madalina Preda, Mihaela Stefanescu, Mircea Ioan Popa**

Scientific adviser: Anca Doina Plesca MD, Professor, Medicine Dean, *Carol Davila* University of Medicine and Pharmacy Romania, Bucuresti.

**Introduction.** Adolescent pregnancy and parenting are considered social and public health issues. For most of the adolescents, pregnancy and childbirth are neither planned nor wanted. Early motherhood increases the risks for both mothers and their babies. One goal of our study is to evaluate this risk.

**Materials and methods.** A total of 238 infants whose mothers were between 15 and 30 years old at the moment of birth were included in the study. All infants were hospitalized in „Dr. Victor Gomoiu” Children’s Clinical Hospital, Bucharest during August - October 2015. We collected data from the patients’ charts and compared the education level, living area, birth weight and smoke exposure of the adolescent mothers (<20 years old) with the mothers in the 20-35 age group (control group) using EpiInfo 7.1.4.0.

**Results and discussion.** Among all infants included in the study group 15.99% have adolescent mothers. A percent of 68.42% of the adolescent mothers had only primary education compared with 14.50% of the control group. Of the adolescent mothers, 5.26% have secondary school compared with 15% of the mothers from the control group. None of the adolescent mothers have university studies while 9% of mothers in the control group were graduated of an university. Pregnant teens and teen mothers should be encouraged and helped to continue schooling.

The risk of child neglect and maltreatment is higher among teenage mothers. In our study, 57.89% in the adolescent mothers group are exposing their infants to cigarette smoke compared with 47.50% of the mothers in the control group. Adolescents are more likely than older women to have a low or very low birth weight infant. Twelve percent of the mothers in the control group had children with low birth weight or very low birth weight compared to 21.05% of the adolescent mothers. Twenty one percent of the mothers ranged in the control group are living in rural areas compared to 47.37% of the adolescent mothers. Educational programs that give teen mothers the skills to be better parents and provide for their child financially and emotionally should be designed and implemented.

**Conclusions.** Adolescent motherhood is more likely in uneducated and rural communities. Most of the teen mothers have only primary education. Adolescent mothers and their babies have unique health

risks. Newborns born to adolescent mothers are more likely to have low or very low birth weight, with the risk of long-term effects. Infants born to teen mothers and are at higher risk of being exposed to cigarette smoke. Adolescent motherhood remains a public health issue. Adolescent mothers should be provided with psychological and financial support and should be encouraged to continue the school.

**Key words:** adolescent, motherhood, public, health.

## **230. CIRCADIAN DESYNCHRONY IN SHIFT WORK**

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The circadian clock is one of the most important mechanism of human body that coordinates biological rhythms with environmental changes in the day-night cycle. It influences hormones, behavior, cognitive function, metabolism, cell proliferation, apoptosis and response to genotoxic stress.

The earliest recorded account of a circadian process dates from the 4th century B.C.E., the next dates was in Chinese medical texts dated to around the 13th century, but near our days discovered the first mammalian circadian clock mutation using mice in 1994. In circadian literature, synchronization means that rhythms display a 24 h period but may not necessarily be in the right phase, for example, abnormally delayed or advanced. We are diurnal species, so we are active during the day and sleep during the night. But exist specific categories of people with morning diurnal preference (larks) and evening preference (owls). Their internal biological clock adapted and work in own specific mode. Deviation from the normal mode leads to desynchronization of the circadian clock, for example among shift workers. Shift work is work that takes place on a schedule outside the traditional 8 am – 6 pm day. It can involve evening or night shifts, early morning shifts, and rotating shifts. Many reviewers have been published regarding the subjective perceptions, health, performance and psychological aspects of shift work. Of course it is Associated with a number of health problems. This research concentrate on shift work in relation to desynchrony of biological clock and it's impact on the function of the liver. Through the physiologic and biologic methods I obtained that the level of glucose in blood through 24 hours changes concerning the schedule of work. Presumably, permanent shift work causes hypoglycemia. This causes metabolic disorders and finally diabetes. In this study how future propose is to evaluate the health and circadian rhythm of medical workers. It is necessary to evaluate the schedule of shift work in medical service. The most numerically important shift work conditions in medicine are irregular night shifts (sometimes nights and sometimes days) and rotating schedules. Most permanent or long-term night shift workers in medicine can not adapt their circadian system to the imposed work schedule. A recent meta-analysis of 6-sulphatoxymelatonin rhythms in permanent night workers indicates that only a small percentage (<3%) shows complete circadian adaptation, information by Josephine Arendt, Centre for Chronobiology, Faculty of Health and Medical Sciences, University of Surrey, Guildford. Thus, the vast majority of shift workers in medical service will be working during their circadian time-off and trying to sleep during periods of maximum alertness. The curtailment of sleep when taken during the day in shift workers is well documented and is a cause of sleep deprivation, that need to evaluate better.

Finally we suppose a lot of deregulation of the health state of medical workers caused by the deregulation of the circadian rhythm connected with the occupational stress and incorrect schedule.

## **231. CONTRACEPTION. A TRICKY PROBLEM WHICH HAS BECOME ESSENTIAL**

**Maria Mirela Ani, Alexandru Emil Baetu**

Scientific adviser: Cristina Golea, MD, PhD University of Medicine And Pharmacy of Targu Mures, Romania

**Introduction:** Last year in Romania was recorded the highest number of children abandoned at birth in a decade while more that 11.000 babies were not recognized by fathers according to the Directorate for People and Management Database by Ministry of Internal Affairs. In connection whit this, in literature, the impugned aspect is the lack of sexual education and family planning outlining for contraception.

**Our main objective** is to check the knowledge about the most widely used contraceptive methods between general population, female students from University of Medicine and Pharmacy of Targu Mures, Romania and some medical doctors in order to demonstrate if the knowledge about contraception can ensure a safe sex life as well as choosing a contraceptive method knowingly.

**Material and methods:** The name of this study is CONCEPT and is a prospective, transversal study who include 182 patients(pts) divided in 3 groups as followed: group 1:127 young females from University of Medicine and Pharmacy of Targu Mures, Romania,group 2: 41 patients from community and group 3:14 young medical doctors. We developed a score in order to evaluate the knowledge of these 3 groups with a maximum of 80 points and a minimum of 0. We also applied a questionnaire for all those patients to see what contraceptive methods they're using. All statistical analysis were performed using Graph Pad Prism 6.1.

**Results:** The demographic dates were quite similar for group 1 of students(mean age: 23,59, SD:1,91); group 2 of patients from community(mean age:22,39, SD: 3,53) and group 3 of medical doctors(mean age: 27,21, SD: 2,29). The group with the higher scores at our test was group 3 (mean:60,33; SD: 10,14,  $p<0.05$ ) followed by group 1 of students (mean:56,82; SD:10,69;  $p<0.05$ ) and group 3 with a mean of 51,26 and SD:12,19,  $p<0.05$ ).Using unpaired t test we compare the group 3 with the group 1 and we found a statiscal difference ( $p=0.0238$ ) and a higher statistical difference between the group 3 of medical doctors and group 2 of young females from community ( $p=0.012$ ). We also find a big difference between the group 1 of students and group 3 ( $p=0.019$ ). We observed that the group 1 tended to use more birth control pills more than any other group ( $p=0, 0254$ ). Chi Square test was used in order to clarify which group tended to use condoms as a contraceptive method but we didn't find any difference.

**In conclusion** the health and sexual education received in college seems to be very helpful for young women regarding contraception and we are looking forward to start a local campaign of information. However we are pleasantly surprised that all 3 categories of patients are using condoms.

We think that the collective effort from the medical authorities regarding family planning, sexual education and contraception can lead to lower rates of abortions and abandonment of newborns.

## **232. THE VACCINATION ISSUE – WHO IS RESPONSIBLE? RETROSPECTIVE STUDY ON 278 INFANTS HOSPITALIZED IN A PEDIATRIC CLINICAL HOSPITAL IN BUCHAREST**

**Doina Anca Plesca, Maria-Luiza Butoi, Mihaela Roxana Huhu, Ioana Georgescu, Madalina Preda, Octavian Ioghen, Mihaela Stefanescu, Mircea Ioan Popa**

Scientific adviser: Anca Doina Plesca, MD, Professor, Medicine Dean, *Carol Davila* University of Medicine and Pharmacy, Bucuresti, Romania

**Introduction.** Vaccines represent one of the most effective and cost-saving public health interventions. Still, this measure continues to be under-used all over the world. Immunization averts an estimated 2 to 3 million deaths every year from diphtheria, tetanus, pertussis (whooping cough), and measles. Although globally the proportion of children who receive recommended vaccines has remained steady for the past few years, we observed during our clinical practice that the vaccination rate in Romania might be lower than the needed vaccination rate. The objective of this study is to test this hypothesis and to highlight the causes of low vaccination rates in Romania.

**Materials and methods.** We collected data regarding different variables such as vaccination status, living area, mothers' age from the patient charts of all the infants (278) hospitalized in the Clidren's Clinical Hospital "Dr Victor Gomoiu" during a three-month period (1st of august – 31st of October 2015). We determined the frequencies and analyzed the differences between vaccinated and unvaccinated children regarding the above mentioned variables using EpiInfo 7.1.4.0.

**Results and discussion.** Of a total of 278 hospitalized infants, 15 (5.9%) were excluded because of missing data, 194 (69.79%) were completely vaccinated and 69 (24.8%) were unvaccinated or incompletely vaccinated.

According to WHO, the global vaccination coverage of the vaccines included in Romania's immunization schedule ranges between 82% (vaccine against hepatitis B) and 86% (DTPa vaccine) which makes the immunization coverage we found alarmingly low. Our data shows that one explanation for this situation could be child neglect. We found that unvaccinated or incompletely vaccinated infants are more likely to have adolescent mothers than vaccinated children (24.64 % compared to 10.82%).

Children who live in rural areas have lower immunization rates. In our study, we observed that vaccination rate is higher among children living in urban areas (78.8%) than among children living in rural areas.

**Conclusions.** The immunization rate in Romania is lower than the recommended immunization rate. Child neglect, difficulty to reach health providers, lack of information could be some of the causes. Whether the true responsible for this issue is the children's caregiver, the Health Ministry, or both, immunization coverage represents an important public health issue and it should be further and thoroughly investigated.

**Keywords:** vaccines, coverage, Romania

### **233. NUTRITION OF THE STUDENTS FROM UNIVERSITY OF MEDICINE AND PHARMACY TIRGU MURES**

**Ioana-Alina Miu, Gianina-Maria Cadare, Andreea Ionita, Elena Petrache**

Scientific adviser: Ceana Daniela Edith, MD, University Assistant, University of Medicine and Pharmacy Targu Mures, Romania

**Background:** Appropriate nutrition in humans is one of the most important factors affecting normal development, nutritional status and being in good health. University students can be overburdened with responsibilities arising from their studies which may result in abnormal diet/nutrition and decrease their levels of physical activity.

**Objective:** To determine and assess nutrition and eating habits of students from the general medicine who are in the first year compared with students from same academic centres also studying generale medicine who are in the last year.

**Material and method:** This study is an cross-sectional study which includes a total number of 246 students, in which 152 from the first year and 94 from the last year. We use an anonymously questionnaire. We used Graph Pad for statistical processing. Data was obtained by questionnaires including the importance of nutrition and sport in their lives.

**Results:** From the total of 246 participants, 152 (75% women and 25% men) were from the first year and 94 (72% women and 28% men) from the last year. For these students we evaluated the physical activity, eating habits, meals schedule and liquids ingestion. The physical activity was not a predictor factor in our study ( $p = 0.02$ ); 25% from first year students practice sports less than 6th year students-42,6%. 81,9% from 6th year students prefer to eat home cooked meals opposite to the 1st year student-83,9% who eat more likely at the restaurants or canteens ( $p=0,001$ ). 63,2% of students from the 1st year eat more white bread despite the 45,7% from the 6th years ( $p=0,028$ ). Regarding the consumption of liquids we didn't discover any significant difference between the 2 lots ( $p=0,008$ ). The majority from the both lots prefer consuming water (85,5% from the first year and 75,5% from the last year are consuming water). As for eating fats, we noticed a significant statistics difference ( $p=0,001$ ). 51,3% students from the first year prefer eating more butter compared to 46,8% students from the 6th year.

**Conclusion:** There are results in our questionnaire that have statistical significance but the majority doesn't. Despite the fact that the 6th year students have developed more knowledge about healthy alimentation, they have a nutritional status hasn't improved so much. It is important that the learning program should allow breaks for meals at fixed hours. Students should have access to a canteen with healthy meals, meals adapted to the physical and mental activity. Getting used to some healthy eating habits must be done from early ages, because those will be preserved all live long.

**Key words:** eating habits, students, nutrition, sport.



## 234. SOME EPIDEMIOLOGICAL PECULIARITIES OF MORBIDITY DUE TO SEPTIC-PURULENT NOSOCOMIAL INFECTIONS IN CARDIOSURGERY

**Aliona Nastas**

Scientific adviser: Prisacari Viorel, Professor, correspondent member of the Academy of Sciences of Moldova, Department of Epidemiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Nosocomial infection has become one of the major problems of contemporary health care. Increased morbidity and its consequences, including lethality and economic losses resulting from additional care costs, require studying the real incidence and risk factors for the adoption of surveillance and control strategies. (V.Prisacari)

**Materials and Methods:** The study is based on retrospective analysis of 396 observation forms of patients treated in the Department of Acquired Heart Defects(AHD) during 2010, active detection of cases with septic-purulent nosocomial infection (ISPN), further processed using computerized program MS Excel.

**Results:** It was found that in 352 patients treated surgically, 126 developed ISPN, the incidence being 35,79% or 357,95 cases per 1,000 patients operated. Therewith, patients treated conservatively the incidence of ISPN is 6.8%.

It has been shown that one of the risk factors is age patients, so the quota aged between 55-59 years the incidence is 31,7% and the quota aged between 60-64 years – 23,6%.

Distribution of morbidity with cardiosurgical ISPN depending on length of stay in hospital demonstrates that patients develop complications more frequently who have been stationary a longer duration: 21-25 days - 19%, 26-30 days – 18,2% and 31-35 days - 17%.

Intensive index of septic-purulent complications per 1000 surgery was 315,54 ‰ in patients undergoing surgery for 0-4 hours, 343,7 ‰ lasting 4-6 hours of surgery and up to 466,7 ‰ among the duration of surgery more than 6-8 hours.

**Conclusions:** Epidemiological peculiarities detected can be taken into account when implementing the program of surveillance and control of nosocomial infections of cardiosurgical profile.

**Keywords:** Cardiosurgery, Acquired Heart Defects, nosocomial infection, septic-purulent infection

## 235. PARENT'S OPINIONS TOWARDS VACCINATION

**Elena Petrache**

Scientific adviser: Ceana Daniela Edith, MD, University Assistant, University of Medicine and Pharmacy Targu Mures, Romania

**Introduction.** Vaccination is the process by which into the body is inserted a biological product containing inactive viruses or bacteria, viruses or bacteria with attenuated virulence and anatoxin in

order to obtain a state of temporary protection. Through the diffuseness of the information coming by all means, it noticed that parent's attitude changed regarding vaccination. The aim of this study is to express the opinion of parents towards vaccination.

**Materials and methods.** This is a prospective study using a questionnaire with 17 questions. Data were collected between 15.10.2015-15.12.2015 from parents (n=272) whose children are pupils under 14 years old. Data were statistically processed using Graphpad.

**Discussion results.** It not found a statistical significant difference between sample of parents with higher education (197, 72,42%) and the sample of parents without higher education (75, 27,57%), both samples not choose the optional vaccination.

As well, number of parents living in urban areas (160, 76,19%) who received information from medical stuff regarding vaccination's benefits is higher than the number of parents living in rural areas (34, 54,83%), emphasize a statistical significant difference between those two samples.

It can be noticed that the majority of parents questioned living in urban area (69.04%) and the ones livind in rural areas (50%) agree with new very strict law regarding vaccination.

Out of survey questioned, 17 parents (8%) didn't vaccinate their children for various reasons. Out of those 17, 13 declared that they will maintain the decision not to vaccinate their children.

**Conclusions.** Parents consider that sanitary system has a big responsibility to inform parents on vaccination. This responsibility is shared between Ministry of Health and healthcare providers as family doctor, pediatrician.

**Keywords:** vaccination, parent's opinion, children.

## 236. STRESS-A REAL PROBLEM OF TEACHERS

**Dorina Pogreban**

Scientific adviser: Catalina Croitoru, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Hans Selye, the parent of stress has tried more variants to define stress, after more research he concluded that stress is a body reaction which appears under the influence of different stressing factors of the external environment. Along time there have been made more challenges to define stress, one completing the other. Stress is an integrative part of daily life which cannot be avoided (Elizabeth Kendall,2000). Stress is a complex psycho-social phenomenon which appears from the struggle of a person who has more demands, tasks, situations that are understood as being difficult, painful or of a great importance for a certain person (Baban,1998). Stress can interfere in any domain becoming a normal experience for everyone but it may have two sides: once it can appear as a stimulus due to which you can achieve a goal, the other side may be as a decisive factor in changing the existing life style into a negative one.

**Materials and methods:** In the present work there were analyzed the major aspects of this issue that have been published the last 10 yers. The study is based on 53 sources of literature of foreign authors (Romania, Russia, USA, Germany, Italy, etc.).

**Discussion results:** Social changes didn't make teachers immune towards stress. Meanwhile society sees teaching as a job without difficulties but with more advantages: an organized program of activity, holidays, free time. These words refer to the narrow vision people have about the work and the activities performed by a teacher.

The main sources of stress among teachers (according to the research lately made in Europe, U.S.A., Canada, Portugal, Danemark, Australia) are: the speed of producing information, the compulsoriness of reading, preparing and bringing up to day the information, the big volume of administrative tasks, the lack of teachers' autonomy, the lack of support and cooperation, problems that appear from class management (weak planning and programming, the reduced skillfulness of teachers in the domain of human relationship, of communication, of conflict management) the growth of didactic norms and of working form, the lack of space, the difficulty of career growth, the low wages of teachers (a factor that determines them have two jobs in order to survive).

Work in stress conditions can bring a series of consequences such as tiredness, pressure, sleep or voice disorder etc..According to the worldwide statistics the phenomenon of job abandones about 20-50% in the first years of activity.

**Conclusion:**Preventing a pathologic state is simpler cheaper and more efficient than treating itself. The same happens about stress. There are multiple ways and methods to reduce stress: full filling a task or a job on time, relaxing, preserving feelings, and the most important is to be able to tell, to admit the presence of stress –doing that we can diminish its action.

**Key words:** stress, teachers, factors, consequences, means.

## **237. EPIDEMIOLOGY OF INFECTION WITH EBOLA VIRUS – SUMMING-UP STUDY**

**Doina Repesco**

Scientific adviser: Cotelea Adrian, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** When it comes to serious diseases that torture Africa, there is no other name that to sound as fearsome as Ebola. Ebola has murdered so far too many people, the number of whom will remain unknown for the medical science. It is not known exactly how many epidemics have been in the past, which cut down hundreds of victims in a few days. In order to highlight some epidemiological peculiarities specific to Ebola, it was initiated this summing-up study.

**Materials and methods:** The study is based on the analysis of data from the specialty literature. Over 300 sources have been analyzed in this respect. By meta-analysis, it was appreciated the timeline of occurrence of pandemics and it was evaluated the efficiency of different prevention measures. The integral study is presented in the graduation thesis of the author.

**Discussion, results:** For the first time Ebola was described in Sudan, in 1976, when 284 people infected with Ebola were recorded, out of which 151 (53%) died. A few months later, a new epidemic broke out in the neighboring state Zaire, where 318 infected people were recorded, and 280 of them died (88%). The disease got its name after the river which flows near the settlement where the first cases of Ebola were noticed, nameyin Zaire. In 1979, the disease broke out again, but this time in Sudan, where 34 people were infected, out of whom 65% died. Only 15 years later (1994), Ebola was diagnosed in the third African state– Gabon in 52 patients and had a death rate of 60%, in Ivory Coast–one single victim, then again in Congo in 1995, in 315 patients, out of whom 254 (81%) died.

The epidemiological peculiarities have not been sufficiently cleared out in all cases. In general, it is recognized that sources of infection and its transmission slightly differ in animals compared to what is known about disease in humans. The evolution and anatomic and clinical features are rather well-known aspects presently and which continue to be studied, but aspects of infection in animals are known too little.

**Conclusion:**

1. Ebola is an infectious disease extremely dangerous with pandemic potential;
2. Ebola is an exotic infectious disease with natural focus;
3. High risk to contact Ebola infectious is more appropriate for natives of areas with epidemic potential and for immigrants.

**Key words:** Ebola, epidemic, pandemic.

## **238. THE MUNICIPAL PUBLIC TRANSPORT MICROCLIMATE IN CHISINAU DURING THE COLD SEASON.**

**Corneliu Rotaru, Alexandru Garbuz**

*Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Basic.** Municipal public transport has been and is very current. Daily, in Chisinau, the transportation of 800 thousand passengers is made with the help of about 500 community cars. In Republic of Moldova the conditions of work and the health of workers in the field of public transport are insufficiently studied. The importance of the topic increases given that many women are working in the field, therefore emphasizing the need for the study.

**Materials and methods.** We evaluated the microclimate parameters in the saloons of public transport from Chisinau using the apparatus Meteoscop M. Basic indicators such as air temperature, relative humidity and velocity of currents which was considered constant (0.1 m/s) were examined in accordance with the rules. Three sets of measurements were performed in order to record the transition from the hot season to the cold season which included 50 electric cars per day, and then the Sigma

Date	Year	Season	Ext.Temp. (d.m.S.)	Int. Temp. (d.m.S.)	RH % (d.m.S.)	AT	WChill
11 september		Autumn	19,5	26,2	78,5	31,1	28,6
29 november	2014	Autumn	2,8	9,4	43,7	6,9	12,5
28 december		Winter	-4,8	6,8	63	4,6	10,0

method was used in order to analyze the statistical average of the measurements. The quality index of the microclimate was evaluated, namely the Actual Temperature and the Wind Chill. Then these results were compared with the regulatory framework in the given domain.

**Discussion of the results.** We compared the results of the Actual Temperature and Wind Chill with European regulatory framework nomograms in the field of occupational health and environmental health (89/654/EEC and FRR 2.2.2006-05; RNI 2.2.4.548 -96) and we determined that the actual temperature exceeded the minimum required in 2 cases. In September the index of actual temperature falls within the normal range, and in November and December it doesn't reach the normal minimum 18 ° C with 11.1 ° C, and respectively, 13.4 ° C.

**The conclusion.** This fact speaks about very cold working conditions during the cold season of the year, and as a result one might experience different diseases of the respiratory, urinary or cardiovascular system and many more.

**Key word:** microclimate, public transportation, actual temperature, employees, public health.

## 239. PECULIARITIES OF OCCUPATIONAL HEALTH SPECIALISTS' INSTRUCTION AND TRAINING

Livia Tapu, Elena Gurghis, Alina Ferdohleb

Scientific adviser: Ion Bahnarel, MD, PhD, Professor, Head of Department General Hygiene, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova, Occupational Health Scientific Laboratory, National Center of Public Health Chisinau, Moldova

**Introduction:** Occupational Specialty Health is a new specialty for both Moldova and the countries in the European region. Moldova is the only country in Europe that has not implemented a workers' health and safety surveillance system, in accordance with European and international bodies: EU-OSHA (European Agency for Safety and Health at Work), WHO (World Health Organisation), the ILO (International Labour Organisation). This system is part of the Public Health Strategy at European level and aims employee health surveillance, prevention and detection of occupational and work-related diseases.

**Objective of the study:** Assessing the situation in the field of instruction and training occupational health specialists. World experience shows that occupational health specialist one-third of life is spent at work of employees, studying working conditions and risk factors.

**Materials and methods:** In this paper were analyzed scientific papers on similar experience of different countries in this area over the last decade.

**Results:** World experience shows that occupational health specialist one-third of life spends at employees' work place, studying working conditions and risk factors. One of the main activities of the occupational health specialist is the assessment of employees' working environment and filling in a declaration of the occupational disease. The experience of European countries shows the effectiveness of training specialists through electronic online courses. One of these projects is called NEtWoRM in the Socrates program, which was implemented in 2007, 2008, 2009 in Romania. The involvement of European experts gave the opportunity to raise cost efficiency in training high-level occupational health specialists. France is one of the founders pillars "Médecine du travail", in the course are trained not only physicians, but also ergonomist engineers and psychologist in labor hygiene. In the USA, the American Academy of Physicians has recommended introduction in the curriculum of residency program in family medicine of a guide in occupational medicine. After conducting a survey with 290 questionnaires and a response rate of 64.5%, 91.7% of respondents felt necessary occupational medicine introduction course.

**Conclusions:** Moldova requires a workers' health and safety surveillance system, which is mentioned in the National Strategy for Public Health, but is not currently implemented. Currently the specialty of Occupational Health is covered by Labour Hygiene and Occupational Diseases course, course on Occupational Medicine does not exist, being necessary to create special trainings.

**Keywords:** Occupational Health specialist, training, Labor Hygiene, Occupational Medicine.

## **240. THE OPPORTUNITIES TO ESTABLISH RELATIONS WITH MEDICAL INSTITUTIONS IN GERMANY THROUGH MANAGER TRAINING PROGRAM**

**Natalia Toaca**

Scientific adviser: Peltec Angela, Associate Professor, Department of Internal Medicine, Clinic of Gastroenterology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** There are a lot of exchange and training programs in Europe. One of them is Manager Training Program which takes place in Germany and lasts a month. It seems nothing connected with medicine, but in medical institutions we need managers with the medical specification. This program has in his division health sector. This is financed by German Federal Ministry for Economic Affairs and Energy.

**Materials and Methods:** The Manager Training Program comprises four phases:

1. Preparation in home country
2. One month-practice in Germany
3. Follow-up seminars in home country
4. Seminars and international conferences, allowing them the opportunity to build up a network and to exchange knowledge.

To access this program is necessary to complete the application form, which can be found at the web site of the Chamber of Commerce and Industry of Republic of Moldova. The confirmation was received with established data and hour of the interview with the German representative. Throughout the entire program, participants are supported via the “Global Campus 21” internet portal. With this, they receive access to a network in which a total of over 10,000 executives from 17 countries are already active to date. I followed up the one-month program in Germany in an international group with 22 participants from 9 different countries.

**Results:** During the stage in Germany there are a lot of trainings and collective meetings in hospitals, private clinics and companies which produce medical instruments and technologies, but also 5 individual ones. Three of them were with managers of private dental studios and two with managers of company which produce medical instrumental and materials for dentistry – Ivoclar Vivodent. So were created the possibilities to get contacts with representative from Karls Storz, Aesculap, Ottobock, Biotronik, Siemens Healthcare and with Germany's most research-intensive medical institution – Charite Berlin.

**Conclusion:** It was a premiere to receive an application from Republic of Moldova for health sector in Manager Training Program. So it is an opportunity to get contacts with hospitals, private clinics and companies which produce medical instruments. This program offer the possibilities which can develop the medicine practice and make easier getting help to patients.

**Key words:** management, training.

## **241. THE PSYCHOHYGIENE OF ADAPTATION OF TEACHING STUDENTS TO PROCESS HIGHER EDUCATION INSTITUTIONS**

**Alexandra Topa**

Scientific adviser: Ovidiu Tafuni, PhD, Associate Professor, Deputy Chair of General Hygiene, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Students adaptation in the teaching process in higher education is the basic factor that determines the efficiency of the teaching process, the success and efficiency of the person engaged in a particular activity. The phenomenon of adaptation involves a number of risk factors that lead to signs of inadequacy - a current problem in psychohygiene. A significant number of students (68%) experiencing signs of maladjustment in academic environment. These statistics correlate with the number of students affected by excessive stress (25-73%), which causes a lot of psychosocial, medical negative effects on health for young people in learning. Psycho-hygienic measures can fortify students' academic adaptability.

**Materials and methods.** This study is a synthesis of different scientific concepts, bibliographic studies for students to the teaching process over the years such as guides, theses, etc. Medicine, extract from statistical publications.

**Results.** After a study of Meazina M., PhD in psychological sciences in 2003, it turned out that the student's personality characteristics are most important in adapting to the university, particularly the

development of certain traits. Adaptation barriers encountered in teaching the students favoring induced stress (25-73%). The appearance of psychological barriers is favored by personal characteristics of the student related by the flexibility of psychological adaptability to external factors such as learning conditions (40%), change of status - from collegian to student (41%) - held as primarily and regime of the day, complexity of the program, policy and law and ministries as secondary. Psychological barriers, excessive stress were highlighted by psychosocial manifestations: emotional exhaustion; decrease in school achievement; 43% - loss of interest and pleasure without carrying out everyday activities; 37.82% - the state of indecisiveness, difficulty of making decisions; 26.42% - not an objective appreciation; 19.68% - unhappiness, medical and psychological manifestations: 40% - headache; 48.81% - restlessness and tension, which accuses mostly girls; 11.91% were thought to commit suicide at least once; 24.35% feel tired all the time. Suggestions to counteraction academic stress: organization and planning, balance between teaching and recreation, a healthy lifestyle techniques, anti stress, self-knowledge, cultivating interpersonal relationships, money management techniques, effective learning (method of color traffic light, study method PQRSST, methods reading RICAR, formulas mnemonic), counteracting the stress tests have been shown to be effective in solving students' adaptation barriers, preventing excessive stress and improve teaching process to increase student success and satisfaction.

### **Conclusions.**

1. A significant number of students (68%) face particular barriers to adapt to the university environment;
2. It turned out that the student's personality characteristics are most important in adapting to the university;
3. There is an obvious interdependence between adaptation barriers and stress;
4. The adjustment process is destructive influenced by communication, human and psychosocial barriers;
5. Maladjustment produces negative effects on health and psychosocial study group;
6. Recommendations for solving the barriers to adaptation can streamline the process and improve the quality of teaching.

**Keywords:** psycho-hygiene, adaptation, barriers, students, teaching process.

## **242. PUPILS' KNOWLEDGE FROM A PRIVATE HIGH SCHOOL FROM CHISINAU CONCERNING THE HEALTHY EATING**

**Aculina Topada**

Scientific adviser: Zepca Victor, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Because eating habits developed in youth are likely to be continued into adulthood, World Health Organization (WHO) calls states for early and continuous intervention, and one of the easiest and most cost-effective ways to improve the health and wellbeing starts with breakfast.



WHO reports show that the prevalence of obesity and higher body mass index (BMI) is generally lower among young people who take breakfast. These young people showed signs of improvement of cognitive function and academic performances. The aim of this research was to study pupil's knowledge concerning the healthy eating.

**Materials and methods:** We used analytical, descriptive, sociological and statistical research methods. The research was conducted on a sample of 134 pupils from the VII<sup>th</sup> -XII<sup>th</sup> grade, from a private high school from Chisinau (70 boys and 64 girls). Our questionnaire included 39 items and it was based on the frequency of food daily intake. The study results were used for ensuring an intervention in the school by introducing class hour, civics and biology topics about healthy eating conducted by trained physicians and teachers.

**Discussion results:** After conducting the study was found that 8.9% pupils consider that for being healthy is recommended to salt food after desire. 2.9% pupils said that a healthy diet means two meals per day. Most of pupils mentioned that unhealthy foods are chips and snakes (91.1%), hamburgers, donuts and hotdogs (86.6%) and Coca-Cola (47.1%), less than half of those questioned consider healthy food pizza (59.7%), chocolate (29.1%) and cheese glazed with chocolate (28.4%). Some of pupils considered unhealthy food products: milk (6.7%), fruits (6.7%), fish (5.4%) and meat from poultry (2.2%). Most of pupils from private high school were informed about healthy eating at biology (76.9%) and only half of those questioned at civic education (55.9%) and at the class hour (50.7%). Most of pupils have indicated as information source about the healthy eating, parents, grandparents (84.3%), the Internet (71.6%) and half of them the mass-media (55.9%). Only a third of pupils said that they have been informed about healthy eating by teachers (38.1%), school nurse (35.1%) and colleagues, friends (36.6%). School should be a promoter of healthy eating, but in Moldova teachers and school nurses are not trained in nutrition and cannot approach these issues during class hour.

**Conclusion:** Pupils are informed at school about healthy eating at hours of biology, civic education and at class hour. As important information sources about healthy eating for pupils are family, Internet and mass-media.

**Keywords:** pupils, knowledge, healthy eating.

## **243. RISK BEHAVIOR OF PUPILS FROM RURAL AREAS IN CORRELATION WITH LIVING IN THE HOUSE ADULTS**

**Larisa Turcanu**

Scientific adviser: Zepca Victor, PhD, Associate Professor, State University of Medicine and Pharmacy *Nicolae Testemitanu*, National Center of Public Health, Chisinau, Republic of Moldova

**Introduction:** Young generation's behavior can be influenced by adults who live in the same house.

**Materials and methods:** The study comprised 783 V<sup>th</sup>-VIII<sup>th</sup> grade pupils (358 boys and 425 girls) from 10 high schools in rural areas of Moldova. The study instrument represented a survey that included 43 questions, four of which addressed pupils' risk behavior.

**Discussion, results:** Pupils who completed the survey lived with the following adults: both parents and grandparents (70%), mother and grandparents (7.4%), dad and grandparents (2.5%), mother,

stepfather and grandparents (5.8% ), father and stepmother (1.4%), mother, another adult/adults and grandparents (2.5%), father and another adult/adults (0.3%), grandparents and other relatives, non-relatives or supervisors (1.6%). When it came to students who smoked regularly, meaning at least a cigarette daily for 30 days, 4.1% of them lived in complete families while 3.7% of pupils lived in incomplete families (with mother and another adult/adults and grandparents - 10 %, with grandparents and other relatives, non-relatives, or supervisors - 6%, with mother, stepfather and grandparents - 4.6%). Out of all pupils who carried a cold weapon (knife, bat) for at least one day during the last 30 days, 6.2% lived in complete families and 5.3% in incomplete families (with mother, stepfather and grandparents - 8.9%, with grandparents and other relatives, non-relatives, or supervisors - 7.9%). Students who participated in fights during the last 12 months lived in complete families in a proportion of 38.3% and in incomplete families - 40.8% (with father and stepmother - 54.5%, only father and grandparents - 50%, father and other adult/adults - 50%). When analyzing pupils who got drunk, 11.3% of them lived in complete families while 33.2% ( $p < 0.001$ ) in incomplete families (with father and stepmother - 54.5%, with father and grandparents - 45%, with grandparents and other relatives, non-relatives, or supervisors - 33.3%).

**Conclusion:**

1. Approximately one third of Vth – VIIIth grade pupils from rural areas of Moldova lived in incomplete families.
2. Pupils from incomplete families got drunk more often compared to those from complete families.

**Key Words:** risk behavior, pupils, family composition.

## POSTERS

### 244. ASSESSMENT OF IODINE LOAD IN IODIZED SALT IN CHISINAU GROCERY STORES ASSORTMENT

**Antonela Gherciu**

Scientific adviser: Garbuz Alexandru, University Assistant, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Basic.** Iodine is a trace element necessary for the synthesis of thyroid hormones. From the 30-50 mg of iodine existing in the adult organism, 8-10 mg are concentrated in the thyroid gland which show a particular affinity for this element, Sergiu Manescu said.

Professor Sergiu Manescu explain etiopathogenesis in next way: in the state of deficiency of iodine in the body, the thyroid gland is overloaded by pituitary (gland), amplifying it's activity for compensating that deficiency, but work in empty, the follicles undergoes hypertrophy, accumulate more colloid and gland volume increases occurring endemic goiter.

Physiological status and environmental conditions that increase energy expenditure of the body causes greater consumption of thyroid hormones. Therefore, children, adolescents, women during maternity and those performing strenuous activities are more susceptible to iodine insufficiency.

The endemic goiter, called endemic thyreopathic dystrophy, is manifested by decreased basal metabolism, sluggishness and fatigue in physical and intellectual activity (up to cretinism), reduced emotionality, decreased resistance to cold, delayed growth and bone mineralization (dwarfism thyroid). To prevent endemic goiter in adults under normal conditions of life are sufficient 60-70 micrograms of iodine per day (1 microgram / kg). However it appears that the optimum ration is 100-200 micrograms per day. The needs of children are estimated to be 40-50 micrograms in the first year, 70-90 micrograms for preschool children, and 120-150 micrograms for school students. Endemic goiter occurs in people who consume food and water poor in iodine.

It is estimated that 80-90% of body needed iodine comes from food.

**Materials and methods.** An effective way that prevents the endemic thyreopate dystrophy is the consumption of iodized salt. In Moldova salt fortification began in the 90s, while Romania started to fortify salt with potassium iodide since in 1952, and potassium iodate since 1963 in quantities of 20-40 mg / kg according to WHO recommendations.

To not lose iodine salt must be as pure, to keep in dry and cool and consume within the guarantee period.

We conducted market analysis assortment of salt present in food store chains in Chisinau. The assortment is presented by 27 kinds of salt pans of which 7 are chosen skip expensive. From the remaining 20 types only 6 are iodized. In laboratory conditions we tested these six types of iodized salt for iodine real presence. The experience was repeated over 15 days to see the dynamic stability of iodine in salt.

**Discussion of the results.**In most samples of salt were tested to determine the concentration of iodine in the normal range, except for only one type of salt imported from the European Union, with detected concentration of 19.42 mg / kg in the first test and 17.96 mg / kg after 15 days, which also causes an instability of iodine compound and a concentration below the initial cut.

Otherwise determined elimination of iodine from iodized salt compounds amounting to 1-4 percent within 15 days of the initial concentration after package opening.

**Conclusion.** In Moldova, most salt type on the market is non-iodized, salt predominantly gem. Iodized salt in Moldova corresponds to iodine load amounting to 83% of the total market introduced in grocery stores. To perform prophylaxis of iodine deficiency, it is recommended the use of iodized salt to exchange trade brand. Key words: salt, iodine, endemic goiter, prophylaxis

## 245. THE ROLE OF THE WEBSITE INFORMATION FOR RESEARCH FIELD

**Olga Cernelev**

Scientific adviser: Ovidiu Tafuni, PhD, Associate Professor, Deputy Chair of General Hygiene, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Globally, the Internet is used by over 2.7 billion people. According to the national report BATIM, conducted by Gemius in 2013, in the Republic of Moldova, the total number of Internet users has reached 1748635. In this context, information technologies are indispensable in everyday life. Internet is important not only for the general population, but also for documentation of all persons involved in research and innovation field. So, this paper concerns the use of the Internet in the research process, in identifying research issues using the Web for surveys to publishing research results.

**Materials and methods.** The present work is focused on optimizing the research data management by using a quick, useful, effective and the most convenient source of information – a website. NOBEZITATE was created and launch in October 2014. It was linked to the social network – Facebook. Till 2016 there were posted 114 articles in the field of nutrition and healthy diet (science, interactive, recommendations, etc.).

**Discussion results.** NOBEZITATE is a website which has the aim to promote healthy eating habits among the population from the Republic of Moldova. It is a valuable resource for researchers desiring to understand people and the social and cultural contexts within which they live outside of experimental settings, with due emphasis on the interpretations, experiences and views of 'real world' people.

NOBEZITATE was appreciated by 1396 people, where 78% are female users and 22 % are male users. The website is followed by 2,94% women and 0,5% men aged 13-17 years old; 22,9% females and 4,73% males aged 18-24 years old; 37,3% females and 8,24% males aged 25-34 years old; 9,96% females and 5,59% males among 35-44 years old; 2,44% females and 1,43 % males aged 45-54 years old; 0,57 females and 1,15 % males aged 55-64 years old and 1,36% females and 0,5 % males aged more than 65 years old.

The website is followed at the national and international levels: by 1039 persons from the Republic of Moldova; 54 from Romania; 42 persons from Italy; 33 persons from Great Britain, etc.

**Conclusion.** NOBEZITATE provides a database and allows continuous monitoring of the number of visitors (according to gender, age, region); their interest and engagement in reading the posted articles, etc. It has a lot of advantages for researcher such as: cost-effectiveness (cost, time, human resources); possibility of using multimedia elements (video, images, etc.); automatic questionnaire; elaboration of reports in real time; possibility to work with large samples of respondents (national and international), etc.

**Key Words:** website, Internet, research.

## **246. CARDIOVASCULAR MORBIDITY AMONG POPULATION OF THE REPUBLIC OF MOLDOVA IN CONNECTION WITH MINERALIZATION DEGREE OF THE DRINKING WATER**

**Maria-Victoria Racu**

Scientific adviser: Cebanu Serghei, MD, MPH, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** At the moment, cardiovascular diseases are situated among the main causes of population morbidity, mortality rate being estimated 50 % in the entire population. Besides well known causes of cardiovascular morbidity exists another one cause, studied by a lot of authors, which is called mineralization degree of the drinking water. It's known that a higher mineralization of drinking water may determine a lower cardiovascular morbidity. The objective of our study was estimation of mineralization degree of drinking water in different parts of the Republic of Moldova and its influence on the cardiovascular diseases of the population.

**Materials and methods:** Our study has been done by collecting water specimens of surface water and deep water from different parts of the republic and appreciating their hardness and magnesium and calcium concentration. The morbidity of population was obtained from the National Center of Health Management by yearly reports. During the study we use observation, descriptive and analytical methods.

