



UNIVERSITY OF MEDICINE, PHARMACY,
SCIENCE AND TECHNOLOGY
OF TÂRGU MUREȘ

BOOK of ABSTRACTS

Nr. 1/2018

**Days of the University of Medicine, Pharmacy,
Science and Technology of Târgu Mureș
December 10th-14th, 2018, Târgu Mureș**

**Scientific Session of University Academic Staff
The 11th Conference of Ph.D. Students and Young Doctors**



2018

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Scientific Session of University Academic Staff

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Science, and Technology of Târgu Mureş
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ABSTRACT BOOK

Days of the University of Medicine, Pharmacy, Science and Technology of Târgu Mureş

Days of the University of Medicine, Pharmacy, Science, and Technology of Târgu Mureş
December 10th-14th, 2018, Târgu Mureş – Scientific Session of University Academic Staff

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ANESTHESIOLOGY AND INTENSIVE CARE MEDICINE

SURGICAL AND INVAZIVE CARDIOLOGICAL PROCEDURES FOR AORTIC STENOSIS - ADVANTAGES AND DISADVANTAGES

Kovacs Judit¹, Domokos Kamilla²

¹Department of Anesthesiology and Intensive Care Medicine (II) and Emergency Medicine, UMFST Tîrgu Mureş

²student, UMFST Tîrgu Mureş

Background: Aortic stenosis is one of the most common cardiological diseases among the elderly. For its treatment, the gold standard is the conventional surgical aortic valve replacement (AVR), but newly for high-risk patients transcatheter aortic valve implantation (TAVI) is used. The objective of our study was to compare the outcome of patients undergoing AVR or TAVI procedures. **Material and methods:** Material and method: A retrospective clinical study was performed at the Emergency Institute of Cardiovascular Diseases and Transplantation Tg-Mures, from 01.01. till 30.06. 2018. We included all adult patients undergoing surgical or invasive cardiological aortic valve implantation. We analyzed the length of procedures, the intraprocedural incidents, the type of anesthesia, the postoperative complications, the length of stay in (LOS) the intensive care unit (ICU). **Results:** Results: In this period 40 patients had surgical aortic valve replacement and 14 transcatheter aortic valve implantation. Surgical procedures were performed in total intravenous anesthesia (TIVA), during intravascular procedures TIVA (in 2 cases) and light analgesation (12 patients) were used. The mean age was higher in the TAVI group (78.7 ± 1.4 vs. 64.2 ± 1.8 in surgical patients). In the surgical group, 9 patients had also coronary artery bypass graft and 3 mitral valvuloplasties. The procedures were longer in the surgical group (294.4 ± 14.9 min vs. TAVI group 80.6 ± 11.5 min, $p < 0.0001$). TAVI was associated with a higher risk of atrioventricular block ($p = 0.0147$), the incidence of cardiac failure, atrial fibrillation, the length of mechanical ventilation and the LOS in ICU was higher, but not significantly in the surgical group. **Conclusions:** Conclusion: Surgical aortic valve replacement can be considered a successful procedure, but there are promising results for intravascular procedures in high-risk patients. Further research is needed to investigate the long-term outcome of TAVI. It is extremely important choosing the right method for the patient after a correct risk assessment, to avoid complications.

Keywords: aortic stenosis, aortic valve replacement, transcatheter

IMMUNOMODULATION AS A VALUABLE TOOL IN EARLY PROINFLAMMATORY RESPONSE IN CRITICALLY ILL PATIENTS

Grigorescu Bianca¹, Veres M², Stoian Adina¹, Gliga Florina¹, Fodor Raluca³, Almasy Emoke³

¹Department of Pathophysiology, UMFST Tîrgu Mureş

²Department of Anesthesiology and Intensive Care Medicine I, UMFST Tîrgu Mureş

³Department of Anesthesiology and Intensive Care Medicine (II) and Emergency Medicine, UMFST Tîrgu Mureş

Background: Hemadsorption represents a new concept developed to decrease systemic levels of pro-inflammatory and anti-inflammatory mediators released in the early phase of sepsis or septic shock. **Material and methods:** We present three cases of critically ill patients admitted in ICU for sepsis or septic shock. The patients underwent renal replacement therapy using extracorporeal cytokine absorption devices. Hemodynamic and respiratory parameters were assessed, as well as the proinflammatory biomarkers and the severity scores APACHE II and SOFA. **Results:** After eight days of treatment we noticed a decrease of presepsin, procalcitonin, pNGAL, C Reactive Protein, proANP and proADM in patients serum, and a decrease in SOFA and APACHE II scores values. Cardiac index and extravascular lung water improved and the need for vasopressors decreased. **Conclusions:** Hemadsorption improved patient s outcome, hemodynamics and it had a positive effect on capillary leak syndrome. It ceased further cytokines and proinflammatory mediators injury and reduced costs.

Keywords: sepsis, hemadsorption, proinflammatory, biomarkers

BIOCHEMISTRY

EVALUATION OF METABOLIC PARAMETERS, MINERALS AND INVESTIGATION OF MICROANGIOPATHY IN TYPE 2 DIABETIC PATIENTS

Nemes-Nagy Eniko¹, Tripon RG¹, German-Sallo Marta², Preg Z², Pal S¹, Szabo Monika², Tilinca Mariana Cornelia³

¹Department of Biochemistry, UMFST Tîrgu Mureş

²Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

³Department of Cell Biology, UMFST Tîrgu Mureş

Background: Microvascular complications (such as retinopathy, nephropathy) are often underdiagnosed in type 2 diabetic patients. Appropriate mineral homeostasis and carbohydrate metabolic balance are important in prevention of microangiopathy. The aim of the study was to evaluate biochemical parameters and to reveal the presence of microangiopathy in type 2 diabetic patients on different therapy **Material and methods:** The study was conducted during 2013-2015 in Tîrgu Mureş on ambulant patients of a medical unit specialized on cardiovascular diseases. The study group included 224 type 2 diabetic patients, 77% of them being on metformin treatment. Biochemical parameters were determined on the Konelab 20XTi analyzer and on Nycocard Reader, the retina was examined using the Zeiss Visucam 500 equipment. **Results:** Elevated serum creatinine values could be revealed in 68% of the patients, zinc deficiency was present in 46% of the subjects, the metabolic balance was good based on glycated hemoglobin measurement in over 60% of the patients. Non-proliferative retinopathy was present in 52% of the subjects and cataract in 26%. **Conclusions:** In several cases pathological laboratory parameters coexist with ophthalmological manifestations such as retinopathy and cataract. Proper, complex investigation of diabetic patients could be helpful to unmask silent microvascular pathology, which can improve the treatment plan of these subjects.

Keywords: microangiopathy, diabetic patients, biochemical parameters, metabolic balance, ophthalmological manifestations

SILENT CEREBROVASCULAR DISEASE REVEALED IN A HYPERTENSIVE DIABETIC SUBJECT UNDERGOING COGNITIVE FUNCTION SCREENING – CASE PRESENTATION

Nemes-Nagy Eniko¹, Tripon RG¹, Preg Z², Baroti Beata³, German-Sallo Marta²

¹Department of Biochemistry, UMFST Tîrgu Mureş

²Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

³Department of Radiology, UMFST Tîrgu Mureş

Background: Cognitive function screening is not a routine test performed in all hypertensive patients in our country, although it is highly recommended by current guidelines. A case of an elderly female patient is presented emphasizing the importance of cognitive screening tests in the clinical practice. **Material and methods:** The patient had a history of poorly controlled hypertension during the previous twelve years, and she has been recently diagnosed with type 2 diabetes mellitus. She was admitted to hospital having manifestations of carbohydrate metabolic imbalance and complained of memory problems. **Results:** During hospitalization a 70% stenosis could be revealed at the internal carotid artery, cognitive screening tests revealed mild impairment of mental functions. Stage III hypertensive retinopathy was diagnosed by retinal imaging, brain magnetic resonance showed macro- and microvascular lesions in the periventricular white matter and signs of former ischemic stroke in the area of the left posterior cerebral artery. **Conclusions:** We can conclude that cognitive screening helped to unmask silent cerebrovascular disease in an oligosymptomatic hypertensive diabetic patient. Screening of cognitive function should be included in the routine assessment of hypertensive patients.