**Discussion results:** Water hardness is determined by the amount of dissolved calcium and magnesium ions in it. After study water hardness from the North of the Republic (Edinet city), the South (Cahul city) and the Center (Straseni and Criuleni cities) we observed that the biggest concentration of calcium ions in deep water was in the North, but for surface water - in the Center. The biggest concentration of magnesium ions in deep water was in the Center, but in surface water - in the South. Surface water hardness was higher than deep one and cardiovascular morbidity in population which used surface water was lower than in population which used deep water. We also see a relation between calcium concentration and cardiovascular diseases, which were higher in the North, where calcium in surface water was lower. For magnesium concentration we state that also in the North, where its level was lower in deep water, cardiovascular diseases was higher.

**Conclusion:** Cardiovascular morbidity is lower in the regions with higher mineralization of drinking water. Surface water is richer in calcium and magnesium ions and contributes to a better cardiovascular function and lower morbidity.

**Key words:** Water hardness, Calcium and Magnesium concentration, cardiovascular morbidity

## **247. HYGIENIC ASSESSMENT OF TRAINING TIMETABLE AND SYMPTOMS OF OVERTRAINING TO FOOTBALL PLAYERS**

**Dumitru Cheptea**

Scientific adviser: Cebanu Serghei, MD, MPH, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** To stay healthy and to avoid injuries of health and to achieve best performances football players have to be adopters of a healthy lifestyle. One of the main factors of increasing the level of physical training of athletes is an organized systematic training, respecting the timetable of work and rest, training conditions, physiological principles and hygienic requirements of an healthy dietary. So, the purpose of this study is evaluation of training schedule and overtraining symptoms of junior sportsmen.

**Materials and methods.** Generally speaking the study was realised on the base of nowadays methods: hygiene, epidemiology, mathematical statistics. The study was realised in a group of 62 junior players aging of 15-17. The questionnaire consisted of 20 questions based on overtraining syndrome and all the athletes were tested concerning "Recovery Scoring Guide".

**Discussion and results.** The training of football players is 5 times a week, usually in the afternoon having a 90-minute period. The training consists of several stages: 1) the preparation (heating) - 25 min.; 2) the base (technic and tactic) - 45min.; 3) exercises (playing football) - 20 min.; 4) transition and recovery - 5 min.

The players have to choose foods for supporting consistent intensive training and optimizing their performances. All the players must have a nutrition plan that takes into account individual needs. In the current study it was found that the 48.3% of the respondents are fed three times a day, while the 3.2% of the athletes are fed insufficiently, only 2 times in 24 hours. The 35.2% of all participants in the study are fed 5 and more times. The 48.4% of the athletes have a diversified food alimentation, but the 51.6% have insufficiency of it. Only the 19.5% sleep enough and the 80.5% sleep less than 8 hours a day. Regarding the injuries during the training, the cause being insufficient heating the 21.1% of all athletes suffer of.

The main complaints of the athletes due to insufficient recovery are: lack of concentration (30.6%); muscle pain (24.2%); loss of competitive ability (20.9%); confusion during the competitions (14.5%); abandon tendencies (9.6%).

**Conclusion.** The training of junior athletes who are practicing football takes place in compliance with all pedagogic principles and legalities, which are based on physiological and hygienic principles.

Regarding the symptoms of overtraining the 22% of the athletes mention the problem persists, due to the peculiarities of individual adaptation of the body to training factors.

**Key words:** football player, overtraining syndrome, training, recovery.

## **248. THE EXAMINATION OF CARBON DIOXIDE IN THE CONFERENCE ROOMS OF STATE UNIVERSITY OF MEDICINE AND PHARMACY NICOLAE TESTEMITANU**

**Nicolae Demenciuc, Alexandru Garbuz**

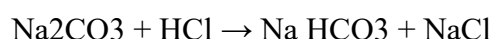
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**Basic.** Carbon dioxide is a colorless gas, odorless, it doesn't irritate the mucous membrane and it can't be felt. The carbon dioxide is 1,5 times heavier than the air, that's way it is usually concentrated in the lower part of closed spaces, causing the intoxication of the organism, but also it's a sanitary indicator that shows up the ventilation's work quality in spaces with different destinations, as Gh. Ostrofet mentions.

In outdoor air in urban conditions, the carbon dioxide is found in concentrations of 0.3-0.4 %, there for it shouldn't overcome 0.1% or 1000ppm in closed spaces. This amount remains at constant values in nature, because it's intake and output is in perpetual balance.

The carbon dioxide is expelled during exhalation in the process of human respiration, this phenomenon consisting it's main source in closed spaces. An adult expels 15-22l of carbon dioxide per hour. It expels at the cellular firing through the expelled air, that contains 3.4-4.5% of CO<sub>2</sub>. Enormous concentrations of carbon dioxide come out in closed spaces or in areas where are present aggregated sources of CO<sub>2</sub>. To prevent intoxication with carbon dioxide it's required to assure an efficient ventilation in all the situations that can advantage the expansion of carbon dioxide. Concentration (fermentation rooms, mines, shelters). The carbon dioxide, increasing concurrent with the changes of the factors that determine the air quality in crowded rooms, is used as a vitiate indicator of the air. The admissible amount of carbon dioxide in closed spaces is of 0.1%, as I. Bahnarel mentions.

**Materials and methods.** We have analysed the carbon dioxide's concentration in the conference rooms of the State University of Medicine and Pharmacy „Nicolae Testemitanu”, using the digital gas analyzer AQ-2000, before the entrance of the students in the room, during the break and after the end of the classes. To be assured we have checked a set of samples through Vinocurov's analytical chemical technique. Vinocurov's technique is based on the absorbent of carbon dioxide with a base after which it titer decreases. The decrease of the sodium carbonate's titer is determined by the titration of hydrochloric acid of 1/500N. The reaction is based on the following formula:



The concluded measurement results are placed in the table below:

Conference room Measurement results		Conference room of Fiziology	Conference room Esanu	Conference room Farmacy	Conference room Galetchii	Conference room Anatomie
1	CO2	2742	3101	3042	1357	1841
	RH	51,7	58,2	54,2	32,3	56
	Temperature	67,3	65	68,3	65,5	65,7
2	CO2	5174	3963	4069	3062	2849
	RH	60,6	56,8	57,2	54,2	49,3
	Temperature	68,9	66,5	68,9	67,2	67,1
3	CO2	5775	4263	4341	3837	3507
	RH	61,4	57,4	58,2	59,2	56
	Temperature	61,2	68,8	69,2	68,7	69,2

**Discussion of the measurement results.** After the analysis and comparison of the result, following the regulatory documentation in this field, we notice that according the international standards, namely GOST: 30494-2011; ISO 3166-004-97 and according that national ones, we attest a poor work of the ventilation system in the conference rooms that can cause a state of hypoxia with clinical signs of sleepiness among students during the classes.

**Conclusion.** Certainly, this results can be considered as preventive ones, because it requires wider measurement, specially of the qualitative and quantitative parameters of the ventilation system. However, the results require the inclusion of some practical recommendation, for example the student's



gress during the break time, the inclusion of the ventilation system and it's current service, the room's airing, before the classes, during the breaks and after classes.

## **249. METHODOLOGIES FOR LEGAL AND FINANCIAL COMPENSATION FOR ONCOLOGISTS WORK-RELATED HEALTH DAMAGE**

**Veronica Svet**

Scientific adviser: Mereuta Ion, Professor, Head of Department of oncology, hematology and radiotherapy, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The right to insurance in cases of accidents at work and occupational diseases, is guaranteed by the state. Insurance for accidents at work and occupational diseases consists in establishing specific medical-legal relations in cases of occupational hazards: diminished ability to work, loss of work capacity due to work-related accidents or occupational disease and obligatory social insurance system for all categories of employees, including oncologists.

**Materials and methods:** We analyzed normative acts in the field of social insurance of physicians of oncology specialties. Simultaneously we processed compensation procedures, benefits and compensation in case of work-related health injury of oncologists. Based on comparative law and the SWOT analysis 15 normative documents - laws, government decisions, and other regulations in force were analyzed.

**Results discussion:** Ensuring oncologists for work accidents and occupational diseases occur in different cases: reducing and offsetting consequences of work-related accidents and occupational diseases; promotion of occupational safety and prevention of occupational accidents and occupational diseases. Under the legislation Insurance, Citizens, including oncologists, are entitled to benefits and insurance claims for rehabilitation, recovery of work capacity, professional rehabilitation, allowances for temporary unemployment, for temporary transfer to another employment, disability and death. The legislation stipulates that in case of death of the insured, including medical oncologists, as a result of a work-related accident or an occupational disease, the beneficiaries are: children of the insured person, in our case the oncologist, who at the time of his death: are aged up to 18 years or have reached that age, spouse or one of the parents of the deceased insured, or another person who, at the time of death of the insured, does not work and takes care of the insured person's children under 3 years of age. For damage strife is when the doctors injured party knew or should have known the damage and the person responsible for the damage, concerning future and possible damage, for each injury is entitled to act independently is prescribed from the date the injured party has known effectively or must have known the damage occurred. These are some of the issues on the application of Moldovan legislation to resolve disputes related to recovery of damages caused by bodily injury or other harm to health or death. With great dissatisfaction, I had examples of so...

### **Conclusions:**

1. Moldovan Legislation stipulates rights and remedies in case of injury to health and the exercise of the profession including oncologist.

2. The oncologist as the injured party is entitled to compensation for expenses incurred in connection with ill health. Where oncologist lost entirely professional capacity for work, one can claim damages from the perpetrator costs of retraining, the migration process in another specialty.

3. Bodily or other harm to health or death of the oncologist, results in not only financial loss but also a moral damages.

4. A permanent improvement of legislation and normative acts in the field of safety and health at work of oncologists and Health Regulations specifically on research and evidence of professional diseases is required.

**Key words:** oncologists, health and safety at work, professional morbidity, health damage, compensation.

## FUNDAMENTAL SCIENCES

### ORAL PRESENTATIONS

#### 250. TREATMENT OPTIONS IN SYSTEMIC INFLAMMATORY RESPONSE SYNDROME

**Anastasia Andreev**

Scientific adviser: Vasile Lutan, PhD, Professor, Department of Physiopathology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Patients subject to major surgery, suffering sepsis, major trauma, or following cardiopulmonary bypass exhibit an 'acute phase' inflammatory response. When the inflammatory response becomes uncontrolled, a Systemic Inflammatory Response Syndrome (SIRS) ensues. The etiology of systemic inflammatory response syndrome (SIRS) is broad and includes infectious and noninfectious conditions, surgical procedures, trauma, medications, and therapies. There are 3 stages in development of SIRS. In the first stage, following an insult, cytokines are produced at the site. In the second stage, small quantities of local cytokines are released into the circulation, improving the local response. This acute phase response is typically well controlled by the release of endogenous antagonists, the goal being homeostasis. In the final stage if homeostasis is not restored, a significant systemic reaction occurs.

**Materials and methods:** Collecting data and research results from published cohort studies, double blinded placebo RCT, prospective survey with emphasis on intensive care unit patients.

**Discussion results:** The goal of this project was to establish the effectiveness of new treatment strategies in treatment of SIRS. Mainly these are based on physiological aspect and pharmacological one. From physiological treatment can be mentioned Early Goal-directed therapy based on optimising cardiac pre-load and contractility, delivery of necessary oxygen and insulin therapy. Van den Berghe et al showed that insulin therapy reduces by 34% the in-hospital mortality and incidence of fatal infection in diabetic and non-diabetic critically ill patients.

Pharmacological therapies are based on treatment with monoclonal antibodies, activated Protein C, corticosteroids, antioxidants, serine protease inhibitors as well as filtration and adsorptive therapies (activated Charcoal; Immobilized antibody systems). Infusion of Activated Protein C reduces the absolute risk in mortality to 6.1%. Corticosteroids showed a decrease of pro-inflammatory cytokines (IL-6, TNF $\alpha$ , and E-selectin) and increase of anti-inflammatory cytokines (IL-10). However, the negative side in using corticosteroids are the pulmonary dysfunction and prolonged time to extubation, as well as a lot of exclusion criteria for using them. Monoclonal antibodies HA-1A (human monoclonal IgM antibody) showed a reduction from 49% to 30% in 28 day mortality in patients with gram-negative bacteremia. The most efficient therapies are filtration and adsorptive therapies. Immobilized antibody systems assure near-complete removal of TNF $\alpha$  from human plasma as well as reduction to 70% of cytokine levels (IL-1 $\beta$ , IL-1Ra, IL-6, IL-8 and TNF $\alpha$ ). Activated Charcoal absorb almost 100% of plasma LPS, IL-Ra, IL-1 $\beta$ , IL-8, IL-1a and IFN- $\gamma$  and 40% of TNF $\alpha$ . In 5 of the 8 adult patients in ICU, reported resolution of sepsis.

**Conclusion:** The true incidence of systemic inflammatory response syndrome (SIRS) is unknown. However, the occurrence of SIRS was characterized by a significantly elevated release of IL-6 and IL-8, with subsequent increase in the leukocyte count, C-reactive protein (CRP), and procalcitonin. Prognosis depends on the etiologic source of SIRS, as well as on Associated comorbidities. Strategies targeting purported triggers, early mediators and even physiological responses to inflammation have largely been unsuccessful to date. Some of the most prominent areas of research relates to the initiators and modulation of the pro-inflammatory cascade, methods of extracting pro-inflammatory cytokines and how genetic polymorphisms may influences the natural history of SIRS in patients.. However, some encouraging data exists with adsorptive strategies to attenuate the hyper-cytokinaemia Associated with SIRS. Activated Charcoal and Polymyxin B hemofiltration systems have promising features in this respect, but we look forward to the generation of more exhaustive and definitive research in the future.

**Key Words:** Systemic Inflammatory Response Syndrome, Cytokines, Treatment Strategies.

## **251. THE ROLE OF VASCULAR ENDOTHELIAL GROWTH FACTORS AND NEOVASCULARIZATION IN THE DEVELOPMENT OF RECURRENT VARICOSE VEINS AFTER SURGERY.**

**Natalia Onica, Ecaterina Pavlovschi**

Scientific adviser: Lutan Vasile, PhD, Professor, Chief of Pathophysiology and Clinical Pathophysiology Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Varicose disease remains an actual pathology due to high incidence, possible complications and also damage to the quality of life. The basic treatment of varicose veins is surgical one. According to retrospective observations, about 35% of patients over 2-5 years after the surgery develop recurrent varicose veins with pathologic reflux at the sapheno-femoral junction (SFJ). Relapsed venous reflux at SFJ can lead to severe venous insufficiency and recurrent venous disease.

**Materials and methods:** The study included 26 patients with venous disease in the basin of great saphenous vein in both legs, taking part to class C2-C3, according to CEAP classification (Clinical-Etiology-Anatomy-Pathophysiology). To the patients with a defect in the SFJ and a great saphenous vein reflux, confirmed by Doppler Duplex scanning, was performed the crossectomy and striping in combination with mini-phlebectomy to remove the dilated veins. In all patients were performed both methods of prevention of the phenomenon of neovascularization: anatomical barrier and selective crossectomy, either on the left or right leg. Vascular endothelial growth factors (VEGF-C/VEGF-D) were determined by immunohistochemical methods through monoclonal antibodies.

**Results:** One month later after the surgery have been effectuated Duplex scanning to all patients, for the control of performed crossectomy, which demonstrated a lack of residual affluents. One year after the surgery in 15.2% of patients were detected visible varices at the thigh, while the phenomenon of neovascularization, confirmed by Doppler Duplex scanning, was detected in 22.9% patients. After two years the frequency of phenomenon of neovascularization was 34.5% (23% selective crossectomy and anatomical barrier-11.5%). In these patients, plasma levels of VEGF-C/VEGF-D was increased,

which confirms the role of these factors in the pathogenesis of the phenomenon of neovascularization and recurrent varicose veins.

**Conclusion:** In addition to surgical treatment of varicose veins, which includes various methods of prevention of the phenomenon of neovascularization (anatomical barriers, selective crossotomy, endothelial inversion), antiangiogenic therapy gets a new large aspect directed towards receptors VEGFR-3 and its ligands VEGF-C/VEGF-D. They are directly involved in the process of formation of new, tortuous vessels and development of severe venous insufficiency.

**Key words:** Endothelial growth factors, neovascularization, varices.

## **252. FEATURES OF RECIPROCAL INTERACTION AS COORDINATION OF MOTOR AND CARDIAC FUNCTIONS**

**Nadiia Barzak, Alina Vakoliuk**

Scientific adviser: Oleg Vlasenko, Vinnytsia National Pirogov Memorial Medical University

**Introduction:** Reciprocation is the coordination of 2 activity centers. The majority of works were devoted to the reciprocal interactions of motor centers; but much less attention was given to the phenomenon of vegetative function regulation.

**Aim:** To study the features of reciprocal interaction of sympathetic and parasympathetic divisions of autonomic nervous system.

**Materials and methodology:** A group of male rats Wistar (n = 12) weighing 250-300 g was used for experiment. The first stage of the experiment was to check the heart rate during food procuring movements in normal rats (n = 8) with normal, stable motor skills. There was the phenomenon of short-term motor bradycardia during the movement. The second stage of the experiment was to register the heart rate during food procuring movement in rats influenced by an intraperitoneal atropine (1.7 mg/kg) injection, in order to exclude vagal effect on heart function.

**Results:** Pharmacological blockage of the vagus nerve by atropine causes a significant increase (p<0.05) in heart rate background 11% to the value of  $487 \pm 10.1$  BPM, but not to “rule out” the phenomenon of short-term motor bradycardia during the food procuring movement.

**Conclusion:** The reciprocal innervation of antagonistic muscles and heart have their similarities and differences. This can have 3 levels of regulation and 2 opposing processes (excitation and inhibition) in the reciprocal organization. The working body (or an interconnected group) (lower level) gets antagonistic innervation from two centers (average level). It can predict that the presence of a higher level which causes excitation of one center and simultaneous inhibition of the antagonistic center.

**Key words:** Reciprocation, heart rate, rats, atropine.

## 253. UTERINE FIBROIDS (ANATOMOPATHOLOGICAL AND CLINICO-STATISTICAL FINDINGS)

**Vlada Bodrug**

Scientific adviser: Constantin Marian, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Uterine fibroids, also known as leiomyomas, fibromyomas or myomas, are benign tumors that affect the smooth muscle of the uterus. According to their location, uterine fibroids are classified into: submucous, subserous and intramural fibroids. The main cause of apparition is believed to be elevated hormone levels.

**Materials and methods:** A retrospective study of 734 cases of uterine fibroids from the period 2013-2015 was performed. The study included an analysis of data from registers of the Morphopathology Department at the Municipal Hospital Nr.2 “Sf. Arhanghel Mihail”, Chisinau. Also, case studies were made, including micro (haematoxylin and eosin, picrofuxin staining) and macro morphological evaluation of specimens.

**Discussion results:** From the total of 734 female patients with uterine fibroids who had myomectomies, hysterectomies and smears performed, 372 (50,7%) had a single nodule and 362 (49,3%) had multiple nodules. By location, the nodules had the next distribution: submucous – 200 (27,3%), subserous – 4 (0,5%), intramural – 511 (69,6%), mixed – 19 (2,6%). Sorting by dimensions, most of the patients had fibroids with the size ranging from 2 to 5 cm – 44,7%. In terms of age, the women’s distribution is as follows: 21-30y.o. – 28 (3,8%), 31-40y.o. – 122 (16,6%), 41-50y.o. – 370 (50,4%), 51-60y.o. – 172 (23,4%), 61-70y.o. – 35 (4,8%), 71-80y.o. – 7 (1%). The main objective symptom detected was the metrorrhagia, although most of the uterine fibroids are asymptomatic. Secondary changes of the reproductive system included adenomyosis, fibrosis, hyalinosis, calcification, salpingitis, ovarian cysts and myxomatosis. The most common endometrial alteration was the glandular hyperplasia – 311 cases (42,4%).

**Conclusion:** From this study, we detected that uterine fibroids most commonly occur in the fertile age – 70,8%, proving the crucial effect of sexual hormones on the fibroids’ development. The incidence of multiple nodules, compared to that of solitary nodules, is almost the same. Most of the nodules had intramural location.

**Key-words:** uterine fibroid, tumor, women.

## 254. ANTIMICROBIAL RESISTANCE - THE MILLENNIUM III CHALLENGE

**Aurelia Burduniuc**

Scientific adviser: Greta Balan, Associate Professor, Department of Microbiology, Virology and Immunology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Antimicrobial resistance has been declared a crisis by the World Health Organization, the Centers for Disease Control and Prevention and other relevant organizations. Resistance to antimicrobials presents a major challenge in health care as resistant bacteria dramatically decrease the chances of effectively treating infections and increase the risk of complications.

**Materials and methods:** This paper analysis and describes the major aspects of this topic published during the half-century: the global situation of antibiotic resistance, its major causes and consequences, solutions and conclusions. The study is based on 93 literary sources of foreign authors (France, Bulgaria, USA Germany, Hungary, Italy, Poland, Belgium, Norway etc.) and international organizations.

**Discussion results:** The discovery of antimicrobial agent was one of the greatest achievements of the twentieth century. Paul Ehrlich discovered the first antibiotic Salvarsanin 1910, used to treat syphilis, followed by Alexander Fleming with the "epochal discovery" of penicillin in 1928. These were the starting points for discovering classes of antibiotics present today. Causes for antibiotic resistance are complex and include human behavior at many levels of society: overuse, abuse or misuse, due to incorrect diagnosis. Increased globalization also causes the spread of drug resistance. Antimicrobial resistance knows no national borders, and affects all countries regardless of their economic status. Resistance can spread quickly across different bacterial species, from bacteria in animals to those in humans. The consequences affect everybody in the world.

**Conclusion:** Improving the use of antibiotics is an important patient safety and public health issue as well as a national priority. Solutions to antimicrobial resistance: implementing the National Strategy for combating antibiotic-resistant bacteria; stronger regulation aimed at limiting non-prescription use in humans and in farm animals; rational use infection control in the healthcare setting; rapid diagnostics of resistance bacteria; communications campaigns co-ordinated with the broader awareness efforts described above

**Key Words:** antimicrobial resistance

## 255. TRANSPLANT OF FAECAL MICROBIOTA - PRIORITY AREA IN THE AGENDA TO ERADICATE CLOSTRIDIUM DIFFICILE INFECTION

**Ina Cazacliu**

Scientific adviser: Vorobjit Valentina, PhD, Associate Professor; Department of Microbiology, Virology and Immunology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Fecal transplant or transplant of fecal microbiota (TFM) is an innovative technique of transplantation of fecal bacteria from a healthy person to a sick one. For the first time it was used by experts from the University Hospital "Hadassah"(Ierusalim) to treat certain intestinal diseases, especially the ones caused by the bacterium *Clostridium difficile*. This microorganism is found in intestines of people of different ages, but the increasing number of these bacteria inhibits the normal micro-flora of the intestinal tract inside healthy people. When the optimum balance in the gut is disrupted (often as a result of antibiotic treatment), there is a rapid increase of *Clostridium difficile*, which leads to diseases. *C.difficile* is estimated to be responsible for at least one fourth of antibiotic-Associated diarrheas in hospitalized patients. Studies that have been done in this field have contributed to the progress in getting known the TFM. The recovery of patients were successful in more than 90% after the manipulations which were performed, these being recognized as the most important scientific achievements of 2012.

**Material and methods:** The presentation represents an extensive literature review based on previously completed research; we have conducted its own study and concluded the benefit of this procedure for the treatment of patients with intestinal diseases.

**The result of discussion:** There are three antimicrobial drugs most commonly implicated in infection with *C.difficile*, clindamycin, ampicillin and the cephalosporin. First-line antimicrobial drugs for *C. difficile* treatment are metronidazole and vancomycin; however, recent data suggest that metronidazole is losing its efficacy and expert suggests to use more radical methods for treatment such as transplant of fecal microbiota. Transplantation can be provided through a variety of methodologies, either to the lower proximal, lower distal, or upper gastrointestinal tract. A research conducted in 2008 by T. Brodie, an Australian gastroenterologist, and other scientists, allowed to extend the list of indications for TFM. In addition to the treatment of intestine pathologies, faecal transplant was used to treat diseases like Parkinson's disease, diabetes mellitus, and insulin resistance, rheumatoid arthritis, obesity, and multiple sclerosis.

**Conclusion:** Unfortunately *C.difficile* infection increases incidence, severity and recurrence rates, particularly in the last several years. From 1996 to 2010, the reported incidence of CDI cases in acute care hospitals in the U.S indicates an increase from 139,000 to 349,000. Up to now the intestinal microbiota has been generally inaccessible to scientific researches because most of them were hardly cultivated in the laboratory. The transplant of fecal microbiota proves to be an inexpensive and very effective intervention in intestinal diseases treatment. According to literature data, about 90% of patients are cured, so this procedure represented a real success in modern medicine.

**Key-words:** Fecal microbiota, *Clostridium difficile*, recurrent infection, intestinal disease.



## 256. EXPRESSION OF THE MIR-1 MOLECULE IN PATIENTS WITH UTERINE LEIOMYOSARCOMA

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**Background:** The uterine leiomyosarcoma represents the most frequent malignant gynecologic mesenchymal tumor that often develops distant metastases. The diagnosis of these tumors is nowadays still a challenge and the direct implication of the small non-coding RNAs (MicroRNAs) in gene expression, tumor initiation and tumor progression has already been revealed in scientific studies. Because the aberrant microRNA (miRNA) expression patterns show a diagnostic value as tumor markers, we aimed to identify the gene expression level of miRNA-1 (miR-1) and the protein targets in uterine leiomyosarcoma.

**Methods:** Using the specific cell line - SK-UT-1 with similar biological characteristics of the uterine leiomyosarcoma tissue, in comparison to ovarian carcinoma cell lines: OVCAR-3, TOV-21 and SK-OV-3, and cell lines of mouse heart-muscle (HL-1), we were able to perform real time PCRs and RNA-Isolation arrays, transient and stable transfection programs with lipofectamine reagents. Tissue samples of uterine leiomyosarcoma and healthy uterus were again analyzed by means of transfection and isolation arrays. The electrophoresis using protein targets of the miR-1 (p38 and ERK 1/2 widely expressed protein kinase intracellular signaling molecules and involved in functions including the regulation of meiosis, mitosis, und postmitotic functions) was also integrated.

**Results:** The analysis of the SK-UT-1 cell line have shown significant differences in comparison to the other studied cell lines, respectively a reduced expression of the miR-1 molecules. The same results were observed in the process of transfection and electrophoresis of the human tissues, where the lowest expression of the miR-1 was evidenced in the uterine leiomyosarcomas. The specific protein targets of miR-1 have shown positive Western Blot signals.

**Conclusions:** The miR-1 non coding molecules may improve our understanding of disease development, progression and gene expression of the uterine leiomyosarcoma. Further prospective translational studies in order to evaluate miR-1 as a prognostic factor are needed.

**Key words:** MIR-1, leiomyosarcoma, Western Blot.

## **257. MATURITY ONSET DIABETES OF THE YOUNG: CURRENT TRENDS AND CONCEPTS**

**Covantev Serghei**

Scientific adviser: Perciuleac Ludmila, PhD, Associate Professor, Department of Molecular Biology and Human Genetics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Diabetes is a worldwide problem with polygenic etiology and high rate of mortality and morbidity. By 2030 the number of individuals with diabetes worldwide may rise to 472 million. Eighty per cent of them will be in low and middle income countries. In some of these countries diabetic drugs and insulin are inaccessible or rather expensive which eventually affect the whole healthcare system. Nevertheless 10% of patients with type 1 and 5% of patients with type 2 diabetes have a monogenic form of this disease.

**Materials and methods:** We studied a case series of patients with maturity onset diabetes of the young (MODY) with the review of the literature of the last 10 years using PubMed and Scopus.

**Discussion results:** Nationwide studies show that the prevalence of MODY ranges from about 1% to 35% of all diabetes mellitus cases. Current data describes 11 types of MODY. The most frequent are MODY 1, 2 and 3. To date, several transcriptional factors and an enzyme are associated with MODY. There are several characteristic traits that may help to diagnose the disease without molecular methods. Such include diabetes diagnosed before 45 years, negative  $\beta$ -cell antibodies, less than 30 years of age, no insulin resistance, family history of diabetes, detectable C-peptide more than 0,2 nmol/l outside the honeymoon period, GST more than 0.2 nmol/l.

**Conclusion:** In Republic of Moldova there are approximately 80 thousand diabetic patients, which mean that they represent somewhere 50% of the endocrine diseases. Some of these patients may have MODY diabetes which requires different treatment options and has a better clinical prognosis than type 1 and 2 diabetes mellitus.

**Key Words:** monogenic forms of diabetes, HNF-4a, GCK, HNF-1a.

## 258. THE ANGIOGENIC PATHWAY OF GLIOBLASTOMA

**Dominic Pascal Keller, Ioan Jung**

Scientific adviser: Simona Gurzu, MD, PhD, Professor, University of Medicine and Pharmacy Targu Mures, Romania

**Background:** There are over 130 different types of tumors in the central nervous system that include astrocytoma, glioblastoma, oligodendroglioma, meningioma, and schwannoma. From them, glioblastoma is considered the most common lethal primary brain tumor in adults.

**Objective:** To create an overview of different angiogenic pathways of the glioblastoma.

**Material and Method:** The 277 histopathologically confirmed consecutive primary brain tumors diagnosed at Department of Pathology of Emergency County Hospital of Tirgu-Mures, Romania, during 2012-2013, were retrospectively checked to see the incidence and immunohistochemical (IHC) particularities of glioblastoma. The immunostains were performed in 35 randomly selected glioblastomas, using the angiogenesis-related antibodies Vascular Endothelial Growth Factor (VEGF-A), COX-2, Maspin, and Epidermal Growth Factor Receptor (EGFR).

**Results:** From the 277 tumor cases, 62 (22.38%) were glioblastomas. Most of them (85.48%, n=53) were diagnosed in patients over 40, with a male:female ratio of 1.4:1. From the 35 cases used for IHC examinations, only 6 were marked by VEGF (17.14%), the other 29 (82.86%) being VEGF negative. No one of the cases showed maspin positivity. The rate of positivity for EGFR and COX-2 was 37.14% (n=13) and 60% (n=21), respectively. All of the 13 EGFR positive cases displayed COX-2 positivity and did not showed VEGF expression.

**Conclusions:** In glioblastoma cells, the angiogenesis is rather mediated by COX-2 than VEGF or maspin. In patients with VEGF negative glioblastomas, the anti-EGFR drugs could be successfully used. The effect of anti-EGFR drugs can be improved when combined with anti-COX-2 agents.

## 259. USING BETA BLOCKERS IN DIABETES.

**Ina Dusa**

Scientific adviser: Coretchi Ianos, PhD in medical sciences, Asistant, Department of Pharmacology and Clinical Pharmacology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Cardiovascular complications of diabetes mellitus have a high incidence with repercussions affecting the patients' quality of life. Beta blockers have an important role in treating those complications. However, their use may be associated with some harmful effects. So, the goal of this paper is to find out possible ways of safe beta blockers' use in treatment of diabetes mellitus.

**Materials and methods.** In order to achieve this goal, there was performed a profound analysis of bibliographical and reference sources referring to beta blockers use in diabetes treatment.

**Discussion results.** Diabetes mellitus is a relative contraindication for beta blocker therapy, because it may block the glycogenolysis and tisular glucose mobilization, thus impairing the recovery from hypoglycemic crisis or hiding its symptoms, may reduce the insulin secretion and raise TAG, HDL, fasting glycemia levels, as well as glycozilated Hb and insulin resistance. Inhibiting  $\beta_3$  receptors they may cause a weight gain of 1-2 kgs. On the other hand, diabetes has multiple complications like arterial hypertension, ischemic heart diseases and cardiac insufficiency- those that are proved to be treated well by  $\beta_1$  receptors blocking. Thereby we may reconsider the use of beta blockers that can treat those complications without harmful side effects. Some clinical research prove that  $\beta_1$  blockers are way more efficient in cardiovascular problems than converting enzyme inhibitors in diabetic patients. Comparing  $\beta_1$  blockers, converting enzyme inhibitors, calcium channel blockers and thiazide diuretics in such cases shows almost the same efficiency rate.

**Conclusion.** Beta blockers, if chosen accurately may serve as an efficient way of treatment the diabetes complications without jeopardizing patient's health. The key moment is a selective  $\beta_1$ -blocking, thus evading those side effects caused by  $\beta_2$  blocking.

**Key Words:** beta-blocker, diabetes, cardiovascular diseases.

## **260. RESISTANCE AND SUSCEPTIBILITY AMONG URINARY TRACT INFECTIONS ISOLATES OF ESCHERICHIA COLI FROM FEMALE OUTPATIENTS**

**Ana Maria Romina Jugariu, Razvan-Gabriel Budeanu, Alexandru-Emil Baetu**

**Introduction:** Urinary tract infections are the most common bacterial infections in women and account for significant morbidity and health care costs. A limited and predictable spectrum of organisms cause urinary tract infections in young, otherwise healthy females. Among both outpatients and inpatients, Escherichia coli is the primary urinary tract pathogen, accounting for 75 to 90% of uncomplicated urinary tract infection isolates. Staphylococcus saprophyticus, Klebsiella spp., Proteus spp., Enterococcus spp., and Enterobacter spp. are pathogens less commonly isolated from outpatients.

**Aim:** The present study was conducted to determine regional, and institutional in vitro susceptibilities for ampicillin, ciprofloxacin, nitrofurantoin, and SXT among urine isolates of E. coli from female outpatients from Urology Department of Emergency Hospital, Targu Mures from Romania. In addition, the rate of change in susceptibilities to these four commonly tested antimicrobial agents over 3 years, from 2012 to 2014, was also determined.

**Materials and Methods:** We retrospectively reviewed 272 patients with a urinary tract infection with Escherichia Coli starting in 01.01.2012 to 31.12.2014 from Urology Department by Emergency County Hospital Targu Mures. The susceptibility testing results (by Kirby-Bauer technique) included in the analysis were restricted to urine isolate of E. coli submitted per calendar year by female outpatients of all ages. We will provide data about the evolution under this treatment. All statistical analysis were performed using GraphPad Prism 6.0.

**Results:** Ampicillin, ciprofloxacin, nitrofurantoin, and SXT susceptibilities for urine isolates of E. coli from female outpatients during the years 2012 through 2014: for the Ampicillin (susceptibility

32%, resistance 66,2%,  $p < 0.0001$ ), for the Ciprofloxacin (susceptibility 60,8%, resistance 38,4%,  $p < 0.0001$ ), for the Nitrofurantoin (susceptibility 92,8% resistance 5,8%,  $p < 0.0001$ ) and SXT (susceptibility 56,2,%resistance 43,1,  $p < 0.0001$ ).

**Conclusion:** Given that *E. coli* is the principal pathogen in urinary tract infections, particularly among outpatients, resistance to nitrofurantoin in *E. coli* infections is an important indicator of whether nitrofurantoin should continue to be used empirically while we wait the antibiogram.

## 261. THE RATE OF PERSONALITY DISORDERS AT HEALTHY YOUNG PEOPLE

**Ana Jugurt, Lozovanu Svetlana**

Scientific adviser: Victor Vovc, MD, PhD, Professor, Department of Human Physiology and Biophysics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** DSM-V provides an evaluation system of: “Patient-Reported Outcome Measurement Information System” (PROMIS) which consists in a small questionnaire, that evaluates patient status in relation with national rules, providing a score on two levels of evaluation: clinician's evaluation and patient's evaluation. The Personality Inventory questionnaire for DSM-5 (PID-5) allows detection features and personality disorders which represents some racial and ethnic factors in determining a mental disorder.

**Objects of study:** The evaluation of personality disorders with the help of the instrument from international scientific circuit (PID-5) in order to implement in clinical practice the diagnostic mode of personality disorder according to the included criteria in DSM-V.

**Materials and methods:** The study was realised on a sample of 61 students of USMF, 83,6% women and 16,4% men and 22 students of ASEM–88,9% women and 11,1% men, with a age between 18-24 years, during the 2015-2016 years. All the persons have completed the questionnaire PID-5, translated, adapted and validated with the Republic of Moldova population. This questionnaire evaluates disadaptive features in the third Section from DSM-V and includes 220 of elements of personality report, touching the 25 features of personality. Each feature includes 4-14 elements. The elements PID-5 are evaluated on a scale of 4 points, from 0 to 3, according to this points it's established a score, which is more than 2 and is indicative index of one of those 6 types of personality disorders: Antisocial, Bordeline, Schizotypal, Avoidant, Obsessive-compulsive, and Narcissist.

**Results and discussions:** The obtained results denote that between the ASEM students were not detected the personality disorder through the men, but through the women were detected a person with the personality disorder of bordeline type, schizotypal, avoidant and obsessive-compulsive, that is 4,54%. Between the USMF students, the prevalence rate of personality disorder through the women, as follows: the bordeline types–1,96%, schizotypal-2%, avoidant-9,8%, obsessive-compulsive-11,8% si narcissist-3,9%; through the men were not detected the personality disorder. Between the USMF students prevails the obsessive-compulsive and avoidant type, the rate of personality disorders is more higher through the students of USMF than through the students of ASEM.

**Conclusion:** The results of the current study are supported by the results of other previous research and confirm that the PID-5 represents a dimensional model for evaluation and understanding of personality disorders in the clinical and scientific purposes.

**Key words:** DSM-V, PID-5, personality disorders.

## **262. THE MAIN PATHS OF REACTIVE OXYGEN SPECIES PRODUCTION IN DISORDERS CAUSED BY ISCHEMIA/REPERFUSION**

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**Introduction:** There are a significant number of diseases in which injuries occur as a consequence of tissue ischemia (myocardial infarction, ischemic stroke, ovarian torsion, etc.). The initial therapeutic intervention is to remove as soon as possible the cause of the ischemia. However, it has been found that reperfusion can induce changes that worsen the initial injury and, finally, organ damage in such diseases is given by the sum of the changes that occur during ischemia and reperfusion period. Thus, it is important to understand what happens during reperfusion to act in a manner to minimize negative effects on the affected tissue.

**Materials and Methods:** We studied 120 articles in MEDLINE and PubMed database over the last five years describing mechanisms injuries in ischemia/reperfusion in different organs.

**Discussion results:** There are a lot of mechanisms involved in reperfusion injury: generation of reactive oxygen species (ROS), mitochondrial pore opening, inflammatory response, increase the intracellular calcium concentration, endothelial dysfunction, protrombogenic phenotype development, etc. One of the most important is the production of reactive oxygen species. There are several sources for the production of reactive oxygen species in a process of reperfusion, but the main are: complexes I and III of the electron transporting chain, the enzyme xanthine oxidase and NADPH oxidase. In addition, it was found that the generation of ROS is related to the deregulation of calcium homeostasis, for instance, in ischemia the increase in intracellular calcium concentration induces dephosphorylation of complexes of respiratory chain, and in the case of reperfusion, when an increased amount of oxygen penetrates the tissue, increases the production of ROS. ROS lead to cell and tissue damage, membrane lipid peroxidation, alteration of cellular proteins and DNA damage.

**Conclusion:** The production of reactive oxygen species in the process of reperfusion plays an important role in the exacerbation of the initial lesions caused by ischemia. ROS produced alters cellular macromolecules. The main elements involved in the production of ROS are mitochondria, xanthine oxidase and NADPH oxidase, and modifications of intracellular calcium concentration support pathological changes.

**Key words:** free radicals, oxidative stress, ischemia/reperfusion.

## 263. BIOMARKERS IN OVARIAN CANCER

**Rahela Manoli**

Scientific adviser: Silvia Stratulat, Associate Professor, Department of Biochemistry and clinical Biochemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Elucidation of the most frequent biomarkers in ovarian cancer.

**Materials and methods:** The study was based on the analysis of biographical sources from 2007-2014.

**Discussion results:** One of the major challenges in cancer research is the identification of stable biomarkers, which can be routinely measured noninvasively in easily accessible samples. Ovarian cancer is one such disease that would benefit from improved diagnostic markers. Ovarian cancer is the leading cause of death from gynecological malignancy in the western world. One way to facilitate early detection of ovarian cancer is through screening, but currently available diagnostic tools, including ovarian cancer biomarkers and clinical imaging, lack sufficient specificity and sensitivity for implementation in a population-based screening program.

**Conclusions:** The ability to sensitively and specifically predict the presence of early disease and its status, stage and Associated therapeutic efficacy has the potential to revolutionize ovarian cancer detection and treatment and to greatly improve the quality of life and survival rates of ovarian cancer patients.

**Key words:** ovarian cancer, diagnosis, biomarker, early detection.

## 264. THE ROLE OF GLUTATHIONE IN CANCER DEVELOPMENT AND CHEMORESISTANCE

**Daniela Mirzac**

Scientific adviser: Tatiana Timercan, University Assistant, Department of Biochemistry and Clinical Biochemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Glutathione (GSH) is a tripeptide produced by the liver and has the ability (among others) to remove a wide range of toxins, including those produced by heavy metals, alcohol, smoking, radiation and cancer chemotherapy. Elevated GSH levels were detected in various types of tumors, along with high levels of GSH-related enzymes, such as  $\gamma$ -glutamylcysteine ligase (GCL) and  $\gamma$ -glutamyl-transpeptidase (GGT), GSH-transporting export pumps. This makes the neoplastic tissues more resistant to chemotherapy. Therefore, the GSH system attracted the attention of scientists as a possible target for medical intervention against cancer progression and chemoresistance.

**Materials and methods:** The presentation represents an extensive literature review and is based on relevant scientific articles regarding the subject from medical databases.

**Discussion results:** The main research in the field aimed at depleting GSH by a specific inhibition of GCL, a key enzyme of GSH biosynthesis. But GSH depletion appears to be therapeutically effective when very low levels (<10% of their control values) can be achieved within the cancer cells. Thus, achievement of selective tumor GSH depletion under in vivo circumstances is a pharmacological challenge. Also, GSH synthesis and GSH synthesis-linked genes are up-regulated during oxidative stress and inflammation. Furthermore, Nrf-2 deficient cells were more susceptible to doxorubicin and BSO treatment-induced cell death than wild cells. Moreover, propyl gallate activated caspases 3, 8, and 9, and induced an increase in p53, Bax, Fas, and Fas Ligand; whereas MAPKs inhibited nuclear translocation of Nrf-2 and induced intracellular GSH depletion in human leukemia. This indicates that Nrf-2 is one of the first factors that induce cell survival under GSH depletion, which points out to this transcription factor as an attractive target in leukemia but also in other cancers sharing similar molecular mechanisms. The increase in GSH is a major contributing factor to drug resistance by binding to or reacting with, drugs, interacting with ROS, preventing damage to proteins or DNA, or by participating in DNA repair processes.

**Conclusion:** The modulation of cellular GSH is a double-edged sword. On one hand, enhancing the capacity of GSH and its Associated enzymes represents an aim in the search for cytoprotective strategies against cancer. On the other hand, the strategy of depleting GSH and GSH-related detoxification pathways is aimed at sensitizing cancer cells to chemotherapy. **Keywords:** Glutathione, cancer development, chemoresistance.

## 265. TUFTSIN-BIOLOGICAL ROLE AND PHARMACEUTICAL VALUE

**Varvara Naghita**

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**Introduction:** Despite the high level the human civilization achieved, we still constantly face dangers as viral infections, bacteria, traumas, chronic disease, cancer etc. Thanks to the development of medicine and pharmaceuticals, antibiotics, anti-inflammatory and immunomodulatory drugs as well as cytostatic and cancer killing drugs were developed. Still, many of them have many adverse reactions, or are expensive, or both. That is why the discovery of Tuftsin in 1970 is considered one of a high value for the modern medicine, by offering new ways of treatment of the diseases, which endanger health and life.

**Objectives and Purposes** of this work was to identify the immunomodulatory, anti-inflammatory, antibacterial and cancer killing properties of Tuftsin.

**Materials and Methods:** A bibliographic review of the scientific articles published over the studies of Tuftsin and its properties, during 1980-2012, was performed.

**Results:** In 1970s, Victor A. Najjar and Kenji Nishioka found a new natural tetrapeptide (Thr-Lys-Pro-Arg) derived from the proteolytic degradation of the 289–292 amino acid residues of the IgG heavy chain Fc domain that was named tuftsin. Tuftsin is produced by the action of two proteolytic enzymes – splenic tuftsin edocarboxypeptidase and leukokinase.



Further studies found out that Tuftsin and/or Tuftsin-like peptides increase immunologic effects like phagocyte respiratory burst, migration and chemotaxis ability, antigen presentation, etc. of cells of monocytic origin (macrophages, neutrophils, microglia and Kupffer cells). The peptide can be recognized by macrophages and microglia cells due to the expression of Tuftsin receptors. The receptors for Tuftsin react specifically to the Pro-Arg part of the peptide and the interaction of them raises the GMPc level in the target cell. In addition, the peptide is capable of targeting proteins to these cells. According to some studies, Tuftsin conjugates could increase production of antibodies and strengthen the humoral immune response to the antigen to which it was linked.

Still, in many animal disease models, such as sepsis (Wardowska et al., 2009), encephalomyelitis and multiple sclerosis (Bhasin M., et al., 2007), arthritis (Bashi T., et al., 2016), lupus nephritis (Bashi T., et al., 2015) Tuftsin treatment has been Associated with anti-inflammatory effects. This proves the paradox effects of Tuftsin and its original immunomodulatory properties.

Tuftsin clinical developments was hampered because it is extremely susceptible to proteolytic degradation in vivo. To overcome this pitfall several derivatives have been synthesized. Their studies found out that these compounds exhibit similar activity as Tuftsin or even better properties. For example, it was described the ability of Tuftsin fragment 1-3 to inhibit macrophage and microglia and to decrease oxygen radicals production by activated microglia, thus reducing brain edema and tissue damage in animal models of brain ischemia. T peptide (TP), obtained by linking four tuftsin peptides, despite its limited effect in intact tumors, strongly inhibited postsurgical relapsed growth of residual tumors in mice.

**Conclusions:** According to the presented data, Tuftsin presents different and useful properties that can be used in treating different severe diseases by rising the immune activity, as well as inflammatory processes by lowering it. It's value as a medicine rises, by the fact that Tuftsin it is an endogenous substance proper to the patient's body, thus being better accepted and having far more less adverse reactions than the rest of drugs, which is of a great importance.

**Key words:** Tuftsin, immunomodulation, antibacterial, anticancer.

## **266. IMPLEMENTATION OF PID-5 QUESTIONNAIRES, IN DIAGNOSIS OF PERSONALITY DISORDERS**

**Iurie Noroc**

Scientific adviser: Svetlana Lozovanu, Associate Professor, Department of Human physiology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Personality disorder is the inability to develop a sense of identity and the self-commitment in the context of interpersonal functioning inability norms and cultural expectations of the subject that persists for several years and are not the result of other disorders.

**The purpose of paper.** The study aims to put in circulation in Republic of Moldova a tool for analyzing personality disorders.

**Material and methods.** The study was conducted on a sample of 225 people aged between 18-64 years in urban and rural areas, including 166 women and 59 men. In the research was used PID-5, which assesses maladaptive traits in Section III of the proposed DSM-5. The measure includes 220 items, compared personality. Romanian version of the questionnaire was validated and adapted by a group of researchers from the Department of Physiology (USMF, "Nicolae Testemitanu", Republic of Moldova) and the Institute of Neurology and Neurosurgery, with the following steps: faithfulness, comparing rules (Hambleton 1994; Hambleton Patsula, 1998; Geisinger, 1994).

**Results / discussion.** Following interrogation voluntary people-both urban and rural areas as via PID-5, we obtained results that interpret them, we see domination disorder and borderline obsessive-convulsive narcissic between women and men. Thus, people females in urban areas suffer 10.4% (11 people in the number of women in urban areas) disorder and borderline obsessive-convulsive and 16.7% in rural areas (10 in total women rural). Men suffer in 10.0% (urban) and 3.4% (rural) of narcissicism. In a asimilitudine ideas, 12.65% of women have obsessive-convulsive disorder, and 8.43% - from 165 cases studied borderline. Narcissism dominates 6.77% of 59 cases.

These disorders are characterized by a set of traits (cognitive, affective) while, having an incapacitating. In 2013 has been edited and published the DSM-5 which was shown to be an effective model for diagnosing personality disorders, where, identity " is a receptacle of brain biochemistry. It was promoted the idea that pathological personality traits to be emancipated in six broad areas (negative emotionality, detachment, antagonism, disinhibition, psihoticism).

**Conclusions.** The new classification system has vast potential for use in clinical DSM-IV than having to face a string of evidence. Introducing dimensional assessment, paradigm changing, allows the clinician through the exact thresholds that aim, delineation and understanding diagnoses of personality disorders. From our point of view DSM-5 is a clinical value, a future, receptor "for new biological factors and environmental risks, a simple dimensional measurement syndromes.

**Keywords.** DSM-5, personality disorders, areas, diagnosis.

## **267. AWARENESS, USAGE AND ABUSE OF METHYLPHENIDATE AMONG YOUNG PEOPLE IN STUDY PROCESS**

**Oleg Rogach**

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**Introduction:** Recent statistical data show a constantly increasing incidence of Attention Deficit Hyperactivity Disorder (ADHD) emphasizing the wide usage of methylphenidate as an absolute treatment. Methylphenidate represent a psychostimulant drug which exert it's function in prefrontal cortex of the brain which control our behavior, cognitive functions, memory, planning and focusing ability. In spite of its positive effect, improper use and without doctor's prescription it is very dangerous for students.

**Purpose and Objective:** The social experiment was designed to identify the awareness usage and abuse of the drug methylphenidate among the young people during the study process and their basal knowledge about Contraindication and Side effect of the drug.

**Materials and Methods:** We collected data from 68 students, on a basis of anonymous inquiry. Among the students were people diagnosed with any form of ADHD and people who don't have ADHD at all but still using a methylphenidate to boost their learning abilities. The information of usage, awareness and abuse was analyzed.

**Results:** We found that 19 out of 68 students (27.9%) which study Medicine in University used or using methylphenidate during their study process. After interpretation of result we understand that 9 (47.4%) from 19 students that used methylphenidate, used it as a self-medication and the usage of the drug is incorrect. 12 (63%) students out of 19 were satisfied with the effect of the drug, but another 7 (37%) students had a very pronounced side effects. From the inquiry we can see that 62 (91.2%) students out of 68 heard about this drug, but only 30 (44.11%) students know to which group this drug belongs and its pharmacological aspects. 29 (42.6%) students are aware of contraindications of this drug. The average age of participants is 21 years. The majority of students used the drug for the first time at the age of 20 year old. 18 (94.7%) students out of 19 used methylphenidate in order to improve their study ability. The frequency of the usage of methylphenidate among the students is: 2 (11%) students use methylphenidate on daily basis, 5 (26%) students use methylphenidate once a week – once a month and 12 (63%) students are used methylphenidate only once in their lives. The side effects of the methylphenidate among the students were almost similar to the drug instruction. The side effect included tachycardia and palpitations, sweating, agitation, dyspnea, diarrhea/constipation, euphoria, insomnia, headache, loss of appetite, depression, diffused alopecia and changes in menstrual cycle. Even though, the students, had this side effect, on the question “Will they use methylphenidate again?” 11 (57%) students replied with positive answer, while 8 other students abstained.

**Conclusion:** Methylphenidate is a drug widely used in treatment of ADHD in all over the world. The action of the drug on brain itself is similar to the effect of Cocaine, thus require high awareness of the user about effects, contraindications and side effects of this drug, and what is most important, its proper administration. After analyzing the data above, we can see serious abuse of the drug in daily life of students. The dosages and frequencies are inappropriate for effective outcome of drug use, and may cause dependence and undesirable consequences. Our task is to elevate the awareness of the students which use methylphenidate, to put a question “Should they use it?”. ”If this is really worth it?” and to decrease the notable abuse of this drug among the students.

**Keywords:** ADHD, Methylphenidate, Abuse, Students, Study.

## 268. THE PAT FAMILY OF PROTEINS IN THE NORMAL AND PATHOLOGICAL LIPOLYSIS

**Victor Roman**

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**Introduction.** Investigations of the structure of fat droplets (PL), intracellular deposits of excess fat have revealed the presence of several proteins on their surface that are involved in their metabolism. Like any other cellular organelles, their surface is rich in a lot of proteins that regulate their functions. Of these, five were reunited in the PAT family: perilipin (perilipin1), adipophilin (perilipin 2), TIP47 (perilipin 3), S3-12 (perilipin 4) and OXPAT (perilipin 5). Conflicting hypotheses proposed for explaining the role of the PAT family of proteins in different pathologies motivated us into initiating this study.

**Point.** To study the role and the properties of the proteins included in the PAT family, their expression in various cells and their possible involvement in different pathologies.

**Material and methods.** Using the literature in the last 10 years we have investigated the role perilipins play in different pathologies.

**Result.** The PAT family of proteins, in addition to the major role it plays in the metabolism of PL, was found to have a lot of implications in human pathology. Perilipins are one of the pathogenetic factors in hepatic steatosis, atherosclerosis, myocardial infarction and obesity. Besides their use in the prognosis of these diseases, a possibility of intervention on the PAT family of proteins arises at the molecular level, with implications in treatment. Perilipin 2 along with aquaporin 1 may serve as a marker of clear cell kidney cancer, can help differentiating renal malign masses from benign ones. In other cancers, perilipin analysis may be useful for determining the type of cancer growth or its primary origin.

**Conclusion:** (1) Perilipin 1 subtype A is expressed in adipose tissue and the C subtype in the steroidogenic cells. Perilipin 5 is expressed primarily in cardiac muscle, where it influences the lipid metabolism. Perilipin 2 and 3 becomes expressed in some types of cancers. (2) Understanding the major role the perilipins play in the metabolism of PL can move us forward understanding pathologies involving them, allowing us to predict or prevent the occurrence of some diseases. (3) Genetic interventions on perilipin gene could be a real opportunity for treating and slowing down some diseases.

**Keywords:** PAT family of proteins, lipid droplets, perilipin

## 269. RESPIRATORY PATTERN'S MODIFICATIONS AT HEALTHY SUBJECTS, UNDER THE INFLUENCE OF EMOTIONS.

**Vadim Rosca, Daniela Dodi**

Scientific adviser: Vovc Victor, Professor, Head of the Human physiology and biophysics Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The respiratory pattern represents a set of volume and time parameters which characterize respiration, and in special movements Associated with it. Indices of respiratory pattern are very sensible at various psihoemotional actions (Boiten 1994). Nowadays the psychophysiology of breath has a broader development, in special was proved that different emotions can modify the respiratory pattern ( Boiten 1998).We realised this research in order to establish the specific influence of various emotions or of emotional behaviour on the components of the respiratory pattern. In the previous researches (Boiten 1998) the influence of the emotions was studied only on a few parameters (2-3) of the respiratory pattern. Nowadays the physiological experimental practice allow us to realise a more precise and keen measurement of the respiratory pattern.

**Materials and methods:** The study was realised on a sample of 10 healthy subjects, 6 women and 4 men aged 19 to 24 years. The respiratory pattern was recorded by respiratory plethysmography with inductance using the VisuResp (UBI France) device. All recordings were performed in the supine position. Emotional states were modeled by showing video sequences or films thru a lap- top located next to the examined person. Videos lasted 2 min each with 2 min breaks between them. Modeled emotional states: disgust, horror, amusement, sadness, fear (anxiety ), tenderness. he routes obtained were analyzed using the VisuResp software while statistical processing was performed using the StatsDirect program.

The following parameters of the respiratory pattern where examined:

Vt- Tidal volume(l); Ti- the duration of inspiration(sec);T- total duration of the respiratory cycle(sec);Ti/T- the part of inspiration from the total cycle; Vi/Ti- the inspiratory drive; VIF- minute-volume(air flow in 1 min).

Discussion results: The analysis of the obtained results revealed that the biggest effect on the parameters studied had the feeling of digust. Three respiratory pattern values of six studied were changed statistically significant under the action of this emotional behavior.

The tidal volume was decreased ( $0.260 \pm 0.08$  vs  $0.319 \pm 0.96$ ;  $P < 0.005$ ) also did the minute-volume ( $4.55 \pm 1.37$  vs  $4.86 \pm 1.34$ ,  $P < 0.05$ ) while the respiratory drive was raised ( $0.179 \pm 0.05$  vs  $0.11 \pm 0.04$ ,  $P < 0.05$ ). The respiratory drive proved to be also sensible to the sense of fear ( $0.178 \pm 0.05$  vs  $0.11 \pm 0.04$ ,  $P < 0.05$ ) and tenderness ( $0.181 \pm 0.05$  vs  $0.11 \pm 0.04$ ,  $P < 0.05$ ). The minute-volume reduced at the reproduction of sadness ( $4.51 \pm 1.46$  vs  $4.86 \pm 1.34$ ,  $P < 0.05$ ) and fear (anxiety) ( $4.41 \pm 1.51$  vs  $4.86 \pm 1.34$ ,  $P < 0.05$ ).

The character of observed changes complete the data obtained by previous authors, enlarging the knowledge spectrum on influence of emotions on respiratory pattern. These data allow us to suppose that the keen tuning of the respiratory behavior is taking place with the contest of CNS structures involved in the generation and expression of the emotions. Also these structures are involved in the tuning of respiration (Davis 1992, Masaoka et at 2012).

**Conclusion:**The data we obtained contribute to a better understanding of the psychophysiological tuning of respiration.

**Key-words:**respiration,emotions.

## 270. GLYCATION. A STUDY ABOUT REGENERATION

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**Introduction:** Glycation is a chemical process in which proteins are conjugated with glucose, it is characteristic for persons who are suffering for insipid diabetes, but also it is common in cases of a high level of blood glucose. With reference to organism different functions degeneration, including a bad angiogenesis, caused by glycation, it was purposed to observe how a high sugar alimentation would influence the time of regeneration in an animal organism.

**Materials and methods:** For this study, was taken 40 mice and separated in 6 groups, I- 10 mice, about 1.5 years old, high sugar diet, II- 10 mice, about 1.5 years, ordinary food, III- 5 mice, about 7 month old, high sugar diet, IV- 6 mice, about 7 month old, ordinary food, V- 3 mice, about 8 month old, high sugar diet, VI- 6 mice, about 6 month old, high sugar diet. At 10-th day, a small incision on lower limb was did on each mouse, after, it was observed the time of regeneration in each group. As food was served: in groups with ordinary food, wheat, bread, carrot, beet; in groups with high sugar diet, wheat, bread, carrot, beet, sugar and different sweets.

**Discussion results:** In first days of experiment, it was observed that groups of mice, which had a ordinary diet were more active, they ran and played more than groups with a high sugar diet. Also it was determined that groups of mice with high sugar diet like vegetables more than groups without sugar supplement. After incisions this processes also was common. Analyzing regeneration, it may be said that, in first days after incisions it was observed that in groups of elder mice and with ordinary food, animals felt better, and regeneration had a higher speed than group with a high sugar diet. Anyway at the final of experiment their results in regeneration was approximatively equal. In younger groups in firs days also was present this phenomenon, but it continued, and in the end groups with ordinary diet had results better with about 1-2 days than groups with high sugar diet. Also it was noticed a strange thing, mice with high sugar diet had a strange fur, like it was wet or something like that.

**Conclusion:** In younger mice, the speed of regeneration is higher when alimentation is ordinary than when alimentation is rich in sugar, in elder mice the speed of regeneration is approximatively equal. Remain to demonstrate this not only through subjective methods, but also through objective like histochemical methods.

## 271. HLA – A, HLA – B, HLA – DR ALLELE FREQUENCIES BETWEEN KIDNEY RECIPIENTS WITH DIFFERENT BLOOD GROUP

**Severija Pažemeckaitė**

Scientific adviser: Skrodenienė Erika, Lithuanian University of Health Sciences

**Introduction:** Human leukocyte antigens (HLA) play a central role in the cellular and humoral immune responses that determine the outcome of a transplant. The extensive polymorphism of HLA poses a major barrier to successful transplantation.

Blood groups refer not only to genetically encoded erythrocyte antigens but also the immunologic diversity expressed by other blood constituents, including leukocytes, platelets, and plasma. The ABO blood group system has the single most important blood group antigens. Kidney donors must have a compatible blood type with the recipient for the transplant to be accepted by the recipient's organism and immune system.

**Aim:** To evaluate kidney recipients' HLA allele frequencies among patients with different blood groups.

**Objective:**

1. To determine the most frequent HLA – A, HLA – B, HLA – DR alleles among kidney recipients.
2. To compare HLA – A allele frequencies among kidney recipients with different blood groups.
3. To compare HLA – B allele frequencies among kidney recipients with different blood groups.
4. To compare HLA – DR allele frequencies among kidney recipients with different blood groups.

**Methods:** The retrospective data analysis of patients who were in the waitlist for kidney transplant in Hospital Lithuanian University of Health Sciences Kaunas Clinics during years 2013 – 2014 was performed. The following data was analyzed: ABO blood group antigens detected using column agglutination technique and class I (HLA – A, HLA – B), class II (HLA – DR) HLA antigens, detected using either lymphocytotoxic or molecular biology method. Data analysis was performed using Microsoft Excel and SPSS 19.0 software package. To assess the significance of the results the method of chi-square (X<sup>2</sup>) was used, assuming the results to be statistically significant with  $p < 0,05$ .

**Results:** The study included 250 LUHS Kaunas clinics patients waiting for kidney transplant. The most frequent (rate >8%) HLA-A, HLA-B, HLA-DR alleles were determined. The most frequent of the HLA-A alleles were 1 (8.8%), 2 (30.8%), 3 (16%), 11 (8%). Among HLA-B, the most frequent were 7 (28%), 8 (10.8%), 13 (10%). And among HLA-DR alleles: 1 (15%), 4 (12%), 7 (13.2%), 8 (8%) and 15 (8.8%). HLA-A 11 allele presence among different blood groups was statistically significant ( $p = 0.008$ ); 36 out of 250 patients had this allele, it was detected in different blood groups in the following frequencies: O ( $n = 11$ ; 32.4%), A ( $n = 8$ ; 23.5%), B ( $n = 10$ ; 29.4%), AB ( $n = 5$ , 14.7%). HLA-B 7 allele presence among different blood groups was statistically significant ( $p = 0.042$ ), 65 out of 250 patients had this allele, it was detected in different blood groups in the following frequencies: O ( $n = 26$ ; 43.3%), A ( $n = 22$ ; 36.7%), B ( $n = 9$ ; 15.0%), AB ( $n = 3$ ; 5%). HLA-DR 8 allele presence among different blood groups was statistically significant ( $p = 0.028$ ); 33 out of 250 patients had this allele, it was detected in different blood groups in the following frequencies: O ( $n = 11$ ; 34.4%), A ( $n = 10$ ; 31.3%), B ( $n = 5$ , 15.6%), AB ( $n = 6$ ; 18.78%). The presence of other HLA-A (1, 2, 3), HLA-B (8; 13) and HLA-DR (1; 4; 7; 15) alleles in blood groups was not statistically significant,  $p > 0.05$ .

**Conclusions:** 1. The most frequently observed alleles were the following: HLA–A: 1, 2, 3, 11; HLA–B: 7, 8, 13; HLA–DR: 1, 4, 7, 8, 15.

2. HLA–A 11 allele dominated between kidney recipients with O and B blood groups.

3. HLA-B 7 allele dominated between kidney recipients with O and A blood groups.
4. HLA-DR 8 allele dominated between kidney recipients with O and A blood groups.

**Keywords:** HLA-A, HLA-B, HLA-DR.

## **272. THE PAIN MANAGEMENT AND KNOWLEDGE OF NONSTEROIDICAL ANTI-INFLAMMATORY DRUGS (NAIDS) SIDE EFFECTS LINK TO GENDER**

**Severija Pažemckaitė, Akvilė Ūsaitė**

Scientific adviser: Albinas Naudžiūnas, MD, PhD, Professor, Lithuanian University of Health Sciences

**Introduction:** Pain is a common medical problem, and relief of pain is an important therapeutic goal. Although mild and moderate pain by outpatients is most commonly treated with over-the-counter drugs. Over the past decade, there have been growing concerns about the harm — abuse, as well as serious injury and death — caused by the use of over-the-counter painkillers. These concerns have emerged in parallel with the evolving understanding of the importance of pain management in medical care. It's important to maintain the balance between providing access to pain medications for those who need them, and on the other hand, managing the variety of risks posed by painkilling drugs. Especially nowadays when drug consumption between society has increased significantly. More and more people have been hospitalized because of these drugs side effects. This fact shows that society in Europe aren't informed about over-the-counter painkillers harmful influence to their health.

**The aim** of this study is to evaluate factors influencing non prescription drugs against mild-moderate pain choice.

### **Objectives:**

- To determine and compare the most frequent pain type in men and women groups;
- To compare the frequency of NAID's used in pain management in different gender groups;
- To evaluate the Lithuanian citizens knowledge about NAIDs side effects and compare it in gender groups.

**Materials and methods:** The online questionnaire form was applied for two biggest Lithuania's cities - Vilnius and Kaunas – citizens. Total 99 respondents in the age of 19-80 years were interviewed. According the gender respondents distributed equally by 51 (51.1%) males and 48 (49.9%) females. IBM SPSS Statistics 19.0 version. For categorical data analysis  $\chi^2$  and Fisher's exact tests were performed.  $P < 0.05$  was evaluated as statistically significant.

**Discussion results:** Most women were tend to suffer from pain 1 time per month (41.2%) and the most of men (39.6%) indicated suffering from pain rare than 1 time pro six months,  $p = 0.003$ . The women were more likely to mark gastric ulcers (68.9%), renal insufficiency (68.4%) as the NAID's side effect than men (31.1 % and 31.6 5 respectively) The mostly women uses NDAIS for menstrual (66.7%), headache (74.5%), and muscle pain (17.7), as the men uses it for back pain (43.8%) and headache (35.1%),  $P < 0.05$ . Women (66.7 % ) were more likely to choose ibuprofen as the man (41.7%),  $p < 0.05$ . In other NAIDS the consumption choice does not statistically differ.



### **Conclusion:**

- The most frequent pain treated with NAIDS were menstrual and headache in women group, and in men group back pain and headache.
- Women are tend to use NAIDS against pain 1 time pro month the most of male are tend to use it rare as 1 time pro 6 months.
- Both women and men groups showed lack of information about NAIDS side effects (with women showing more knowledge in gastric ulcer and renal insufficiency as side effect).

**Key Words:** NAID, men – women pain, aspirin, pain management.

## **273. THE ROLE OF LGI PROTEINS IN RAISING NEURONAL EXCITABILITY AND IN EPILEPTOGENESIS**

### **Doina Spinu**

Scientific adviser: Todiras Stela, PhD, Associate Professor, Physiopathology and clinical physiopathology department, State University of Medicine and Pharmacy *Nicolae Testemitanu*, Chisinau, Moldova

**Introduction.** According to WHO approximately 50 million people worldwide have epilepsy, making it one of the most common neurological diseases globally, and about two thirds of them are idiopathic. Certain types of idiopathic epilepsy are developed with the involvement of LGI family proteins. The role of LGI proteins (leucine-rich, glioma-inactivated protein-1) is to regulate synaptic transmission, activity of voltage-gated potassium channel (Kv1.1), and to inhibit neuroblastomas. The goal of this study is to highlight the role of LGI proteins in raising neuronal excitability and epileptogenesis.

**Materials and methods.** 12 articles from relevant scientific journals, as Nature Medicine, SAGE Journals, Journal of Neuroscience, have been studied.

**Results.** Two basic mechanisms are known by which LGI protein is involved in the development of neurological disorders: temporal lobe epilepsy (TLE) caused by mutation in LGI gene, and limbic encephalopathy (LE) caused by presence of antibodies anti-LGI.

At the presynaptic membrane, truncated LGI1 fails to prevent rapid inactivation of the Kv1.1 potassium channel. The consequent high influx of Ca<sup>2+</sup> triggers massive transmitter release of glutamate. Truncated LGI1 also fails to be secreted and does not bind ADAM22 (a disintegrin and metalloprotease domain) and other postsynaptic receptors. The augmented Src kinase activity maintains an immature NMDA receptor composition with high NR2B/NR2A ratio. As a consequence, NMDA receptor– mediated calcium currents last longer and enhance excitatory responses.

Interaction between LGI1 and ADAM23 leads to decrease of seizure threshold, and interaction with ADAM22 reduce decrease expression of AMPA receptors. LGI1 antibodies Associated with LE neutralize the specific protein-protein interaction between LGI1 and ADAM22/ADAM23, inducing epileptogenetic effect.

**Conclusion.** Mutation of LGI1 gene, disruption of interaction between LGI proteins and ADAM proteins, ADAM proteins defects, lead to TLE phenotype, manifested by seizure, hallucination, auditive disorders, memory disorders. At the same time the presence of antibodies anti-LGI or anti-NMDA lead to LE, manifesting by lose of memory, irritability, headache, seizures and psychosis.

**Key words:** LGI, epilepsy, mutation.

## 274. BIOCHEMICAL DATA IN ACUTE MYOCARDIAL INFARCTION.

**Tatiana Timercan**

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**Introduction:** Acute myocardial infarction (AMI) is one of the most usual diagnosis in hospitalized patients. Hyperglycemia, hypertension, and hypercholesterolemia evaluated on admission in patients with AMI are considered negative predictors of short- and long-term clinical outcomes.

**Aim:** We performed statistical analyses to identify correlations between biochemical parameters in patients with AMI Associated with hypertension stage II/III.

**Materials and methods:** Our study was performed on 33 patients with AMI admitted to the Intensive Care Unit of the Public Institution Institute of Cardiology. Patients were divided into three groups: L1- AMI Associated with hypertension stage II (n=13); L2- AMI Associated with hypertension stage III (n=8); L3- sham AMI (n=12). On admission in all the patients were evaluated plasma levels of cholesterol, LDL and HDL cholesterol, triglycerides (TAG), and glucose. The obtained data were represented by median and percentiles. For comparison the Mann Whitney and Kruskal-Wallis nonparametric tests were performed using SPSS statistical program.

**Discussion results:** Statistically significant differences were found in parameters of age ( $\chi^2_{26.901}$  df=2 p=0.032) and TAG ( $\chi^2_{26.559}$  df=2 p=0.038). The age of patients in L1 was lower (median 60.0) compared to L2 (median 65.0, Mann-Whitney U=32.0, p=0.161), but higher than in L3 (median 55.0, Mann-Whitney U=16.5, p=0.012). TAG value was higher in L1 (median 2.24) compared to L2 (median 1.35, Mann-Whitney U=22.5, p=0.03) and L3 (median 1.37, Mann-Whitney U=46.5, p=0.91). We noticed a slight difference in value of glucose ( $\chi^2_{24.828}$  df=2 p=0.038): it was lower in L1 (median 6.8) compared to L2 (median 11.2, Mann-Whitney U=27.0, p=0.076) and L3 (median 7.1, Mann-Whitney U=21.0, p=0.039). The investigated groups showed no statistically significant differences in cholesterol value (L1 median 5.5; L2 median 5.35; L3 median 5.3; Kruskal-Wallis test  $\chi^2_{20.688}$  df=2 p=0.709), LDL-cholesterol (L1 median 3.02; L2 median 3.4; L3 median 3.0, Kruskal-Wallis test  $\chi^2_{21.373}$  df=2 p=0.503), HDL-cholesterol (L1 median 1.3; L2 median 1.28; L3 median 1.27, Kruskal-Wallis test  $\chi^2_{21.462}$  df=2 p=0.481).

**Conclusion:** Atherosclerosis is main cause of AMI. Hypertension and hyperglycemia after acute coronary syndrome are Associated with an increased risk of in-hospital mortality and severe complications. The major plasma lipid traits, low-density lipoprotein cholesterol (LDL-C), triglycerides,

and high-density lipoprotein cholesterol (HDL-C) are all predictive of cardiovascular risk and are considered targets for therapeutic intervention.

**Key Words:** AMI, hypertension, dislipidemia, hyperglycemia.

## 275. LEUKEMIA CAUSED BY CHIMERIC ONCOGENES

**Tocan Maxim**

Scientific adviser: Ludmila Rotaru, MD, PhD, Associate Professor, Department of Molecular Biology and Human Genetics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The involving of chimeric oncogenes in the molecular-genetic mechanism of leukemia's occurrence is currently discussed a lot. Their activity is explained by the transformation of the hematopoietic cells into leukemic cells using different kind of genetic disorders. It involves the disruption of a normal survival, proliferation and differentiation of the hematopoietic's progenitors. As an example of these chimeric oncogenes is the BCR-ABL gene, which is responsible for the creation of an abnormal protein kinase and it has been proved that almost 95% of Chronic Myeloid Leukemia patients have this gene in their leukemic cells. Therefore, it is important to realise that medical examination of patients with hematologic malignancies should involve cytogenetic technics (RT-PCR qualitative or quantitative, FISH) as an essential method of diagnostic as they play a major role in establishing a more targeted treatment.

**Materials and methods:** The current study includes 704 patients followed at the CHU Amiens, France with a suspicion for Chronic Myeloid Leukemia during 2012-2015. Their diagnostic was put based on their blood test, myelogram analyze and finally by the RT-PCR qualitative method, which played the most precise role in establishing the disease. The statistical used method is the descriptive one, since we made our study based on their medical records and their results.

**Discussion results:** After making this study, we have obtained the following data: it included 374 men (53%) and 330 women (47%). The average age when this investigation method was applied is 62.67 years, including 63.14 years for males and 62.15 years for females. 109 patients (15.42%) have presented a positive diagnostic: 96 patients (13.63%) had a M-BCR-ABL transcript and 13 patients (1.84%) had a m-BCR-ABL transcript. In 591 cases (83.94%) the BCR-ABL transcript was absent, but in 4 cases (0.56%) the transcript could not be identified because of the extracted ARN's bad quality.

**Conclusion:** In the end, after analysing this study's results, we can conclude that most part of leukemias can be certainly confirmed by using RT-PCR. For the establishment of a leukemia diagnostic we use RT-PCR qualitative, but for the disease's evolution we practice RT-PCR quantitative. Also we have observed the role of BCR-ABL oncogene in Chronic Myeloid Leukemia's etiology and the variety of regions where chromosomal translocation may occur. Therefore using molecular-genetic techniques in the diagnosis of leukemia has a fundamental significance for the development of a targeted treatment.

**Key words:** Chimeric oncogenes, BCR-ABL, RT-PCR.

## 276. UTERINE ARTERY EMBOLIZATION (LITERATURE REVIEW)

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**Background.** Uterine artery embolization (UAE also known as uterine fibroid embolization UFE) was carried out for the first time in 1970 in order to obtain hemostasis in postpartum women, after caesarean, after abortion, after hysterectomy. Hysterectomy is a major surgical procedure typically requiring 5 days of hospitalization for the immediate postoperative recovery, and the long-term recovery period can range from 4 weeks to as long as 6 months. The most common presenting symptoms of fibroids are menorrhagia/metrorrhagia, dysmenorrhea, chronic pelvic pain. Bleeding problems tend to present early, when fibroids are relatively small. The degree of bleeding can be dramatic, causing marked anemia and chronic fatigue. Fibroid symptoms can have a significant impact on the quality of life that is comparable to other major chronic diseases. The only absolute contraindications to UAE are current pelvic or gynecologic infection and current pregnancy. Relative contraindications include those that would be considered for any angiographic procedure: uncorrectable coagulopathy, severe renal insufficiency, and a history of anaphylactic reactions to radiographic contrast media. Another relative contraindication is a peri- or postmenopausal state. Uterine artery embolization is performed in the interventional radiology suite, usually after the subject has been sedated. One or both of the femoral arteries are catheterized, and pelvic arteriography is performed to define the vascular tree. In addition to the usual postprocedure requirements Associated with an arterial puncture, the major treatment issues following UAE relate primarily to postembolization syndrome, which consists of pelvic pain, nausea/vomiting, and low-grade fevers.

**Conclusions:** Uterine artery embolization is a safe alternative to surgical myomectomy, resulting in shorter hospital stay, fewer and less severe adverse events. Awareness of the known complications of uterine artery embolization may allow more rapid diagnosis and effective therapeutic responses to complications when they occur. Uterine fibroids embolization requires a thorough knowledge of the pelvic arterial anatomy. Identification of normal arterial anatomy and main variations of the uterus, fibroid tumor vascularization are essential for the safety and success of the procedure. All intending to perform uterine fibroid embolization of the tumor should benefit a specific training in pelvic anatomy and in the technical procedure.

**Key words:** uterine artery, hemorrhage, embolization.

## POSTERS

### 277. AGE FACTOR AND CONCOMITANT PATHOLOGIES IN PATIENTS WITH SACROILIITIS

Vasilii Arian

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**Introduction:** Sacroiliitis is an inflammatory process which involves the sacroiliac joint, which is one of the diagnostic criteria for seronegative spondyloarthropathies. The objective of this study was to find correlations between New York radiographic criteria according to age and the concomitant pathologies in severe cases.

**Materials and methods:** we used the medical records of 50 patients with different types of seronegative spondyloarthropathies: 20 men and 30 women.

**Discussion results:** The radiological evaluation of sacroiliitis was made according to the New York criteria which contain 5 degrees of evolution: 0 – normal; I – suspect, although unclear alterations; II – minimal erosions and sclerosis, but without joint space alteration; III – erosions and sclerosis, with widening or narrowing of the joint space; IV – ankylosis. In 50% of men ankylosing spondylitis was present and 77% of women had psoriatic arthritis. Between the ages 20-29 more women were found with II<sup>nd</sup> degree sacroiliac joint damage. In the 30-39 range there were also only women with II<sup>nd</sup> degree damage. In the 40-49 range more men were found with IV<sup>th</sup> degree damage. In other age groups no specific incidence was found. All sever degrees (III-IV) in men- 10 patients with ages between 40-69, with ankylosing spondylitis were more likely to have concomitant pathologies like HVB, autoimmune thyroiditis and arthrosis. In women, 3 patients between 50-69 years, radiological degrees III-IV of sacroiliitis were Associated with postmenopausal osteoporosis, HVB and arthrosis.

Thus, we see that in severe cases of sacroiliitis there is presence of HVB. The relation is confirmed in some studies that demonstrate the role of HVB and HCV viruses in the etiology of autoimmune diseases. On the other hand, immunosuppressive drugs are commonly used in the management of rheumatic diseases and were shown to induce viral reactivation in HVB- and HCV-positive patients.

**Conclusion:** Studies show that there are no significant radiological changes of the sacroiliac joint in young adult patients with seronegative spondyloarthropathies. Severe sacroiliitis is more specific for old and middle aged men, diagnosed with this condition. In cases of severe sacroileitis, HVB and arthrosis have been detected as concomitant illnesses in both men and women.

**Key words:** seronegative spondyloarthropathies, radiologic criteria, sacroiliitis, HVB.

## 278. THE PARTICULARITIES OF OXIDATIVE STRESS IN CANCER.

**Alina Bacinschi**

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**Introduction:** Humanity is facing a critical public health problem: the cancer, and in the next decade is likely to become the most important global disease. By 2020, it is estimated that cancer mortality will exceed the mortality of cardiovascular diseases.

Daily every cell of our body is the target of bullies feared: pollutants, cigarette smoke, ultraviolet radiation, ultrasound, hormones (estrogens) and not least free radicals (RL).

The study of the consequences of RL oxygen formation is one of the topics of great interest of Biochemistry and Medicine, especially the consequences in cancer formation RL. Oxidative stress (OS) is closely related to all aspects of cancer, the tumor carcinogenicity state, from prevention to treatment. A statistics presented recently by the World Health Organization indicates a correlation worrying between the degree of industrial development of society and the incidence of diseases circulatory, neurodegenerative diseases and cancers, diseases causing death, which are a direct result of complex phenomena gathered under the name OS.

**Materials and Methods:** We conducted an analysis of more than 20 international articles obtained by searching the database MEDLINE, PubMed, EBSCO, HINARI, published from 2000 till 2015.

**Discussion Results:** So, there is a permanent cancer called chronic OS. It is known that OS and RL are mutagens. These produce mutations, cytotoxic and modify gene expression. Mutations inducing oxidant factors can initiate carcinogenesis, whereas oxidative modifications of genetic material can lead to progression of benign tumors with malignant transformation.

The human body is constantly under the action of OS, which may be of exogenous origin (e.g. UVR), as well as endogenous (cellular level involving mitochondria). So, when the body exceeds the capacity of the redox system, genetic mutations can generate an intracellular signal transduction of transcription factors which may be affected directly or through antioxidants, leading to carcinogenicity. One of the mechanisms by which anticancer agents and radiotherapy exert their effects is apoptosis of cancer cells. OS problem is also involved in resistance to these treatments. Many field studies have shown that treatment with chemotherapy raises the OS in patients who receive them therefore represents producers of OS antineoplastic agents in this group of patients in anticancer chemotherapy.

**Conclusion:** OS chronic cellular level can stimulate or cancer progression or metastasis of its power, and can make some anticancer drug treatments be less effective.

**Key Words:** Oxidative stress, cancer, inflammation, chemotherapy.

## **279. THE OTOACOUSTIC EMISSIONS AS A BY-PRODUCT OF THE COCHLEAR AMPLIFIER AND THEIR ROLE IN HEARING SCREENING.**

**Vasile Blaja, Svetlana Lozovanu**

Scientific adviser: Victor Vovc, MD, PhD, Professor, Department of Physiology and Biophysics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The normal ear does not just receive sound; it also, paradoxically, produces low-intensity sounds called otoacoustic emissions(OAEs). Otoacoustic emissions are sounds of cochlear origin, that are caused by the motion of the cochlea outer hair cells, as they respond to auditory stimulation, during an active process that is called the cochlear amplification of sounds. When sound stimulates the cochlea, the outer hair cells vibrate, and then produced vibrations are transmitted backwards through the middle ear to the eardrum that produces a nearly inaudible sound. Otoacoustic emissions can be recorded by a microphone fitted into the ear canal, and provide a simple, efficient and non-invasive objective indicator of healthy cochlear function.