Keywords: cognitive function, screening, diabetes mellitus, hypertension, retinal imaging

CARDIOLOGY

THE CLINICAL UTILITY OF CA-125 IN HEART FAILURE

Frigy A¹, Belenyi Boglarka¹, Kirchmaier A², Fekete N², Szabo IA³

¹Department of Internal Medicine IV, UMFST Tîrgu Mureş

²Student, UMFST Tîrgu Mureş

³Department of Pathophysiology, UMFST Tîrgu Mureş

Background: Heart failure is a worldwide epidemic, linked with high mortality and high health care expenditure. Cardiac biomarkers are useful parameters in heart failure management, because of their diagnostic, prognostic and therapy guiding value.

Material and methods: CA-125, a well-known tumor marker in ovarian cancer, has been proven to be a powerful biomarker in the setting of acute and chronic heart failure, being mainly used for prognostic purposes. The overproduction of CA-125 in heart failure could be explained by tissue stretching caused by mechanical stress (e.g., pleural effusion) and by increased cytokine activation (IL-1, TNFalpha, etc.) characteristic for heart failure. **Results:** The first part of our work presents the main clinical data related to the usefulness of CA-125 in diverse heart failure scenarios (acute, chronic, and advanced). In the second part, to illustrate the possible caveats related to CA-125, we present two cases of women with heart failure, in whom CA-125 was measured for oncological reasons, but the high levels were found to be caused by heart failure, ovarian malignancy being disclosed by imaging.

Conclusions: CA-125 is a potent biomarker in heart failure and its use has to be encouraged in daily clinical practice. High levels of CA-125 have to be interpreted with caution in female patients with heart failure, in regard of ovarian cancer screening.

Keywords: CA-125, heart failure, biomarkers

CARDIOVASCULAR SURGERY

LEFT VENTRICULAR ASSIST DEVICE FOR END-STAGE HEART FAILURE

Suciu H¹, Balau R¹, Ghiragosian C¹, Banceu C¹, Al-Hussein H², Goia Cristina¹, Harpa M¹

¹Department of Surgery V, UMFST Tîrgu Mureş

²Department of Anatomy, UMFST Tîrgu Mureş

Background: Intrathoracic mechanical circulatory support is represented by electromechanical pump implantation in order to support partially or completely cardiac circulatory function in cases with refractory low cardiac output. The mechanical support improves the patient status, achieving "bridge to transplant" therapy. Also it can be used as "destination therapy" when cardiac transplantation is not suitable, "bridge to recovery" regarding reversible causes for cardiac function deterioration or "bridge to decision". **Material and methods:** We present a case of a 50 years-old male, with history of prior tobacco use, diagnosed since 2005 with benign ventricular arrhythmia, with history of cardiac arrest in 2011 and possible myocarditis due to bacterial pneumonia in 2015, underwent ablation for atrial flutter and implantation of internal defibrillator for sustained ventricular tachycardia. Thoracic MRI investigation showed cardiac fibrosis. Throughout this period, until presenting in our Institute the ejection fraction decreases from 60 to 20-25%, suffering subsequent complications of severe cardiac failure: acute pulmonary edema, pericarditis, pleuritis, atrial and ventricular arrhythmias. Considering the irreversible cardiac function depression (INTERMACS class 3), we decided to implant a Heart Ware Left Ventricular Assist Device with excellent postoperative results. **Results:** After implantation there were significant improvements in cardiovascular status, reversal of the negative effects of chronic heart failure, correction of metabolic status and improved tolerance at exertion. LVAD support improves cardiac function by reverse remodeling of the myocardium through neuroendocrine modulation. Post implantation possible complications as bleeding, infection, stroke, right heart failure, kidney dysfunction can interfere with the therapeutic plan. **Conclusions:** This case presentation stands as an argument for the usage of ventricular assist devices in patients with end-stage cardiac failure, proving that circulatory support decreases the effects of low perfusion organ-injury, resulting in a better quality of life and organ-function preservation until transplantation is attainable.

Keywords: LVAD, low cardiac output syndrome, heart failure, left ventricular assist device, bridge to transplant

MINIMALLY INVASIVE MITRAL VALVE REPAIR

Suciu H¹, Badiu C², Stroe V¹, Ghiragosian C¹, Stoica Alexandra¹, Al-Hussein H³, Harpa M¹

¹Department of Surgery V, UMFST Tîrgu Mureş

²Department of Surgery V, UMF Carol Davila Bucureşti

³Department of Anatomy, UMFST Tîrgu Mureş

Background: Minimally invasive cardiac surgery is the consequence of technology and surgical expertise progress. Less invasive approaches have been applied to reduce the surgical risks and improve postoperative recovery in comparison with conventional procedures. Mitral regurgitation is the second most frequent valvular disease that require a surgical correction. **Material and methods:** We present a case of a 36-year-old male patient, symptomatic in functional class III (NYHA), who was referred in our clinic for severe mitral insufficiency. Electrocardiogram revealed sinus rhythm and echocardiogram showed normal function of the left ventricle, left atrial enlargement and significant mitral regurgitation due to prolapse of the posterior valvulae (P2-P3). Under general anesthesia with selective intubation, cardio-pulmonary bypass was achieved by femoral arterio-venous surgical cannulation and jugular cannulation using Seldinger technique. A right minithoracotomy through the 4th intercostal space and pericardium incision were performed. After cardiac arrest, in mild hypothermia, the left atrium was opened to expose the mitral valve. Annuloplasty with Edwards Physio Ring and three Gore-Tex neochordae (P2-P3) implantation, using the loop technique, were used to achieve a high durability repair. **Results:** The recovery was quick, without complications. Intraoperative transesophageal and postoperative transthoracic echocardiographic assessment showed successful mitral repair with trivial residual regurgitation. The patient, symptomatic in NYHA I, was discharged after 7 days. **Conclusions:** Minimally invasive cardiac surgery have great results regarding postoperative pain, bleeding events, esthetic aspects and fast recovery, with equal mortality and morbidity as conventional procedures, but the surgeons should be aware about intraoperative complications that can lead to full sternotomy.

Our first case of minimally invasive mitral valve repair under direct vision was performed successfully, demonstrating that it is feasible, safe and efficient. More experience should be reached to be recognized as gold standard procedure, because patients will always opt for less invasive surgery.

Keywords: mitral valve repair, neochordae, minimally invasive surgery, annuloplasty, minithoracotomy

CLINICAL RESEARCH

TRENDS IN CLINICAL RESEARCH, ASSESSED BY QUERYING THE AGGREGATE ANALYSIS OF CLINICALTRIALS.GOV (AACT) DATABASE

Imre M¹, Imre Eniko²

¹Department of Research Methodology, UMFST Tîrgu Mureş

²Department of Internal Medicine I, UMFST Tîrgu Mureş

Background: Trends and predictions are of high interest in the clinical research industry. To improve this type of analysis, the US government granted free Access to Aggregate Content of ClinicalTrials.gov (AACT). The AACT is a PostgreSQL relational database containing information about clinical trials registered at ClinicalTrials.gov. As a cloud-hosted PostgreSQL database, AACT can be directly accessed via standard queries and analytic tools. **Material and methods:** PgAdmin4 was used to query AACT, and to extract relevant information about all clinical trials started after 1st of January 2008. Trials were grouped by time of start, phase, study type, sponsor type, country and other variables. Statistical analysis was performed by using descriptive statistics, pivot tables, pivot charts and trend analysis. **Results:** A number of 222395 trials were identified as started during the last 10 years. Between 2008 and 2016 there was a constant increase in the number of clinical trials started each year by an approximate of 1700 trials (with a linear regression of $R^2 = 0.916$). Despite, the number of phase 1 and 2 trials was constant during the years, the number of phase 3 and phase 4 trials started to decrease since the third quarter of 2016. Analysing the data more deeply, our results suggest, that despite of a steady state of early phase trials (related mostly to development of new molecules), industry sponsored late phase trials are those decreasing, and by this suggest a decrease of number of molecules reaching the market, and a slowdown of new drug market access. **Conclusions:** The clinical research industry faces significant changes. Analysing the AACT database permits a reliable prediction of the trends, forecasts and direction this scientific field is heading to, and can be a good supportive tool for both health care providers and pharmaceutical companies predicting possible future directions.