**Propose and objectives:**To highlight some aspects of hearing mechanisms, especially the cochlear amplification of sounds and the role of outer hair cells in this process. Also to underline the importance of otoacoustic emissions in assessment of cochlear function, and early diagnosis of congenital hearing loss in newborns.

**Materials and methods:** There were analyzed the results of the last scientific works and discoveries in the field of hearing mechanisms, especially the role of outer hair cells in cochlear amplifier, hearing diseases that can appear in destruction of this mechanism, and diagnosis methods.

**Discussion results:** Experimental measurements of basilar membrane vibrations within the postmortem and in the living cochlea demonstrate the difference between these, with a greater improved sensitivity and sharpness of tuning in the living cochlea. That means that the basilar membrane vibrates more in a living cochlea than in a dead cochlea. This property is called the cochlear amplifier, and is generated by the cochlear outer hair cells electromotility and stereociliary active bundle movements. In process of cochlear amplifier are produces a by-product called otoacoustic emissions. Detectable OAEs is produced by motions of the eardrum which are extremely small. Usually this sounds are an unstable volume between -30 dB and +30 dB sound pressure level. OAEs allow to appreciate the cochlear function, especially in congenital hearing loss, when the early diagnostic is very important.

**Conclusion:** The cochlear amplifier play a great role in auditory sensitivity, and permit improved frequency discrimination. Without the cochlear amplifier, the traveling wave gradually reaches a peak, and then rapidly declines. The indicator of normal cochlear amplifier mechanism is the presence of otoacoustic emissions, which can be recorded and used as a diagnostic method - hearing screening, a very important tool in early diagnosis of congenital hearing loss in newborns or in diagnosis of other hearing diseases.

**Key Words:** otoacoustic emissions, cochlear amplifier, outer hair cells, hearing screening.

## 280. METABOLIC CHANGES IN MYOCARDIAL INFARCTION

**Radu Brea**

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**Introduction:** The focus of this review is the biochemistry of Myocardial Infarction (MI) in general and specifically during ischemia and reperfusion, phases in which intervention is critical and efficient if performed. The key elements that we studied are: reactive oxygen species, calcium handling in the heart, Krebs cycle and mitochondrial MPTP channel activity.

**Materials and Methods:** We analyzed more than 100 articles from databases MEDLINE, EBSCO and HINARY published from 2011 till 2015

**Discussion Results:** Prolonged ischemia can cause considerable damage, and in a highly metabolic organ such as the heart, this effect can be devastating. However, restoration of perfusion seems to paradoxically extend the size of an infarct. The cause is multifactorial, nonetheless, there is substantial evidence that a key role is played by reactive oxygen species (ROS). ROS generation occurs in ischemia/reperfusion (I/R), and sets off pathways that damage cellular components initiating cell death, contributing to MI. On the other hand, ROS can act as signaling molecules that participate in preconditioning by various pharmacological agents. They activate cell survival programs that help tissues better resist I/R.

The MPTP is a non-selective mitochondrial pore and in its normal closed state it preserves the membrane potential and pH gradient required for ATP production. Opening of the MPTP in response to changes in the cell environment during I/R is detrimental to the mitochondria and is thought to be one of the mediators of I/R injury through initiation of cell death by necrosis or apoptosis.

Calcium, a central element in heart physiology is involved in signaling pathways that can also help or damage the heart. Ca<sup>2+</sup> influx through the L-type Ca<sup>2+</sup> channel increases production of ROS during oxidative stress. CaMKII which regulates contraction is involved in many cardiac diseases. In the stunned heart its activity is beneficial however in irreversible I/R it leads to cell death and necrosis.

A study of metabolic alterations caused by MI showed that in vivo decrease in Krebs cycle activity in the 6-week post-MI heart may represent an early maladaptive phase in the metabolic alterations after MI in which reductions in Krebs cycle activity precede a reduction in PDH flux. Also, changes in mitochondrial metabolism in heart disease are progressive and proportional to the degree of cardiac impairment.

**Conclusion:** Studies show that considerable damage occurs when reperfusion is performed disregarding the reactions it triggers with the formation of ROS. The activation of the MPTP and calcium dysregulation, also have a key role in MI. However, there are attempts to produce agents that can block the MPTP and agents that regulate intracellular calcium handling, thus providing a stepping stone for future treatments and interventions.

**Key Words:** myocardial infarction, reactive oxygen species, mitochondrial permeability transition pore.



## 281. ANTIBIOTIC SUSCEPTIBILITY OF ENTEROBACTERIACEAE STRAINS ISOLATED FROM URINARY TRACT INFECTIONS

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Enterobacteriaceae are the most frequent causes of urinary tract infections. We analysed the antibiotic susceptibility of urinary isolates recovered at the Microbiology Laboratory of Mures County Emergency Clinical Hospital.

**Materials and methods:** We collected data from the electronic data base of the laboratory. All successive non-duplicate, clinically significant Enterobacteriaceae strains tested during a one year period (2015) were included in our study. Recurrent isolates were considered for analysis only if there were phenotypically different. Pluribacterial samples were excluded from the study.

**Results:** A total of 672 strains from 651 patients were involved in our study. The most frequent was *E. coli* (n=500, 74%), followed by *Klebsiella pneumoniae* (90, 13%), *Proteus mirabilis* (34, 5%), *Serratia marcescens* (18, 3%) and others (5%). The highest susceptibility was registered for ertapenem (93%). The least active antibiotic was ampicillin (31%). Relatively low susceptibility was detected against fluoroquinolones (64%) and trimethoprim-sulfamethoxazol (60%). In case of *E. coli* the highest susceptibility was registered for ertapenem (99.8%) and nitrofurantoin (99%). In case of *Klebsiella pneumoniae* the most active antibiotic was ertapenem (78%).

**Conclusions:** The antibiotic most active against all urinary Enterobacteriaceae isolates was ertapenem. Antibiotics commonly used to treat urinary tract infections, such as fluoroquinolones and trimethoprim sulfamethoxazol were less efficient, therefore their empirical use should be avoided. Nitrofurantoin, an antibiotic used to treat uncomplicated urinary tract infections caused by *E. coli*, was highly active.

**Keywords:** urinary isolates, fluoroquinolones, *E. coli*, *Klebsiella* spp.

## 282. A SYSTEMATIC LITERATURE REVIEW OF HEREDITARY ASPECTS OF OVARIAN CANCER

**Dumitrita Colac**

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**Introduction:** Every year, worldwide, are registered 10 million new cases of cancer and 6.2 million deaths over the cancer. About 5 to 40 % of malignant tumors of all anatomical locations have a genetic etiology, and this percentage is growing due to increased general morbidity. So far, in the literature there are described over 200 hereditary cancer syndromes, for 35% of which are fully described the primary molecular defects or localisation of chromosomal mutation, and DNA diagnosis has become a routine method of investigation for genetic diagnosis. Ovarian cancer also refers to these pathologies.

Ovarian cancer ranks 7th in the incidence of malignant tumors that can occur in women, with peak incidence between 40 and 65 years. A woman's risk of developing ovarian cancer is 1,4 - 1,8%, with an annual incidence of approximately 57.3 / 100,000 women who reach the age of 75-79 years, representing the fifth leading cause of death cancer in women, and 5-year survival rate for all stages is between 35-38%.

**Materials and methods:** we study the articles, publications and scientific literature specific for this topic

**Discussion and results:** Morphological obvious of the intraepithelial carcinoma in fallopian tubes showed that glandular serous epithelium of the distal fallopian tube is the origin of anatomical primary disease in most hereditary ovarian carcinomas type II, then, it seems that the identification of intraepithelial tubal carcinoma with relatively non - invasive and in situ methods, by molecular imaging could lead to an improvement in primary and secondary prevention of diseases. Approximately 5-10% of ovarian cancers develop due to genetic predisposition, by mutations of the BRCA1 gene (17q) and BRCA2 gene (13q) - forming a combination of ovarian and breast cancer, hereditary breast-ovarian cancer (HBOC) syndrome. Other genetic mutations involved in the pathogenesis of ovarian cancer are changes in metalloproteinases, in PTEN, TP53. Around 60% of cases of serous ovarian cancer in stage III and IV are related to have mutations in the TP53 tumor suppressor gene.

**Conclusion:** By investigating mutations in ovarian cancers genetically determined, we could increase survival by performing prophylactic salpingo-oophorectomy to susceptible persons.

## **283. INHERITED METABOLIC DISORDERS IN REPUBLIC OF MOLDOVA**

**Andrei Cojocari**

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**Introduction:** Inherited metabolic diseases include different inborn errors of metabolism caused by genetic reasons. It should be noted that each inherited metabolic disorder is rare in population but all together these diseases may affect about 1 in 1000 to 2500 newborns. Some of these diseases are detected by routine screening, other need elaboration of new efficient methods of diagnosis. The aim of this study was to present the current comprehensive information about the distribution, frequency and methods of diagnostic of the inherited metabolic disorders in Republic of Moldova during last 5 years.

**Material and Methods:** We analyzed publications and medical data for the last 5 years using PubMed, SpringerLink system and IBN to study the incidence, prevalence, causes, symptoms, and modern methods of diagnosis of inherited metabolic disorders in Moldova.

**Discussion results:** It's known that the main cause of the inherited metabolic disorders is different mutations in genes that produce abnormalities in synthesis, transformation and degradation of proteins, lipids and carbohydrates. Inherited metabolic diseases are characterized by a variety of symptoms that may affect any organ and usually affect more than one. There is no effective therapy for

many inherited metabolic disorders. Current trends in the treatment are aimed at only symptomatic therapy. During the period from 2011 to 2014, in Moldova were examined children with different metabolic disorders using the following methods: fluid chromatography, NMR and mass spectrometry methods. In base of obtained data the National Register of rare diseases was elaborated. It includes 12 metabolic diseases: methylmalonic aciduria, glutaric aciduria, galactosemia, alcaptonuria, glycogen accumulation diseases, lysosomal diseases, mitochondrial diseases and others. Genetic diagnosis methods include PCR analysis, DNA sequencing, Southern blot method, and allow to reveal the problem at an early stage of development.

**Conclusion:** The elaboration of the National Register of the rare diseases and introduction into medical practice of the molecular methods of diagnostic of inborn errors of metabolism will help to reduce the mortality and morbidity in children due to early detection of problems and their early treatment.

## **284. GENETIC STUDY OF CLINICAL VARIABILITY IN THE CRANIO VERTEBRAL JUNCTION ANOMALIES**

**Irina Daali**

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**Introduction:** Cranio-vertebral anomalies represent defects of the development in the structures which are located in the transition zone between mobile cranium and relatively rigid spinal column and can involve brain, spinal cord causing various neurological clinic. Study of these conditions is very important and actual in connection with the development of direction in manual therapy as cranio-sacral therapy.

**Materials and methods:** Theoretical and methodological basis of the study is scientific aspects studied in the domain of congenital vertebralogy. The most important part of analysis is based on material of publications which are containing specific studies from the other countries and international statistics.

**Results of this research:** There were determined health and development particularities of people with cranio-vertebral disorders; substantiated the main concepts in the occurrence of cranio-vertebral anomalies showing controversies regarding the dynamics of its development; found value and interaction of different factors of influence on the development of cranio-vertebral region; gave reasons for the early identification of developmental points anomaly risk of cranio- cervical junction. Investigated data suggests that malformations in the cranio-vertebral region are quite common among patients in the department of neurology. Among patients who come in the neuro-surgery department with atlanto-axial dislocation 25% have congenital variant of displacement. Clinical polymorphism correlates with a variety of changes at the genetic level. GDF3, GDF6 and MEIOX1 genes are involved in bone development and mutations in these genes cause heterogeneity in Klippel-Feil syndrome (KFS).

Klippel-Feil syndrome is clinically characterized by a short neck, low posterior hairline and limited neck movement.

**Conclusions:** The present study provides sufficient evidence that KFS is caused by a mutation in the MEOX1 and GDF3,GDF6 genes. This issue which has a scientific and clinical interest require an interdisciplinary approach that will ensure efficient planning of resources with involving of a performance type of management aimed to improve the situation in this category of patients as soon as possible.

**Key words:** cranio-vertebral anomalies, variability

## **285. ALDOSTERONE SYNTHASE GENE CYP11B2 -344C/T POLYMORPHISM AND GENDER ASPECTS OF ANTIHYPERTENSIVE TREATMENT EFFICACY**

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**Background.** There is growing evidence that high interindividual variability in response to blood-lowering medications is partially explained by genetic factors. Multiple genes, encoding blood pressure-regulating drug receptors and receptor response mechanisms are Associated with different results in achieving target BP values under antihypertensive treatment. Despite some consistent research, showing that various genetic single-nucleotide polymorphisms (SNP) may affect antihypertensive treatment efficacy, study results in this field continue to be conflicting and provide disparate results [1]. Aldosterone is the key mineralocorticoid rennin-angiotensin-aldosterone system (RAAS) hormone, affecting distal nephron to regulate sodium resorption, excretion of potassium, and intravascular volume. So the associations between aldosterone synthase gene polymorphism and hypertension would thus be of significant interest. Studies about the potential role of aldosterone synthase gene CYP11B2 (-344T/C) polymorphism and primary hypertension demonstrated controversial results. Some results indicate that -344T/C polymorphism has an impact on hypertensive target organ damage and the response to antihypertensive drugs [2]. YP4]11B2 (-344T/C), studies have polymorphism is Associated with the antihypertensive response to diuretics and RAAS-inhibitors [5 □7]. Due to small study samples and controversial results, even in conditions of one population, it remains unclear, whether CYP11B2 -344T/C single-nucleotide polymorphism (SNP) affects antihypertensive treatment response and long-term treatment outcomes.

Gender-related aspects of hypertension is a research field based on physiological tendency of men to have higher BP values during the whole lifespan, regardless of race or ethnicity. Men also tend to have more modifiable risk factors, such as excessive alcohol consumption, smoking, poor diet, sedentary lifestyle, etc. [8] Highlighting mechanisms, underlying sex differences in hypertension may lead to development of tailored therapeutic strategies, adaptive to specific gender-related variables, thus improving treatment outcomes [9 □10].

**Aim.** Current study aimed to evaluate gender aspects of interindividual response to antihypertensive treatment along with the role of SNP CYP11B2 -344C/T in achieving target BP levels.

**Patients and methods.** 93 patients with primary hypertension, 33 men (35.5%) and 60 women (64.5%) were enrolled into the study. Such gender proportion does not demonstrate any preference for enrolling women, making the studied group peculiar. Patients with secondary hypertension and documented first line antihypertensive treatment intolerance were not included into the study. All patients underwent standard clinical evaluation. Classical cardiovascular risk factors were assessed: family history of hypertension (FHH), history of premature cardiovascular events (CVEs) (defined as an event at the age  $\leq 55$  years of age in men and  $\leq 60$  years in women), smoking status, alcohol consumption, diet, daily sedentary time. Documented anamnesis of polycystic ovary syndrome (PCOS), gestational hypertension, preeclampsia and eclampsia, surgical menopause and hypertension in menopause were assessed in women. Concomitant clinical conditions, such as obesity, type 2 diabetes mellitus were also taken into consideration.

SNP CYP11B2 -344C/T was assessed with polymerase chain reaction restriction fragment length polymorphism method (PCR-RFLP). Genetic material was obtained with buccal swab after obtaining patient's informed consent. Epithelial cell deoxyribonucleic acid (DNA) extraction was performed with modified method, using Chelex solution [11]. Concentration and purity of a DNA-sample was assessed with spectrophotometry (Nanophotometr, Implen), after aliquot withdrawal directly from the vial with DNA solution. CYP11B2 (-344C/T) allelic variants were determined with PCR-RFLP. Amplification was performed with CFX96-amplifier (BIO-RAD, USA) in 20  $\mu$ L buffer («Fermentas», Lithuania) and 100 nm of each oligonucleotide primer, 100  $\mu$ L of 150 ng DN  
stained with ethidium bromide, applying electrophoresis visualized under UV-light. Products of amplification were identified with DNA molecular mass marker pUC19: Msp1.

Obtained data was statistically processed with the use of STATISTICA 10.0 software (StatSoft, USA). Frequency data were analyzed by Fisher exact p method, two-tailed. P values  $p < 0,05$  were considered statistically significant.



Figure 1. End-stage PCR RFLP products, electrophoresis in agarose gel.

M – DNA molecular mass marker, tracks numbered 1-15 represent corresponding DNA samples.

**Results.** Approximately one third (11; 33,3%) of men enrolled into the study controlled BP effectively under the treatment. Proportion of women with proper BP control was significantly higher ( $p=0,03$ ), more than half of women (34; 56,7%) had proper office BP levels. Groups of men and women were comparable between each other according to the mean quantity of prescribed medications, type of combination, administered in order to reduce BP. Remarkably, equally men and women, who did not reach target BP levels, have had family history of early CVEs ( $p=0,034$ ;  $p=0,007$ , correspondingly). Women with lack of proper BP control had significantly higher rate of concomitant type 2 diabetes mellitus, than women with target BP levels under antihypertensive treatment.

Table 1.

Risk factors	Rate among women with BP $\geq$ 135/85 mm Hg (n=32)	Rate among men with BP $\geq$ 135/85 mm Hg (n=23)	P
FAH, %	90,6	91,3	1
FH of premature CVE, %	37,5	39,1	1
Smoking, %	18,8	86,9	<b>0,001</b>
Excessive alcohol intake, %	0	43,5	<b>0,001</b>
Sedentary lifestyle, %	46,9	39,1	0,59
Excessive salt intake, %	50	65,2	0,28
Excessive intake of saturated and trans-fats, %	75	82,6	0,28
Obesity, %	71,9	56,5	0,26
Type 2 diabetes mellitus, %	46,9	39,1	0,59

Comparing subgroups of men and women with inadequate response to antihypertensive therapy by major cardiovascular risk factors showed that men with poor BP control have had some statistically significant differences with women, not achieving target BP levels. Men have had a current status of smoker significantly along with the excessive alcohol intake more often, than women ( $p=0,001$ ;  $p=0,001$ , correspondingly).

Genotyping demonstrated, that the men were CYP11B2 -344C/T CC-genotype carriers less often, than women ( $p=0,03$ ), while differences between gender groups regarding heterozygous genotype and TT-genotype were insignificant (see Table 2).

Table 2.

CYPIIB2 haplotype	-344C/T	Female hypertensive patients (n=60)	Male hypertensive patients (n=33)	P, two-tailed, Fisher method
CC, %		28,3	9,1	0,03
CT, %		27; 45	21; 63,6	0,08
TT, %		16; 26,7	9; 27,3	0,95

Analyzing women's cardiovascular risk factors, that can have an implication in hypertension course and outcomes no statistically significant differences were found between women who properly controlled BP under treatment and those, who did not achieve BP goals. Women with CC-genotype of CYPIIB2 gene demonstrated high rates of hypertension occurrence during the menopause (see Table 3).

Table 3.

Risk factors	Women with CC-genotype (n=17)	Women with TT-genotype (n=16)	P, two-tailed, Fisher method
PCOS	1 (5,9%)	1 (6,3%)	1
Gestational hypertension	5 (29,4%)	3 (18,8%)	0,688
History of preeclampsia and/or eclampsia	1 (5,9%)	1 (6,3%)	1
Surgical menopause	1 (5,9%)	1 (6,3%)	1
Hypertension in menopause	11 (64,7%)	4 (25%)	<b>0,037</b>

**Conclusions.** Thus, study results showed that proportion of men, tending to control BP levels under prescribed treatment was lower than in women. Traditional cardiovascular risk factors analysis showed an association between family history of premature cardiovascular events and improper BP control in both men and women, receiving adequate and comparable antihypertensive treatment. Comparison for the rate of cardiovascular risk factors within gender subgroups, experiencing inadequate BP control under treatment demonstrated high rates of current smokers and alcohol abuse in males. Gender groups demonstrated statistically significant difference in C-monozygous genotype rate, representing men to be T-allele carriers more often than women. Carrying CYPIIB2 -344C/T CC-genotype was a factor, Associated with high rate of hypertension during the menopause, pointing towards special attention for women with certain gene-environmental interaction, regarding BP control and cardiovascular prevention.

**Keywords:** aldosterone synthase gene CYPIIB2 -344C/T polymorphism, antihypertensive treatment, classic modifiable and non-modifiable risk factors, gender.

## 286. VARIANTS OF FORMATION OF SUPERFICIAL AND DEEP PALMAR ARCS

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**Introduction:** Our work with title "Desvoltage variants of superficial and deep palmar arcs" was performed at Department Topographic Anatomy and Operative Surgery with scientific coordinator Bedencova O.E.

**The objective:** To study variants of formation of superficial and deep palmar arcs on cadaveric material.

**Materials & Methods:** We used surgical instruments: scalpel, tweezers; 10 corpses at the Department Topographic Anatomy and Operative Surgery; camera.

**Results:** We identified 2 types of superficial arcs (arcus radioulnaris; arcus ulnaris) and 2 types of deep arcs (deep arc formed due anastomosis between the deep palmar branch of the radial artery and the deep branch of the ulnar artery; deep arc formed due anastomosis between the deep palmar branch of the radial artery with the the upper and lower of the deep branch of ulnar artery)

**Conclusion:** We have been revealed the most common desvoltage variant of arcs - arcus radioulnaris, which consists 20%.

## 287. THE GENETIC ASPECTS OF HYPERCHOLESTEROLEMIA

Olga Fosa

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**Introduction:** Hypercholesterolemia appears when a person swallows a big quantity of cholesterol, or it is synthesised in excess by hepatocytes. A high level of cholesterol increases the cardiovascular risk, and the incidence of myocardial and cerebral stroke. Hypercholesterolemia and overweight are caused by increased saturated fats consumption at persons with genetic idiosyncrasy and are supported by sedentariness. There is an increased production of LDL, and the genetic component is unlikely to be monogenic. The genes which are involved in appearance of hypercholesterolemia are: LDLR gene - protein that encodes LDL receptor on the hepatocytes; APOB gene - is the main component of chylomicrons and LDL, its disorder causes conformational changes of binding with LDL receptor; LDLRAP1 gene – gene that codifies pockets on the hepatocyte's membrane and PCSK9 - controls the number of LDL receptors. The most of all (60-75%) have dose-gene effect. The most common genetic disease that causes hypercholesterolemia is familial hypercholesterolemia, an autosomal dominant



pathology. There are homozygot and heterozygot forms, those homozygot being the most critical, the person don't reach the age of 30. The diagnosis is established only by genetic analyses.

**Material and methods:** The purpose of this study is to appreciate the correlation between hypercholesterolemia, the apperance of vascular diseases and their connection with family history at 50 persons (19 female and 31 male) with chronic cardiac pathology.

**Discussion results:** An analysis of the study gives the following results: 58% of patient's relatives suffer from arterial hypertension, 12% suffer from coronarian pathology and other 12% of relatives died of vascular disease. It was observed in the medical history that the number of vascular diseases increases with aging, this is characteristic for atherosclerosis, being caused by hypercholesterolemia. Evaluating the results, the farmacological methods with statins and genic therapy are the most efficient concepts of treatment. The applicability of microorganisms like retroviruses or adenoviruses has a great potential to become a new therapy for genetic diseases.

**Conclusion:**

1. The genetic verification of cholesterol metabolism is very complicated and involves a lot of genes, but fenotipically the patients have the same characteristics.
2. The molecular diagnosis directs to the increased proportion of patients which begin or intensify the anticholesterol therapy, as a result, decreases the incidence of atherosclerosis at suffering population.
3. The genic therapy is a new method, with a great potential to become a new therapy for treating genetic diseases.

**Key words:** Hypercholesterolemia, vascular diseases, gene therapy.

## **288. TOPOGRAPHICAL VARIANTS AND STRUCTURAL PARTICULARITIES OF SPLENIC ARTERY**

**Iulia Gandrabur, Natalia Mazuruc**

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**Introduction.** The splenic vessels, particularly the arteries are important during scheduled and urgent surgical procedures on immunocompetent organs. The problem has grown strongly since the introduction of organ sparing procedures during surgical treatments of diseases and traumas. The exact knowledge of splenic artery topography and its branching patterns is essential in modern surgery.

**Materials and methods.** The study was performed on spleens of deceased patients whose cause of death didn't affect the organ and its vascular supply. The topography and branching patterns of splenic artery was studied during anatomical dissection of 18 spleens. Discussion results. The topography of the splenic arteries was studied on different organ complexes. The artery had a sinous course in 11 cases (60,5%) and straight in 7 cases (39,5%). One polar artery in the hilum region was encountered in 6 cases. Two polar arteries were encountered in one case. The splenic artery branched in twoarteries in 6 cases

(33,2%), in three arteries in 6 case (33,2%), in 4 arteries in 2 cases (11,3%) and in 5 arteries in 1 case (5,6%). In 3 cases the artery entered the hilum without branching (16,7%).

**Conclusion.** We demonstrated that splenic artery most often has a sinous course – 60,5% of cases and in 39,5% of cases has a straight course. In the majority of cases the artery branches in the hilum region in 2 and 3 arteries (33,2%, respectively).

**Key words.** spleen, splenic artery, splenic artery branches.

## **289. PROSTATE CANCER. GENETICS, DIAGNOSTICS, TREATMENT AND PREVENTION.**

**Irina Guriev**

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**Introduction:** The cancer of prostate continues to be a pathology of unknown etiology and the second leading cause of cancer death. It's a major issue among men after 60 years old. Genetics is investigating many additional genes that may play a role in prostate disease risk. Many genetic studies showed that diagnosis and treatment need a much more intelligent approach. Identifying genetic variants may help researchers find the most effective ways to treat or prevent diseases such as prostate cancer on early-stage. Also, the genetics is able to answer for the mechanisms through which cancer genes stimulate cell birth or inhibit cell death.

**Materials and methods:** The research is based on contemporary bibliographic and scientific information, including more than 40 literatures in Romanian, English and Russian languages. At the same time studies were based on 184 cases of hospitalized men in "Oncological Institute", during 2013-2014 years. All of them were diagnosed with prostate cancer.

**Discussion results:** Literature review revealed many genes with a potential influence in tumorigenesis, like gene PTEN or BRCA1, BRCA2. According to 184 clinical cases, in consideration were taken the patient's age and his PSA level. All results were represented into two tables and two diagrams (for the year 2013 and year 2014). The common fact of both years is that the higher number of patients can be seen in column of 61-80 years, with PSA 10, 1-30 ng/ml. The unique and most young patient was 48 years old man with PSA more than 100 ng/ml. This fact reveals the considerable role of age, which is concerned, in human tumorigenesis. One of the main tasks is to establish principles for monitoring men with a high risk for this tumor and to create a screening test for early discovering. Analysing 184 cases with such diagnostics, we can convince that there is a correlation between age and PSA level. Also, it is known that persons, with sick father or brother, have higher risk to inherit the prostate cancer. It is important to specify that African American are more predispose to develop this disease. The risk increases with diet riched in saturated fat.

**Conclusion:** Prostate cancer needs an interdisciplinary approach. So, near urology and oncology, a significant part belongs to genetics. Genetic's goal is to prevent cancer using 4K score, that is more

informative than PSA test and to elaborate an efficient method of treating, like gene therapy. Another important observation showed that disease prevails among men after 60 years old and more rarely is found among men with 50 and less years old. It means that age is one of the risk factors, which should be examined among men, as well as other factors like human race, family history or diet.

**Key words:** Prostate cancer, gene, PSA, prevention.

## 290. ANGIOGENESIS OF ATHEROSCLEROTIC PLAQUE

**Oleg Gutan**

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**Introduction:** Atherosclerosis is considered a multifactorial disease with many risk factors: smoking, abuse of alcohol, diabetes, hypertension, dyslipidemia and infection with microorganisms. During angiogenesis in atherosclerotic plaque occurs formation of new vessels to maintain the supply of oxygen and nutrients to the cells of the vascular wall. The growth of new vessel that occurs in the regions of atherosclerotic plaque lesions in course of remodeling is considered predisposal factor to plaque rupture.

**Materials and Methods:** We used morphological analysis and immunohistochemistry to investigate the expression of CD34, SMA (actin smooth muscle cells) and CD105- positive in affected vessels of large caliber (aorta, carotid) and medium (cerebral arteries, coronary) taken during necropsies of deceased patients from atherosclerotic complications and / or metabolic syndrome. In this study we included 17 fragments of human aorta with calcified fibrous plaques, 15 carotid artery with less pronounced morphological stenosis, 13 middle cerebral arteries. The morphology of plaques was evaluated on serial sections stained with hematoxylin-eosin and analyzed on optical microscopy. The following antibodies were used for immunohistochemistry: SMA (smooth muscle actin), CD34, CD105.

**Results:** At the intima, most vessels in the region of atherosclerotic plaque were CD34 positive, at level of fibrous plaque - often, and at adventitia, namely vasa- vasorum were positive for CD34 in small and medium vessels. SMA marker is detected in smooth muscle cells, myofibroblasts, myoepithelial cells and less in pericytes. In the region of plaque and its adjacent areas, adventitia and intima, CD105 vessel density was higher, and in distant regions of atherosclerotic lesion decreased their density.

**Conclusions:** The role of angiogenesis in atherosclerosis is more complex and depends on the stage of pathological process. Our results show that the method of immunohistochemical with application of specific vascular markers, demonstrates important pathogenetic aspects in atherosclerotic plaque formation. In the development of atherosclerotic plaques and in the process of angiogenesis have an important role mast cells and macrophages together with other immunocompetent cells.

**Keywords:** angiogenesis, atherosclerosis, atherosclerotic plaque, SMA, CD34, CD105

## 291. THE GLEASON GRADING SYSTEM FOR PROSTATE CANCER

**Olga Haidau**

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**Introduction:** Prostate cancer is currently one of the major health problems of men. According to the latest updates provided by the Center of Statistics and Cancer Registry of the Oncology Institute of Republic of Moldova (OIM) during 2000-2009, the number of prostate cancers, diagnosed de novo in the Republic of Moldova, shows a continuous increase from 85 cases for 2000 to 249 cases in 2009. According to mortality rate among the male population it was registered a prostate cancer percentage growth from 4.1% in 2000, up to 8.1% in 2009.

**Discussion and results:** Prostate cancer is a very common and very unpredictable form of cancer. Mostly the prostate adenocarcinoma is expressed as a multifocal disease. Histological grading of prostate carcinoma is an important step in defining of prognostic and of the therapeutic behavior. Although there are numerous grading system of prostatic carcinomas, the Gleason system represents a special importance, due of reproducibility but also due of utilization in most institutions and in the specialized literature. The Gleason histological grading scheme is based exclusively on the microscopic aspects of tumor glands at low magnification and, in contrast to other grading systems, disregards aspects of cytology. The Gleason system aims to identify two architectural aspects - the primary model, which is predominantly and secondary model. Both models are denoted by 1-5 grade (grade 1 being the most differentiated cancer and grade 5 the most poorly differentiated or undifferentiated carcinoma). It is considered that prognosis of the disease is influenced by both the architectural aspects of primary and secondary, they are added up to give a combined grade Gleason - Gleason score. The cancers with a higher Gleason score are more aggressive and have a worse prognosis.

**Conclusion:** The diagnosis and staging of prostate cancer is very important for determining treatment and Gleason score calculation can be used for determining the risk of prostate cancer recurrence.

**Key words:** prostate cancer, Gleason system, prognostic.

## 292. THE STROMA INFLUENCE IN BREAST CANCER DEVELOPMENT

**Ana-Virginia Marinescu**

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**Introduction:** The complex process between cancer invasion and stroma response is still being elucidated, but is clear that cancer is a disease of more than just malignant cells. The tumor interstitial fluid has an important role in initiating the immune response. Determining the composition of tumor interstitial fluid can give us information about poor or good prognosis. Moreover, access to breast cancer's stroma permits us to identify the substances that can be used in early detection and monitoring

the disease activity. Our aim is to summarize the recent studies on peri-tumoral stroma and tumor interstitial fluid compared to normal mammary gland structure and use the results for early diagnosis, monitoring disease and maybe change the therapeutical targets.

**Materials and Methods:** The study represents a literature review and is based on state-of-the-art information collected from 12 articles on breast cancer development from PubMed.

**Results:** In comparison to normal mammary gland structure, in the peri-tumoral stroma of breast cancer there are increased alpha smooth muscle actin, collagen IV, hyaluronan, fibroblast activated protein, myeloid-derived suppressor cells, cancer Associated adipose and a variety of host cells including macrophages and fibroblasts. Elevated expression of hyaluronan, tumor Associated macrophages, vascular endothelial growth factor-A, myeloid-derived suppressor cells- tell us about a poor prognosis. Numerous studies have demonstrated that inhibition of hyaluronan synthesis using 4-MU, tyrosine kinase inhibitor imatinib, aromatase inhibitor letrozole reduce breast cancer tumor cell proliferation and migration.

**Conclusion:** Current therapies target primarily the carcinoma cells, although many women have recurrent disease or/and develop metastases. This study demonstrates the importance of tumor microenvironment in mammary cancer development and the necessity to apply the treatment that will includes both the stroma and the cancer cells.

**Keywords:** breast cancer, tumor interstitial fluid, peri-tumoral stroma, tumor microenvironment.

## **293. RETINOBLASTOMA: GENETIC BACKGROUND, MODERN DIAGNOSTIC METHODS AND THERAPIES**

**Natalia Mazuruc**

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**Introduction:** Retinoblastoma is a rare malignant eye tumor that develops from the embryonic tissue of retina. This disease is one of the classic examples of monogenic diseases. It develops due to a mutation of RB1 gene, which is located on chromosome 13 in the 13q14 locus. It should be noted that about 90% of all cancers of the eyes in children under 5 years of age are caused by RB1 mutations. Thus the study of modern methods of diagnosis and treatment of retinoblastoma can be effectively applied as a model for the treatment of other cancers caused genetically.

**Material and Methods:** In this study we performed a comprehensive review of medical data for the last 10 years using PubMed, Scopus and IBN to study the incidence, prevalence, causes, symptoms, and modern methods of treatment of this disease.

**Discussion results:** There is no doubt that the main cause of this disease is different mutations in both alleles of the retinoblastoma tumor suppressor gene - RB1, or a mutation in one allele, but with obligatory deactivation of another. About 60% of retinoblastomas are not hereditary, and in most cases are unilateral, with a medium age of diagnosis being 2 years. Retinoblastoma can also be bilateral and

hereditary (40% of cases), with an earlier medium age of diagnosis being 1 year. The disease is characterized by a variety of symptoms, among which the most important are the lekokoriya and strabismus. International common classification system of the severity of the disease allows the implementation of general procedures for the treatment of disorder according to the degree of its development. Current trends in the treatment are aimed at maximum preservation of the patients vision, and include techniques such as cryotherapy, laser and transpupillary thermotherapy treatment along with the standard radiation therapy. Genetic diagnosis methods include PCR analysis, DNA sequencing, Southern blot method, and allow to reveal the problem at an early stage of development. During the period from 1991 to 2004, in Moldova were registered 37 children with retinoblastoma, representing 1.26% of the total number of children with malignant tumors in a given time.

**Conclusion:** Retinoblastoma is the most common type of eye cancer in children. However, with early detection, sequential treatment and strict compliance with the doctor's recommendations, it is possible to preserve the vision in 75% of cases. The introduction into medical practice of genetic diagnosis and genetic counseling of families is appropriate, as this helps to reduce the mortality and morbidity in patients due to early detection of problems and their early treatment.

**Keywords:** Retinoblastoma, modern diagnostic methods, RB1.

## **294. COMPARATIVE GENETIC ANALYSIS OF CYSTIC FIBROSIS IN POPULATIONS OF THE REPUBLIC OF MOLDOVA AND INDIA**

**Mele Veettil Mohammed Raneesh**

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Cystic Fibrosis is the most common and life shortening disease in Caucasians, and it is found commonly in Europe, Australia and United States of America. It is an autosomal recessive monogenetic disorder that affects several system, which is caused by mutations in the CFTR (Cystic Fibrosis Transmembrane Conductor Regulator) gene. This gene encodes for the transmembrane conductance regulator protein which responsible for the conductance of chloride ions across epithelial cells in different organs. This affects the transport of salt and water in different organs, which results in thick secretions.

**Aim of the study:** To study the genetic component and mutation of cystic fibrosis in different races especially in India and Moldova, to understand the pathogenesis of the genetic material that causes cystic fibrosis.

**Material and methods.** Analysis of latest articles and databases concerning Cystic fibrosis in both populations.

**Conclusion.** 1 in 2000 is the prevalence of Cystic fibrosis patient in Moldova whereas 1 in 40000 to 100000 is the prevalence in India. Recent statistics suggest that 1 in 25000 expatriates of India in United Kingdom and United States of America have Cystic fibrosis. However, the exact number of

Cystic Fibrosis patients in India are unknown compared to Moldova due to the lack of studies conducted in the Indian population and also non availability of screening or investigation methods. More than 1000 mutations have been identified in CFTR gene in different ways.  $\Delta F508$ , which means deletion of phenylalanine at the 508 position, is the most common mutation found. The most frequent mutations of the CFTR gene in Moldavian populations are  $\Delta F508$ , G542X & W1282X, and in India  $\Delta F508$ , -219insG & S169G.

Better understanding and screening of the population have increased the life expectancy of the cystic fibrosis patients. New screening methods need to be implemented into the health care systems as well as holding seminars for the health care professionals to improve the diagnosis and patient support. Early diagnosis will improve the life of patient and reduce mortality.

**Key words:** Cystic Fibrosis, CFTR, Genetic component, prevalence,  $\Delta F508$ .

## **295. FACTORS INVOLVED IN MUSCULOSKELETAL PAIN IN ELEMENTARY SCHOOL STUDENTS**

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**Background:** Musculoskeletal pain in elementary school students is a current issue. Known risk factors include: family history of back pain, time spent watching tv or sitting at the computer, gender – female, practicing high intensity performance sports, history of back injury, altered general state of health.

**Objectives:** This study aims to identify a correlation between the onset of back pain and individual risk factors, including family history, time spent in certain activities (prolonged sitting in front of the tv or computer), physical stresses during sports, and backpack weight.

**Materials and methods:** The study was done on a sample of 225 students of grades 1 to 4, aged between 7 and 11 years old. The data was gathered through a 32-item questionnaire, in the city of Targu Mures over the period of a week, with the teachers and parents consent.

**Results:** 65,3% of the students had relatives that were suffering from back pain, 3,1% have had their back injured at some point, 56% spend between 1 and 2 hours in front of the tv/computer, 60% practiced some form of performance sport and for 30,6% of the students the length of the training session was about 1 hour. Most frequently, pain was localized in the back (16,8%) and shoulder (11,11%). For 85% of the students the weight of their backpack exceeded the limits stated in the current legislation. A relationship between musculoskeletal pain and risk factors -time spent in front of the tv/computer, practicing advanced sports-, was found.

**Conclusions:** A statistically significant relationship was found between musculoskeletal pain and the time spent in front of the tv/computer (for more than 2 hours a day), training in performance sports for more than one hour a day.

**Keywords:** Musculoskeletal pain, backpack weight, students.

## 296. PATHOPHYSIOLOGY OF IRON DEFICIENCY.

**Alina Moldovanu**

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**Introduction:** Iron deficiency is the primary cause of the anemia worldwide, affecting especially children and adolescents whose body is still growing, pregnant and nursing women, vegetarians and meat-free food ration. Iron deficiency leads to the development dystrophy and atrophy processes of the digestive mucosa, that is followed by maldigestion and decreasing the absorption in the intestine. Iron deficiency evolve with a number of trophic changes in the tissues, affecting cells with high mitotic activity.

**Purpose and objectivities:** Estimating prevalence of iron deficiency in different population groups and Associated risk factors; study the importance and role of iron in the body; evaluate pathophysiological aspects of iron metabolism in people deficient in iron;

**Materials and Methods:** This research is based on analyzing bibliographic information on the pathophysiology of iron deficiency: etiology, pathogenesis, diagnosis and principles of pathogenetic therapy.

**Results:** About 20% of women of childbearing age and 20% of children up to a year suffer from iron deficiency anemia. Iron deficiency frequency is 30-32%, which is high, in preschool children, affecting up to 47% of children. Iron deficiency is revealed to babes in 20-25% of cases, in children under the age of 4 years - 43% of cases, in children between 5-12 years - 37% cases. Leading risk factors in the occurrence of iron deficiency: insufficient reserves of iron at birth, intake poor iron absorption, disorders of iron absorbtion, increased loss of iron, increased need of iron, chronic diseases or cancers, infections, genetic, drugs, drinking alcohol, menstruation abundant blood donors are likely to develop iron deficiency. Deficiency is recognized as a combination of insufficient intake of iron and red blood cell morphology characterized by microcitosys and hypochromia as consequently abnormalities in absorption, transport and storage of iron in organism. The most frequent cause of diagnostic confusion is possible between iron deficiency and iron lock release of reticuloendothelial system because of inflammation. Informing the population at risk for iron deficiency about the importance of maintaining indexes such as hemoglobin concentration of iron and concentration of transferrin in blood. Basic strategy adapted globally, to control and eradicate iron deficiency, are: daily food rich in iron, iron supplementation (medicine); fortification of foods with iron, promoting prevention of iron deficiency anemia among pregnant women, teenagers and people affected by heart failure, combating poor development of the fetus.

**Conclusions:** about 20% of women of childbearing age and 20% of children up to one year deficiency anemia through iron deficiency frequency. At students is 30-32%, which is high in preschool children, affecting up to 47%. Deficiency of iron is detected in the infants in 20-25% cases in children under 4 years - 43% of cases in children between 5-12 years - 37% cases.

**Key word:** Iron deficiency, risk factors, pathophysiology.



## 297. OXYGEN CONSUMPTION DETERMINATION ADMINISTERING BENZITURONE

**Olga Nacu, Ana Mihaela Nuta, Tatiana Chiriac**

Scientific adviser: Victor Ghicavii, corresponding member of MSA, PhD, Professor, Pharmacology and Clinical Pharmacology Department, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Research of new isothioureia derivatives has reached significant proportions in recent years. Generally, they are known as effective vasoconstrictor substances possibly to be used in arterial hypotension. The last studies of these compounds undermined a substance with hypotensive effect chloride-S-benzilizotiourone (benziturone).

**Goals.** Benziturone influence experimental elucidation of oxygen consumption in laboratory animals.

**Materials and methods.** Oxygen consumption was determined within 3 min using S.V. Miropolski system at the time intervals: 1-3 min; 5-8 min; 15-18 min; 30-33 min; 60-63 min; 120-123 min. The experience included 2 groups of rats of the Wistar line, 10 in each, weighing 208-320g. The rats from the control group were administered 2 ml of saline solution intraperitoneally, those in the test group, benziturone in the dose of 2 mg / kg. Statistical study according to t-Student criterion.

**Results.** In the time intervals 1-3 min; 5-8 min; 15-18 min; 30-33 min significant statistical differences of the mean value of oxygen consumption between the test group and control group were not determined. Conversely a difference in the mean value of the control group was observed:  $19.61 \pm 0.95$  in 60-63 min;  $17.54 \pm 0.43$  min in 120-123 and test group:  $14.36 \pm 1.33$  in 60-63 min;  $11.22 \pm 1.55$  in 120-123 min, where  $p = 0.004$  for 60-63 min; and for 120-123 min  $p = 0.001$

**Conclusions:** As a result of experiments a decrease in oxygen consumption was observed due to benziturone administration comparing with the control group. The decrease was significant starting with the minute 60.

**Keywords:** benziturone, oxygen consumption.

## 298. MORPHOFUNCTIONAL VARIABILITY OF THE LATERAL VENTRICLES OF THE BRAIN AND CHOROID PLEXUSES

**Luminita Postolachi**

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**Innovation:** The study is devoted to the study of macro-microscopic anatomy of the choroid plexus and lateral cerebral ventricles. This theme remains up-to-date, because each of neuroscience and neurophysiology stages of development require the review of previous formulated conceptions. In this

contest, continuously arise additional questions; they refer to histogenesis, structure, variability and their functions. Choroid plexuses of lateral cerebral ventricles, as an organ, are connecting two organized systems vascular and nervous ones. The interest in studying the vascularization of the central nervous system and the innervations of cerebral and meningeal vessels persists throughout the years.

Researches carried out on brain ventricles and choroid plexuses are needed not only in terms of theory but they also are important for neurology practice.

Choroid plexuses of the cerebral ventricles derived from the pia mater (leptomeninge) play an exclusive role in producing and regulating the cerebrospinal fluid being arranged between two components of the body, blood and cerebrospinal fluid. Due to the insufficient study of plexuses and lateral cerebral ventricles from the macro-microscopic and microscopic way, the interest in their research persists.

**Research purposes:** To establish the morphofunctional variability of the lateral cerebral ventricles and the components of choroid plexuses.

**Research Methods:** Anatomic method of preparation: Brain extracted carefully from the skull of the corpse was introduced into formalin solution of increased concentration. Besides this, through the lower wall of the third ventricle was performed an additional fixation by injecting from 15 to 20 ml of 3% solution of formalin. Thereafter with the knife for brain were carried out a number of horizontal sections from the dorsal surface of the brain to transverse fibers of the corpus callosum. Then were opened the anterior horns of the lateral ventricles and pointing the oblique knife downward the basal nuclei were sectioned. Additionally, with the help of the scalpel and scissors were opened lower and posterior walls of the horns of the lateral ventricles, where the choroid plexus were discovered. To demonstrate the central part of the lateral ventricles the corpus callosum is removed and the fornix commissure is sectioned.

During the process dissection, brain preparations were photographed layer by layer.

**Results and discussions:** Choroid plexuses from the lateral cerebral ventricles of the human body represent the vascular organs which are composed of base and villosities which in children and newborns are in form of clamps (trabeculae) of gray or purple color. At the age of sexual maturity the choroid plexus almost cannot be distinguished by external appearance from those in adults, representing granulated cords of red or pale red color.

Thus, choroid plexus of the cerebral ventricles are made up of loose connective tissue, epithelium and blood vessels. They differ in the villous area which contains numerous villosities covered by uni-layered epithelium. Villosities may be of different size from tiny to large, being arranged solitary or in various components. In the center of bulky villosities are arranged blood vessels that are larger than the capillaries located in the center of small villosities.

Some capillaries have wide lumen and can be found in the vicinity of the epithelial lining, others with narrow lumen are arranged in the deeper layers of the choroid plexuses. Many blood vessels are located in the conjunctive tissular stroma of the plexus. As noted, choroid plexuses of the human brain ventricles are provided with human blood supply and complex structure of microcirculatory bed. This is the reflection of the general principle of vascularization of the brain, which is in special hemodynamic conditions. The blood reaching the brain is subjected to gravity forces. The blood that goes from the

heart to the brain through the arteries must amount upward against gravity. Vascular bed from all cerebral segments, including that of the ventricles of the brain, is found in a confined space limited by rigid walls of the skull. Brain ventricles represent interconnecting cavities located in the brain lined with ependyma forming a whole network through which cerebrospinal fluid circulates. The lateral ventricle is located in the hemisphere, with a horseshoe or the letter "C" shape, acquired from the consecutive development of different compartments of the hemisphere and is distinguished by lower, anterior and posterior horn. Ventricular wall consists of the temporal lobe caudate nucleus and fornix. As a result of investigations were found different variations of form and structure of the lateral cerebral ventricles and their choroid plexus. These variabilities are dependent on age, level of development of the brain, the secretion of choroid plexus and of same neurological pathologies.

**Conclusion:** The development, form and structure of lateral cerebral ventricles and choroid plexus arise while developing brain microvascular network and indicating a correlation between them.

It is important to know the morphology and the variability of lateral ventricles and choroid plexuses in the field of neuroscience and neurosurgery, in order to establish a correct diagnosis and to indicate the effective treatment of neurological pathologies.

**Key words:** plexus, ventricle, brain, development.

## 299. STUDY ABOUT VARIABILITY OF THIGH VASCULARIZATION

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**Introduction:** Besides the rate of development, the XXI century also means the shift to individualized medicine, in all its areas and especially including surgery. Due to this, a bibliographical and practical study was elaborated in order to determine the variability of vascular branches of high caliber variability, in the region of anterior thigh, this being very important in achieving angiography, arterial punctures, local surgical maneuvers.

**Materials and Methods:** In order to achieve the proposed goal, a bibliographical study was elaborated with reference to blood vessels distribution, as well the several thighs dissection of cadavers with and different gender and constitution.

**Discussion and results:** The results of dissections give the right to mention that they coincided with the bibliographical result, which will be exposed. It was found a particular case, characterized by a circumarterial bifurcation of the femoral vein around a perforating branches of the deep femoral artery, it was also determined in some bibliographical sources that this case is common in 40% of cases. With reference to deep femoral artery, it may be defined by its direction: 48% of cases with a lateral or dorsal-lateral direction to femoral artery, in 40% it has a dorsal direction, 10% of cases, a medial or dorsal-medial orientation, and 2% of cases it may be double, medial and lateral directions. [T. F. Massoud si E.W.L. Fletcher (1997), Siddharth, P., Smith, N.L. s.a. (1885), Munich (1860)].

Referring to the same artery, it has also a huge variety according to its origin and its relation with adjacent vessels: in 58% of cases it has the same origin with circumflex femoral lateral and medial arteries, in 18% of cases it has a common trunk only with the lateral circumflex femoral artery, the medial one remains an independent branch of the femoral artery, in 15% of cases it has a common trunk with the medial circumflex femoral artery, the lateral one being independent, in 4% of cases the deep femoral artery has the origin on the femoral artery, in 3 % it has the same origin with lateral and medial circumflex femoral artery, but the lateral one has and individual branch, in 1% of cases the deep femoral artery has an independent trunk, in which the lateral and medial circumflex femoral artery have their origin as a common trunk. Also there are rare cases, such as: the deep femoral artery is a branch of external iliac artery and inferior epigastric artery, the medial circumflex artery is absent [T. F. Massoud si E. W.L. Fletcher (1997) ].

Referring to Lateral circumflex femoral artery (LCFA), exist information that: 1) LCFA takes origin from deep femoral artery, here also is included case when exist 2 LCFA, both with origin from deep femoral artery; 2) LCFA derives from femoral artery, above origin of deep femoral artery, 3) LCFA derives from femoral artery below deep femoral artery, 4) LCFA derives from femoral artery above deep femoral artery, but here also exists a middle branch of LCFA which derives from femoral artery, but lower than deep femoral artery, 5) A descending branch of LCFA derives from femoral artery, above the origin of deep femoral artery, another ascending branch takes origin from deep femoral artery, 6) LCFA derives from deep femoral artery, but exist a secondary branch of LCFA which derives lower than deep femoral artery [Hozumi Fukuda, Mitsutaka Ashida (2004)]. Also information about this theme is presenting in following table.

Author	Origin from femoral artery	Origin from Deep femoral artery
Lipshutz (11) (1916)(N = 100)	59%	36%
Clarke et. Al (4) (1993) (N = 40)	53%	40%
Dixit (7) (2001) (N= 48)	62.5%	20.63%
Tanyeli (21) (2006) (N = 100)	75%	15%
MB Samarawickrama (16) (2009) (N = 26)	62%	31%
Shiny Vinila B. H (17) s.a (2012) (N = 40)	65%	18.4%

**Conclusions:** Diversity of vascularization remains a fact, that study aimed at systematizing this information. It remains to determine diversity of vascular profile at other levels of the human body.

**Key words:** variants of vascularization, deep femoral artery, lateral circumflex femoral artery, medial circumflex femoral artery.

### 300. ULTRADIAN BIORHYTHMS' INFLUENCE IN CELL POPULATION. APPLICATIVE ASPECTS

**Gheorghe Secu, Daniela Jumiga**

Scientific adviser: Lisii Leonid, PhD, Professor, Department of Biochemistry and Clinical Biochemistry, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Ultradian biorhythms represent biological rhythms which last between 20 and 90 minutes. They were discovered in 50s of the last century and approved by using several techniques of quantitative and qualitative analyzes which demonstrated that ultradian biorhythms were characteristic only for some segregated cells, and later there was discovered their influence in regulation and synchronization of adjacent cell population, also their importance in entire organism homeostasis maintaining. This research aims to evaluate and categorize the most important aspects of this approaches.

**Materials and methods:** In order to find answers to the proposed questions, a bioinformatic study is needed, by using PubMed and Link Springer data base which will be analyzed and structured in the following way.

**Discussions and results:** it was discovered that u. biorhythms have more than 20 impacts over cell functions and properties, such as ATP synthesis, nucleic acids synthesis, synthesis of proteins, cell activity, protein secretion, cell respiration, the amount of cAMP, and also sometimes u. biorhythms may influence even the weigh and the size of the cell. Ultradian biorhythms were identified not only at human, but also at the rest of mammals, crustaceans, molluscs, protozoa, bacteria and other single-celled organisms.

During the study it was determined that this biorhythms are not anything else than the result of auto-organization of cell population's oscillations.

Actually, exists the idea that this biorhythms are synchronized by the gangliosides, this was confirmed by several experiments in vitro, where in the intercellular space of some cell populations was introduced gangliosides, and in this way was discovered that they were responsible for different processes, the most obvious one was the oscillations during proteins' synthesis.

More recent and more complex studies show us a more adaptable model regarding the synchronization of different cell populations, in this way the biorhythms control occurs as follow: endogenously ( interstitial fluid ) which involves the following reactions: gangliosides, attach to specific receptors and release Ca<sup>2+</sup> + depots, calcium activates protein kinase, so the phosphorylation of specific proteins occurs and thus sets the stage of biorhythms of synthesis; Exogenously ( blood) in the same way, the only difference is that protein kinase activated by cAMP which is activated by the adenylate cyclase, the last one (adenylate cyclase) is activated by adrenaline, serotonin, melatonin, etc. In this context, it was possible to insight and later to confirm by experimental studies that cell proliferation depends not only on circadian rhythms but also on those ultradian ones, in this way they having an applicable aspect in regenerations, ontogenesis and oncological diseases. Other practical aspects which may be named: heart work, the efficiency of catecholamine receptors and their secretion, the entire system of organs, intercellular communications, cellular function. Another aspect, also very important, is that the process of aging may be Associated with a imbalance of intercellular synchronization, therefore, imbalance at the level of different ultradian rhythms. Researched phenomenon has important application in several clinical aspects: 1 ) In this way it adjusts the functions of the entire body; 2) The mechanism affects the ability of the body to work well with a determined frequency; 3) The quantitative difference of some substances at different periods of time, is important in the effectiveness of drugs introduced in different phases of ultradian cycles; 4 ) The perspective to compensate aging effects by introducing certain substances in the intercellular space.5) Better understanding of different organ systems functionality and the possibility of diagnosis according to the case.

**Conclusions:** Ultradian biorhythms are not just a trend, and due to high-technologies development, they may be used during diagnosis and during the treatment and planification of therapeutic maneuvers as well. It rests to elucidate, argumentate optimal, corect, economical and affordable methods of personalized determination of these rhythms.

**Key Words:** Ultradian Biorhythms, Synchronization, Cell Population.

### 301. GENETIC HETEROGENEITY IN DIABETES MELLITUS

**Olga Stefanet**

Scientific adviser: Svetlana Capcelea, Department of Molecular Biology and Human Genetics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Diabetes mellitus (DM) represents a group of pathological conditions that share the phenotype of hyperglycemia as the result of insulin deficiency or the disorders of insulin action. 90% of people with diabetes have type 2 diabetes (T2D), while type 1 diabetes (T1D) affects 10% of the patients. T1D has a strong autoimmune component, proved by the correlation with specific haplotypes of the HLA system. T2D develops mainly because of the  $\beta$ -cell dysfunction and insulin resistance. There are rare forms of DM caused by genetic defects of  $\beta$ -cell function, genetic defects of insulin action, diseases of the exocrine pancreas, endocrinopathies, diabetes induced by chemicals or infections.

The epidemiological aspects of DM impress with its worldwide expansion and high prevalence in people. Severe vascular and neurologic complications of diabetes reduce the quality and duration of life, bringing an economic impact to the countries' budgets. We have performed a study which was aimed for the determination of the genetic background and the evolutionary features of the disease in patients with DM.

**Materials and methods:** The study was performed in the Department of Molecular Biology and Human Genetics, most of the patients being from the Department of Endocrinology, the Republican Clinical Hospital. We studied 34 clinical cases of DM: 19 male and 15 female patients, between 18 and 80 years old; 10 with the diagnosis of T1D, and 24 with T2D. The questionnaire included the following aspects: the debut of the disease, the features of the objective and paraclinical examination, the evolution of DM including acute and chronic complications, family history and life style.

**Discussion results:** The study has shown the following results: genetic susceptibility can be observed more frequently in patients with T2D; T2D is Associated with obesity, arterial hypertension and dyslipidemia while patients with T1D have normal body mass index; T1D may be Associated with other autoimmune diseases, such as autoimmune thyroiditis or rheumatic cardiopathy; many patients with T2D treated with oral antidiabetic drugs had to Associate insulin to their therapy, so,  $\beta$ -cell dysfunction plays an important role in T2D pathogenesis.

**Conclusion:** The pathogenesis of DM shows a strong genetic component Associated with life style features. So, it would be a great opportunity of preventing the disease and its complications by changing the habits in people with family history and genetic predisposition for DM. The principles of genomic medicine should be brought closed to the clinical medicine. The implementation of genetic

testing and personalized approach to the patients would reduce the cost of the treatment by reducing the incidence of DM.

**Key Words:** diabetes, genomics, candidate genes, metabolic syndrome

### 302. THE IMMUNE PROCESS IN THE PATHOGENESIS OF TUMORS

**Irina Televca**

Scientific adviser: Stela Todiras, Department of Physiopathology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The immune process in the pathogenesis of the tumors represents an actual subject for the prevention and the treatment of the cancer, which frequency is decreasing while studying the newest theories of the etiopathology of cancer, a disease that is the common cause of death.

**The objective** of this study is to review the newest methods, that explain the role of the immune processes in the pathology and the treatment of tumors.

**Material and methods:** Informational support for the development of this publication has served a full amount of current national and international journals, which are concerned with tumors, found through the „PubMed” „Google” si „CrossRefMedlineWeb of Science”. After entering the filters: the immune process in the pathogenesis of tumors were selected 20 sources.

**Results:**After studying the interaction between the immune system and the tumors, different immunotherapies were identified: the new therapeutic monoclonal antibodies, that were approved by the Food and Drug Administration, as a standard treatment in some forms of cancer, Associated with trastuzumab for mamar cancer and rituximab for the B cells lymphoma, and the vaccines, which are starting to be used in clinical practice, either alone or in various combinations.

**Conclusions:** Much has been learned about the potential of the immune system to control cancer and the various ways that immunotherapy can boost the potential of the immune system for the benefit of the patient. This knowledge has stimulated the invention of many new therapeutic antibodies, cell-based treatments, and vaccines, which are starting to be used in clinical practice, either alone or in various combinations. These new therapies are expected to result in improved cancer treatment and, eventually, the prevention of cancer.

**Key words:** The hallmarks of cancer, the immunology of cancer, imunogenicity, immunosuppression, immunotherapies.

### 303. THE INFLUENCE OF EXPIRATION AND INSPIRATION DURATION ON RESPIRATORY HEART ARRHYTHMIA

**Iulia Temusco, Andrei Ganenco**

Scientific adviser: Victor Vovc, MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Objective.** To study the effect of the duration of inhalation and exhalation, and their relation to the respiratory heart arrhythmia (RHA) and observe changes in vagal tone during the test

**Methods** 13 non-smoking subjects were selected (4 of them men) with an average age of 20 + \ - 2 years, they were all healthy, don't suffer of cardiac arrhythmia, not obese and don't take drugs, also don't drink caffeine-containing products for 4 hours before the experiment.

**Procedure** The subjects were instructed at first to breathe as usual, then quickly inhale (3seconds) and slow exhale (7 seconds) and vice versa. Breathing and heart rate were recorded using biopac. Also subjects underwent tests about their anxiety and the state of the autonomic nervous system by Spielberger, by Moldovanu

**Results** According to the results of tests were increased values for the state of nervous, cardiovascular and digestive systems, shortness of breath, tremor and tetany. 5 subjects overestimated all indicators. The breathing rate was 6\min. During the test with a short inspiration after a long expiration ( $P = 0.00214$ ), RHA was higher than vice versa ( $P = 0.000775$ ). The heart frequency in both experiments was 89 b\m. The correlation hf\lf bands in 3\7 experiment was 0,09 and in 7\3 experiment 0,083

**Conclusions** RHA amplitude is influenced by the respiration rate and the amount of air exchanged per breath. Reducing the frequency of breathing increases RHA. Inspire blocks vagal cardiac regulation. During the test with a short inspiration after a long expiration vagal tone and RHA, was higher than in a long inspiration after a short expiration. The experiment also showed that the correlation of hf\lf bands has no effect on heart rate variability.

Keywords: paced respiration, Respiratory sinus, arrhythmia, Biopac.

### **304. THE CHICK EMBRYO CHORIOALLANTOIC MEMBRANE AS A MODEL FOR STUDYING OF ANGIOGENESIS PROCESS**

**Cristina Timofti**

Scientific adviser: Tatiana Globa, MD, PhD, University Assistant, Department of Hystology, Embriology and Citology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Cancer is the result of uncontrolled cell divisions, and angiogenesis processes are those that support and maintenance the tumor changes. Recently, the angiogenesis becomes one of the most studied physiological event due to the key role it plays in the pathogenesis of cancer as well because of its potential as a therapeutic target. To analyze the mechanisms underlying normal and pathological angiogenesis numerous angiogenic tests in vivo have been determined using different species of animals, including mammals, birds and fish. The range of biological studies in vivo of the angiogenesis allowed scientists to progress rapidly in highlighting of the action mechanism of multiple proangiogenic factors. The cost, simplicity, reproducibility, and credibility are the determinants that dictate the choice of method.

**Discussion:** Chick embryo chorioallantoic membrane (CAM) is a extremely vascularized extraembryonic membrane. It represents an accessible and inexpensive model in vivo, which is used



long time in the reproductive biology as well in studying of angiogenesis. Due to lack of immune system in early development and the absence of rejection reactions, CAM becomes the preferred model for studying of cancer and its metastasis process. The test consists by implantation of a culture of cells on the chorioallantoic membrane of the chick embryo. The incubation period ranges from 1-3 days, depending of the substances, after which angiogenesis can be quantified by the image analysis or by colorimetric methods of detection. Quantification of the angiogenic response is performed using the vascular scale (0 to 4). At the site of implantation, is identifying the vascular density (intensity of newly formed blood vessels) and the vascular index (highlighting of branching points in relation with overlapped ring).

**Conclusion:** CAM allows the study of tumor growth, of anti-tumor therapies, and of pro-tumor molecular pathways in a biologically relevant system, which is also an accessible and inexpensive model. Thereby, CAM is an excellent model to obtain information on partial questions still unresolved.

**Keywords:** Angiogenesis, Chorioallantoic membrane, Tumor growth.

## **305. CLINICAL ANATOMY OF THE LUMBAR REGION AND THE RETROPERITONEAL SPACE**

**Isidor Zamisnii**

Scientific adviser: Serghei Suman, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** The knowledge of such aspects like clinical anatomy, skeletopy, syntopy and projection points of internal organs of lumbar region and retroperitoneal space has a big medical importance, being an indicator for diagnosis of multiple diseases. Retroperitoneal fat spaces can be compared with channels through which purulent collections can be spread and produce a great impact in clinical evolution and surgical approach in this region.

**Purpose and objectives:** Our study is based on revision of scientific literature which may define practical application and shows the value of the clinical anatomy, lumbar region and retroperitoneal space.

**Material and methods:** We studied and reviewed literary sources which highlight the importance of the clinical anatomy. For carrying out manipulations on the lumbar region and the retroperitoneal space, it is important to know the correlations between tissues, organs, and cellular spaces. Knowing the stratigraphy is paramount in diagnosing and addressing phlegmon and cold abscess, which is linked to the evolution and continuity of the fascia between regions.

**Results:** The analysis of results in the current study will contribute to increase the insurance of surgical techniques through the clinical importance of anatomical knowledge and relationships of anatomical formations in the lumbar region and the retroperitoneal space.

**Conclusion:** Knowledge of the lumbar region and the retroperitoneal space is very important to ensure patient safety and comfort. The practical value of the correlation between organs and retroperitoneal tissues increases the interest in understanding the evolution of purulent collections.

**Key words:** lumbar, retroperitoneal, skeletopy, syntopy.

### **306. DYSLIPIDEMIA IN PATIENTS WITH TYPE 2 DIABETES ACCORDING TO THE DEGREE AND TYPE OF OBESITY.**

**Dorina Zara**

Scientific adviser: Silvia Stratulat, PhD, Associate Professor, Department of Biochemistry and clinical Biochemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** By 2025, worldwide, approximately 300 million people is estimated to have type 2 diabetes. In 72-85% of cases the type 2 diabetes is Associated with atherogenic dyslipidemia, the important cardiovascular risk factor. It is characterized by elevated levels of TG, LDL-C and decreased level of HDL-C.

**Objective of the study.** Comparative analysis of the atherogenic lipid profile in patients with type 2 diabetes based on the degree and type of their obesity.

**Material and methods.** A retrospective, descriptive and analytical study was realized on 194 patients with type 2 diabetes, hospitalized in Republican Clinical Hospital, Department of Endocrinology, during february 2015-january 2016.

**Results.** The study included 83 men (42.8%) and 111 women (57.2%) with mean age of  $56.2 \pm 0.4$  years and mean duration of diabetes of  $10.5 \pm 0.3$  years. Patients were divided into 5 groups according to BMI: normal weight-25 patients (12.8%), overweight-52 patients (26.8%), obesity grade 1-63 patients (32.5%), obesity grade 2-39 patients (20.1%), obesity grade 3-15 patients (7.7%). The lipid profile of the groups was: to the group with normal weight: TG =  $2.06 \pm 0.05$  mmol / l, LDL-c =  $4.3 \pm 0.08$  mmol/l, HDL-c =  $1.079 \pm 0.01$  mmol/l. Group with overweight: TG =  $3.11 \pm 0.16$  mmol/l, LDL-C =  $5.25 \pm 0.14$  mmol/l, HDL-C  $1.04 \pm 0.02$  mmol/l. Obesity grade 1: TG =  $3.69 \pm 0.22$  mmol/l, LDL-C =  $5.62 \pm 0.13$  mmol/l, HDL-c =  $1.002 \pm 0.03$  mmol/l. Obesity grade 2: TG =  $4.47 \pm 0.18$  mmol/l, LDL-C  $6.51 \pm 0.10$  mmol/l, HDL-C  $0.99 \pm 0.02$  mmol/l. Obesity grade 3: TG  $6.31 \pm 0.29$  mmol/l, LDL-C =  $7.42 \pm 0.45$  mmol/l, HDL-C  $0.76 \pm 0.02$  mmol/l. So, a statistically significant difference was obtained ( $p < 0.001$ ) between the degree of obesity according to the lipid panel. Also the atherogenic index was calculated, which tended to increase depending on the degree of obesity, the highest value recorded to obesity grade 3 =  $14.70 \pm 0.91$ .

From the total amount, 122 patients (62.8%) have android obesity and 72 patients (37.2%) have gynoid obesity. Each group of 5 was divided into 2 subgroups according to type of obesity: android or gynoid. A statistically significant difference was obtained ( $p < 0.05$ ) between subgroups according to lipid profile.

**Conclusions.** In the lipid profile of patients with type 2 diabetes exist the difference according to BMI, a great severity of dyslipidemia is directly proportional to the degree of obesity. The type of obesity it's very important, more serious disorders of lipoprotein metabolism is registered in patients with android obesity.

**Keywords:** Type 2 diabetes mellitus, dyslipidemia, obesity.

### 307. GENETIC ASPECTS OF PRADER-WILLI SYNDROME

**Xenia Zagordnaia, Anton Zilbert**

Scientific adviser: Svetlana Capcelea, Department of Molecular Biology and Human Genetics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** PWS is a complex genetic disorder affecting appetite, growth, metabolism, cognitive function and behavior.

Characterized by: 1) Low muscle tone 2) Short stature (when not treated with growth hormone) 3) Incomplete sexual development 4) Cognitive disabilities 5) Behavioral problems 6) The hallmark characteristics – chronic feelings of insatiable hunger and a slowed metabolism that can lead to excessive eating and life-threatening obesity.

The syndrome is due to the loss of expression of several genes encoded on the long arm of chromosome 15 (15q11.2–q13). The complex phenotype is most probably caused by a hypothalamic dysfunction that is responsible for hormonal dysfunctions and for absence of the sense of satiety.

People with PWS have a flaw in the hypothalamus part of their brain, which normally registers feelings of hunger and satiety. While the problem is not yet fully understood, it is apparent that people with this flaw never feel full; they have a continuous urge to eat that they cannot learn to control. To compound this problem, people with PWS need less food than their peers without the syndrome because their bodies have less muscle and tend to burn fewer calories.

**Materials and methods:** While doing the review we screened worldwide literature and interactive sources. We tried to choose information that will be reliable and will explain the genetic aspects, clinical features and complications of PWS.

**Discussion results:** PWS is rarely seen worldwide disease especially in RM that impossible diagnoses without genetics tests in neonates. Increasing awareness to PWS can bring to increase use of genetic methods of diagnoses and less miss diagnoses.

**Conclusion:** Prader-Willi syndrome is a complex multisystem disorder. Patients can be affected by various problems; therefore precocious diagnosis is fundamental to guarantee optimal assistance. Each patient should undergo personally tailored treatment from birth. Therapeutic decisions and clinical followup need to consider all of these possible problems. A multidisciplinary team is required, made up of specialists such as neonatologists, geneticist, pediatricians, endocrinologists, orthopedic surgeons, psychologists, psychiatrists, physiotherapists, and urologists to deal with the numerous medical and psychological problems a PWS patient has to face. Only in this way we can improve quality of life, prevent complications, and prolong life expectancy in patients with PWS.

**Key-words:** Prader-Willi, Obesity.

## DENTAL MEDICINE SECTION

### ORAL PRESENTATION

#### 308. ETIOLOGY OF COMPLICATIONS OF THIRD MOLAR ERUPTION

**Vasile Zugrav**

Scientific adviser: Chele Nicolae, MD, PhD, Department of Dental Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** In the post natal period, many of the complications of the eruption of third molar can be explained in emryogenesis. In the sixth week of the intra uterine life, the primary lamina dura appears, later from which the primary teeth are formed. The proliferation and differentiation in the sixteenth week leads to the secondary lamina dura which later forms the permanent dentition. This process of odontogenesis explains the complications of eruptions of the third molar, which has a very large variety and frequency of pathological forms in their formation and eruption leading to degenerative processes, nervous complications and pathological tumours.

**Scope and objectives:** Study of literature and determination of the mechanism of complications of eruption.

-Retrospective analysis of a lot of 100 patients diagnosed with complications of the eruption of the third molar.

-Determination of the most frequent complications in the diagnosed lot of patients.

-Analysis and identification of etiological factors causing complications of eruption of the third molar.

**Materials and methods:**

-Retrospective study on the basis of medical records in the deptt. Of OMF in the Municipal Clinical Hospital of Emergency services.

-Study of primary examination and complaint of the patient.

-Diagnostic methods used include IOPA xray,OPG and CT.

**Results:** The study analysed on the basis of the medical records and complaints of the patients concluded the following: Septic complications 65%, Mechanical complications 30%, Tumoral complications 3.5%, Nervous complications 1%, Vascular complications 0.5%.

**Conclusion:** Complications of eruption of the third molar have a correlation with the actual development and phylogenetics and with a constant increase in the cerebular activity of the modern man, in favour of the maxillary development leading to an insufficient space for the eruption of the third molar.

**Key words:** third molar,wisdom tooth, jaws, odontogenesis.

### **309. THE ROLE OF DENTOMAXILAR ANOMALIES IN PERIODONTAL DISEASES**

**Marin Vasilica, Nistor Ionica**

Scientific adviser: Sincar Dorina Cerasella, MD, PhD, "Dunarea de Jos" University, Galati, Romania

**Introduction:** Periodontal diseases are the most frequent destructive inflammatory condition in the human pathology. Based on information picked from specialised literature, the purpose of the study is to reveal the implications of dentomaxilar anomalies in the appearance of periodontal afflictions based on clinical modifications at a periodontal level in these patients. Moreover, the dentist has an essential role in the education of these patients through the promotion of a habit of maintaining adequate oral health and prevention of any complications Associated with these diseases.

**Material and methods:** The clinical study consisted in the hospitalisation of 46 patients (males and females between the ages of 15 and 30) which presented several types of dentomaxilar anomalies (incongruences with crowding and spacing), plaque and tartar deposits, as well as periodontal afflictions (gingivitis, periodontitis). Their treatment included the sanitation of the oral cavity, informing and motivating the patients of proper oral health techniques, orthodontic recovery.

**Results and discussion:** During the course of odontal, periodontal, orthodontic treatments and after their conclusion there has been observed an evident improvement in the state of the periodont (the reduction of bleeding, gum retraction, dental mobility, even moderate growth in the height of the gums).

**Conclusion:** Dentomaxilar anomalies influenced the installation of gingivitis and periodontitis (especially hyperplasic gingivitis), these advancing with age (gingivitis was more frequent in younger patients). By maintaining rigorous oral hygiene the patients involved in the study proved that unsatisfactory oral hygiene is what allows dentomaxilar anomalies to become local irritation factors for periodontal structures, provoking different grades of disease.

### **310. OCCLUSION GUIDANCE USING CONTEMPORARY METHODS OF ORTHODONTIC AND ORTHOPEDIC TREATMENT, IN DECIDUOUS, MIXED AND PERMANENT DENTITION**

**Andrei Usaci**

Scientific adviser: Solomon Oleg, Professor, DMD, Head of the Department Orthopedic Dentistry „Ilarion Postolachi”, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** According to JAPANESE JOURNAL OF CLINICAL DENTISTRY FOR CHILDREN, about 73 % of children are attested with all types of malocclusions, in deciduous, mixed and permanent dentition. The cause of those disorders are oral breathing, oral habits (thumb sucking, use of pacifier after 3 years since birth, nail biting, tongue thrust, etc.), diet (soft and processed food).

Preventing or avoiding those complications was the main reason of developing new concepts of treatment and prophylaxis. Using of myofunctional trainers, space maintainers, lip and tongue retractors,

create possibilities of avoiding the late orthodontic treatment, which needs far more time than preventing and prophylaxis strategy. It is well known that development of maxilla-facial muscles in growth period are in close compliance with posture position of the body, oral and nasal breathing, mastication, deglutition, diction, teeth and bone morphology, that's why it is very important to guide growth processes from the beginning.

**Material and Methods:** Includes the research based on clinical cases (18), documented using Photostatic analyze (90), radiology diagnostic, detailed explain of treatment and prophylaxis method, during X.2015-IV.2016 period.

**Results and discussions:** During the research on occlusion guidance, were examined 18 clinical cases, including clinical and laboratory explorations, diagnosis and treatment plan. From 18 cases, only 39 % respected indications and obtained good results, 39 % respected indications partially and accomplish insignificant changes and 22 % doesn't comply indications and got a minimal result.

**Conclusions:** Our main objective of the study, was to evolve a strategy of preventive the development of malocclusions and avoiding it on primary stages. During the research we have mentioned, that one of the most important factor in occlusion guidance using contemporary methods it is patient discipline and the team work between orthodontist and patient. Following all indications and conscious attitude are the decisive aspects of successful treatment, which are difficult to reach with patient on early age.

## **311. HISTOPATHOLOGICAL AND CLINICAL INVESTIGATION ON THE INFLUENCE OF INTRACANAL MEDICATION IN THE TREATMENT OF CHRONIC PERIODONTITIS**

**Oleksandr Karabulya, Iana Palchikova, Vasyl Savchuk, Marianna Palamarchuk, Olha Zhytar Yanna Ivaniuk**

**Introduction:** One of the major tasks in the treatment of chronic apical periodontitis is regeneration of pathologically changed periapical tissues. This goal might be achieved by means of different remedies introduced into periapical tissues, stimulating the regeneration of damaged tissues.

**Aim:** This work investigates the efficiency of a temporary paste in the treatment of chronic apical periodontitis. The paste contains: Metronidazole, Enterogel, Alflutop.

**Materials and method:** Investigation included: experiments on rats and experimental group ( 30 teeth presenting chronic apical periodontitis ). The drug Collapan was used as a comparative remedy.

**Result:** In the histological specimens of the mandible bone defects of the 6<sup>th</sup> -7<sup>th</sup> groups rats (filled with Collapan), bone defect was significantly similar to the condition of bone tissue of the 4<sup>th</sup> and 5<sup>th</sup> groups rats (filled with proposed composition). Signs of reparation expressed in the formation of big number of new form blood vessels, active osteoblaste, connective tissues formation were closely attached to the bone tissue. In the 30 cases under study, the treated teeth caused no pain, assured a good mastication and the adjacent mucous membrane evidenced no pathological modification.

**Conclusion:** Our histological investigation have proved the osteoregenerative abilities of the proposed medicamental composition, similar to those of the material used as a control Collapan. This affords grounds to consider that the proposed medicamental composition possesses significant clinical efficiency for usage in the treatment of chronic apical periodontitis stimulation regeneration of damaged periapical tissues.

**Keywords:** histological investigation, enterogel, metronidazole, alflutop.

## 312. ERRORS AND COMPLICATIONS IN DENTAL CARIES

**Mari Tarabin, Ahmad Rabi**

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**Introduction:** Currently dental caries remains one of the most common diseases of the world population regardless of age and sex. Insufficient knowledge in diagnosis and treatment of dental caries can cause a number of incidents and accidents which unfortunately are quite numerous and occur quite frequently, and can ultimately compromise the treatment.

**Purpose:** To provide data errors, possible complications, their prevention and control during and after the treatment of dental caries.

**Material and methods:** There were selected and analyzed some clinical cases and X-rays of 20 patients aged between 18 and 50 years who sought dental care in the dental clinic of State University of Medicine and Pharmacy, Nicolae Testemitanu ". The patients were subjected to some clinical investigations for diagnostic purpose before the treatment to view the condition of hard dental tissues and to assess the treatment performed by the dentist.

**Results and discussions:** The analysis results indicate that although the level of health care in the Republic of Moldova is relatively high, with implementation of multiple modern technologies of treatment, however in some cases a number of errors are found in dentists` therapeutic tactics, which result in severe complications.

**Key words:** dental caries, errors and complications, radiological aspects

## 313. EVALUATION OF IMPLANT-PROSTHETIC TREATMENT OF PATIENTS WITH EDENTULOUS POSTERIOR AREAS ON THE LOWER JAW, ONE YEAR FOLLOW-UP

**Mihai Mostovei, Dumitru Sirbu, Vadim Popovici**

Scientific adviser: Solomon Oleg, Professor, DMD, Head of the Department Orthopedic Dentistry „Iarion Postolachi”, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Advancement of technologies in implantology permits rehabilitation of edentulous patients restoring esthetics, function and lost comfort, meanwhile, increasing the quality of life for these patients. One of the factors that are considered during implant placement is the area where the surgery should be done. These areas differ in bone quality and quantity, vascularisation degree, presence of adjacent anatomical features, masticatory forces, inclination degree of teeth, etc. Posterior mandibular areas exhibit difficulties for implant placement caused by the presence of mandibular canal, submandibular fossae, poor vascularisation and high masticatory forces.

**The aim** of this study was to evaluate the succes of implant-prosthetic treatment in posterior mandibular areas after one year of functional loading.

**Materials and methods:** The study was based on the literature data and clinical results of 33 two-stage dental implants inserted in the posterior areas of lower jaw in 9 patients (aged between 39-51 years) applying the standard Branemark protocol. Patients had no general and local health problems that could jeopardise the treatment success. Only short edentulous spans have been included in the study from which 4 were single unit spans. Inserted implants were mainly of 3.75-10 mm and were loaded in conventional terms (>2 months) evaluating further the early success (1-3 years) applying the Albreksson succes criteria. The bone-implant resorbtion was evaluated after 12.2 months using the radiological method proposed by Topalo V. and Mostovei A. Soft tissue status was clinically evaluated through probing and determination inflamatory signs around implants.

**Results:** During the follow-up period there have been noticed no signs of inflammation in soft tissues. Probing showed a firm gingival attachemnt with no exudate. Patients had no sings of pain, discomfort or tooth mobility. Bone resorption during the flollow-up period was  $0,35\pm 0.05$ mm mesially and  $0.22\pm 0.04$  distally.

**Conclusions:** Despite the poor conditions which limits the surgery field in the lateral mandibular areas with poor vascularization in elder patients, implant-prosthetic treatment in this areas however has a predictable and stable result after one year restoring lost function of the masticatory system.

**Key words:** Implant-prosthetic treatment, Albrekttsson implant-succes criteria, bone resorbtion.

## **314. THE TREATMENT OF CHRONIC MARGINAL PERIODONTITIS BY USING SURGICAL-RECONSTRUCTIVE METHOD WITH ADITION MATERIAL "LITAR"**

**Maria Terentieva**

Scientific adviser: Gheorghe Nicolau, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:**Chronic diseases of the marginal periodontium are the most common disorders of the dento-maxillary system.By the age of 40-50 years, 94-96% of the population are already suffering from this condition.Statistics show that periodontal diseases are 5 times more common after tooth extractions than after caries and its complications.Currently there are two well-defined elements in the etiology and pathogenesis of MCP:1.the level of microbial aggression of the subgingival



plaque, 2. susceptibility of the organism to generate an immune response. The plaque is the central factor in the whole chain of events, starting with a healthy periodontal and ending up with an inflammatory process, with the loss of the teeth.

In recent years periodontal surgery has revolutionized the possibilities of selecting methods, tools, technologies, materials that stimulate the regeneration of periodontal tissues (containing collagen, hydroxyapatite, bioceramic-based materials, bone substitutes...), which outlines the fact that the pathology is sufficiently studied, but still there are many differences in patient examination, lack of methods, universal and effective methods of treatment. This has determined us for the study on the issue.

**The purpose** of the clinical investigations was to argue the implementation of surgical-reconstructive method of treatment by using nanostructural addition material "LitAr" for rehabilitation of patients with chronic marginal periodontitis.