Keywords: Aggregate Analysis of ClinicalTrials.gov (AACT) Da, clinical research industry, PostgreSQL relational clinical research database, trends in clinical research, drug development

DENTAL MEDICINE

PREDISPOSING FACTORS OF BURNOUT SYNDROME IN DENTISTS

Kovacs Monika¹, Beresescu Liana¹, Bukhari Csilla¹, Pop M¹, Kerekes-Mathe Bernadette²

¹MD1, UMFST Tîrgu Mureş

²MD2, UMFST Tîrgu Mureş

Background: Burnout syndrome affects medical staff with adverse effects on both the physician and the patient. Knowledge of risk factors can lead to a better work environment for dentists. The aim of this study was to evaluate the factors that are associated with burnout syndrome among dentists from Mures county. **Material and methods:** In this study we distributed online anonymous questionnaires among registered dentists in the Mures county. The first part of the questionnaire included questions regarding socio-demographic characteristics. In the second part of the questionnaire we used the Maslach Burnout Inventory (MBI) which is a tested instrument, and contains 22 items and is structured on 3 dimensions: emotional exhaustion, depersonalization and personal sense of accomplishment. **Results:** High-risk burnout syndrome has mostly occurred in association with some socio-demographic characteristics, especially to male dentists, who work more than 8 hours a day, working without an assistant. **Conclusions:** Dentists can experience burnout syndrome in their professional lives, preventive measures would be welcome.

Keywords: dentist, burnout, workload

UNSTIMULATED SALIVARY FLOW RATE, PH AND BUFFER CAPACITY OF SALIVA CORRELATED WITH CARIES

Buka Imola¹, Lazar Luminita¹, Bukhari Csilla¹, Vlasa A¹

¹Department of Odontology and Periodontology, UMFST Tîrgu Mureş

Background: Introduction: Saliva plays a critical role in oral homeostasis, as it modulates the ecosystem within the oral cavity. Lubrication of the alimentary bolus, protection and repair of mucosa, and dental remineralization are some of the functions of saliva. The buffer capacity of saliva basically depends on bicarbonate concentration; it correlates with salivary flow rate, as any factor decreasing salivary flow rate tends to decrease its buffer capacity and to increase the risk of caries development. **Material and methods:** In our study 29 children were surveyed, 13 boys and 16 girls, aged between 12-13 years old. In **Phase 1**- 29 children were asked to complete a questionnaire. In **Phase 2** - unstimulated whole saliva was collected by suction method and flow rates was determined. In **Phase 3** - children were examined and data were collected about DMF-S. The data were statistically analyzed using Graphpad (InStat), Mann-Whitney test. **Results:** Unstimulated salivary flow rate presented a normal distribution. Median salivary flow rate was 2,57 ml /5 min.- A significant extremely positive correlation was found between average value of fillings and salivary flow rate and average value of the decay.- A significant positive correlation was found between the value fillings and the amount of lactic acid used in the titration.- There were no significant differences between the number of tooth fillings and the volume of lactic acid used for titration.- Boys showed a greater flow rate than girls.- No differences were found in salivary pH between boys and girls.- Based on the results of statistical analysis we can say that the higher number of decay, fillings attracts a lower saliva flow, decay indicates a low buffering capacity. **Conclusions:** Dental caries is a complex and dynamic process where a multitude of factors influence and initiate the progression of disease. One of the most important factor influences the development of dental caries is saliva.

Keywords: salivary flow rate, pH, buffer capacity

A CASE OF GINGIVO-MANDIBULAR METASTASIS OF A PRIMARY LUNG MALIGNANCY

Petrovan Cecilia¹, Lubenita-Enache F¹, Mocan Simona², Bogozi BB¹

¹Department of Oral and Maxillofacial Surgery, UMFST Tirgu Mures

²Department of Pathology, UMFST Tirgu Mures

Background: Metastatic tumors of oral cavity are rare and may occur within soft tissues or jaw bones. Due to their low incidence, these metastases are challenging to diagnose and to treat - generally, they display vague symptoms, that mimic dental infection or ordinary ulceration, poorly differentiated histopathological features and quite a poor prognosis. **Material and methods:** This paper presents the case of a 69y male patient, with a malignant gingivo-mandibular tumor, first, diagnosed clinically as typical squamous carcinoma of oral cavity, but, which was subsequently demonstrated to be, metastases of a lung adenocarcinoma. **Results:** The patient is presented in OMF Surgery Clinic for an ulcerative lesion of left retromolar mandible gum, and biopsy result was moderate differentiated squamous carcinoma. CT scan reveals: left gingivo-mandibular tumor, submandibular and latero-cervical lymph nodes, and, a 35/57/60mm left upper lobe lung tumor. Post-operative histopathological exams reveal: lung carcinoma metastasis (by immunohistochemistry - IHC - corresponding to a solid adenocarcinoma) for the resected gingivo-mandibular tumor and lymph-nodes; and, initially, squamous-cell lung carcinoma for segmental lung resection and mediastinal lymphadenectomy; than, furthermore, IHC diagnosed as lung adenocarcinoma. A new CT scan, performed one month post lung resection, reveals cerebellar metastasis, treated by Gamma-Knife. PET-CT (F18-FDG) examination, shows secondary bone determinations, mediastinal lymph-nodes. The pathological feature of the primary lung tumor (adenocarcinoma), the advanced stage (multiple metastasis) recommend the patient for targeted Immunotherapy with Pembrolizumab. **Conclusions:** Due to rare cases of oral metastases, to diagnose primary tumor site, and secondary, metastases sites, clinically, and histopathologically as well, are challenging. Especially, since in this case, the histopathological aspect of lung squamous carcinoma and adenocarcinoma are quite similar on Hematoxylin-Eosin; only IHC being able to diagnose accurately the tumor type. Thus, in order to establish a proper management of this type of pathology, diagnose of primary tumor as site and as histopathological type are mandatory and any misdiagnose should be avoided.

Keywords: gingivo-mandibular metastasis, lung adenocarcinoma, cerebellar metastasis, Pembrolizumab targeted Immunotherapy

SURFACE DEGRADATION OF MONOLITIC ZIRCONIA AFTER EXPOSURE TO ACIDIC ENVIRONMENT

Bors Andreea¹, Szekely Melinda¹, Molnar-Varlam Cristina¹

¹Department of Morphology of Teeth and Dental Arches, UMFST Tirgu Mures

Background: Nowadays monolithic zirconia is more and more used to fabricate fixed dental prostheses. However, less data is available on acid resistance of this dental material. This study aimed to evaluate the effect of acidic environments on the surface of monolithic zirconia. **Material and methods:** Forty zirconia rods (N=40) were divided in four groups of 10 samples and immersed in 1.23% solutions of acidulated phosphate fluoride (APF) gel and maintained at 37°C for 4 min (G1:n=10) and 60 min (G3:n=10), representing short- and long-term etching effect, respectively. To compare the effects of these acidic exposures also control groups immersed in water were used (G2:n=10; G4:n=10). Surfaces roughness of all specimens were imaged using digital microscopy and scanning electron microscopy (SEM) before and after exposure. The data were analyzed using two-way ANOVA with repeated measures and Tukey's test (alpha=0.05). **Results:** Both, 4 min (0.44±0.1 to 0.81±0.2 µm) and 60 min (0.66±0.1 to 1.04±0.3 µm) APF gel exposure created significantly more surface roughness in tested zirconia specimens when compared to the control groups (0.33±0.2 to 0.68±0.2 micron) (p<0.05). The mean surface roughness for the longest exposure time was significantly higher than those of 4 minutes. The qualitative SEM analysis showed evidence of surface degradation on all of monolithic zirconia samples at different immersion times. **Conclusions:** Microscopic images detected superficial surface degradation on monolithic zirconia rods increasing with the exposure time in acidulated phosphate fluoride. Other studies have to elucidate the synergistic effect of mechanical forces and acidic electrochemical environment, which may produce fracture and failure of the zirconia restorations.