**Materials and methods:** Clinical methods of investigation were performed in order to achieve the tasks. The study was performed in the Odontology, periodontology and oral pathology department within SUMP *Nicolae Testemitanu*, based on data obtained from 14 patients with chronic periodontitis aged 41-60 (9 women and 5 men). All patients were divided into two groups: first - experimental, consisting of 8 people (flap surgery with the use of hydroxyapatite LitAr), and the second - control group, consisting of 6 patients under a traditionally conservative treatment.

**Discussions and results:** The results show that surgical methods of treatment of chronic periodontitis marginal, gives better results (98,3%), obtaining from 2 mm to 6 mm of new-formed bone, depending on the localization of the bone defect, while only an improvement of the condition was observed after a conservative treatment (50%). The effectiveness of the surgical methods can be explained by the fact that through this process are solved simultaneously several problems: suppressing periodontal pockets, plastic bone, reconstruction of functional periodontium and removing infection.

**Conclusions:** According to the algorithm developed in the current study, the complex treatment of MCP provides the desired effect faster than the most widely used methods. An improvement can be obtained by applying a 2-step plan: the first includes conservative therapy, mainly aimed on improving the general condition of patients, the second aim is the liquidation of local lesions, realized by surgical methods combined with using of addition material LitAr.

**Key words:** periodontal disease, chronic marginal periodontitis, addition material, guided tissue regeneration.

## 315. MANAGEMENT OF ANKYLOGLOSSIA

**Mihai Manole**

Scientific adviser: Ion Lupan, Professor, PhD, Chef of Department Maxillo-facial surgery, pedodontics and orthodontics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Ankyloglossia is a condition that affects 2-5% of newborn. It is caused by the short lingual frenulum or the fusion of the ventral surface of the tongue with the floor of the oral cavity.

The diagnosis is based on clinical signs by assessing the impossibility of reaching the palate with the tongue or protruding the tip beyond the lower teeth. ankyloglossia can present a serious problem for the young patient during the first months of life if the child cannot suck normally.

**Materials and Methods:** Includes accurate and verifiable facts, selected from literature and a clinical study on the medical records of the patients from Republican Clinical Hospital for Children “Emilian Cotaga” during 2013-2015 period. For advanced studies were taken 3 patients from 2016.

**Results of discussion:** During the study of ankyloglossia were examined 59 clinical cases 56 medical records and 3 cases were documented in details. The medical records offered us information on the prevalence of gender, age at which most parents address for surgery for the children. Also were revealed the main symptoms that intervene in this pathology. The 3 cases that were documented more detailed explain the treatment and other concomitant diseases that may occur.

**Conclusions:** The main goal of the study was to investigate the problem of ankyloglossia and its solving. As a result of the study we managed to make the first statistics on this pathology, and explain all the aspect of evolvement and treatment of ankyloglossia.

**Key words:** ankyloglossia, frenulum, pathology.

## 316. ANTIMICROBIAL PHOTODYNAMIC THERAPY IN CONTROL OF PERIODONTAL DISEASE

**Elizaveta Golub**

Scientific adviser: Silvia Martu, *Grigore.T.Popa* University of Medicine and Pharmacy, Iasi, Romania

**Introduction:** Periodontitis is an inflammatory disease of the tissues that surround and support the teeth, bringing about progressive destruction of periodontium. Periodontitis is caused by relatively small group of microorganisms inhabiting the subgingival biofilm. The treatment of periodontal disease aims to remove sub-gingival calculus (calculus) and biofilm deposits. Current treatment techniques implies a recurrent mechanical destruction of oral bacteria or maintaining therapeutic concentrations of antimicrobials in the oral cavity, both of which have their limits and do not give a lasting result. So that we propose to provide an overview of alternative antibacterial therapeutic methods as photodynamic therapy (PDT), to ascertain the better strategies for control of microbial growth. Photodynamic therapy is a treatment modality based on the activation of exogenous photosensitizing agents by a light source to produce cell damage.

**Objective:** The presentation aims to study the effectiveness of antimicrobial photodynamic therapy (PDT) as an adjunct to nonsurgical treatment of periodontal disease compared to the conventional periodontitis treatment.

**Methodology:** We present the case of a 38 years old male patient, diagnosed with chronic periodontitis. The patient was not a smoker and did not present any systemic inflammatory and/or infectious diseases, nor was submitted to antibiotics or antiinflammatory drugs in the last 6 months. The treatment procedure involved a split-mouth method (2 arches treated with conventional mechanical periodontal therapy plus photodynamic disinfection and 2 arches treated only by conventional therapy).

The periodontal status (bleeding on probing, periodontal probing depth and plaque index) was re-assessed at 2 weeks and 3 months post-therapy.

**Results:** Nearly all photodynamic activations caused a statistically significant improvement of the periodontal status, with reduction in probing depth and bleeding on probing.

**Conclusion:** Within the limits of the present methodology, it can be concluded that antimicrobial photodynamic therapy seems to be a reliable adjunctive therapeutic method of treatment the periodontitis. Antimicrobial photodynamic therapy may hold promise as a substitute for currently available chemotherapy in the treatment of periodontal diseases.

**Keywords:** antimicrobial photodynamic therapy • photosensitizer • periodontal pockets • periodontitis.

### **317. PARTICULARITIES IN CHRONIC MARGINAL PERIODONTITIS AT PATIENTS WITH DIABETES MELLITUS**

**Zina Furtuna**

Scientific adviser: Ciobanu Sergiu, PhD, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Diabetes mellitus is a disease that affects the entire body, including the mouth (marginal periodontal tissues). Dental care is particularly important for people with diabetes because they face a higher risk of oral health problems due to hyperglycemia. The effects of diabetes depend directly on glycemic control.

**Purpose:** Highlighting the particularities of chronic marginal periodontitis in diabetes mellitus.

**Material and methods:** To achieve the established purpose, 10 patients with diabetes mellitus from the department of endocrinology from the Republican Clinical Hospital were included in the study. Also, another 10 patients were included as the control group. Examination was performed according to the WHO methodology, by direct inspections using a unique set of dental tools. The plaque index Silness & Loe, PMA index (papilar, marginal alveolar) and CPITN index were determined. Patients were subjected to treatment by cleaning and scaling. After that, the PMA index was determined again.

**Results:** Patients with diabetes mellitus had an inflammation after scaling that lasted more time, confirmed by PMA index, comparing with patients in the control group. This type of inflammation is due to a low trophic at the marginal periodontal level, because diabetes angiopathy affects the whole body, including the mouth (marginal periodontal tissues).

**Conclusion:** Diabetes mellitus is one of the most spreaded chronic disease, and the effects can be seen all over the human body, including stomatognathic system.

**Key words:** diabetes mellitus, periodontitis, hyperglycemia.

## 318. DENTAL IMPLANT COMPLICATIONS

**Andrei Fanea**

Scientific adviser: Sirbu Dumitru, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Implantology has known a remarkable evolution over the past 15-20 years. Dental implants are the first treatment option in tooth loss. Modern concepts and aspects in dental implantology are widely discussed nowadays, while errors and complications are not as well studied. Complications in implant treatment are being discussed more frequently within the recent international conferences. According to (Annibali S. et al. 2009), the complications in implant-prosthetic treatment are divided by the moment of appearance. The immediate complications are: infection, swelling, bruising and hematoma, emphysema, bleeding, flaps dehiscence, sensorial disturbances. The late complications are: mucositis, periimplantitis, disintegration of the implant, gingival retraction, secondary nervous lesions, impact fracture. The purpose of the study is evaluation of implantological treatment complications and developing prophylaxis measures.

**Materials and methods:** The study group is represented by 20 patients, on which 68 implants were inserted. The patients with implant fracture and periimplantitis were selected, according to Annibali S. et al classification. The average age is 52,3 years, the oldest patient was 82 years old and the youngest was 29 years old. 70% of the patients were women, 30% men. 60% of the implants were inserted in the mandible and 40 in the maxilla. The approach towards the affected implants was determined by the scale proposed by James and modified by Misch.

**Results and discussions:** Periimplantitis was determined in 90% of the patients and implant fracture in 10%. Periimplantitis in the pre-prosthetic stage has been noticed in 35% of the patients. In the post-prosthetic stage in 65% of the patients. In 95% of periimplantitis, dental implants were used in partial edentations and only 5% in total edentations. From all the inserted implants, Alpha-Bio Tec implants were involved in 45% of the complications, Dentium implants were involved in 20% of cases, 10% blade implants, one stage implants in 25%. The average value of the defects is 4,86 mm, the highest defect is 7,51 mm and the lowest 1,79 mm. From the total of 45 teeth, 22 were extracted, which is 48,8%. The study has shown that pre-prosthetic and post-prosthetic complications have different etiology and the incidence is determined by the type of the used implants, upper or lower jaw localization, partial or total edentation. According to the obtained information, the following methods of prophylaxy are proposed: thorough pre-prosthetic preparation, minimal intra-operative trauma and using external and internal cooling systems, avoiding over-lifting the flap, careful tissue management, minimal mechanical and thermic bone trauma, performing X-ray, total removal of the fixing cement, occlusal integration of the prosthesis.

**Conclusions:** Implementation of prophylactic measures and an interdisciplinary approach of the patients are necessary in order to prevent implantological complication.

**Keywords:** peri-implant complications, periimplantitis, implant fracture.

## 319. METHODS OF TREATMENT IN THE EXTENSIVE CORONARY DESTRUCTIONS FROM SIDE AREA

**Ionica Nistor**

Scientific adviser: Lecturer Dr. Cerasella Dorina Sincar, MD, PhD, "Dunarea de Jos" University, Galati, Romania

**Introduction:** The coronary lesions represent affections that morphologically interest the dental crown of the tooth, including its relations with the adjoining and opposed teeth. Many times these cause aesthetic disorders, pain and possible reductions of the masticatory function.

**The aim** of this study is determining the prothetic possibilities of restoring the affected dental segment, highlighting the therapeutic method which proved itself efficient when it comes to its resistance and durability. In this context we have carried out an analysis from a morpho-functional point of view of the prothetic possibilities of preserving the teeth from the side area and of restoring the functionality of the stomatognathic system, establishing at the same time the hierarchy of the essential factors of succes in the prothetic therapy.

**Material and method:** The clinical study of the work consisted in the oral rehabilitation of 114 patients having coronary destructions in the side area, the individual treatment of each patient consisting in prosthetic through applying the following types of crowns: metallic cover, mixt totally physiognomic, mixt partially physiognomic, whole ware/ ceramics cover and of substitution and through applying the inlays. The examination and the assessment of the patients has been done according to the clinical observation sheet based on the extra and intraoral examination; the paraclinical examination carried out: retroalveolar X-rays, orthopantomographies and intraoral photography; getting their advisedly, mandated, informed and motivated consent before starting the treatment.

**Results and discussion:** The prothetic therapy of the coronary lesions considerably reduce the risk of teeth loss on the arch, indicating the fact that it may constitute an important intervention therapy for patients with large coronary destructions.

The results have proved that at patients with large coronary destructions at the level of the terminal teeth that also were edentulous, the recovery of these teeth led to a solution of immovable prosthetic, without the need to pull out the causal teeth and implicitly turning the side edentulous into a terminal edentulous, which would have lent itself to another method of prothetic solution, accepted by patients with difficulty.

**Conclusions:** Taking into consideration the high rate of odontic lesions that require prothetic treatment in the side area, it can be stated that restoring the morphological and functional functions and then the aesthetic ones because of the special importance the side area represents within the stomatognathic apparatus.

**Keywords:** prothetic therapy, functional functions, prothetic solution.

## **320. ETIOLOGY, CLINICAL FEATURES AND METHODS OF TREATMENT OF MOLAR-INCISOR HYPOMINERALIZATION**

**Victoria Eftodii, Diana Uncuta**

State University of Medicine and Pharmacy *Nicolae Testemitanu*, Chisinau, Moldova

**Introduction:** Molar Incisor Hypomineralization (MIH) is defined as hypomineralization of systemic origin, affecting 1 to 4 permanent molars and it is often Associated with enamel defects in permanent incisors. The MIH term was firstly introduced by Weerheijm in 2001. It has been proved that MIH prevalence varies between 2,8 and 40% and that this condition can be determined by the influence of several prenatal and postnatal factors between the 18th week of pregnancy and 3-5 years of age. The objective of the study is to describe the etiological factors, clinical features of hypomineralized enamel and treatment methods in molar incisor hypomineralization.

**Materials and methods:** 10 subjects were evaluated clinically and paraclinically, and at a separate session, their parents completed a medical history questionnaire and adhesive composite treatment was provided.

**Discussion results:** Although the MIH etiology is multifactorial, including prenatal and postnatal factors and it has not been fully understood yet, children born preterm and those suffering various systemic pathologies during the first 3 years, are more likely to develop MIH. Clinical features in MIH include demarcated yellow, white or brown opacities, usually located on the buccal and occlusal surfaces. The lesions on the molars are more extensive and hypersensitivity may be Associated, which can lead to difficulties in toothbrushing. MIH affected teeth are more fragile, therefore caries may develop easily. The methods of treatment include topical fluoride varnish applications and composite restorations.

**Conclusions:** MIH affected teeth may lead to tooth structure loss and caries development. Early diagnosis and treatment of MIH is important due to the significant role of the permanent molars in development of the occlusion.

**Keywords:** MIH, hypomineralization, developmental enamel defect, adhesive restorations

## **321. MANUAL INSTRUMENTATION COMPARE TO ROTARY SYSTEM IN ENDODONTIC TREATMENT.**

**Gheorghe Nicolau, Alexandr Danici, Valentina Nicolaiciuc, Ion Roman, Korektor Marina**

*Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Endodontic therapy is a branch in dentistry concerned to anatomy, physiology and pathology of dental pulp and periradicular tissue, including the normal pulp. This specialty of dentistry is managed with etiology diagnosis, prevention, and treatment of the dental pulp and the periradicular tissues that surround the root of the tooth. Treatment of pulp inflammations divided into several steps: mechanical and chemical preparation, shaping and obturation.

## Goals and Objectives

1. Study about different methods in preparation of root canal in endodontic system;
2. Compare between manual and rotary technique in root canal preparation;
3. To find out the advantages and disadvantages manual files compare to rotary system;
4. To evaluate the efficiency of rotary instruments in mechanical preparation of root canal.

**Material and Methods.** Manual instrumentation compare to rotary system in Endodontic system were investigated in patients that approach the Stomatological Therapeutical Department of University clinic Nr.1 in Toma Ciorba 42. We got 40 patients between ages 18-55, 20 male and 20 female. 25 of the patients with diagnose of Pulpitis and 15 with diagnose of apical periodontitis. 25 of the patients were treated in one visit of endodontic treatment and 15 of the patients were treated in two visits of endodontic treatment. Evaluation of extracted teeth. In addition to evaluation of the patient, I choose to perform a research on extracted teeth, in order to evaluate the preparation of the root canal. I choose 8 extracted upper and lower incisors and perform in them endodontic treatment with different methods of preparation and shaping of root canal.

From each group of teeth that was prepared with the same endodontic system, I filled one tooth with cold lateral condensation using GuttaPercha and Ah+. After the teeth were prepared they were placed in wax plates and was done X-ray from two directions: Buccal and Proximal. The systems that were used are Dia PT, SAF, Pro-taper and K-file.

## Conclusion

1. Nowadays beside the manual files that are manufactured from stainless steel or nickel titanium are available also rotary systems as Pro Taper, SAF, Dia-PT, Wave One and Mtwo and other rotary system.

2. Manual system and rotary system are both effectively remove debris from root canal, however, time for root canal preparation is significantly shorter using the rotary system than using the manual system. In case when anatomy of root canal is difficult for enlargement and shaping, in curved canal or C-shaped canals, should used SAF.

3. The advantages of rotary system compare to manual files are preparation and shaping the root canal much more smoothly and consistently, and in conical shape, procedures are more reliable with less chance of complications. Rotary instrument ensures faster endodontic procedure however in the same time removing of dentin is more excessive, except SAF which is micro-invasive preparation of root canal.

4. Pro Taper and Dia-PT are similar in their shape and cross section, and their features in root canal preparation is similar, however, self adjusting file is micro-invasive technique, due to the fact that the file adapt the shape of the root canal, and combines mechanical preparation with irrigation of the root canal. The patient were treated by different method of endodontic files, manual and rotary systems.

**Key words:** Endodontic treatment Manual files, rotary files, Pro-taper, SAF, Dia-PT.

## 322. STATE OF GLUTATHIONE REDUCTASE – GLUCOSE-6-PHOSPHATE DEHYDRO-GENASE SYSTEM IN SALIVA OF STUDENTS FROM DIFFERENT COUNTRIES

**Denis Cravenco, Valerii Crusilinschii**

Scientific adviser: Nina Sevcenco, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Reduced glutathione performs a protective antitoxic and antioxidant role. The only enzyme, whose basic biological significance to maintain a high level of reduced glutathione is glutathione reductase. Normal functioning of glutathione requires coenzyme NADPH, which generates aerobic glucose oxidation pathway (pentose phosphate pathway) through the action of glucose-6-phosphate dehydrogenase. The amount of glutathione varies, so a pathological insufficiency of it was observed at a third of the population. Genetic and biochemical studies have demonstrated the important role of glutathione and glutathione-dependent enzymes, which control the intracellular redox-state, inactivate oxygen radicals, protect from oxidative stress.

**Purpose.** Comparative analysis of the glutathione reductase – glucose-6-phosphate dehydrogenase state in saliva of students from different countries.

**Material and methods.** The study involved 46 healthy students (20-23 years): Moldova (group 1), Israel (group 2), Palestine (group 3), Congo (group 4). The study complied with all ethical and legal norms. The activity of glutathione reductase (GR), glucose-6-phosphate dehydrogenase (G6PD), content of reduced glutathione (RG) and protein were determined by spectrophotometry (DiaSys). Statistics: t-Student and Spearman.

**Results.** The content of RG in the saliva of 2nd group was 33,49 mcmol/g protein (185,6%;  $p < 0.01$ ), in the 3rd – 10,1 mcmol/g (56%) and in the 4th – 40,30 mcmol/g (223,4%;  $p < 0,001$ ) compared with the 1st group (18,04 mcmol/g, 100%). Activity of GR in the saliva of 1st group was 12,0 IU (100%), in the 2nd group - 20,6 IU (171,7%), in the 3rd – 38,3 IU (319,2%), in the 4th group - 29,1 IU (242,5%). Activity of G6PD in the 1st group was 6,6 IU/l (100%), in the 2nd – 18,7 IU/l (283,3%), in the 3rd – 8,9 IU/l (134,8%), in the 4th group - 13,1 IU/l (198,5%). The results of Spearman's rank correlation analysis showed a close relationship between GR and G6PD in 1st, 2nd and 4th groups. However, the functional relationship between the GR and RG was only found in the third group ( $Pt < 0,0025$ ).

**Conclusion:** The differences between the content of GR and level of G6PD activity in the saliva of the students from different countries likely reflect the genetically determined metabolic features. Correlation analysis using the nonparametric Spearman test showed functional relatively close relationship between all the parameters considered, which may indicate modifications of metabolic processes in the growing organism.

**Keywords:** reduced glutathione, glutathione reductase, glucose-6-phosphate dehydrogenase, saliva.



### **323. THE IIIRD MOLAR POSTEXTRACTIONAL COMPLICATIONS' THERAPEUTICAL AND SURGICAL PROPHYLAXIS**

**Dumitru Chele, Gabriela Motelica**

Scientific adviser: Chele Nicolae, MD, PhD, Associate Professor, Department of Dental Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Wisdom tooth pathology remains an issue in oral surgery and general dentistry because of multiple complications and contradictions regarding its treatment. According to Canopkene's research (2004), from 785 patients aged 16-90 years with various inflammatory processes in oral-maxillofacial region, the inflammatory process of 48.2% was caused by M3. The extraction of impacted third lower molars is a common procedure in oral surgery. It involves trauma of soft and hard tissues accompanied by edema, limited mouth opening, pain, postsurgical complications etc. This is a serious impact on the quality of life. This study was done to evaluate the therapeutic effect of corticosteroids when administered two hours before surgery.

**Materials and methods.** The study was based on clinical and paraclinical results of 23 patients (aged between 20-35 years) including 14 men and 9 women with pathology of the lower IIIrd molar. They were then divided into two groups: the study group who received oral administration of prednisolon (10 mg) and the control group who did not receive medication. To evaluate the edema, two measurements were performed pre and post surgery. The first one was the distance between the corner of the mouth and the ear lobe, and the second one was the distance between the lateral angle of the eye and the angle of the jaw. To determine the mouth opening limitation due to the muscular postoperative contraction, the initial opening of the mouth (measured with the callipers) was compared to the postoperative condition.

**Discussion results.** After comparing the 2 groups, the study group demonstrated a significant reduction of edema and pain without limiting the mouth opening comparing to the control group.

**Conclusion.** Anti-inflammatory steroids inhibit the prostaglandin synthesis, the thromboxanes and the conversion of phospholipids into arachidonic acid, which helps to reduce the transudate. Thus, corticosteroids should be used before surgery in order to reduce the post surgical discomfort and swelling.

**Key Words:** Wisdom Teeth, Extractions, Corticosteroids.

### **324. CRANIO – FACIAL ASSOCIATED TRAUMAS**

**Veronica Bolobocianu<sup>1</sup>, Valeria Velesco<sup>2</sup>, Dimitrita Baciu<sup>3</sup>, Hitu Dumitru<sup>4</sup>**

Faculty of Stomatology, Students 1-3, doctor in medical sciences, Associate Professor<sup>4</sup>, Oro-Maxillo-Facial Department of Surgery and Oral Implantology 'Arsenie Gutan'

**Introduction.** Facial Associated traumas generate a range of social problems, with an important economic damage. All these justify the recent study of facial Associated traumas treatment problems,

by specialist doctors, however, the elaboration of new curative-diagnostic algorithms remains a priority in the modern traumatology.

**The aim of the work:** The evaluation of comparative observational descriptive study of cranio – facial Associated traumatic injuries.

**Materials and methods:** In order to reach the set aim, during 2011 medical assistance was offered to patients with facial traumatic injuries at the Oro-Maxilo-Facial surgical clinic (OMFSu). 153 patients with facial Associated traumas have been monitored and took part in a retrospective epidemiological study which included the frequency of the cranio-facial Associated trauma allocation.

**Results and discussion:** Facial Associated traumatic injuries constitute of 13,38% from the total number of patients treated at the OMFSu division. Cranio facial traumatism leading with a total of 87,58% cases out of the patients with Associated traumatism. Concussion occupied 75,37% incidents out of the patients with cranio-facial traumatism, followed by cerebral contusion with 3,73% incidents. Cranial bones fractures consisted of 5,22% compared to the soft tissue injuries which consisted of 32,08% of the incidents out of the patients with cranio-facial traumas.

**Conclusion:**

1. Cranio-facial traumatism consisted of 87,58% cases out of the total number of patients with facial Associated traumatic injuries;

2. Concussion constituted of 75,37% incidents out of the total number of patients with cranio-facial traumatism;

3. Soft tissue injuries comprised 32,08% instances out of the total number of patients with cranio-facial traumatism.

**Keywords:** facial Associated traumatic injuries, diagnostics, treatment

## **325. SECONDARY ALVEOLAR BONE GRAFTING IN CLEFT LIP AND PALATE PATIENTS**

**Egor Porosencov, Ion Lupan**

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**Introduction** After the primary surgeries cleft lip and palate patients need a recovery of the alveolar process defect with osteoplasty using autogenous bone grafts also combined with xenogeneic and alloplastic materials. The primary objective of secondary alveolar bone grafting in patients with cleft lip and palate is to provide bone tissue for the cleft site. That later will permit the placement of osseointegrated implants into the cleft area.

**Methods and Materials** In our clinic the preferred donor sites for the secondary grafting of alveolar clefts defect are: iliac crest, symphysis and mandibular ramus. In the period from 2011-2015, 30 bone grafting procedures were done to 25 patients with lip and palate cleft by the age 15-25. In 8 operations was used iliac crest bone graft, in 14 cases from symphysis and in 6 from mandibular ramus. By our protocol the bone was divided in to cortical mini-plates, the rest was crashed by the bone-cruncher and mixed 1:1 with xenocollagen and hydroxyapatite granules. The grafted bone side was covered with a collagen membrane only in the cases of periosteum deficiency. To evaluate the bone volume CBCT 3-D examination was performed pre-operative and 6 month post-operative .

**Results** According to CBCT 3-D results the necessary bone volume was present in 25 patients and implants were successfully installed. But in 5 cases after 6 month additional bone grafting was needed, because of the complications: graft exposure -2 patients, oro-nasal fistula -2 patients, insufficient formation of bone -1 patient.

**Conclusion.** Bone grafts from iliac crest, mandibular ramus and symphysis can be used with success in osteoplasty of alveolar congenital defects. There were no significant difference between this three graft sites, important is the recipient bone place. To gain more relevant conclusion in time the study is continuing.

**Key Words** cleft lip and palate, secondary bone grafting

## **326. IMPROVEMENT OF PERIODONTAL STATUS BY ADMINISTRATION OF LACTOBACILLUS REUTERI**

**Tatiana Porosencova, Valeriu Burlacu**

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**Introduction.** Dental caries and periodontitis are the most common infectious diseases in humans. Recently, there has been increasing interest in probiotic control against these oral infections and a number of clinical trials have been conducted to elucidate the possible impact on oral health. The aim of this study was to evaluate the effects of *Lactobacillus reuteri*-containing probiotic tablets as an adjunct to scaling and root planing.

**Materials and methods.** Fifty nine chronic periodontitis patients with initial lesions, generally healthy, were recruited and monitored clinically (measures of periodontal pocket depth, clinical attachment level, gingival index, plaque index) and microbiologically (red complex + *Aggregatibacter actinomycetemcomitans*) at baseline and after 20 days after therapy. All patients received one-stage oral

hygiene session and randomly divided in two groups: 1st group – at 29 patients was performed scaling and root planing; 2nd group - 30 patients with scaling and root planing + probiotic ( $1 \times 10^8$  CFU/day). The tablets were used once a day, in a period of 20 days.

**Results.** After periodontal therapy, measures indicated significantly reduced clinical and numerical microbiological parameters in scaling and root planing + probiotic.

**Conclusions.** Oral administration of *L. Reuteri* could contribute to the beneficial effects of periodontal conditions.

**Key-words:** probiotics, periodontitis, initial.

## POSTERS

### 327. THE INCIDENCE OF DENTOMAXILAR ANOMALIES IN CHILDRE FROM RURAL ENVIRONMENTS

**Vasilica Marin, Ionica Nistor**

Scientific adviser: Alexandru Mircea Nicolau, University Assistant, *Dunarea de Jos* University, Galati, Romania

**Introduction:** Anodontomaxilar anomalies are a leading cause for pathologies in the stomatognathic system. Because of the frequent manifestation of these pathogens it is important for the oral health of the population to determine their prevalence.

**Material and method:** The clinical study was carried out on a lot consisting of 144 children between the ages of 7 and 14, in August 2015. These studied at the Primary School no. 1 in the town of Valea Marului, Galati county and were in the mixed dentition period and the beginning of the permanent dentition period. For every child there was informed consent from parents/tutors, as well as the consent of the school principal. The parents of the children who were part of the study were assured that the investigation is completely non-invasive. Their oral cavities were inspected for establishing dental status and examining the occlusion in view of orthodontic clinical diagnostic, a consultation sheet being completed for each child.

**Results and discussions:** A prevalence of dentomaxilar anomalies of 87.35% was observed in the studied sample. The largest portion is occupied by anomalies of space with crowding (owing, certainly, to precocious loss of the support area through dental cavities and their consequences), the rarest being mandibular protrusion. A greater frequency of unidentar anomalies (which could be clinically diagnosed: regarding shape, position, structure) was observed in comparison with Angle ones. Likewise, many of these were present in children with poor oral hygiene who did not have the possibility of consultation by a stomatologist.

**Conclusions:** It was considered that the prevalence of dentomaxilar anomalies at school-aged children from the rural environment depends on the socio-economic and environmental conditions from

their respective area. Ideally, there would be prophylaxis programmes and, in consequence, interceptive treatment.

**Key words:** anomalies, occlusion, orthodontic clinical diagnostic.

### **328. THE STUDY OF BIOPHYSICAL PROPERTIES OF ORAL FLUID IN CHILDREN WITH DENTAL CARIES**

**Irina Gutan, Irina Bolbocean**

Scientific adviser: Spinei Aurelia, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** For early diagnosis of dental and systemic diseases, the crystallographic method of research of the oral fluid (OF) was proposed, as it is the most accessible body fluid.

**Aim of the study:** to study peculiarities of oral fluid micro crystallization in children with dental caries.

**Material and methods:** 100 children aged between 7 and 10 have been clinically examined. The study of crystallographic changes of the oral liquid was performed using the method developed by Shatohina S.N. and coauthors (2006). A volume of 0.2 to 0.3 ml of oral liquid was collected with a sterile pipette. Three drops of oral liquid collected from each child were applied on glass slides. The dehydration of the OF product drops was produced in a thermostat at  $t\ 37^{\circ}\text{C}$ , which insured dust protection. Micro preparations were examined under an optical microscope. The study was conducted in accordance with the requirements of the Code of Ethics for Scientific Research.

**Results:** from the total number of children examined, 71% are affected by dental caries. The oral fluid micro crystallization degree in children with dental caries is lower compared to caries-free children and is correlated with the degree of caries activity.

**Conclusion:** the study of structural peculiarities of dehydrated oral fluid droplet in children with dental caries has elucidated a number of markers of the changes produced in the mouth that can later be applied in screening research activities in dentistry, dental practice and development of cario-preventive measures and evaluation of their effectiveness.

**Keywords:** oral fluid, micro crystallization, dental caries

### **329. EVALUATION OF THE RISK OF DENTAL CARIES OCCURRENCE IN CHILDREN USING THE CARIOGRAM SOFTWARE**

**Irina Bolbocean, Irina Gutan**

Scientific adviser: Spinei Aurelia, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Dental caries is a multifactorial disease, characterized by a local destruction of hard tissues under the action of microorganisms. WHO places dental caries on the 3rd-4th place within health problems of the population, which offers it the characteristics of a social disease. It is important to pay attention to the high prevalence, as well as to the early occurrence of dental caries in growing children. The objective is to evaluate the risk of caries in children using the Cariogram software.

**Materials and methods:** The clinical data of this study is based on the examination of 98 children aged 7-14. The methods of examination included collecting patient data; clinical and complementary methods of examination. Oral hygiene index and DMFT were determined. The complex evaluation of caries risk was performed using the Cariogram software. The study was realized according to the ethic demands and with having signed the agreement forms by the children's parents or their legal representatives.

**Discussion results:** The influence of a series of factors was found in the majority of children involved in the study. A very low risk in caries was determined in 24,48% of the children, low risk - in 25,51%, medium - 26,53%, high - 19,38% and very high - 4,08%. An extreme caries risk was caused by deficient oral hygiene, high concentration of Streptococcus Mutans in saliva, lack of fluoridation etc.

**Conclusions:** The high risk in caries occurrence in children indicates the need of initiation of prevention programs targeting individual factors of caries development.

**Keywords:** dental caries, cariogram, carious risk.

### **330. THE BACTERIAN PLAQUE – DETERMINING FACTOR IN PARADONTOPATHIES**

**Ionica Nistor, Vitalie Rusu**

Scientific adviser: Lecturer Dr. Cerasella Dorina Sincar, MD, PhD, *Dunarea de Jos* University, Galati, Romania

**Introduction:** The bacterial plaque is an ecological microbial system represented through a bacterial aggregation adherent to dental surfaces and not only, which can be removed through a water spray and simple cleansing. This system represents an important pathogenic potential not only for enamel but also for the marginal paradont. The bacterial plaque is unanimously recognised today as being the determining factor of the paradontal disease. Its control is a way of prevention which determines the use of the most feasible methods of discovery, control and motivating the patients so as to annihilate the etiopathogenetic role of the bacterial plaque.

**Material and method:** The examination and evaluation of the patients have been carried out according to the clinical chart based on the extra and intraoral examinations. The observation charts have been filled in with paraclinical examinations. The study comprised a group of 200 patients aged between 15 and 76 who were examined at the same time interval, after the last dental brushing. The Silness-Loe plaque index was determined using as plaque revealing substance: methylene blue solution 2% (through mild tamponing so as not to remove the plaque deposits by rubbing), followed by energetic cleansing with

tap water for 30 seconds and highlighting the PB deposits. The gum bleeding index(SBI), the papillary bleeding index(PBI) and CPITN index have also been determined.

**Results and discussions:** The patients were instructed about the correct brushing technique and after its correct acquisition they were recommended to perform the dental brushing at least twice a day: in the morning and in the evening; as well as the use of some auxiliary means of hygienization consisting of the use of mouthwash, dental floss, etc. After the monthly examinations we have noticed a reduction of the Silness-Loe plaque index but also an improvement of paradontal status.

**Conclusions:** The correctly performed oral hygiene can bring significant improvements, many times without needing to perform an antimicrobial medicinal treatment.

There is a close connection between the presence of bacterial plaque and the inflammatory process which can contribute to the appearance of paradontopathies. A correct oral hygiene can lead to a reduction of the frequency of the appearance of paradontal diseases till the total healing.

**Key words:** bacterial plaque, plaque index, dental brushing, paradontopathy.

### 331. TOTAL AND EXTENDED EDENTATION – THERAPEUTIC APPROACH

**Nistor Ionica, Marin Vasilica**

Scientific adviser: Lecturer Dr. Cerasella Dorina Sincar, MD, PhD, *Dunarea de Jos* University, Galati, Romania

**The purpose of the study:** Edentation is one of the most serious diseases of the dentomaxilar apparatus, being characterised by the absence of teeth from the oral cavity, a phenomenon that occurs after their eruption.

**Material and method:** Clinical study of the treatment consisted in the total oral rehabilitation of three patients which presented partial and total edentation, the individual treatments consisted in adjuvant and/or conjunct prosthesis.

**Results:** Even in the case of resolving the extended edentation, the majority of the patients can feel a state of infirmity because of the mobilisation of their prosthesis, but proper recuperation of the morphology and the functions of the stomatognathic system convinces the patient to undergo mobile therapy. Plans of treatment for improving the functions of the dentomaxilar apparatus follow: educating and informing the patient about oral hygiene, presenting and debating therapeutical solutions and insuring that the patient understands the necessity of prosthetic treatment, as well as organising it in stages. Therapeutic solutions to the presented situations are: total maxilar and mandibular prosthesis, partial mandibular prosthesis – mobilised with metal hooks, fixed metal-composite on remaining teeth.

**Conclusion:** Restabilising ADM function is not integral (because of the total prosthesis), the masticatory function being at 1/5 of its capacity. On the other hand, the physiognomical function is restored almost completely, and the phonation adapts rapidly after rehabilitation.

**Keywords:** edentation, stomatognathic system, mobile therapy, prosthetic treatment.

### 332. THE ROLE OF MICROBIAL FACTOR IN ENDODONTIC PATHOLOGY

**Alexandru Muradu, Sergiu Rosca, Ana Ciobanu, Dorin Rosca**

Scientific Adviser: Ciobanu Sergiu, MD, PhD, Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** By Endodontic infection we mean contamination at the main channel, the lateral and apical delta, and it certainly affects dentin. The infection of endodontic space is a dynamic, highly complex process in which different bacteria are dominating, depending on the stage of evolution of the infectious process. The infection develops and progresses depending on the bacterial flora composition, which depends on the niche, nutrition, aerobic or anaerobic, PH and the competition or cooperation between species.

**Goal:** Evaluation of the bacterial contamination ways of the endodontic space, specifying the mechanism by which microorganisms enter to the pulp organ.

**Materials and methods:** There were studied over 55 bibliographic sources and it was determined that, microbiological examination of root canals is commonly used and recommended as a method of studying microbial factor in endodontic infections, as part of endodontic therapy. Sampling technique requires the following steps: isolating the affected tooth; antiseptic treatment of the foreign surface of the tooth concerned, and also of the adjacent teeth; removal of the decayed dentine, creating access to the pulp chamber; introducing into open root canals sterile filter paper cones, deeply to the apex of the tooth, maintained for about 2 minutes, then extract; immersed in liquid culture mediums: infusion broth brain-heart for aerobic and facultative bacteria, and thioglycollate broth for anaerobic bacteria. The cone manipulating is made with a sterile forceps; inoculated tubes are incubated at 37 ° C for 48-72 hours, or 96 hours for the anaerobic environments. Environmental disturbance indicates the presence of microorganisms inside the channel and require their removal before final clogging.

**Results:** Using PCR method a large amount of bacteria were found that had not been previously identified or could be found in other cultures, in smaller quantities, such as: *Prevotella Tannerae*, *Actinomyces radicidentis*, species of *Olsenella*, *Dialister Pneumosintes*, *Treponema Maltophilum*, *Treponema amylovorum*, *Treponema medium* and *Treponema lecithinolyticum*.

**Conclusions:** By analyzing the data found in the scientific literature, we established that more than 700 species of microorganism (pathogen – aerobic, anaerobic and facultative) were found in the hard and soft tissues of the mouth.



### 333. ERRORS AND COMPLICATIONS IN DENTAL CARIES

**Tarabin Mari, Ahmad Rabi**

Scientific adviser: L. Eni, MD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Currently dental caries remains one of the most common diseases of the world population regardless of age and sex. Insufficient knowledge in diagnosis and treatment of dental caries can cause a number of incidents and accidents which unfortunately are quite numerous and occur quite frequently, and can ultimately compromise the treatment.

**Purpose:** To provide data errors, possible complications, their prevention and control during and after the treatment of dental caries.

**Material and methods:** There were selected and analyzed some clinical cases and X-rays of 20 patients aged between 18 and 50 years who sought dental care in the dental clinic of State University of Medicine and Pharmacy, Nicolae Testemitanu ". The patients were subjected to some clinical investigations for diagnostic purpose before the treatment to view the condition of hard dental tissues and to assess the treatment performed by the dentist.

**Results and discussions:** The analysis results indicate that although the level of health care in the Republic of Moldova is relatively high, with implementation of multiple modern technologies of treatment, however in some cases a number of errors are found in dentists` therapeutic tactics, which result in severe complications.

**Key words:** dental caries, errors and complications, radiological aspects.

### 334. SUPERFICIAL DENTAL CARIES DIAGNOSIS AND TREATMENT

**Or Hadas**

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**Introduction:** Dental caries is a pathological process that affects hard dental tissues, occurring as a result of several local and general factors, as well as exogenous and endogenous factors.

Through its irreversible evolution, dental caries is the most common cause of the morpho-functional imbalance between the components of the stomatognathic system. The onset of the carious process is characterized by demineralization of hard dental tissues and loss of the enamel mineral components. Adamantine loss can result in dental caries that can lead to dentin exposure. In extreme and progressive cases it can lead to severe complications. Timely detection and correct determination of the diagnosis can impede exposure to causal factors. Their permanent control can maintain the stability of the dental-maxillary system.

**Purpose:** To increase the effectiveness of the treatment of superficial dental caries which includes cavities within the enamel located on the occlusal surfaces of molars. To determine the etiology of superficial dental caries and to assess the efficacy of the treatment of superficial dental caries which includes cavities within the enamel located on the occlusal surfaces of molars using glass ionomer cements, as well as to monitor the clinical course of superficial dental caries.

**Material and methods:** In accordance with the research purpose and investigational objectives, 12 patients aged between 18 and 25 years, who presented to the dental clinic of State University of Medicine and Pharmacy, „Nicolae Testemitanu’’, were subjected to examination and treatment. The patients were selected and included in the study according to their requirements for consultation and treatment at the dentist. The patients diagnosed with superficial dental caries showed a defect affecting only the enamel, with irregular edges, chalky appearance and being an incipient dental caries, with minimal changes. Superficial dental caries was treated by the classical method of instrumental preparation of carious cavities, thorough antiseptic preparation, cavity isolation and drying, filling with glass ionomer Fuji IX-LC. This type of glass ionomer is a preparation biocompatible with hard dental tissues, being resistant to the masticatory pressures and being indicated in filling of superficial dental lesions located on the occlusal surfaces of molars.

**Results:** Of the total number of patients enrolled in the study, the integrity of teeth was reduced and complications, to which hard dental tissues could be exposed, were removed. To maintain the oral cavity in good condition not only the dentist’s intervention is necessary, but also the patient’s support by following thorough oral hygiene, as well as having some food patterns and regular prophylactic check-ups.

**Conclusions:** Clinical monitoring of the patients with superficial dental caries has determined that after the treatment no complications were detected. Use of glass ionomer Fuji IX-LC preparation has shown a high efficacy, it being a preparation biocompatible with hard dental tissues and having a good resistance to the masticatory pressure. Therefore it is recommended to be widely used in dental practice.

**Key words:** dental caries, adamantine, glass ionomer cement.

### **335. BACTERIAL PLAQUE. ITS ROLE IN THE DEVELOPMENT OF INFLAMMATORY DISORDERS**

**Nicolae Gheorghita, Liliana Petruna**

Scientific adviser: L. Eni, MD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Bacterial plaque is a mass of bacteria that are well-adapted to the oral environment. The microorganisms are well attached between them, on the dental surface and also on the structures in the mouth ( dental implants, dental prostheses, dental crowns).

The factors that cause bacterial plaque are: poor oral hygiene, orthodontic appliances, bad dental fillings, crooked teeth.

**Purpose:** We have to determine the level of inflammation and also the clues that can show us an inflammatory disorder.

**Material and methods:** For these purposes 6 persons had been investigated. They were between 16 – 25 years old. All the patients were examined using plaque index, papillary bleeding index and marginal papillary index to determine their role in the development of inflammatory disorders.

**Results:** The examination of the oral hygiene index at the patients showed a satisfactory level of oral hygiene, the bleeding index showed punctate bleeding, marginal papillary bleeding showed a light bleeding at the people, which had been examined.

**Conclusion:** The presented results show that a good oral hygiene and regular brushing can reduce the inflammation of gum.

**Keywords:** bacterial plaque, gum, inflammatory disorders.

### **336. FIXED PROSTHETIC TREATMENT OF HARD TISSUE DENTAL LESIONS AND REDUCED PARTIAL ADENTITIA WITH LIGHT CURE MATERIALS “BIOHPP” TYPE.**

**Daniel Gututui, Dumitru Crismari, Mihai Gututui**

Scientific adviser: Solomon Oleg, Professor, DMD, Head of the Department Orthopedic Dentistry „Iarion Postolachi”, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** prosthetic treatment of coronary odontal lesions and reduced partial adentatia with fixed prosthesis type BioHpp, manufactured by BREDENT is a contemporary alternative in prosthetic treatment of these diseases. BioHpp provides a high possibility in the manufacture of prosthetic devices which can be used both in the frontal areas, as well as the side of the dental arch. With a high resistance section allows the use of 1-2 intermediate elements being made of a polymer with high quality ceramic filler mass. Material properties: it is a class II A medical device, suitable for restorations; which is lighter 6-8 times than metaloceramics; does not contain metals, does not produce the effect of the galvanic cell in the oral cavity, it has been found that it is not allergic and does not cause any change in color of the gums, offers the opportunity to repair the construction of the physiognomy directly into the mouth, is a material resistant to plaque.

**The purpose of the work:** indications and argumentation of dental prosthetic treatment of hard tissue dental lesion and partial adentitia with BioHpp material type, as an alternative to metal-ceramic or metal-composite materials.

**Materials and methods:** in this study were included 11 patients aged between 23 and 47 years with coronary dental injuries and partial edentulous reduced to one or both jaws. The exam was conducted clinical and instrumental, photo documentation, radiographic films were made as well as diagnostic articulator used. BioHpp material was used (veneers) and crea.lign material of BREDENT company.

**Results:** were established clinical criteria of treatment of coronary lesions and toothless partial dental bridge with prosthesis type BioHpp reduced, depending on the clinical case.

**Conclusions:** creation of artificial crowns and dental bridges from the products mentioned above have argued their application is of great quality, aesthetic, durable, flexible in masticatory forces, non-allergic and indicated in all sectors of dental arches.

### **337. ANALYSIS AND EVALUATION OF THE ROLE OF PROFESSIONAL CLEANING METHODS ON THE SALIVARY PH IN SMOKERS**

**Maria Cerlat**

Scientific adviser: Valentina Bodrug, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Smoking is one of the primary factors involved in the occurrence of periodontal disease, and its prevalence and severity are higher in smokers. Smoking causes decreased oxygen supply into the bloodstream, which accelerates the formation of plaque and the initiation of the inflammatory process earlier than in non-smokers.

**Purpose:** To analyze the professional cleaning methods on salivary pH in both smokers and non-smokers, as well as the impact of smoking in the occurrence and development of periodontal disease.

**Materials and methods:** The study lot included group A of 20 patients smokers with chronic catarrhal gingivitis, mild form, with a satisfactory oral hygiene and group B, control group of 20 patients non-smokers, complying with the same criteria of inclusion in the study. All patients signed an informed consent with respect to their participation in this study. The patients of both groups were recorded their salivary pH using a pH paper before ultrasonic scaling and professional cleaning and 10 days after periodontal therapy. During this time patients used the same oral hygiene products, smokers were asked not to smoke for 10 days.

**Results and discussion:** The study showed that all patients had different results of salivary pH recorded before and after professional cleaning. Smokers showed a significant reduction in initial salivary pH acidity compared with controls.

**Conclusions:** Smoking is a risk factor in the occurrence and development of periodontal disease which leads to tooth loss in young patients. Professional cleaning measures reduce the risk of periodontal disease in both smokers and non-smokers. However, treatment is more effective and faster in nonsmokers.

### 338. STRUCTURE AND FORM PARTICULARITIES OF INTERRADICULAR AND INTERDENTAL SEPTA

Ana Ciobanu, Cornel Calfa, Lucia Ciobanu

Scientific adviser: Ciobanu Sergiu, PhD, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Interdental and interradicular septa represents anatomical structures that reference in different types of pathologies like: marginal periodontitis, paradontosis and dental migrations. In literature does not exist enough information about the structure and form varieties of interalveolar septa. We can mention next forms of septa: sharp lance form, dome form, crescent form and dissected form which is divided in: dissected properly and dissected in steps. All this types of forms have a different influence on pathological appearance on the bone structure. Another particularity is an cortical difference that may be not so pronounced at some persons, while to others it is more pronounced. Also a particularity is in the structure of cancellous bone where we can see the distance between bone trabeculae. By time in some pathological conditions we attest changes in interdental and interradicular septa - thinning the cortical at septa's peaks, outbreaks of spongy bone tissue thinning etc.

**Purpose:** Studying varieties of form and factors that influence their changes at interdental and interradicular septa's level in normal and pathological cases.

**Material and methods:** Were studied 132 radiograms of patients that received medical help in USMF, "Nicolae Testemitanu" dental clinic and in private dental clinic, "Parodent Prim" SRL from Chisinau city. Radiographic clichés were analyzed at fluoroscopy. For study we used Новик И.О. classification. The method of collectioning the information was by selective method - were selected only radiograms that corresponded our classification criteria. Therewith we used the method of observation and analyze of types of interdental and interradicular septa in norm and pathological disease.

**Discussion results:** Anatomical structures of interdental and interradicular septa are in strong relation with various factors: tooth anatomy of teeth and their position in the dental arch, type of vascularization, local physico-chemical conditions and local systemic factors. The interdental septum protrude at alveolar level and is more massive in relation with vestibular and oral alveolar wall. Interradicular septum are perforated by multiple holes, through which nerves and blood vessels pass. Cortical thickness is reduced at maxillary level than at mandibula. Normally the anatomical structure of septum is not standart, it has individual particularities (of shape, bone density).

Analyzing the obtained data, we found that from 132 radiograms only 19 (14.39%) of cases was detected with normal structure interdental and interradicular septa to young persons - 16-35 years. From this numbers, dome shaped septum - 27,2 %; sharp lance - 25,3 %; halfmoon - 46,72% and dissected shape - 0,78%.

**Conclusion:** 1. The analysis of data from speciality literature that confirms the four types of interdental septum: dome shaped, halfmoon, sharp lance and dissected shape. 2. The basic factors that influence the shape of septa are: the teeth anatomy and their position in arch, the functional occlusal forces that are transmitted, type of vascularization, physico-chemical conditions of individual local and systemic factors. 3. Obtained results are in relationship with results from speciality literature that refers

to the form of septum: dome-27,2%; sharpened lance- 25,3%; halfmoon-46,72% and dissected form-0,78%. 4. Pathological condition mostly appears molars region where prevail the dome shaped septa.

**Key words:** Septum, dome, radiogram, halfmoon, lance, structure.

### **339. MILD FORM OF LOCALIZED CHRONIC CATARRHAL GINGIVITIS. DIAGNOSIS AND TREATMENT**

**Ksenya Barayev**

Scientific adviser: Lidia Eni, MD, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Gingivitis is an inflammatory disease of the gums caused by the influence of unfavorable local and general factors. It evolves without affecting periodontal ligaments.

Periodontal disease can be prevented by regular oral hygiene, correct tooth brushing, removal of dental plaque, defective fillings in the interdental papilla, incorrect dentures, and orthodontic appliances etc. Gingivitis, by its manifestation, can be mild, moderate and severe, but by the degree of the inflammatory process extent, it may be localized, affecting the gums in the region of one or a few teeth, and generalized, affecting one or both jaws.

**Purpose:** To study the etiology, clinical picture, diagnosis of chronic catarrhal gingivitis and the choice of a rational treatment.

**Material and methods:** This study was performed on six patients diagnosed with localized chronic catarrhal gingivitis, mild form. All patients were subjected to local treatment to remove both the subgingival and supragingival tartar. In addition to the local treatment, the patients also followed the general treatment. As a result, we managed to remove the causal factors that can lead to severe complications, which allowed us to keep the teeth on the dental areola, thus ensuring their functionality over a long period of time.

**Results:** The bleeding of gums and inflammatory process were stopped after the treatment was carried out, thus achieving a stable health level, optimal conditions of cleaning the affected areas, and the possibility to keep the bacterial plaque under control.

**Conclusions:** Chronic catarrhal gingivitis as part of marginal chronic periodontitis requires the proper treatment to be performed correctly.

**Key words:** Gingivitis, inflammatory process, local treatment.

## 340. THE TREATMENT OF CHRONIC APICAL PERIODONTITIS

**Eugen Iuhtimovschi**

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**Introduction:** Chronic apical periodontitis is an inflammatory response of periodontal structures to aggression by pathogens of endo- exogenous origin, when conventional treatment does not ensure a favorable prognosis for extended lesions of periodontal structures. Conservative methods are based on the ability of the active components of the root filling materials to target through dentine tubules, accessory canals and root apex, producing antiseptic and anti-inflammatory action, and repairing the areas of periradicular destruction.

Calcium hydroxide, long known for its antimicrobial properties and stimulation of mineralization, particularly in pulp capping, has found its place in treatment of chronic apical periodontitis. The use of calcium hydroxide in endodontics has won over time a permanent interest due to:

- stimulation of tissue calcification;
- antimicrobial action;
- elimination of persistent apical secretions;
- accelerating decomposition of necrotic tissue.

Calcium hydroxide has the unique property to promote mineralization even in the tissues where this process is not characteristic. Recent assumptions assigns hydroxide group a major importance in acceleration of calcification by providing favorable alkaline environment of the process where inorganic phosphate is precipitated as calcium phosphate (Weine F.S.)

**Purpose:** Estimation of clinical efficacy of medications containing calcium hydroxide, inducing and accelerating osteo-reparative processes in treatment of destructive forms of chronic apical periodontitis.

**Materials and Methods:** In order to develop a rational plan of treatment we studied thoroughly the data from medical history, clinical examination

(probing, percussion, palpation, thermic test, teeth mobility assessment) and additional results (determining of pulp electro-excitability and X-ray examination).

**Results:** The study was conducted on a sample of 12 patients aged between 19-58 years, including 8 women and 4 men, presenting 16 teeth with destructive lesions of apical periodontal tissues (mono-radicular -7, biradicular-5, multi-radicular -4). All teeth were treated with calcium preparations for 3 weeks. Three months later no complete osteo-regeneration was observed in any of the cases. When examining the consignment at 6 months full osteo-regeneration was manifested in 5 cases, while in all others a partial osteo-regeneration was obtained.

**Conclusions:** The analysis of clinical and radiological results demonstrates that preparations of calcium hydroxide are effective remedies in the treatment of chronic apical periodontitis, which favor healing processes and tissue mineralization.

**Key words:** Chronic apical periodontitis, Calcium hydroxide, Treatment.



**PHARMACY SECTION**  
**ORAL PRESENTATIONS**

**341. THE STUDY OF MODERN MEDICATION OF DEPRESSION STATE**

**Vladlena Zozina**

Scientific adviser: Gonciar Veaceslav PhD, Professor, Scutari Corina, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Depression is considered to be the plague of the XXI century. According to the latest statistics more than 125 million people worldwide suffer from depression. In the last twenty years the rhythm of antidepressants sales had increased over 40%. Annually in the world are consumed approximately 10,000 tons of tranquilizers in order to relieve depression. Regarding to the fact that there are few studies about the incidence of clinical manifestations, contemporary methods of treatment, we undertook this research. The goal is to appreciate the epidemiology, clinical manifestations and treatment methods.

**Materials and methods:** In our study we analyzed 98 medical histories and performed a review of the literature of the last 10 years using PubMed.

**Discussion results:** Gender ratio shows that men are more likely to be in depression (70.56%) than women (29.44%). The biggest number of the subjects are in the age group 51-65 years with a slight difference from those who are in their 36-50 years. The smallest group consists of the representatives with the age under 20 years. It is observed a higher percentage of depression cases in rural areas compared to urban ones: 60.98% cases in rural areas and 39.02% in urban areas. The most frequent depressive symptoms are: depressive mood (95-100%); insomnia (95%); concentration disorder (90%); anorexia (80%); fatigability (75%); despair (50%); delirious ideas (35%). By analysis of 33 studies of depression treatment we determined that 50% of the cases had response to medical treatment, while the placebo response rate was 35%. Randomized trials with tricyclic antidepressants demonstrate similar effectiveness with SSRI drugs in prophylaxy but SSRI are slightly better toleration. Tricyclic antidepressants have more side effects, intensity of which persists through the whole time of treatment. This fact can lead to early interruption of treatment. Lower-dose prescribing to reduce side effects will be inefficient, because subtherapeutic doses have low efficiency, 3/4 of treated patients remain depressed despite such a long treatment. To reduce the toxicity of drug treatment scientists appealed to such an ancient method as phytotherapy by studying different plants: *Hypericum perforatum*, Kava, *Bacopa monnieri* and others which have a better effect and lack of serious side effects.

**Conclusions:** According to the study results we established that more effective drugs for depression treatment are SSRI (sertraline) but due to the adverse effects it is better to study the efficiency of natural drugs, which have lower toxicity and lack of side effects.

**Key-words:** depression treatment, antidepressants.

## 342. PHARMACISTS AND THE “VACCINATION SCEPTICS”

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**Introduction:** Vaccination skeptics is nowadays one of the most discussed issues within medical institutions and it's becoming a hot topic in the society. This paper will provide information and analysis on general opinions of population and pharmacists toward vaccination in Moldova. WHO defines vaccines as biological preparation that improves immunity to a particular disease. For healthcare specialists it seems as a quite simple process intended to produce immunity to a specific disease by stimulating the production of antibodies. It's considered one of public health's greatest achievements and one of the most cost effective procedures when it comes to preventing certain diseases.

**Materials and methods:** All provided data is taken primarily from the research made within Republic of Moldova which involves pharmacists as health care professionals and people of different age groups, from different social and professional backgrounds. Surveys are performed online or paper-based and filled anonymously. The results of analysis will be compared with the same data from other countries; will be discussed aspects of a pharmacist's influence on vaccination and monitor the possible scenarios of pharmacists advocating immunizations and promoting disease prevention among population.

**Discussion results:** There are several laws in Moldova that provide necessary information about the importance of vaccines. Several articles of legislation, imply that Moldova promotes compulsory child vaccination. Vaccines, vaccinations, and immunizations tend to be a controversial topic all over the world. While in developing countries people are introduced to it with great enthusiasm in hope to raise healthy generations, people in developed countries gravitate towards having a negative attitude. Recently, it became a huge movement, which is influenced by a growing number of media factors such as websites, fan-groups, discussion forums, videos, books and even documentaries which carry non-vaccine propaganda. Nowadays the society has access to overwhelming amount of information, tends to claim that vaccines are causing debilitating illness. For example vaccination risks, adverse vaccination events which can lead to development of other diseases such as autism or autoimmune diseases which are not officially recognized as vaccine reactions and recorded by doctors. There are opinions that the lowering rate of diseases in developed countries can be a result of water supply, sanitation and increased incomes, not vaccination. From ethical point of view compulsory vaccination is a denial of human rights and governments should not require vaccinations as there is no choice left for people who want to refuse vaccination. The last widely mentioned aspect is religion. People who support vaccination have a list of arguments which is close to that stated by doctors. The most important ones are: reduction of deaths from infectious diseases, lack of proven facts that link adverse reactions to diseases like autism, most of their claims affirm that these are coincidental. From ethical point of view, vaccines are seen as a collective good because the more people are immune to certain microorganisms and viruses the less chances those stand for spreading and lastly they claim that government takes decisions by consulting with specialists in the medical field. Conclusion: Vaccine practices are well-accepted by doctors, public health specialists and pharmacists. It seems at first sight that physicians are the key characters in providing information and reaching out to their patients when it comes to vaccines. The fact that vaccine

administration is prohibited by pharmacists does not mean that they are less important in the vaccination process. Key words: pharmacist, vaccination, adverse events, opinion, population.

### **343. EXPERIMENTAL DETERMINATION OF THE LOGP USING THE SPECTROPHOTOMETRIC METHOD**

**Natalia Savin, Oxana Vislough, Andrei Uncu**

Scientific adviser: Uncu Livia, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** In order to estimate the bioavailability of drugs and their formulations together with the water solubility parameter, it is important to know the ability of a substance to pass through the cell membranes (lipid bilayer). For an approximate estimate of this capacity, it is used the term "lipophilicity", which represents the correlation between the dissolving of substance in water and n-octanol, considered to be a solvent with a polarity close to the phospholipid structure of the cell membrane [1,2]. The purpose of this study was to determine experimentally the lipophilicity of a molecule of a new compound, derivative of oxathiodiazole with antimycobacterial properties, using the spectrophotometric method.

**Materials and methods:** Spectrophotometer UV-VIS Agilent 8453, n-octanol, purified water, laboratory chemical dishes in accordance with requirements of Ph. Eur.

**Results and discussion:** It was prepared the solution of the analyte in n-octanol with an estimated concentration so that the absorbance of the solution to be in the range 1,5-1,8. The solution was analyzed at the wavelength between 220-400 nm, fixing the analytical maximum at 300 nm. It was recorded the absorbance of octane solution: 0,99915. Subsequently, it was recorded the absorbance of the solution after adding an equal amount of water and stirring at the ultrasonic bath (1,01500). It was calculated the lipophilicity, which was expressed by the value logP, working at a pH of the aqueous phase in which the substance has the unionized state (1,799).

**Conclusion:** The analyzed compound has an acceptable lipophilic level according to Lipinski's rules (less than 5), this value being confirmed by theoretical calculations and also by determinations of Thin-Layer Chromatography (TLC) method.

**Keywords:** lipophilicity, spectrophotometry, oxathiodiazole.

### **344. IN VITRO KINETICS STUDY OF VANCOMYCIN RELEASE FROM W/O/W EMULSIONS AND W/O/W/CHITOSAN HYDROGEL FOR TOPICAL DELIVERY**

**Alina Dolghi**

Scientific adviser: Stefan Dima PhD, Professor, „Dunarea de Jos”, Galati, Romania

**Introduction.** Vancomycin (VANCO) is a glycopeptide antibiotic active against Gram-positive bacteria. VANCO is usually distributed on parenteral route in the treatment of staphylococcal infection. Unfortunately, the VANCO administrated by intravenous route cause some undesirable effects such as ototoxicity and nephrotoxicity. Therefore, in recent years, the innovative VANCO topical delivery systems (liposomes, multiple emulsions, polymer nanoparticles, solid lipid nanoparticles) were investigated, and used in the treatment of diseases, such as: local infection, osteomyelitis, skin wound, burns etc [1, 2, 3].

**The aim** of the present work was the preparation of two topical delivery systems based on the W/O/W emulsions loaded with VANCO. We also studied the kinetics release mechanism of VANCO from W/O/W emulsions and W/O/W/chitosan hydrogels and permeation of VANCO through the skin.

**Materials and Methods:** Vancomycin hydrochloride (Mylan S.A.S), chitosan with Mw=180 Da (Sigma Aldrich); soybean oil (Fluka), Span 80 and Tween 80 (Sigma Aldrich), cellulose membrane 0.45 µm (Millipore Corporation, Bedford, USA), deionized water. All reagents used, were of pharmaceutical purity. In vitro kinetics study of VANCO release from the W/O/W emulsion and W/O/W chitosan hydrogel. In vitro experiments concerning VANCO release from the W/O/W and W/O/W chitosan hydrogel were made using a vertical diffusion cell in steady state, and the cellulose membrane as barrier diffusion was used. In vitro skin permeation studies. In order to investigate the VANCO skin permeation, the porcine ear skin was used as penetration barrier. The ear skin was hair depilated, rinsed with physiological saline and washed with BPS.

**Discussion and results.** VANCO-W/O/W emulsion preparation and stability Water-in-oil-in-water (w/o/w) emulsions are systems in which a W/O primary emulsion is dispersed into external aqueous phase. The W/O/W emulsions were recently used to encapsulate hydrophilic compounds in food, cosmetics, and pharmaceuticals. Our results show that the release of VANCO from the emulsion is achieved by diffusion controlled release mechanism, facilitated by the presence of reverse micelles formed into the oil phase. The release and permeation profiles of VANCO followed zero order kinetics. The permeation ability of VANCO-W/O/W emulsions and VANCO-W/O/W/chitosan hydrogel was evaluated using the ear skin as barrier. The control sample was a 0.001M VANCO PBS solution (pH 7.4).

**Conclusions.** The obtained results showed that the release of VANCO from the emulsion is achieved by diffusion controlled release mechanism, facilitated by the presence of reverse micelles formed into the oil phase. The release and permeation profiles of VANCO followed zero order kinetics

**Key words:** vancomycin, multiple emulsions, chitosan hydrogel.

### **345. THE DETERMINATION OF DEXAMETHASONE IN THE MIXTURE DEXAMETHASONE-CIPROFLOXACIN USING THE UV-VIS SPECTROPHOTOMETRIC METHOD**

**Mihaela Staver, Oxana Vislough, Eugen Nicolai**

Scientific adviser: Uncu Livia, PhD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Otitis media, sometimes considered simply an infection or inflammation of the ear is the most common cause of ear pain. Although this condition is a common cause of pain in childhood and is often associated with children, it can affect adults.[2]

The research of the autochthonous and foreign pharmaceutical market shows the presence of a small number of combined drugs used for treating otitis media. It is considered appropriate to develop new combinations as solutions for the treatment of otitis. Based on this fact, the aim of our research was to study the compatibility of drug substances: dexamethasone and ciprofloxacin, using the UV-VIS spectrophotometric method [1].

**Materials and methods:** We studied the spectral behavior of the substances in the mechanical mixture. Dexamethasone and ciprofloxacin were studied individually in different solvents: distilled water, ethanol (96%), solution of HCl 0.1 M, ethanolic solution of H<sub>2</sub>SO<sub>4</sub>. Then the suitable solvent for simultaneous determination of the components in the mixture was selected. The best results were obtained in the solvent- distilled water, which was used for further research. The obtained spectrums were compared to the spectrums of reference standards.

**Results and discussion:** Exactly contoured maximums of absorption for dexamethasone were recorded at 246 nm and the optical density value was determined 0.49 and the amount of substance in the sample was determined 101%.

In order to appreciate the obtained results they were statistically processed, so the results show: RSD(relative standard deviation) - 0,523, Er%(relative error)- 1,383%

**Conclusion:** The developed work technique can be used for quantitative determination of dexamethasone and ciprofloxacin in the mixture and the determination of their compatibility in order to associate them in a combined formulation for the treatment of otitis media.

**Keywords:** otitis, spectrophotometry, dexamethasone

## 346. EVOLUTION OF ORGANOTHERAPY MEDICINES IN CURRENT PRACTICE

**Constantin Chitan**

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**Introduction:** Worldwide, over 350 million patients have benefited from approved medicines manufactured through biotechnology. Currently, over 650 new biological medicines and vaccines are developed to treat more than 100 diseases. Biologics are not new, development of human growth hormone, insulin, and red-blood cell stimulating agents occurred decades ago, but the targets have increased exponentially with new genetic information and new understanding of subcellular cascades and disease processes. Scientific fields used in developing biologics include genomics and proteomics, as well as microarray, cell culture, and monoclonal antibody technologies. The aim of the study is analysing of biological medicines technology process from organotherapy to new current practice of biotherapeutic products. Materials and methods: Has been conducted a descriptive cross-sectional study of different technological manufacturing methods during time of some biological medicines. Discussion results: Biotherapeutics, turned over, human conception about medicine possibilities since they opened new ways of diseases treatment, that recently have considered to be completely incurable. Patients with such terrible diagnosis like cancer, diabetes, multiple sclerosis, chronic kidney disease stage renal failure and others were able to fully recover or significantly improve the quality of life and increase its duration. First generation of biotherapeutics, were products of animals or vegetable origin, for example, bovine insulin, streptokinase, and others. Medicines, such insulin, thyroid hormone, testosterone, estrogen, pancreatin, heparin, have been originally obtained by extraction of animal organs. Since 1922, it has made considerable progress due to the discovery of new hormones produced in pure phase. Then came the products of human origin - growth hormone, antihemophilic factor VIII. The first biotech drug became recombinant human insulin, released on the pharmaceutical market in 1982. Scientific fields used in developing biologics include genomics and proteomics, as well as microarray, cell culture, and monoclonal antibody technologies. Increasing knowledge of genetics and cell processes leads to potential new biologic (and drug) targets at each step in the protein-production process. Today, under the biotherapeutic medicines, in international practice (for example, according to European Medicines Agency,) refers to immunobiological drugs produced by genetic engineering. In particular, for their production is used DNA recombinant technology, the method of controlled expression of other genes. Today there are more than 200 biotech drugs, thousands of new drugs are being studied in clinical trials and about 300 of them are in the final stages of research. About half of all medications developed in the world - biotech drugs. As the exclusive rights for these biological medicines (biotherapeutics) expire, similar biological medicines, or “biosimilars”, are being developed, with some already available on European markets. The manufacturing process of biotech drugs, is very complex. To create a protein that will be used as an active ingredient in the biotechnological preparation is uses a unique line of living cells. The production process involves more than 5,000 critical stages, and for the preparation of quality control is used more than 2000 tests. In the production of biosimilar, practically is impossible to reproduce all the complex technology of production of the active substance, that is why it is necessary to conduct integrated quality control process. Conclusion: Biotechnological drugs - it's unique products, which significantly expanded the possibilities of modern medicine. Today, when the expire a number of

patents of original biotech drugs will appear inevitably biosimilar, what will increase the availability of biotech drugs to the population.

**Key Words:** medicines, biotherapeutics, organotherapies, biosimilar.

### **347. THE IMPACT OF HEALTH TECHNOLOGY ASSESSMENT ON THE AVAILABILITY OF EXPENSIVE DRUGS**

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**Introduction:** Inefficient pharmaceutical policies and use of medicines is one of the top sources of ineffectiveness in health systems. Spending on health cannot increase infinitely, there are always various constraints on the supply of health services. When resources are scarce relative to needs because of a limited budget, the use of resources in one way prevents their use in other ways. Health Technology Assessment (HTA) attempts to give decision-makers some notion of the value of investment decisions in healthcare. The aim of this study is to evaluate the role of HTA on the introduction of high cost medicines through universal health coverage.

**Materials and methods:** It was conducted a cross-sectional descriptive study with the evaluation of procedures, equipment, medications and an interdisciplinary approach that includes analysis of safety, costs, and efficiency. Sources: government organizations data, human and organizational resources, technologies providers, biomedical database, centre's practicing evidence-based medicine, etc. Discussion results: As the medicines are the main drivers to out-of-pocket health payments, and consequently, to catastrophic and impoverishing medical expenditures, the main goal of HTA strategies is to improve the access to essential, quality health technologies including medicines and medical devices – that are fundamental part of every person's right to health. As a starting point, most HTA processes consider the additional health benefits as a way of understanding the value of the recommendations they need to make. HTA processes, those considering coverage for new medicines, examine the economic impact (costs) of decisions to pay for new medicines. Many health systems have been developed guidance for economic evaluation, to ensure estimates of costs and effects of paying for new medicines are derived in a clear and consistent manner. This avoids a situation where an evaluation of one medicine looks more attractive than another, simply because the researcher used different underlying assumptions and approaches. There are 125 focal points of HTA around the world, from which 53 are located in European region. The main purpose of HTA undertaking is planning and budgeting, reimbursement/package of benefits and clinical practice guidelines and protocols. Around 95% of countries use HTA for medicines evaluation, most frequently is used in high income countries (89%) but in low income countries the tendency is significantly lower (62%). Safety (53%-92%), clinical effectiveness (65%-85%), and economic and budgetary impact (45%) are the main components evaluated with HTA. Practically in all countries, for new/original/innovator/without comparator medicines are used as HTA instrument: budget impact analyses, cost-effectiveness analysis and cost-utility analysis (typical for UK). As different states have different ways of accepting evidence and interpreting it, variations exist in the application of HTA appraisals, and these can result in diverging coverage decisions for the same pharmaceutical across different state. There are some limitations on the

use of HTA for new/expensive medicines, it may be difficult to perform satisfactory HTA due to the limited amount of available evidence. The regulator can then decide not to reimburse this drug. However, this may prevent patients from accessing certain promising drugs. In this context “risk-sharing” or “performance-based” agreements are the mechanisms addressing this problem. These schemes intend to protect insurers, while enabling patients to have access to these innovative medicines under certain circumstances.

**Conclusion:** To increase access to new medicines, countries have to perform HTA in policy and decision-making, especially on how best to allocate limited funds to health interventions and technologies; including a new medicine into a reimbursement scheme, evaluation scheme, rolling-out public health programmes, priority setting in health care, setting medicine prices based on their cost-effectiveness, and formulating clinical guidelines. Key Words: Health technology assessment, new medicines, reimbursement.

### 348. MANAGEMENT OF BREAST CANCER SYSTEMIC THERAPY

**Olga Suba**

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**Introduction.** According to the World Health Organization(WHO), breast cancer is the most common cancer in women worldwide, with an increased incidence especially in developing countries, where most cases are diagnosed at later stages with, nearly 1.7 million new cases diagnosed in 2012. It was estimated that worldwide more than 508,000 women died in 2011 from breast cancer. Breast cancer is the leading cause of cancer death among women in developing countries and the second leading cause of cancer death among women in developed countries.

**The aim** of the study is establishment of worldwide common practices of breast cancer systematic therapy. Materials and methods: The study presents a descriptive case study analysis, of available breast cancer therapy, especially in developing countries according with WHO List of Essential Medicines (LME) recommendation.

**Discussion results:** In 2015, 16 new medicines for treating cancers were added to the WHO model of LME, a strong challenge for governments to step up cancer care and guide national efforts to strengthen their health systems. Systemic therapy for breast cancer includes chemotherapy, hormone therapy, and targeted biological therapies. New cancer medicines included in LME was: imatinib (for chronic myelogenous leukemia), rituximab (for some types of non-Hodgkin’s lymphoma) and trastuzumab (for a common subtype of breast cancer). For breast cancer systematic therapy, WHO recommend: cytotoxic and adjuvant preparations: Capecitabine, Carboplatin, Cyclophosphamide, Docetaxelum, Doxorubicinum, Fluorouracilum, Methotrexatum, Paclitaxelum, Trastuzumabum, Vinorelbinum; hormones and anti-hormones: Anastrozolum, Leuprorelinum, Tamoxifenum. Overall, 84 % and 74 % of developing countries had at least one chemotherapeutic and one hormonal agent for breast cancer. Slightly fewer than 10 % of the countries had a HER2-targeted therapy as essential medicine. Tamoxifen, anthracyclines, cyclophosphamide, methotrexate and fluorouracil, doxorubicin



were well represented with inclusion in more than 70 % of the national EML as opposed to inclusion in below 30 % for all other main regimens. Taking into account tumor size, extent of spread, and patient preference, treatment usually involves breast-conserving surgery or mastectomy; in addition, radiation therapy, chemotherapy (before or after surgery); hormone therapy; and/or targeted biologic therapy may be used depending on the stage of the cancer, its biologic characteristics, and the type of surgery used. Effective breast cancer treatment is limited by small numbers of specialized medical personnel; insufficient modern equipment, and the high cost of cancer drugs. Chemotherapy is dependent on multiple factors, such as: size of the cancer, the number of lymph nodes involved, the presence of hormone receptors, and the amount of human epidermal growth receptor 2 (HER2) protein made by the cancer cells. Women with ER+ breast cancer have to administer hormone therapy such as tamoxifen or aromatase inhibitors. The use of the HER2-targeted monoclonal antibody-based treatment trastuzumab together with chemotherapy has been shown to be highly effective in treating HER2-positive cancer, but is cost-expensive in majority of countries. Despite substantial progress made in treatment possibilities, breast cancer survival is still poor in developing countries. This might be due to lack of access to different components of care including systemic therapy.

**Conclusion:** National cancer plans should define health care networks in which centers of excellence become connected through outreach to rural and surrounding areas for consultation and patient triage. Public awareness that breast cancer outcomes are improved through early detection should be promoted in conjunction with the development of resource-appropriate early detection programs. Diagnostic services, surgical treatment, radiotherapy, systemic therapy, and palliative care should become integrated within coordinated multidisciplinary environments.

**Key words:** breast cancer, essential medicines list, developing countries.

### **349. THE PHARMACEUTICAL INDUSTRY ROLE IN ENSURING ACCESS TO MEDICINES IN DIFFERENT COUNTRIES**

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**Introduction:** Different aspects of medicines pricing regulation often represent an obstacle of the patient access to medicines, especially in the developing countries. The main objective of medicines price regulation is to cope with rising health expenditures. Thereby, drug manufacturers, refusing to be present in these markets restraint and preventing access to vital medications and essential medicines. The purpose of the study is evaluation of international medicines pricing regulation carried out between health systems and the pharmaceutical industry.

**Materials and methods:** Has been carried out a descriptive analysis on medicines pricing regulation in different countries in order to determine potential methods of collaboration between pharmaceutical industries and local decision makers. Discussion results: Access to medicine depends on each country's unique capabilities, including the government policies and various factors: availability, affordability, accessibility and quality/acceptability. Most European countries employ a huge variety of regulation measures at the same time both on the demand and on the supply side: supply side regulation:

in patent drugs - price controls: administrative or statutory pricing, external reference pricing, rate of return regulation, negotiations and price-volume agreements, direct expenditure controls: payback, direct expenditure controls: price volume agreements, cost-plus pricing; supply side regulation: off patent drugs - tendering for generics pharmaceuticals in primary care, price capping for generics and linking these to the originator price; supply side regulation: reimbursement methods - positive and negative formularies, internal reference pricing, HTA, innovative pricing and reimbursement schemes. Currently, the pharmaceutical R&D is oriented mainly to the treatment of non-communicable diseases like cancer, Hepatitis C, tuberculosis, rare disease, diabetes. In 2014 have been approved on the EU market 30 new active substance (NAS) – from which 13 NAS take an orphan status, 5 - alimentary tract and metabolism, 7 - anti-infective, 11 - anti-cancer and immunomodulatory, 1 – cardiovascular, 1 – nervous system, and 5 – other diseases; on US market 45 NAS, 21 with orphan status, 9 - alimentary tract and metabolism, 7 - anti-infective, 15 - anti-cancer and immunomodulatory, 3 – nervous system, and 11 – other diseases. The collective impact of the Trans Pacific Partnership (TPP) on the pharmaceutical industry will be to grant at least 10 years of additional monopoly to innovators in various ways. This may reduce pressure on innovators for researching new drugs and developing new remedies. Consequently, the society at large will suffer. This would also mean that patients in TPP countries would have to continue to pay higher prices for 10 more years. Those who can't afford these will have to suffer without medicines that could have cured them.

**Conclusion:** The tension between managing cost and fostering innovation of medicines remain a big problem. There is need for greater cooperation between countries and stakeholders on what constitutes a fair reward for industry innovation while preserving access and sustainability. This should involve better balancing of the value of innovation with equitable, affordable patient access, collaboration among health systems might benefit from including a particular focus on chronic care, specialty medicines and rare diseases. Companies remain conservative in their approach to patents, and some of them have been the subject of settlements or decisions relating to ethical marketing, bribery or corruption standards or competition laws in the last two years.

**Key Words:** medicines, pharmaceutical industry strategy, pricing.

## **350. THE ACCUMULATION DYNAMIC OF POLYPHENOLIC COMPOUNDS IN *PHYSALIS ALKEKENGII* L.**

**A. V. Bili**

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**Introduction.** *Physalis* (*Physalis alkekengi*), herbaceous perennial plant, which is composed of a big number of biologically active substances: polyphenols, tannins, bitter substance – physalin, flavonoids, saponins, ethers, steroids, tannins, vitamins: A, C, B1, B2, B6, B12, alkaloids (solanine, scopoletin). Lycopene (carotinoid) substance is giving a vivid coloration to its fruits. *Physalis* edible breeds have been used both in cooking and in medicine. Just a few therapeutic benefits can be detached from a huge variety. Therefore, its antioxidant effect for medicine, is achieved through the presence polyphenolic compounds in the plant. Plant extracts have a marked antimicrobial action. The extract of

the flower cups is used as an anaesthetic and anaplerotic solution. Physalis berries are able to eliminate urates from the body, have diuretic, hemostatic, inflammatory and choleric action. The plant can be used as multi-vitamin product, favorably influencing the immune system. Green fruits are toxic, because of high concentration of alkaloids.

**Materials and methods.** The aim of the study was to identify biologically active substances - polyphenols, responsible for antioxidant action of this plant, through qualitative and quantitative analysis. Leaves were used as a plant material collected in the center of cultivation of the State University of Medicine and Pharmacy "N. Testimiteanu", in the period of May – September, and dried in accordance with the Pharmacopeia rules.

**Discussion results.** Direct spectrophotometry was used for the quantitative determination of the amount of the phenolic compounds in this study, based on the measurement of the optical density of colored reaction products resulting from oxidation. Among the existing analytical methods for determining phenols on the basis of oxidation-reduction reaction is the method of Folin – Denis FD, with the use of gallic acid as a standard. The FD method is based on the formation of oxidation products of the phenolic compounds by wolfram acid in an alkaline environment, created by the saturated solution of sodium carbonate. In order to speed up the process of oxidation – restoration the water was heated at 80 °C for 30 minutes (according to G. I. Mechnikova chemical-pharmaceutical magazine, vol. No 4, No 2, 2007).

**Conclusion.** Polyphenols are active principles, responsible for antioxidant effect with a wide spectrum of use.

The total amount of the polyphenolic compounds, containing in percent in leaves, shows the following accumulation dynamic: 12,77% - May, 13,12% - June, 13,15% - July, 15,05% - August and 13,73% - September. The maximum percentage of the polyphenolic compounds have been determined in August.

**Key words:** polyphenolic compounds, *Physalis alkekengi* L.

## **351. COMPARATIVE PHYTOCHEMICAL STUDY OF VEGETABLE DRUGS FROM SP. WITHANIA SOMNIFERA L. (DUNAL) MICROPROPAGATED IN VITRO GROWN IN GREENHOUSE AND OPEN FIELD**

**Laurita Matveiciuc**

Scientific adviser: Calalb Tatiana, PhD, Associate Professor, Chair of pharmacognosy and pharmaceutical botany, *Nicolae Testimiteanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** *Withania somnifera* L. (Dunal), commonly known as Ashwagandha, is an important medicinal plant that has been used in Ayurvedic and indigenous medicine for over 3,000 years. In view of its varied therapeutic potential, it has also been the subject of considerable modern scientific attention. It was successfully multiplied by biotechnological methods in vitro in Botany Garden of Academy of Science of the Republic of Moldova and acclimatized in climate conditions of Moldova.

The objective of the study is to determine the total content of major chemical constituents, the alkaloids, in different vegetable drugs of *W. Somnifera* micropropagated in vitro grown in greenhouse and open field.

**Materials and methods:** Roots, aerial parts, leaves of *W. somnifera* plants obtained by micropropagation in vitro grown in greenhouse and open field. Qualitative identification of alkaloids were provided by series of special chemical reactions (Bouchardat reagent, Dragendorff reagent, tannic acid, phosphomolybdic acid, phosphotungstic acid, picric acid, picrolonic acid). Quantitative study was effectuated by isolation with chloroform in separated funnel. After drying of chloroform extract with alkaloids in acids medium were determined the total content of alkaloids by titrimetric method with solution of Sodium hydroxide.

**Discussion results:** The qualitative study results demonstrated that alkaloids are present in all vegetable drugs, but more effective in root (*Withaniae radices*). The results of quantitative study denote that the total contain of alkaloids in vegetable drugs *W. folia* and *W. herba* obtained from greenhouse consist 1.154% in leaves and 1.016% in aerial parts. In vegetable drugs obtained from the open field plants the results was less, respectively *W. folia* – 0.851%, *W. herba* – 0.784%. Comparison, the highest content of total alkaloids there is in *W. radices* (1.415%) grown in open field than in decreasing *W. folia* (1.154%; 0.851%) and *W. herba* (respectively – 1.016%; 0.784%).

**Conclusion:** The phytochemical study of three vegetable drugs obtained from sp. *W. somnifera*, grown in the climate conditions of Moldova may be the good source of tropane alkaloids, especially *W. radices*.