Keywords: acid, surface degradation, monolithic zirconia

IMPLANTO-PROSTHETIC REHABILITATION OF A TOTALLY EDENTULOUS LOWER JAW SHOWING ADVANCED ATROPHY, USING A BAR RETAINED OVERDENTURE – CASE PRESENTATION

Bogozi BB¹, De Vries Andreea¹

¹Department of Oral and Maxillofacial Surgery, UMFST Tîrgu Mureş

Background: Implanto-prosthetic rehabilitation of a totally edentulous lower jaw can be challenging when advanced atrophy of the bone is seen. In such situations placing implants in the lateral aspect of the mandible is sometimes impossible, therefore only the interforaminal area can be used. Another major inconvenience is the lack of keratinized gingival tissue around future implants. Finally the intermaxillary relations can also be unfavorable due to the advanced atrophy. **Material and methods:** In this paper we present the case of a 76-year-old female patient with totally edentulous upper and lower jaws showing advanced atrophy of the alveolar ridges. We mention here that the patient had lost her right arm in an accident, with important difficulties in the maintenance of the prosthetic rehabilitations. The upper jaw was treated with a complete removable denture, for the lower jaw we offered our patient a bar retained overdenture, supported by four osteointegrated dental implants. **Results:** With the chosen treatment option we obtained a satisfactory stability of the dentures and an important increase in quality of life for our patient. **Conclusions:** Selecting the optimal treatment option for every patient and a rigorous planning is absolutely necessary for long-term results in implanto-prosthetic rehabilitation of edentulous jaws.

Keywords: advanced atrophy, implanto-prosthetic rehabilitation, edentulous jaw

ENT (OTORHINOLARYNGOLOGY)

SOCIAL INTEGRATION AND SPACE ORIENTATION IN CHILDREN WITH COCHLEAR IMPLANT

Neagos Adriana¹, Neagos CM², Bertoldi R¹, Stefan Anda¹

¹Department of Otorhinolaryngology, UMFST Tîrgu Mureş

²student, UMF Carol Davila Bucureşti

Background: The cochlear implant is one of the best option for the treatment of profound and several hearing loss. The Cochlear implant has many benefits on quality of life, social integration, orientation in noise and interaction. In this study we want to demonstrate the influence of cochlear implant in quality of life and noise orientation. **Material and methods:** We have analyzed 50 patients with profound and several hearing loss, who underwent cochlear implantation in Emergency County Hospital of Tîrgu Mureş, Otorhinologic Departement. We applied a questionnaire for evaluation the orientation in noise, and social integration. The questionnaire has 28 questions with different answer. **Results:** 52,63% of patients were implanted bilaterally, and 47,37% underwent unilateral cochlear surgery. After using different statistical tests evaluation, we observe a different correlation between age of implantation and lifestyle, different hobby habits, social and familiar integration. **Conclusions:** Cochlear implant affects on any age of group the quality of life, life style, space and noise orientation, social and familiar integration.

Keywords: noise orientation, quality of life, cochlear implant, social integration

HOW TO EVALUATE THE PATIENT FOR COCHLEAR IMPLANT SURGERY

Neagos Adriana¹, Neagos CM², Irimie Larisa¹, Duca Diana³

¹Department of Otorhinolaryngology, UMFST Tîrgu Mureş

²Student, UMF Carol Davila Bucureşti

³Department of Otorhinolaryngology, Privat Medical Center GALENUS

Background: The aim of this study is to evaluate the the important parameters before to start the cochlear implant surgery. This parameters are: audiological investigation, cochlea morphology, cochlea size, and aspects, cochlear nerve presence. **Material and methods:** This is an observational study, which was performed in Emergency County Hospital Tîrgu Mureş, Otorhinologic Departement. We have selected patients for cochlear implant surgery, patients with profound and several hearing loss. Audiological investigations - as ABR, ASSR, and audiometry and Tympanometry, such MRI and CT, were performed. During CT, we have do length and width were measure. Comparative measurements between left and right ear, such between different age of patients group were performed. **Results:** The right-left cochlea size comparison, shows that there are differences between two cochleas. It can be notice that there are difference between cochlea size in different age of group patient, with gradual increase of cochlea. In adults patients the difference size of cochlea is about 0,29 cm compared to young patients. **Conclusions:** Cochlea size variables must be considered, because there may be anatomical variation of cochlea, which influence electrode insertion, a very important step in cochlear implant surgery. The preoperative investigations are very important before to start the surgery and to choose the type of electrode.

Keywords: cochlear implant, inner ear, cochlea size, computer tomography, cochlea morphology

EPIDEMIOLOGY

STUDY ON PATIENT'S KNOWLEDGE, ATTITUDES AND PERCEPTIONS ABOUT ANTIBIOTIC USE AND ANTIMICROBIAL RESISTANCE

Voidazan S¹, Moldovan H², Golea Cristina¹, Moldovan Geanina³

¹Department of Epidemiology, UMFST Tîrgu Mureş

²Department of Occupational Medicine, UMFST Tîrgu Mureş

³Department of Hygiene, UMFST Tîrgu Mureş

Background: Antibiotic resistance is considered a major problem today. One of the factors influencing this topic is the use of antibiotics irrational and excessive by patients. The general population can play an important role in reducing the inappropriate and excessive use of antibiotics, so it is useful to understand the knowledge, attitudes and behaviors regarding the use of antibiotics. The aim in this study, was to analyse the knowledge, attitude and practices of antibiotics use among patients. **Material and methods:** The study was conducted using a questionnaire with 33 questions on knowledge and perception that antibiotic use antimicrobial resistance. It was applied at random patients in the waiting rooms of family medicine cabinet. **Results:** 996 patients completed the questionnaire; 61.4% were urban; 63.5% were women. The average age for respondents was 45 ± 12.5 (SD) years. 62.65% of respondents considered antibiotics to be used for a bacterial infection. 61.4% took at least once an antibiotic in the last year, 68.7% of rural respondents and 56.8% of urban respondents. Of those who consume antibiotics, 65.9% consulted the doctor every time before administration. 10.34% of respondents took antibiotics following family or friends' recommendations, and 22.9% had used antibiotics remaining since the last prescription. Of the respondents, 82.3% considered the administration of antibiotics without prescription to have a negative effect, respectively 85.14% heard the antibiotic resistance of the bacteria. **Conclusions:** Most of the respondents have adequate knowledge about antibiotics and their use. We have identified a fine distinction between rational use of antibiotics and their abuse, but people are aware that non-prescription antibiotics can have repercussions on them and all population.

Keywords: antibiotics, bacterial resistance, self-medication

HEALTH HUMANITIES

MEDICAL AND HEALTH HUMANITIES: A MULTIDISCIPLINARY APPROACH FOR A SANER SOCIETY

Tatar-Dan Maria¹, Fodor Georgeta¹

¹Faculty of Sciences and Letters, UMFST Tîrgu Mureş

Background: In the last decades, there is a growing interest in academic institutions all over America and Europe for integrating humanities disciplines in medical education and health care, an idea spurred out of the necessity of accommodating the advances in medical technology and the human facets of health care and care giving. The recognition of the importance of a dialogue between humanities, ethics and medicine lead to the reformation of medical education and curricula and to the birth of a new multidisciplinary field, the medical humanities. In the last ten years, the academic debates have been insisting upon a more inclusive and interdisciplinary approach and the extension of medical humanities in the sense of including more humanities disciplines and at the same time more people involved in health care and care giving. Thus, a new field emerged, the health humanities. The present paper proposes a discussion on the concepts of medical and health humanities and the subjects inherit in these fields, offering at the same time an overview of the manner in which humanities have been integrated into curricula across Europe. The dialogue between arts, humanities and medicine generated innovation adding new dimensions to medical education and health care and at the same time a renewal of methods and practices in humanities research and teaching, bringing them closer and engaging them in the society. The objective of this paper is to highlight the contribution humanities can bring to the medical education and health care system and generate action in a field that is gaining more and more grown in the west, but it is quite ignored in the Romanian context. **Material and methods: Results: Conclusions:**

Keywords: health humanities, medicine, arts, ethics, multidisciplinary

MIGRATION AND HEALTH: PROBLEMS AND PERSPECTIVES

Altarozzi G¹

¹Faculty of Sciences and Letters, UMFST Tîrgu Mureş

Background: Migration is one of the specific phenomena of the 21st century. Masses of people move every year, due to various reasons, on longer or shorter distances and on periods that expand over weeks or whole decades. As it is unstoppable, this process generates a series of issues related to the prolonged contact between profoundly different cultures and civilizations. Obviously, the field of human health must also face the challenges brought by global migration, not only from the point of view of the spreading of illnesses and diseases but also from that of the need to rethink the health systems, since they are affected by the gradual transformation of the society into a multicultural one. This paper attempts to present the current situation, appealing mainly to examples from the European countries that are mostly exposed to the phenomenon of migration, as well as reflect upon the future perspectives that might be relevant to Romania as one of the possible destination for incoming migratory flows. **Material and methods: Results: Conclusions:**

Keywords: migration, health, multiculturalism, interculturalism, health humanities

PREVENTION AND CONTROL OF EPIDEMICS IN THE ROMAN ARMY

Fabian I¹

¹Faculty of Sciences and Letters, UMFST Tîrgu Mureş

Background: One of the sources of the Roman army's effectiveness was the selection of the physically and mentally sane soldiers (actually the word designating the main battle unit Legion comes from the Latin word Legere meaning to choose to select). During military service, these standards were maintained by the hygienic practices, isolation and careful treatment of the wounded/infected

soldiers. Although the Roman army took over a great deal from the Oriental/Hellenistic armies in terms of combat medicine and treatment of wounds/diseases, the use of medical corpsmen, field hospitals, triage of wounded/sick military personnel and a basic understanding of the epidemiology were strictly Roman inventions. The aim of this paper is to present briefly the main historical sources concerning the prevention and treatment of epidemics and, based on these, a few medical practices used in the Roman era.

Material and methods: Results: Conclusions:

Keywords: Roman, army, sources, epidemics, prevention

MAX BLECHER AND THE AESTHETICS OF DISEASE

Buda DM¹

¹Faculty of Sciences and Letters, UMFST Tîrgu Mureş

Background: The paper approaches Romanian inter-war author Max Blecher's novels, focusing on the experience of degenerative disease and its impact on writing. As Blecher becomes, in the pre-antibiotic world of the 1930s, the prisoner of an incurable medical disorder (Pott's disease - Tuberculous spondylodiscitis), writing becomes a solution for survival, a protective space, as well as a cathartic projection of sufferings, fears, despair and alienation into a de-dramatized fictional world, dominated by alternations of lucidity and hallucination, self-irony and ludical impulses. The physical anomaly is compensated by a chimerical biography that will later create Blecher's public representation as a young Genie, a member of an endangered minority, while at the same time his writing encodes a complex of provincial bovarism (as the sign of an amputated modernity), anti-spiritualism and anti-predestination in the esthetization of the pathological, the importance of accepting one's destiny, or the view of the disease as a parody of human existence. These are all joined, in Blecher's novels, by the contemplation of interior spaces and objects, the interiorization of pains and immobility, the awareness of the proximity of death as well as an obsession of the corporality. Most of these literary features were recently recalibrated into a highly-acclaimed film directed by Radu Jude (*Scarred Hearts*, 2016), and its success proves that Blecher's writing still holds a magnetic power upon the contemporary public, as it addresses in an original and radical way the fundamental themes human existence and creates a memorable expression of the relation with disease, suffering, death and the hope of salvation. Nevertheless, Blecher's literature opens a window towards a revolutive historical period, with its controversies, social torment, obsessions and contradictions. **Material and methods: Results: Conclusions:**

Keywords: Max Blecher, literary writing, disease, alienation, modernity

HEMATOLOGY

CHARLSON COMORBIDITY INDEX (CCI) EVALUATION IN NEWLY DIAGNOSED ACUTE MYELOID LEUKEMIA (AML) PATIENTS

Demian Smaranda¹, Candea Marcela¹, Macarie I¹, Petra Dorina², Matei Claudia¹, Demian RF³

¹Department of Internal Medicine II, UMFST Tîrgu Mureş

²Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

³Department of Oncology, UMFST Tîrgu Mureş

Background: Outside of AML itself and its consequences, other factors related to the patient's status such as age, ECOG performance or different organ failure influences both therapeutic strategies and prognosis. Comorbidities are common in older patients, contributing to a higher rate of early deaths. One of the most used for the risk involved by different comorbidities assessment is the Comorbidities Charlson Index (CCI), in a modified version; CCI over two points associates a worse prognosis, the risk increasing with the score value. **Material and methods:** Study type: qualitative, cross-sectional. Patients included: newly AML cases (52 patients, 65,38% males, median age 66 years) diagnosed in our department, between January 2013-December 2017 (five years). At the diagnosis, we evaluated the AML adapted (without AML as a risk factor), modified-CCI (with the taking into account of age group) and age-adjusted modified-CCI (without taking into account the age), searching for correlations with age, gender, ECOG, FAB subtype, peripheral and marrow blast count. Comorbidities were included only if well documented and have been present in the last five years preceding the AML diagnosis. Statistics: percent, t-test, chi-square test. **Results:** As a whole, the median value of the age-adjusted modified CCI was 2 (extremes 0-10) and 4 for modified CCI (extremes 0-12). The group with a favorable CCI has been shareholder under 50 years, unfavorable CCI (high-risk, CCI >2) prevailed in >70 years group (chi-test $p < 0.01$); for age-group >70 we detected a positive correlation between CCI value and chronological age ($R = +0.288$, $p < 0.05$). High-risk CCI correlated with poor, >2, ECOG. Similar data have been reported in other studies. **Conclusions:** Adapted CCI may be a practical tool for the quantification of the comorbidities burden in AML patients, useful in the proper chemotherapeutic strategy (standard versus decitabine). As a qualitative study, on a low cohort, the relevance of statistical data collected is just an indicative one.

Keywords: acute myeloid leukemia, comorbidities, adapted Comorbidities Charlson Index

THE HYPOMETHYLATION THERAPY IN HIGH RISK MYELODYSPLASTIC SYNDROME – CASE REPORT

Candea Marcela¹, Demian Smaranda¹, Macarie I¹, Petra Dorina², Dorcioman Bogdana³

¹Department of Internal Medicine II, UMFST Tîrgu Mureş

²Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

³Department of Clinical Laboratory, UMFST Tîrgu Mureş

Background: Azacitidine is a pyrimidine nucleoside analogue that inhibits DNA methyltransferase, impairing DNA methylation. It is also an antimetabolite of cytidine, incorporated primarily into RNA. Azacitidine is an antineoplastic agent and is approved in the treatment of the patients with intermediate 2 and high risk myelodysplastic syndrome who are not candidates for transplant and in acute myeloid leukemia with bone marrow blasts 20-30%. **Material and methods:** In June 2017 was diagnosed in our clinic a 50 years old woman with myelodysplastic syndrome, RAEB-2. The onset was with weakness, fatigue and multiple ecchymosis. The lab tests showed severe anemia, moderate thrombocytopenia and 16% blasts in bone marrow aspirate, with multiple dysplastic features. The karyotype was normal and she did not have FLT3 and NPM1 mutations. She was included in intermediate 2 risk myelodysplastic syndrome, according to International Prognostic Scoring System. After one month the marrow blasts was 20% and because the patient refused the intensive chemotherapy we started the azacitidine treatment. **Results:** After three month we achieved complete remission, with 2% blasts in bone marrow aspirate, with normal complete blood count and with good clinical state. The period of remission was nine months long, until the patient relapsed. In all this time the patient had one hospitalization for a hemorrhagic complication, without any infections or other side effects. **Conclusions:** The azacitidine is a well tolerated treatment, which we can obtain complete hematological response and it does not induce bone marrow aplasia and its major

subsequent complications.

Keywords: blast, myelodysplastic, treatment

HYGIENE

IN MEMORIAM PETTENKOFER, SEMMELWEIS, DAVILA

Abram Z¹, Ferencz L¹, Nadasan V¹

¹Department of Hygiene, UMFST Tîrgu Mureş

Background: Preventive medicine had a spectacular and practical development in the 19th century. **Material and methods:** Three of its pioneers had anniversary of their birthday in 2018, occasion to remember their important contribution to the medical sciences, especially to preventive medicine. **Results:** Max von Pettenkofer (1818-1901) is well known as the "father of hygiene" for the establishment of hygiene as an experimental science, for introducing hygiene as an independent discipline in medical teaching and for founding the first hygiene institute, named Institute of Hygiene in Munich, Germany (Institut für Hygiene). His work served as an example for others to organize other institutes around the world. Semmelweis Ignaz (1818-1865) is known as an early pioneer of antiseptic procedures and as the "saviour of mothers". He discovered that the incidence of "childbed fever" could be drastically cut by the use of hand disinfection in obstetrical clinics. He proposed first time the practice of washing hands with chlorinated lime solutions. Carol Davila (1828-1884) is the "father of Romanian medical education", being the founder of the first medical university in Bucharest which is called today Carol Davila University of Medicine and Pharmacy. He organized in Romania the ambulance network, the military services, the first orphanage, and established different medical societies and journals. **Conclusions:** In the professional milieu it is our duty to maintain the memory of the above mentioned persons.