**Key Words:** *Withania somnifera*, alkaloids, vegetable drug, qualitative and quantitative study.

## **352. UV SPECTROPHOTOMETRIC METHOD VALIDATION OF ANALYSIS OF A NEW SUBSTANCE WITH PRONOUNCED ANTIMYCOBACTERIAL ACTIVITY**

**Igor Tocarenco**

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**Introduction.** Tuberculosis is a curable disease and Antimycobacterial remedies are applied successfully more than 40 years. However, TB is a major public health problem, especially for developing countries, including Moldova. Increased incidence of tuberculosis requires the development and standardization of new concepts and therapeutic remedies.

**Aim of the study.** UV spectrophotometric method validation of a new antimycobacterial substance for quantitative analysis of its in pure substance.

**Material and methods.** Spectrophotometer UV (Agilent 8453); electronic balance (OHAUS), 1E-4,4-dimethyl-1-(4-nitrophenyl) -2- (1H-1,2,4, triazole-1-yl) -1-penten-3on.

**Results.** According to the study conducted, the absorption spectrum was analyzed using a spectrophotometer UV, highlighting absorption maxima at 201 nm and 301 nm. There were analyzed five different concentration ethanol solution and built calibration chart of the solution. They were determined and validated the following parameters: repeatability, specificity, accuracy, reproducibility. A defined mode and conditions necessary for conducting spectrophotometric analysis.

**Conclusions.** In the study were investigated the numerical values of some qualitative parameters of a new chemical molecule, which are the basis for further stability studies and formulation of medicinal forms.

**Key words:** 1E - 4,4 - dimethyl- 1 -(4 - nitrophenyl) - 2 - (1H - 1,2,4, triazole- 1 -yl) - 1 - penten- 3on, UV spectrophotometry.

### **353. POLARIMETRY AS A METHOD USED IN QUALITY CONTROL OF DIFFERENT PHARMACOTHERAPEUTIC GROUPS CHIRAL DRUGS**

**Valeria Grigoriev**

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**Introduction:** Chiral compounds that are found in all pharmacotherapeutic groups, and represent a major potential in curing degenerative diseases possesses the property to rotate the plane of polarization of light, so they are optically active phenomenon that can be observed and investigated using a polarimeter. Polarimetric method is widely used in pharmaceutical analysis for determining the optical activity of drug substances, their quantitative and qualitative assessment.

**The purpose of this paper** is to estimate the importance, actuality and usefulness of polarimetric method in the analysis of chiral drugs from different pharmacotherapeutic groups.

**Materials and methods:** In order to determine statistically the rate of recommendation of polarimetric method in the research of drug substances by various states pharmacopoeia, to highlight the benefits of polarimetric method was performed meta-analysis of Romanian Pharmacopoeia ed. X (FR), the European Pharmacopoeia 8th ed. (Ph. Eur.), United States Pharmacopoeia 2nd ed. (Ph. USP), British Pharmacopoeia 2013 (BPH.), The information published in specialized periodicals.

**Results:** In FR ed. X there are 83 drug substances using specific rotatory power is an index of quality, which constitute 12.77% of the total number of substances. For comparison, in European Pharmacopoeia this number is about 15.3 times higher. However, the use of this physical constant for quantitative determinations of is quite limited and this despite the fact that polarimetry as an optical method polarimetry can be used successfully in dosing chiral drug substances.

**Conclusion:** There is a great number of pharmaceutical substances with optical properties included in pharmacopoeia. Polarimetric method can be proposed as an alternative for the dosage of various pharmacotherapeutic groups chiral substances, as a quick, accessible, accurate and non-destructive method.

**Key words:** chiral drugs, polarimetry, polarimeter, optic method, quality control, Pharmacopoeia

### **354. THE DEVELOPMENT OF THE TECHNOLOGY OF PREPARATION OF A NEW, ORIGINAL, COMBINED OINTMENT CONTAINING IZOHYDRAFURAL, METHYLURACIL AND BENZOCAINE**

**Tatiana Gheorghies, Elena Donici**

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**Introduction:** The pathogenesis and treatment of infected wounds continues to be a challenging problem and represents a considerable healthcare burden. An effective treatment of wound infection requires combined drugs, which may reduce time to healing and minimize impact on patients, healthcare systems and society.

**The purpose** of the study was to develop the technology of preparation of a new, original, combined ointment containing of izohydrfural, methyluracil and benzocaine. It aims to Associate the antibacterial action of izohydrfural, the regenerating action of methyluracil and the local anesthetic action of benzocaine. The active substances have been incorporated in different pharmaceutical excipients to develop the optimal formula of the combined ointment. It was established that the lipophilic excipients are the most optimal base for the technology of the ointment.

**Materials and methods:** It was used the active substances: izohydrfural, methyluracil and benzocaine, the excipients: vaseline, oleum vaselini, cetostearyl alcohol, polyethylene glycol 400 and purified water.

**Discussion results:** It is already known the antibacterial action of the original, active substance izohydrfural, which is a derivative of 5-nitrofurantoin with valuable insights into the treatment of infected wounds and not only. The polyvalent nature of the infection requires a complex treatment. That's why the association of izohydrfural with regenerating substances and local anesthetics in the same pharmaceutical form, will solve the problems related to pain and term of regenerative process, facilitating the treatment of infected wounds.

The active substances have been incorporated into lipophilic and hydrophilic excipients to develop the manufacturing technology of the combined ointment. It was investigated 12 compositions according to general criteria of the preformulation of ointments. The lipophilic excipients proved to be the most optimal, due to the lipophilic nature of benzocaine and methyluracil. Izohydrfural was incorporated using the water in oil emulsion base: cetostearyl alcohol.

It was established the sequence of incorporation of the ingredients into the ointment. The technological process of preparation of the combined ointment contains the following steps: (1) Preparation of the active substances; (2) Preparation of the excipients; (3) Incorporation of the active

substance into the base of ointment; (4) Quality control of the combined ointment; (5) Packaging of finished product.

**Conclusion:** It was developed the technology of preparation of a new, original, combined ointment containing izohydralfural, methyluracil and benzocaine, which will be the basis for the Technological Laboratory Regulation for manufacture of investigational series of product.

**Key Words:** izohydralfural, methyluracil, benzocaine, technology, ointment.

## 355. CHAMOMILLAE FLOS AS A VALUABLE RESOURCE IN THE NEW TRENDS OF NEUROLOGICAL DISORDERS

**Roxana Mihaela Costea**

Scientific advisers: Lecturer Oana Cioanca, PhDPharm, Faculty of Pharmacy, *Grigore T. Popa* University of Medicine and Pharmacy, Iasi, Romania; Prof. habil. Lucian Hritcu PhD Biol, Faculty of Biology, University „Al. I. Cuza” Iasi Romania

**Introduction:** *Matricaria chamomilla* L. is a well-known and a long used medicinal plant. The rational phytotherapy trends impose strict control of the plant material used to treat ailments. Therefore, the source and the quality of the raw material is highly important for obtaining a herbal medicinal product with certain biologic activity. Our aim was to obtain, standardize (TLC, UPLC) and biologically evaluate a hydro-alcoholic extract from chamomile flowers (ethanol 50 %; 2.5 g/100 mL) of known origin.

**Materials and Methods:** The phytochemical analysis used thin layer chromatography (TLC) and liquid chromatography techniques (UPLC). Since most of the pharmacological properties of chamomile extracts are known, we used several *in vitro* (Folin –Ciocalteu assays, scavenging capacity against DPPH and ABTS radical) and *in vivo* (radial plus maze, forced swimming, Y test) tests to assess its potential in neurological disorders such as Parkinson and Alzheimer. The animal model was induced by intracerebroventricular (i.c.v.) injection of scopolamine and all surgical procedures were conducted under aseptic conditions with sodium pentobarbital anesthesia, to minimize animal suffering and to reduce the number of animal used (white, Wistar male rats, b.w 200±50g). The animal's behavioral activities within pharmacological tests were statistically analyzed with two-way analysis of variance (ANOVA). All results are expressed as mean ± standard error of mean (S.E.M.).

**Results:** TLC and UPLC confirmed the presence of luteolin and apigenin glycosides, as well as caffeic and chlorogenic acids. Apigenin-7-glucoside amounted up to 0.42%, higher than the European Pharmacopoeial limit (minimum 0.25%). Total polyphenol content of the extract was 68.70 ± 2.55 mg GAE/g. The investigated extract had a good scavenging activity both against DPPH radical (IC<sub>50</sub> = 47,8 ± 1,4 µg/mL) and ABTS cation (IC<sub>50</sub> = 21,4 ± 0,2 µg/mL), comparable with the IC<sub>50</sub> values of the chosen standard (caffeic acid). The scopolamine-treated rats exhibited disorientation, a decreased exploratory activity, a low percentage of the time spent and number of entries in the open arm within elevated plus-maze test and a decreased swimming time and increased immobility time within forced swimming test. Intraperitoneal administration of chamomile extract in doses of 25 mg/kg b.w. or 75 mg/kg b.w. significantly induced anxiolytic- and antidepressant-like effects. Moreover, short memory was improved considerably as compared to the positive control group.

**Conclusions:** Our results suggest that the chamomile extract rich in polyphenols, especially apigenin-7-glucoside ameliorates scopolamine-induced anxiety and depression in laboratory rats. Thus, the results of the present study indicate that a standardized chamomile medicinal product may have clinical applications in the management of anxiety, depression and memory impairment related to dementia.

**Key words:** neurologic disorders, chamomile, standardized extract, antioxidant

## 356. STUDY OF SPECTRAL AND CHROMATOGRAPHIC METHODS ISOFLAVONOIDS.

**Anna Cazanevscaia**

Scientific adviser: Dr. Rodica Dinica, Professor, *Dunarea de Jos* University, Galati, Romania

**Introduction:** Isoflavones are a subclass of plant phenolic compounds belonging to the major classes of flavonoids with the chemical structure of which is based on a skeleton composed of 15 carbon atoms. Such studies have indicated that there is a lower incidence of breast and other cancers common in menopause effect, antioxidant activity and other benefits. We aimed to analyze the spectral and chromatographic methods buds extracts obtained from: soybean (*Glycine max*), dill (*Anethum graveolens*) and anise (*Pimpinella anisum*) to demonstrate the presence of pure isoflavones and obtaining the product mix, with another methods we try demonstrated antioxidants effect.

**Materials and methods:** Using various methods of analysis, chromatographic methods, spectrophotometric, we analyzed the antioxidant compounds such as isoflavones polyhydroxylic class and class oxidase antioxidant enzymes (peroxidase, catalase and polifenoloxidaza) extracts obtained from the plants mentioned above.

We also analyzed the antioxidant activity by determining the inhibition of DPPH radical and we evaluate the total polyphenol content (TPC) of extracts obtained.

**Discussion results:** The results of chromatographic spectra UV / Vis obtained demonstrate isoflavonoids in all analyzed extracts. Also, all analyzed extracts contain significant amounts of antioxidant enzymes.

**Results and Conclusions.** The presence of these compounds argues parallels. The results that came out in the content of polyphenols and antioxidant activity are very good. So, in vitro demonstration plants proprieties analyzed antioxidants are important factors in fighting free radicals.



### 357. THE STUDY AND SELECTION OF EXCIPIENTS FOR FORMULATION OF ANTIMYCOBACTERIAL CAPSULES WITH PROPILTODIAZOLOCHINAZOLIN ONE

**Ecaterina Bilici, Oxana Vislough, Andrei Uncu**

Scientific adviser: Uncu Livia, PhD, Associate Professor; Ciobanu Nicolae, PhD, Associate Professor, Faculty of Pharmacy, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Tuberculosis is a bacterial infection, endemic and contagious disease, caused by *Mycobacterium tuberculosis*, which affects, according to statistics of the World Health Organization year 2014, 9.6 million of population, including new cases of illness 6 million and 480 thousands multidrug-resistant TB. The studies of TB drugs in our country and from the world, have demonstrate that the efficiency of treatment is increasingly smaller. So, our goal is the formulation of capsules with propiltiodiazolochinazolin-one, a new original compound antimycobacterial.

**Materials and methods:** We studied the bibliographic advanced nomenclature of excipients used most often in solid formulations with antimycobacterial therapeutic effect, depending on the structure of active substances and physico-chemical properties. We selected the following auxiliary substances: anhydrous lactose, lactose monohydrate, magnesium stearate, microcrystalline cellulose, polyvinylpyrrolidone, sodium starch gluconate, polyethyleneglycol 4000, 6000.

**Results and discussion:** Propiltiodiazolochinazolin-one is a microcrystalline substance, insoluble in water, which allow us to choose excipients which can be used in gels, to obtain granules and excipients with a certain concentration of water, to obtain powders. In the base of the list of selected excipients, were elaborate six formulation of capsules, for which subsequently will be determinated the physico-chemical and technology properties of powders and granulates.

**Conclusion:** The selected excipients, according to the physico-chemical characteristics, the structure and the therapeutic effects of the active substance, allow the formulation of the antimycobacterial capsules with propiltiodiazolochinazolin-one.

### 358. NMR ANALYSIS OF PHENOXYTHIAZOLECHLORALUM

**Victor Curac, Ana Podgornii**

Scientific adviser: Vladimir Valica, PhD, Professor, Chair of pharmaceutical and toxicological chemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Nuclear magnetic resonance (NMR) is an analysis method for studying the magnetic properties of atomic nucleus and provides information about the number, type and spatial position of the nucleus in the molecule. Together with infrared spectrophotometry (IR), the NMR is a safe tool in establishing the chemical structure of unknown substances in organic synthesis, drug

designing, biochemical process description, analysis of metabolites, the chemical and pharmaceutical analysis.

**Objective of the study.** To determine the chemical structure and the spatial conformation of phenoxythiazolechloralum for designing an antimycobacterial drug.

**Materials and methods.** Bruker NMR spectrometer; electronic balance (Ohaus), phenoxythiazolechloralum.

**Results and discussion.** In this research, the NMR spectra were obtained in relation to internal reference standard of tetramethylsilane (TMS). The study of protonic NMR spectrum (<sup>1</sup>H1) provides information about the chemical shifts of each type of proton and functional groups, which indicates the presence of CH bonds in the benzene ring (2-4), the aromatic chlorine (1-6) and the alcoholic hydroxyl group (3 -4). The NMR carbonic spectrum (<sup>13</sup>C6) demonstrates the spatial position of the functional groups that contain carbon, namely aliphatic CH links (25-40), CH in benzene ring (125-145), C = N (117) C = O ( 194). These results allow to present the chemical formula of phenoxythiazolechloralum.

**Conclusions:** According to this study was determined the chemical structure and spatial conformation of phenoxythiazolechloralum, a drug with antimycobacterial real potential. Key words: NMR spectroscopy, phenoxythiazolechloralum, antimycobacterial.

## **359. COMPARATIVE STUDY OF THE ANTIDEPRESSANT ACTIVITY OF THE EXTRACTS AND BIOLOGICALLY ACTIVE SUBSTANCES OF ELEUTHEROCOCCUS SENTICOSUS**

**A.Y. Alekseeva, A.A. Bazitova, E.N. Zaitceva**

Scientific advisors: PhD in Medicine, Associate Professor; E.N. Zaitceva; D.Sc. in Pharmacology, Full Professor; V.A. Kurkin, Samara State Medical University, Samara, Russia

**Introduction:** The problem of stress has theoretical and practical significance. The stimulation of the immune system and of the adaptive capacity of the organism can be achieved by physical training or introducing into the organism adaptogens. The most important natural adaptogens are the following plants: Panax Ginseng, Eleutherococcus senticosus, Rhodiola rosea, etc. We have researched Eleutherococcus senticosus. The leading groups of biologically active substances (BAS) of Eleutherococcus are phenylpropanoids: eleutheroside B (syringin), eleutheroside D and coumarin (eleutheroside B1), sterol glycoside, carbohydrates, polysaccharides, essential oils, resins and other substances.

**Materials and methods:** The experiments are performed on white outbred rats of both sexes weighing 200-220 g at the Department of Pharmacology of SamSMU. Four groups of experimental animals were formed. We introduced the following substances liquid extract of the Eleutherococcus senticosus in dose of 150 ml/kg, the active substances Eleutherococcus senticosus - syringin and eleutheroside B1 in dose of 10 mg/kg and the comparison drug Amitriptyline in dose of 5 mg/kg. All drugs were administered intragastric probe for rats on the background of 1% water load. Control animals received only water load. After a single dose administration of the drug after 2 h was examined

antidepressant activity in The Porsolt swim test (PST) (The behavioural despair test). The animal have placed into the cylinder for 5 min and we register the active and passive swimming and the time immobilization. The increase of the time active swimming and the decrease of the time immobilization are considered as antidepressant effect.

**Discussion results:** The result of research found that the average time of movement of animals from the experimental groups exceeds the movement of control group and comparative groups. The comparison drug showed a significant increase of the average time of movement to 27%, the liquid extract of eleutherococcus to 46%, the eleutherococcus eleutheroside B1 to 51% and the Eleutherococcus syringin to 62% on the value of water control. By comparing the test substances with amitriptyline we found that the liquid extract of eleutherococcus and eleutheroside B1 nonsignificant increase the average time of the movement of animals to 15% and 19% respectively and the administration of syringin increase significant the activity of rats to 27%.

**Conclusion:** As a result of experiments we found that the active substances syringin of the Eleutherococcus senticosus has antidepressant effects. The liquid extract of Eleutherococcus senticosus and eleutheroside B1 exert antidepressant activity similar to the action of amitriptyline in dose of 5 mg/kg. The antidepressant activity of the experimental substances syringin and eleutheroside B1 is pronounced.

**Key Words:** Eleutherococcus senticosus, phenylpropanoids, syringin, Porsolt swim test.

## **360. THE USE OF ATOMIC ABSORPTION SPECTROSCOPY FOR THE DETERMINATION OF CALCIUM IN DAIRY PRODUCTS**

**Marcel Gusan, Oxana Vislouh**

Scientific adviser: Uncu Livia, PhD, Associate Professor, Department of Pharmaceutical and Toxicological chemistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Calcium is a mineral present in the highest quantity in the human body and has several important functions. Over 99% of total body calcium is in the bones and joint, which are designed to support the structure. The remaining 1% is present in the blood, muscle and intercellular fluids. Dairy products are the best sources of calcium in the diet, therefore, the health authorities recommended to drink three glasses of milk per day. The calcium content in dairy products is different depending on several factors.

**The purpose** of this study is a quantitative assessment of calcium in various milk products using a contemporary instrumental method - atomic absorption spectroscopy (AAS). The basic principle of atomic absorption measurements is background radiation attenuation due to absorption in the sample atomized. Relationship between initial and attenuated radiation gives information about the concentration of the element in the test sample.

**Materials and methods:** 1% fat milk, 2% fat yogurt, skimmed yogurt, atomic absorption spectrometer ICE 3300, lanthanum oxide, calcium carbonate, tableware and household utensils laboratory. Evaluation of the calcium content was carried out based on the standard curve.

**Results and discussions:** Samples for analysis were prepared by homogenization of the products under study with lanthanum oxide solution 10% dilution without extraction with mineral acids. The calibration curve was linear one, characterized by the regression equation  $y = c + 0.1999 \cdot 0.4085 \cdot$  coefficient of correlation  $r = 0.9997$ . The calcium content in milk was 987,62mg / l, yoghurt 2% - 1104.76 mg / L, skimmed yogurt-1095.23 mg / l. The results were compared with references and shows an acceptable correlation values. Considering the compromise made between cost and required sensitivity, flame AAS technique can be considered suitable for the determination of calcium.

**Conclusion:** It was used a simple method for preparing samples for spectroscopic measurements that allowed precise evaluation of the calcium in dairy products. The method can be recommended for routine analyzes.

**Keywords:** calcium, dairy products, atomic absorption spectroscopy.

### 361. CUCUMIS SATIVUS L. PHARMACEUTICAL EXTRACTIVE FORMS

**Mariana Bologan, Catalina Anamaria Bonef**

Scientific adviser: S. L. Dr.Lupoae Mariana, *Dunarea de Jos* University, Galati, Romania

**Introduction:** Since ancient times, men and women have always had a desire for a better appearance and beauty, a wish that is still genuine and nowadays. Throughout the years, recipes, dishes and cosmetics, that were more or less available for this purpose, have been used. One of the widely cultivated plant, with many important benefits for health and skin tone improvement is *Cucumis sativus* L.

**Materials and methods:** The study is based on botany, macroscopic, microscopic and histochemical exam of the product; obtaining the extracting aqueous and alcoholic solutions by various extraction techniques, provided in the specialty literature (infusion, decoction and soak); the use of extracting aqueous and alcoholic solutions to obtain cosmetic lotions depending on the type of skin tone; determine the point of saturation of the vegetal product.

**Discussion results:** Based on the extracting aqueous and alcoholic solutions, cosmetic lotions for every type of skin tone were obtained also, there were determined the organoleptic characteristics and their pH. It has been found that the aqueous solutions lost their stability, crossing from a slightly acid pH (pH=5.5) to acid pH (pH=3-3.5). Cosmetic lotions which were based on extracted alcoholic solutions have kept both their organoleptic characteristics and pH value during the whole period of study (30 days).

**Conclusion:** *Cucumis sativus* L. is recommended to be used in obtaining cosmetic emulsions, given the fact that it shows good results.

**Key Words:** *Cucumis sativus* L., solutions, extraction, skin, cosmetic, toning.

## 362. ANTIOXIDANT ACTIVITY AND TOTAL PHENOLIC CONTENT OF SPROUTED GRAINS

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The sprouted grains like wheat, barley, red lentils, corn, sunflower and buckwheat have attracted much interest in recent years. Polyphenols of cereals are the major bioactive compounds for health benefits, including anti-inflammatory, antiallergic, antithrombotic, antibacterial, antiviral, and vasodilatory actions. According to information in the Medline database, the past ten years have seen a 340% increase in manuscripts mentioning “antioxidants”. Many of the biological functions, such as antiaging, anticarcinogenicity, and antimutagenicity, originate from antioxidant activity.

**The purpose** of this research paper work is:

- to estimate the average content of polyphenols compounds and their antioxidant activity;
- to establish the significance of sprouted cereals in our day by day diet, to find out the perspectives of their therapeutical use.

**Materials and methods.** Meta-analysis of scientific information that was published in specialized periodicals. Folin-Ciocalteu reagent was used in determining total phenolics content. Antioxidant activity was determined using DPPH -  $\alpha$ ,  $\alpha$ -diphenyl- $\beta$ -picrylhydrazyl free radical scavenging method.

**Results.** Sprouting breaks down starches in grains to simple sugars that are easier to digest. It also produces Vitamin C and increases the Vitamin B content. Enzymes that are produced during sprouting help with the breakdown of the grain in the digestive system. Sprouting neutralizes enzyme inhibitors and phytic acid, a compound that blocks absorption of the minerals, inactivates potent carcinogens present in grains called aflatoxins, it also results in an increase in essential fatty acids and crude fiber content. A key role in all the crucial processes plays their antioxidant capacity and total polyphenolic content.

**Conclusion.** The sprouted grains are the major source of polyphenols with antioxidant capacity. As already mentioned, antioxidants have significant potential health benefits; they may protect cell constituents against oxidative damage and therefore limit the risk of various degenerative diseases Associated to oxidative stress such as cancer, cardiovascular disease and osteoporosis. Besides, sprouted cereals extract could be used in food as an additive, i.e as a source of natural antioxidants in order to replace the synthetic ones. Thus, sprouted cereals, due to the low cost and easy availability, can serve as good substrates offering significantly nutritional dietary supplements and bioactive compounds, and had a tremendous potential in food and pharmaceutical industry.

**Keywords:** sprouted grains, antioxidants, polyphenols, health benefits, nutritional dietary supplements.

### 363. PHARMACEUTICAL APPROACHES OF 1,3,4-OXADIAZOLE DERIVATIVES

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**Introduction:** 1,3,4-oxadiazole is a heterocyclic compound containing an oxygen atom and two nitrogen atoms in a five-membered ring. Derivatives of this structure are the key compounds with various and important biological activities which can be used in drug design. The objective of this study is to make an overview of pharmaceutical approaches and broad spectrum of pharmacological activities of 1,3,4-oxadiazole derivatives as reported over the past ten years.

**Material and methods:** This review is based on published studies in English providing relevant information on 1,3,4-oxadiazoles were identified by searching PubMed, Google Scholar, Embase and Springer, restricting the studies with biological information and the year of publishing from 2006 to February 2016.

**Discussion results:** Some of recent studies have shown that 1,3,4-oxadiazoles and its derivatives were reported to possess an excellent antimicrobial, antifungal, anti-inflammatory, analgesic, antioxidant activity. This research provides information about chemical properties, constants, assays and methods used for qualitative and quantitative analysis of 1,3,4-oxadiazoles and its derivatives. Also, we highlight pharmacophore groups which lead to specific pharmacological activities. The antimicrobial activity is the most reported biological effect. According to the F. Macaev's research, the newly synthesized series of 5-aryl-2-thio-1,3,4-oxadiazole compounds appeared to be most active derivatives presenting more than 90% of mycobacterial growth at 12.5 µg/ml.

**Conclusion:** This paperwork provides fundamental chemical and pharmacological information about 1,3,4-oxadiazole derivatives it proves to be significant for further research work on the bioactive oxadiazole ring containing compounds.

**Key words:** 1,3,4-oxadiazole, antimycobacterial, pharmacophore, assay, drug design.

### 364. THE INFLUENCE OF HYPERBARIC OXYGEN ON ATTRACTION TO ALCOHOL

Alina Doroshevici

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**Introduction:** Despite of the joint efforts of scientists worldwide during many years, the alcoholism continues to be a major medical and social problem. The effective method of treatment remains to be developed.

**Aim:** To study the action of the hyperbaric oxygen (HBO) on attraction to alcohol in experimental conditions.

**Material and methods:** The study of alcohol consumption's level by rats was performed by selecting animals with different degree on attraction to alcohol. Fifty rats were divided according to their activity in condition of inescapable swimming in water pool. The overall time of swimming was fixed. Accordingly, animals were divided in low-active (LA)-22 rats and high-active (HA)-28 rats. Pursuant to existent literature, LA rats have higher attraction to alcohol than HA rats. Two groups by 10 rats were formed. The second of it was the control group. The LA animals were placed in individual cages with access to water and alcohol (15%). The overall volumes of ingested alcohol were compared during 10 days on the background of HBO (oxygen 2 ata, 60 min) and 10 days without HBO for the first group. The control group underwent the same measurement but without HBO action.

**Results:** The tests showed that the alcohol consumption in LA rats sharply decreased after the hyperbaric oxygen action. In the control group the alcohol consumption remained constant during the entire period. It is possible that the attraction to alcohol decrease because of the HBO's influence on neuromediator system, namely the synthesis and metabolism of serotonin. Thus we can presume the inclusion of oxygen in the processes related to attraction to alcohol as the serotonergic system has its important role in the voluntary alcohol consumption's adjustment.

**Conclusion:** The conducted research showed the influence of hyperbaric oxygen on the central nervous system's structures where motivation reactions are generated. These oxygen properties could complete the action of drugs that suppress the attraction to alcohol.

**Key words:** Alcohol, attraction to alcohol, hyperbaric oxygen.

## **365. THE FACTORS INFLUENCING PERSONAL CHOICE IN NON PRESCRIPTION DRUGS RELATED PAIN MANAGEMENT**

**Birutė Vaidelytė, Akvilė Ūsaitė**

Scientific adviser: Albinas Naudžiūnas, Lithuanian University of Health Sciences

**Introduction:** Pain is a common medical problem, and relief of pain is an important therapeutic goal. Although mild and moderate pain by outpatients is most commonly treated with over-the-counter drugs. Over the past decade, there have been growing concerns about the harm — abuse, as well as serious injury and death — caused by the use of over-the-counter painkillers. These concerns have emerged in parallel with the evolving understanding of the importance of pain management in medical care. It's important to maintain the balance between providing access to pain medications for those who need them, and on the other hand, managing the variety of risks posed by painkilling drugs. Especially nowadays when drug consumption between society has increased significantly. More and more people have been hospitalized because of these drugs side effects. This fact shows that society in Europe aren't informed about over-the-counter painkillers harmful influence to their health.

The aim of this study is to evaluate ftors influencing non prescription drugs against mild-moderate pain choice.

### **Objectives:**

1. To evaluate pharmaceutical advertisement influence for non steroidal anti-inflammatory drugs (NAID) or paracetamol usage in society.
2. To assess the links between the most commonly used non prescription painkillers and respondents professions(related to biomedical sciences or not related to biomedical sciences).
3. To determine the links between respondents age, gender, type of pain they suffer and the way they choose to reduce the pain.

**Materials and methods:** The online questionnaire form was applied for two biggest Lithuania's cities - Vilnius and Kaunas - citizens with the aim to evaluate different age and professions Lithuanian citizens knowledge about pain pharmaceutical agents and their pain management.

The questionnaire was designed to reveal respondent's gender, age, sociodemographic, experienced pain and knowledge of medicine drugs against pain (painkillers) factors.

Total 99 respondents in the age of 19-80 years were interviewed. According the gender respondents distributed equally by 51 (51.1%) males and 48 (49.9%) females.

The statistical analysis of the research was performed using IBM SPSS Statistics 19.0 version. For categorical data analysis  $\chi^2$  and Fisher's exact tests were performed.  $P < 0.05$  was evaluated as statistically significant.

**Discussion results:** The 24.2 % (n=24) respondents answered that their choice and knowledge for painkillers usage was affected by radio, TV or the internet advertisements, the others noticed that they relay their pain management on friends & relatives (n=75), as well as doctors (n=16) and pharmacists (n=27) recommendations. There was found significant difference between paracetamol (p=0.049) and Solpodeine (p=0.012) choice. Advertisements - affected respondents chose Solpodeine as the main painkiller 25.5 %, although in non advertisement - affected respondents Solpodeine was chosen only 5.3 %. 95,8 % of advertisement - affected respondents do not use paracetamol for pain management, when more than 1/5 (21.3 % ) of non advertisement - affected people answered that they use paracetamol as main painkiller. The biomedical profession related persons more often chosen paracetamol 37.8 % and Ibuprophen 70.4% as main painkillers than others 4.8% and 40.3%, respectively,  $p < 0.05$ . Also there was found the link between paracetamol and ibuprophen pain management usage and gender: women were more likely to choose paracetamol and ibuprophen 72.5 % and 66.7 % as men (respectively 6.3% and 41.7%).

Solpodeine as pain management choice selected 25.5 % advertisement affected people, when in non advertisement affected respondents group this choice marked just 5.3 %. The biomedical profession related persons were more often as their choice painkiller marked paracetamol (37.8 % ) and ibuprophen (70.4%) than others (4.8% and 40.3%, respectively),  $p < 0.05$ . Also there was found the link between paracetamol and ibuprophen pain management usage and gender. Women (respectively 72.5 % and 66.7 % )were more likely to choose paracetamol and ibuprophen as men (respectively 6.3% and 41.7%). The back pain suffering persons were tend to choice NAID drugs in ointment form ( $P < 0.05$ ). No links were found between other painkillers such Analgin, Ketanov, Dolmen, Aspirin, Diclofenac and the respondents choice in pain management, sociodemographical, profession and advertisement factors.



**Conclusion:** Although the respondents affected with pharmaceutical advertisement rarely use paracetamol for pain management, they are more likely to choose solpodeine than those who were not affected by advertisement.

Biomedical related profession Lithuania citizens are more tend to choose pain management with paracetamol and ibuprophen than no biomedical profession citizens.

There was relationship between paracetamol and ibuprophen choice and also there was link between pain type and drugs form.

**Key Words:** NAID, paracetamol, aspirin, mild-moderate pain, pain management.

## ETHICS SECTION

### 366. THE IMPACT OF THE CONDUCTED EXERCISES ON PREGNANT WOMEN: MEDICAL AND BIOETHICAL CONSIDERATIONS

**Nadejda Gherman**

Scientific adviser: Vitalie Ojovanu, PhD, Associate Professor, Department of Philosophy and Bioethics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** The bioethics implementation in the conducted physical exercises for pregnant improves the health conditions of the future mother and child. There is an imperative need to develop this issue to meet the demands of modern society.

**Objective of the study.** The study was conducted to highlight the relevance of multidimensional contemporary bioethical analysis of the pregnant women active lifestyle. Information, promotion of healthy lifestyles and pregnant women encouragement.

**Material and methods.** Reference publications. Socio-bioethical researches. Specialized books and monographs. Methodical-scientific literature data and personal sociological observations.

**Results.** Increasing the number of pregnant women following a healthy and active lifestyle as the result of information, promotion, conduct and encouragement.

**Conclusions.** Reducing the risk of complications during childbirth is a correct combination of involving medical bioethics and physical training of pregnant women.

**Key words:** medicine, physical exercises, pregnant, bioethics.

### 367. THE SPECIFICS OF DIAGNOSIS IN PEDIATRY: THEORETICAL, MEDICAL AND BIOETHICAL ASPECTS

**Olga Sergheevici**

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**Introduction.** In medicine diagnosis is the process of establishing the diagnosis by identifying the nature and cause of a particular disease, symptom or condition of the patient. The necessity of diagnosis establishment comes not so much from a desire to know the absolute truth, but rather to act in the patient's benefit. In pediatrics, the diagnosis is a process especially complex. Dilemma of uncertainty in pediatric diagnostic occurs because of insufficient clinical data, the inability or limited ability of children to communicate. Since decisions in pediatrics are processes that involve analysis and synthesis of all the data, the relationship doctor-parent has an important role. Also in the process of establishing the diagnosis, clinicians may face a number of moral dilemmas. Philosophy of contemporary medicine supports the hypothesis that the efficiency of medical care can be ensured by guiding principles of bioethics.

**Objective of the study.** To identify theoretical, medical and bioethical aspects in the diagnosis in pediatrics.

**Material and methods.** The literature review included scientific publications, statistical data, proceedings of conference materials. There were applied the methods of analysis and synthesis, descriptive, induction, deduction, sociological, medical, historical, and biostatistical.

**Results.** At the stage of diagnosis establishment in pediatrics, medical and ethical issues can arise at any element of the linker: doctor - parent – sick child. To establish a correct diagnosis in pediatrics, must be taken into account clinical and medical factors, as well as the sensitivity and vulnerability of the patient, psychological factors, diagnostic uncertainty, costs, and risks. In pediatrics can be delimited the following main bioethical aspects: the prevailing of paternalistic model; denying methods of diagnosis / treatment proposed because of ethical, religious or insufficient information; the negative influence of external factors on the decisions they take parents on child health; lack of social organizations; lack of ethics committees in health care organizations or their inefficiencies.

**Conclusions.** Diagnosis stage in pediatric medical care is a complex, multidimensional process. So, the specificity of diagnosis in pediatrics is defined as an art where the doctor knows how to combine intellect, knowledge, skills and moral behavioral science and communication. Besides theoretical, medical and clinical aspects, guidance and the respect of bioethical principles are essential in achieving the goals of care.

**Key words:** diagnostic, pediatrics, bioethics.

## 368. ONCOLOGIST'S VISION TOWARD EUTHANASIA

**Marina Barabas**

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**Introduction:** The euthanasiaphenomenon is studied multidimensional by specialists of different areas, that's why the opinion toward it are divergent: some of them tolerate it, others are categorically against it. The sensible approach of it derives from the type of situation referred to euthanasia: hopeless people to ever regain health at the terminal stage of their disease.

**Aim:** To determine the level of considering euthanasia as a method of treatment and oncologist opinion toward it.

**Materials and methods:** A sociological study regarding euthanasia was made that involved an amount of 70 oncologists of the Oncological Institute of Republic of Moldova..

**Results:** Analysis of the study sample showed that 64% of doctors (45) take euthanasia as an act of compassion, the remaining 34% (25) a crime. The answer to the question if they do agree to apply euthanasia in their patients was yes for 62% (43) and a strong no for 38% (28) of respondents, involving religious causes. Although, to support the legalization of euthanasia in our republic was the response of

63% of oncologists, only 2/3 of them 39% were ready to practice it; 47 % of them cannot see themselves doing and other 14% are unsure.

**Conclusion:** Although euthanasia is the cause of many disputes in the medical community and also society, it seems that in our country the majority of oncologists have a vision pro euthanasia. In our opinion, this attitude could be explained by the specific of the oncological assistance – the permanent contact with patients that suffer from mostly incurable diseases.

**Key words:** euthanasia, oncologists.

### 369. THE IMPACT OF TEEN BIRTHS ON MOTHER'S AND CHILD'S HEALTH

**Anastasia Bors**

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**Introduction:** Globally, the number of teenage pregnancy is increasing in consequence of social changes and sexual liberty. Moldova faces a difficult situation, just like other countries, related to the lack of sexual education, early onset of sexual life, unprotected sex. In these circumstances are outlined major problems – teen pregnancy and its complications. Adolescence affects newborn's and mother's health, increasing infant morbidity and mortality as well as morbidity and mortality of mothers. Most authors show that teenage pregnancy brings an increased risk of preeclampsia, premature birth, neonatal hypotrophy, advanced degrees anemia, etc.

**Materials and methods:** The aim of this study was to evaluate maternal and neonatal complications Associated with teenage mothers. In the study were included 112 teenage-mothers. With the analysing of medical documentation from the Institute of Mother and Child Care(Chisinau, Moldova). Socioeconomic data, age, number of pregnancies, antenatal care and complications, neonatal situation were considered.

**Discussion results:** The results of the study can be grouped in two subdivisions: the social aspects and the medical aspects of teen-births. The social aspects: The Distribution of births by the mother's biological age is not very cleared shaped, the studied age varied from 13 to 19 years. Distribution of interviewers by area of residence. In 84 % teenage-mothers were form rural places. The Civil status of interviewers: in 40 % of the 112 pregnant woman were not married. In this case we can speak about a vulnerable social status, in first case for new-born. The Sexual life debut was more at the age of 18 (32%) and 16 (25%). At the topic „Adolescents' information sources about sexual life” i can conclude that medical personal, brochures, parents cannot make a good imagine to attract teenagers to talk about sexuality. Adolescents have more confidence in friends or media(35% and 20%). Also the Topic” The level of knowledge about contraception methods” is not clear, in only 46% they said that they know methods of contraception, but didn't use them. Unknowingness at the topic „The level of knowledge about unprotected sex risks” was at 63 %. The direction of confidence of pregnant-adolescent is very clear determinated and oriented to child's father (65%). At the second place is a medical personnel (22%). The Acceptance degree of the New-Born is 90% positive, this represents a low degree

of abandonment. In 100 % was a positive answer at the questions the „Necessity of “Sexual education” courses”.

The medical aspects: In 77 % the birth was at normal period. And in 62% was per vias naturalis. On the other hand, there were found many complications. Iron deficiency anemia in 96 %, STDs / genitourinary tract infections in 38%, Failure of contraction forces in 46 %, etc. Approximately 90% of the adolescents that gave birth per vias naturalis had birth canal laceration at different levels. Also some new-born complications were found. They are Neonatal jaundice (63%), Child affected by the umbilical cord circulation (42%), Child affected by caesarean section (38%), etc.

**Conclusion:** Analyzing study data, I concluded that young age brings with it some risks during birth. Literature data also warns us about the risks, which will be reflected both newborn`s health as well as his mother. Teenage-mothers had a low level of education, also were not informed about contraception methods, and some of them cannot provide with all necessities for life or existence.

**Key words:** pregnancy, teenage, new-borns, complications

### **370. KINETOTERAPEUTICAL REHABILITATION: MEDICAL, SOCIAL AND BIOETHICAL ASPECTS**

**Maria Olari**

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The concept of medical ethics occurred with the development of medical act and medical science to help the main character of health system-the patient. The basic principles of bioethics focused on beneficence and on patient autonomy are complementary with medical rehabilitation specialization, converging to the same destination: patient independence. Over the last decade both disciplines have benefit from expansion and development, but most often not converged, being raised ethical and moral judgment related to behaviour and conduct of medical staff and reported in the scientific and academic therapists activity.

This work wants to raise awareness of physical therapists and medical specialists in recovering, providing data on the evolution of these disciplines. Medical ethics is the discipline that puts above all integrity, autonomy, physical and mental health of the patient. And the rehabilitation can not be achieved without being primarily a professional with knowledge and without ethical, moral judgment and no ability of choice and selection of the best decisions for the benefit of the patient. The therapist and the patient work together, if this process fails, it will not fully recover medical act. There is the issue of liability patient rehabilitation process. The most important skill is communication appreciated by patients, therapists focus on the patient followed by itself and not just the present condition. This confirms the need to develop a different kind of professional relationship between patient and therapist, precisely because the primary goal of rehabilitation - autonomy and because of time spent with the patient physical therapist. The moral judgment in ethical decision making include the ability to have vision on both sides described above to make connections between theory and practice ethics and recognize the importance

and influence developed relationships with patients, families and other health professionals of the recovery team.

Medical rehabilitation although not faced with cases exalted and extreme, still present with difficult cases to solve in a clinical setting. Associated with moral judgment and ethical norms of principle due to the distinct relationship developed between therapist and patient, the goal principled medical rehabilitation, patient autonomy and due to incomplete knowledge of the medical personnel involved in the act of rehabilitation. We believe that this area of ethical and moral decisions concepts in rehabilitation should be studied further for easier resolution of ethical and moral judgment occurred in practice therapists and rehabilitation process of patients. Also the existence of a code of medical ethics of physical therapists would eliminate certain negative aspects that occur in the recovery process.

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