Keywords: Max von Pettenkofer, Semmelweis Ignaz, Carol Davila, hygiene, anniversary

ROMANIAN MEDICAL DOCTORS' ATTITUDES AND PRACTICES REGARDING PATIENTS WHO ARE USING THE INTERNET FOR HEALTH-RELATED PURPOSES – A PILOT STUDY

Dumitru C¹, Abram Z¹, Ferencz L¹, Nadasan V¹

¹Department of Hygiene, UMFST Tîrgu Mureş

Background: Using the internet to find health-related information may expose patients to inaccurate information. The aim of this study was to investigate the attitudes and practices of Romanian physicians regarding their patients' use of the internet as a source of health-related information. **Material and methods:** The cross-sectional study included 94 physicians from Romania. An anonymous, paper and pencil questionnaire with 13 questions was administered during March-October 2018. The response rate was 71.5%. Descriptive statistics were calculated in MS Excel. **Results:** Only 2% of patients seen by physicians were asked whether they sought information about their disease on the internet. When physicians were asked if patients may benefit from using the internet to seek medical information, 10% agreed, 40% disagreed, and half of them did not have a clear opinion. When physicians were questioned about the possibility that the information found on the internet may encourage noncompliance to medical prescriptions, about 10% responded, "Probably, yes", about 45% "Probably, not", and 45% did not have a clear position. The majority of the physicians believed that medical professionals should inquire patients about their health seeking practices as a part of the anamnesis, but only 36% of them thought that this should be done on a regular basis, with every patient they see. Most of the physicians believed doctors should warn patients about the risks associated with inaccurate information, offer explanations to medical questions, encourage patients to trust medical professionals, discuss questions with the patients, and try to involve them in the decision making. **Conclusions:** About half of the surveyed medical doctors did not have a clear opinion about the benefits and risks of using the internet for health-related purposes by patients. A relatively high number of physicians believed that they should ask patients about their health seeking practices, but they rarely did so with the patients they see.

Keywords: health-related information, medical internet, consumer health, quality of information, participatory medicine

THE COMPLETENESS, ACCURACY, AND CREDIBILITY OF ONLINE COLORECTAL CANCER INFORMATION – A CROSS-SECTIONAL STUDY OF THE SPANISH WEBSITES

Sandor AC¹, Suciu I¹, Abram Z¹, Nadasan V¹

¹Department of Hygiene, UMFST Tîrgu Mureş

Background: The aim of the study was to evaluate the quality of online colorectal cancer information provided by Spanish websites by measuring their credibility, completeness, and accuracy. **Material and methods:** The cross-sectional study included a sample of 25 Spanish websites and were retrieved using Google as search engine and "cáncer colorrectal" as keywords. Each site was rated for credibility, completeness, and accuracy on a scale from 0 to 10. The evaluation of the quality of the information was carried out by two independent evaluators, using a common set of detailed instructions. **Results:** The credibility score was 4.9 (SD 2.4), the completeness score was 4.1 (SD 2.1), and the accuracy score was 6.0 (SD 0.9). Information about the treatment of colorectal cancer was especially lacking as shown by a very low completeness score (2.1; SD 2.1). The websites credibility correlated neither with the completeness ($r = 0.1527$; $p=0.4662$), nor with the accuracy of the information ($r=0.1419$; $p=0.4985$). The websites Google ranks correlated moderately with completeness ($r = -0.4614$; $p=0.0202$) and accuracy scores ($r=-0.4112$; $p=0.0412$). **Conclusions:** The quality scores of the Spanish colorectal cancer websites were mediocre. Website quality was moderately correlated with the websites' Google rank, but not correlated credibility. The results of this study should raise the awareness of the Spanish speaking population regarding the risks involved in seeking information about colorectal cancer on the Internet.

Keywords: colorectal cancer, internet, quality of health-related information

SOCIO-DEMOGRAPHIC, PSYCHOLOGICAL AND BEHAVIORAL PREDICTORS OF HIGH PROGRAM EXPOSURE AMONG ADOLESCENTS PARTICIPATING IN A SMOKING PREVENTION INTERVENTION IN ROMANIA

Nadasan V¹, Foley Kristie², Penzes Melinda³, Ferencz L¹, Urban R⁴, Abram Z¹

¹Department of Hygiene, UMFST Tîrgu Mureş

²Department of Implementation Science, Wake Forest School of Medicine, Winston-Salem, NC, USA

³Institute of Public Health, Faculty of Medicine, Semmelweis University, Budapest, Hungary

⁴Institute of Psychology, Eötvös Loránd University, Budapest, Budapest, Hungary

Background: Web-based computer-assisted smoking prevention programs are promising tools that can reach large groups of teenagers at an affordable cost, under relatively private conditions. However, their impact is significantly influenced by the intensity of exposure to the educational content. The aim of the study was to explore the socio-demographic, psychological and behavioral predictors of program exposure among a group of adolescents participating in a smoking prevention intervention in Târgu Mureş, Romania. **Material and methods:** The sample included 675 of the 1038 adolescents allocated to the intervention group of a smoking prevention program delivered to 9th grade high-school students living in Târgu Mureş. Socio-demographic, psychological and behavioral variables were collected in November-December 2014 using an online questionnaire. The level of exposure to the ASPIRE web-based smoking prevention program was monitored using data automatically saved on the system server. High program exposure was defined as watching 75%-100% of the educational content. Associations were tested using Chi-square test and a logistic regression model. **Results:** : Thirteen of the 44 socio-demographic, psychological and behavioral variables tested in a bivariate analysis were significantly associated with high program exposure ($p<0.05$) and were included in a multiple logistic regression model. The multiple logistic regression analyses revealed four significant predictors of high program exposure: participant s father level of education (OR: 1.75; 95% CI: 1.19-2.44), participant s brother smoking status (OR: 1.76; 95% CI: 1.13-2.72), having tried e-cigarettes (OR: 1.73; 95% CI: 1.22 - 2.45) and considering the health of others an important reason not to smoke (OR: 2.46; 95% CI: 1.54 - 3.93). **Conclusions:** High program exposure was more likely in adolescents having a father with lower level of education, non-smoking brother, not having tried e-cigarettes, and considering the health of others an important reason not to smoke. The identified socio-demographic, psychological and behavioral factors may be useful in project management of smoking prevention programs.

Keywords: intervention dose, program exposure, web-based smoking prevention, ASPIRE program, adolescents

INVESTIGATION OF FERTILITY RATE VARIATION

Gal-Balazs Emoke¹, Abram Z¹

¹Department of Hygiene, UMFST Tîrgu Mureş

Background: As a result of today's modernization, many women postpone marriage and childbearing to a later age, affecting fertility rates, in such a way that women have only one or maximum two children. While in the twentieth century the birth rate was 3-5 children /woman, nowadays this figure has decreased to 2.5 children /woman. The low birth rate and fertility rates as well as the high mortality present a negative demographic picture. Our aim is to assess the change of the fertility rate worldwide, in Europe and in Romania. **Material and methods:** Our data were collected through a questionnaire survey which contains questions related to the personal data and family background of the interviewees, such as marital status, number of children and their date of birth, number of planned children, number of siblings. In our study we focused on fertility data compared to a previous research. **Results:** The results show that fertility rates worldwide have dropped by almost half in the last 50 years. The number of children per woman is extremely low in the European countries (1.6 children /woman). According to our research, the birth rate in our country is also gradually decreasing as our grandparents have had an average of 3.3 brothers, this average is only 1.07 brothers per person nowadays. **Conclusions:** It is rejoicing to confirm women are craving for motherhood, but the results support the fact that in present day women are more concerned with career/calling than early child bearing and therefore the number of wanted children is lower than the planned one.

Keywords: fertility, birth rate, number of children

MILK AND CROISSANT NATIONAL PROGRAM IN HARGHITA COUNTY

Balogh Orsolya¹, Gal Andrea¹, Abram Z¹

¹Department of Hygiene, UMFST Tîrgu Mureş

Background: The Milk and croissant program was started as a national program from 2002/2003 schoolyear and it targeted the early childhood education, the pupils from the primary schools. **Material and methods:** Our study was made on a sample of 12 schools which were composed of 4 urban and 8 rural schools, selected randomly from the list of the School Inspectorate of Harghita County. In the selected schools an anonymous questionnaire was filled out by the 4th class pupils regarding their opinions to the Milk and croissant program. **Results:** We can conclude that milk is consumed predominantly in the urban environment and the schoolchildren are satisfied with its quality, more than half of questioned pupils consider that the provided milk is tasty. After our results, croissant is consumed predominantly in the rural environment, the majority of the pupils consider that it is corresponding qualitatively. Schoolchildren consume breakfast permanently or occasionally: more than 70% of urban girls, more than 60% of rural boys consume food before the school program. **Conclusions:** The Milk and croissant national program is useful for the targeted schoolchildren, but its quality should be permanently improved.

Keywords: milk, croissant, quality, rural-urban

INFECTIOUS DISEASES

CARDIOVASCULAR RISK ASSESSMENT IN HIV INFECTED PATIENTS

Andrejkovits A¹, Georgescu Anca-Meda¹, Chiriac Carmen¹, Zaharia Kezdi Erzsebet Iringo¹

¹Department of Infectious Diseases, UMFST Tîrgu Mureş

Background: HIV-infected patients have an increased risk of cardiovascular (CV) disease. HIV-associated inflammation, immune activation, antiretroviral treatment and traditional risk factors play an important role, that contribute to this increased risk. The aim of this study was to estimate CV risk with on-line calculators. **Material and methods:** A retrospective cross-sectional study on 54 HIV infected patients, was designed to estimate CV risk, for each subject, using four risk equations. The CV risk was correlated with demographical data, smoking, immunological status and lipid profile. For statistical analysis we used Graph Pad, two tailed Fischer's exact test. **Results:** The majority of the patients has between 20 and 30 years old. 33 patients (61,1%) was from historical Cohort of Romania. 21 patients (39%) were smokers and 33 patients (61%) non-smokers. By body mass index, 28 patients were normoponderal, 26 were below or above normal weight. Above 50% from patients have hypertriglyceridemia and approximately 52% have hypercholesterolemia. 74% of our patients have normal serum HDL. At 24 patients the CT/HDL ratio was modified. Viral load range was from 200, have a lower cardiovascular risk. Those with undetectable viral load have less CV risk. A reduced CT/HDL ratio was associated with low CV risk. Patients with undetectable viral load have less CV risk, than patients with detectable VL. Patients from historical Cohort of Romania, have lower CV risk scores (DAD equation), than patients infected from other sources. **Conclusions:** CV risk estimation in young HIV infected population is challenging, there are numerous differences in the various CV risk estimation models. For a relatively good estimation we need other screening methods. multidisciplinary and coordinated approach, with collaboration between the fields of HIV, cardiology is needed to further improve the prognosis.

Keywords: HIV, cardiovascular risk, online calculators

AN ACUTE OTOGENIC GROUP A STREPTOCOCCAL MENINGOENCEPHALITIS IN ADULT

Andrejkovits A¹, Girbovan Cristina¹, Manasturean Cristina¹, Zaharia Kezdi Erzsebet Iringo¹, Szekely Edit², Georgescu Anca-Meda¹

¹Department of Infectious Diseases, UMFST Tîrgu Mureş

²Department of Microbiology, UMFST Tîrgu Mureş

Background: It is well known, that Group A Streptococcus (GAS) frequently cause otolaryngologic infections. In otogenic meningoencephalitis GAS is a rare etiologic agent. **Material and methods:** Case presentation **Results:** We report a case of a 59-year-old female patient, admitted through emergency department, with high fever, tachypnea, agitation, sweating, altered mental status. For three days before presentation, the patient complained about headache, odynophagia, right sided otorrhea and tinnitus. At physical examination we found pallor, rapid breathing, serosanguinous drainage from external auditory canal, nuchal rigidity, positive Brudzinski's sign and decreased consciousness with Glasgow Coma Scale of 11/15. Cranial CT scan showed moderated pneumocephalus, bilateral oto-mastoiditis, without cerebral edema. Cerebro-spinal fluid (CSF) analysis disclosed xanthochromia, very high number of nucleated cell count, glucose 3,24 mg/dL and protein 42011 mg/dL. Broad-spectrum antibiotic therapy was initiated (Penicillin, Vancomycin, Gentamicin). From the ear drainage and CSF culture the same pansensitive beta hemolytic GAS was isolated. The patient required admission to intensive care unit, requiring tracheostomy for mechanical ventilation. After extubation, from the nasal cannula *Acinetobacter baumannii* and Methicillin-resistant *Staphylococcus aureus* was isolated. Repeated blood cultures were negative. After two weeks of treatment, on the repeat brain CT scan a chronic sphenomaxillary sinusitis still persist, the cerebrospinal fluid analysis was normal, the antibiotic course was continued because of health-care associated infections. **Conclusions:** This severe form of otogenic GAS meningoencephalitis is rare and has a high-risk for other complications. We highlight the appearance of hospital acquired infections for long lasting hospitalization. To have a good outcome a multidisciplinary approach is crucial.

Keywords: meningoencephalitis, otitis, GAS

A CHALLENGING CASE OF INFECTIVE ENDOCARDITIS: INEFFECTIVE TREATMENT OR RELAPSE?

Manasturean Cristina¹, Chiriac Carmen¹, Girbovan Cristina¹, Andrejkovits A¹, Georgescu Anca-Meda¹

¹Department of Infectious Diseases, UMFST Tirgu Mures

Background: Efficient treatment of infective endocarditis includes eradication of infecting microorganism in the vegetation and resolving invasive, destructive cardiac or extracardiac complications. These goals might be achieved by effective antimicrobial therapy and surgical intervention. Nevertheless, hidden extracardiac foci are hard to eradicate, and 4% of patients with *Staphylococcus aureus* endocarditis suffer relapse. **Material and methods:** Case report: A 68 year old female presented to the emergency department with a three day old history of fever, chills, shortness of breath and an episode of loss of consciousness. The patient had a medical history of hypertension and mitral stenosis and has recently completed a course of antibiotics for a dental abscess. An echocardiogram confirmed the diagnosis of mitral valve endocarditis, with annular abscess. She received complex medical treatment, including antibiotics according to results of blood cultures (*Staphylococcus aureus* MSSA) in the Infectious diseases Clinic 1. After favorable initial outcome, 2 days after finishing the treatment, she developed fever and was readmitted with the same diagnosis. Another course of antibiotics was administered and a panoramic radiograph showed multiple dental abscesses, thus she was sent to the maxillofacial surgery department for radical treatment. Considering that all infectious sources were eliminated, her mitral valve was replaced with a mechanical prosthesis. **Results:** Three months after cardiac surgery symptoms, clinical and laboratory findings of endocarditis reappeared and she was readmitted. **Conclusions:** Late outbreak of last infectious episode suggests poor relationship with surgical approach, and evidence of same germ involved sustained the assumption of hidden metastatic seeding.

Keywords: endocarditis, *Staphylococcus aureus*, mitral valve endocarditis, antibiotic treatment, metastatic seeding

INTERNAL MEDICINE

TUBERCULOSIS ASSOCIATED WITH HIV/AIDS IN MURES COUNTY (2004 – 2018)

Jimboarean Gabriela¹, Alpar C¹, Rusu Szatmary Mioara¹, Ianosi Edith Simona¹

¹Department of Pulmonology, UMFST Tîrgu Mureş

Background: In the last years we noted a decline in Human Immunodeficiency Virus Infection (HIV) among general population but HIV endemic is still extremely large worldwide. HIV infection is a strong risk factor for tuberculosis (TB). TB continues to be the most frequent chronic infectious disease. TB has a great morbidity/mortality in HIV-infected people. The diabolic couple HIV infection - TB disease associates severe complications and high mortality **Material and methods:** Retrospective study on TB - HIV infected patients managed in Pulmonology Clinic (2004-2018) **Results:** The study group included 85 patients with TB and HIV-infection (46 males, 39 females, 61.2% from rural area). Age distribution: 10.5% children, 60% between 14 - 25 years/old, 29% over 25 years/old. Most of the patients lived in very poor conditions and overcrowded homes. At the time of the diagnosis 74.1% had AIDS (79.4% very advanced AIDS: CD4 cell < 200/mm³). 71.7% had pulmonary TB, 7.1% extra-pulmonary TB, 21.2% both. 58.8% developed complications: pleural effusion (10), miliary TB (9), peritonitis (2), pericarditis (1), meningitis (3), respiratory failure (6), drug intolerance (17), pneumothorax (2). The source of TB remained unidentified in 76% patients. 76.4% had multiples comorbidities by HIV immunodepression. 35.2% had multiples relapses or treatment failure. 71.7% required >9 months treatment. Drug-resistant TB: 32.9%; poor compliance: 41.1%, rate of fatality: 42.35%. **Conclusions:** Most of the patients lived in poor condition and were noncompliant to investigation and treatment. HIV-TB coinfections manifested predominantly in teenagers and adults. AIDS patients were prone to develop severe TB with complications, relapses, treatment failure, drug resistance and high mortality.

Keywords: tuberculosis, HIV infection/AIDS, immunodepression

CHRONIC PERICARDITIS: A CONTINUING CHALLENGE – CASE REPORT

Ianosi Edith Simona¹

¹Department of Internal Medicine IV, UMFST Tîrgu Mureş

Background: Etiology of chronic pericarditis may be diverse: infection (viruses, tuberculosis-TB, *Listeria*, *Legionella*, etc.), chronic heart failure, postmyocardial infarction, radiation injury, chronic uremia (urea 60 mg%), myxedema, collagen diseases, sarcoidosis, sequelae after pericardiectomy, malignancies (mesothelioma, secondary tumors) or idiopathic. **Material and methods:** Case presentation **Results:** A 80-year-old patient (non-smoker, without exposure) presented in Pulmonology Clinic for rest dyspnea, chest pain, cyanosis, peripheral edema. The patient's medical history does not reveal recent heart attacks or ischemic accidents, trauma or autoimmune disease. Thoracic ultrasound revealed pericardial collection. Blood analysis: urea 88mg%, creatinine 2.5mg%, negative autoimmune disease parameters or angiotensin-converting enzyme. Bronchoscopy: no malignant lesions or positive bacteriology for TB bacilli. Spirometry: moderate mixed ventilatory dysfunction. The cardiology examination: ischemic heart disease, chronic fibrillation, hypertension and a chronic pericarditis of unspecified etiology. The patients received antiarrhythmics, beta-blockers, diuretics. Thoracic/abdominal CT confirms chronic pericarditis, mild interstitial fibrosis, bilateral basal pachepleuritis and the presence of small retracted bilateral kidneys with dense intraparenchymatous nodules. The urine test for Koch bacillus was negative. In this clinical and paraclinical context we considered the chronic pericarditis inside the uncontrolled chronic renal disease (chronic uremia) and we recommended investigation extension in Nephrology Clinic, renal biopsy and ultrasound guided cardiological exam for pericardial puncture and liquid examination. We have instituted treatment with combined inhaled bronchodilators, clarithromycin, small doses of anti-inflammatory drugs and we increased diuretics. **Conclusions:** Differential diagnosis of dyspnea and pericarditis requires broad investigations: spirometry, bronchoscopy, cardiac exam, thoracic/abdominal imaging (ultrasound, CT), autoimmunity tests due to the large panel of etiology. Diagnosis of chronic pericarditis is difficult and requires a multidisciplinary approach of specialties (pulmonology, cardiology, nephrology, internal diseases) and pericardium puncture. Chronic renal disease with persistent uremia could explain chronic pericarditis and chronic dyspnea by interstitial fibrosis.

Keywords: chronic pericarditis, uremia, challenge

CARDIOVASCULAR RISK ASSESSMENT IN PATIENTS WITH CHRONIC MYELOID LEUKEMIA UNDER TREATMENT WITH TYROSINE KINASE INHIBITOR

Petra Dorina¹, Varga Andreea¹, Demian Smaranda², Suciua Claudia Floriana¹, Macarie I², Tilea I¹

¹Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

²Department of Internal Medicine II, UMFST Tîrgu Mureş

Background: Tyrosine kinase inhibitors (TKIs) are the first-line agents approved in Romania for the treatment of chronic myeloid leukemia (CML), with a very good disease-specific survival rate. Cardiovascular (CV) adverse events represent a challenge in these patients. Pre-existing CV risk factors, co-morbidities and predispositions of molecular factors are involved in the etiology of CV adverse events. **Material and methods:** A retrospective study in 43 CML patients (26 male, 17 female) treated with TKIs (imatinib, nilotinib, dasatinib) was performed. CVD risk (SCORE high-risk chart and QRISK2 calculator) recordings were calculated. The SCORE chart was applied in 22 patients aged 40-65 years. For assessing CVD risk of whole studied sample QRISK2 calculator was used. Mean follow-up was 77±8.48 months. **Results:** Subject's mean age was 57±15.03 years; 60.46% were male, 30.23% of cases were obese (BMI>30kg/m²). SCORE chart stratified 22.72% patients in the low-risk group, 11 in the moderate-risk group, 5 in the high-risk group and one subject in the very-high-risk group. No CV events were recorded in these patients. Low/moderate-risk group patients did not have a significantly higher rate of major molecular response achievement compared to the high/very-high-risk group (81.25% vs. 66.66%, p=0.585). QRISK2 calculator identified 22 patients with CV risk<10% and one presented acute myocardial infarction. Seven patients presented a 10-20% calculated risk with no CV events, whereas 14 were stratified to a >20% risk and three had a CV event (p=0.270). The patients with CV risk ≤10% did not experienced a significantly higher rate of major molecular response achievement compared to those in the CV risk >10% group (77.27% vs. 57.14%, p=0.202). **Conclusions:** Patient's cardiovascular profile should be determined before initiating treatment with TKIs in order to exclude patients at increased risk of CVD. In our study, SCORE and QRISK2 were not useful for predicting major molecular response to TKIs due to the small sample size.

Keywords: chronic myeloid leukemia, cardiovascular risk, tyrosine kinase inhibitors

CHANGE IN MORTALITY PATTERNS IN DIABETES BETWEEN 2012 AND 2018 IN A MURES COUNTY PATIENT POPULATION

Szabo Monica¹, Tilinca Mariana Cornelia², Szabo Johanna¹, Harkel Beata³, Nemes-Nagy Eniko⁴

¹Department of Internal Medicine IV, UMFST Tîrgu Mureş

²Department of Cell Biology, UMFST Tîrgu Mureş

³Student, UMFST Tîrgu Mureş

⁴Department of Biochemistry, UMFST Tîrgu Mureş

Background: According to the literature, patients with diabetes mellitus have a two-fold higher risk of all-cause mortality, and three-fold higher risk of cardiovascular disease related mortality, with a 10 years shorter life expectancy. However, a more aggressive risk factor management and diabetes treatment may have lessened the risk. Our objective was to analyze the change in mortality patterns in diabetes between 2012 and 2018 in a Mures County patient population, compared to the general population. **Material and methods:** 3265 patients from a Diabetes Care Centre were included, mortality rate, age of death, and mortality causes were followed on a yearly basis between 2012 and 2017. Data were compared to the death related data of the general population, obtained from the National Statistic Registry for Mures County. **Results:** There were 358 deaths in this period. Mean age of death was 3,8±2,9 years lower than that of the general population. There was a constant trend of growing mean death age from one year to the other. Male, insulin treated, and type 2 diabetes versus type 1 patients had a lower mean death age. Causes of mortality in the two groups were: cardiovascular events 53% vs.52%, malignancy 31% vs.21%, respiratory diseases (including pneumonia) 6% vs. 1,2%, suicide 3% vs. 0,01%, others 7% vs. 25%. **Conclusions:** Age gap is narrowing between diabetic and nondiabetic patients, with cardiovascular disease as the leading cause of death, but in an equal percentage as in the general population. However, suicide, malignancy and respiratory diseases are more frequent cause of death among patients with diabetes compared to the general population.

Keywords: diabetes, mortality, death age

EXTRAIESTINAL MANIFESTATION OF ULCERATIVE COLITIS SEVERE THAN INTESTINAL SYMPTOMS CASE REPORT

Onisor Danusia¹, Boeriu Alina¹, Brusnic Olga¹, Petrut Madalina¹, Dobru Daniela¹

¹Department of Internal Medicine VII, UMFST Tîrgu Mureş

Background: Ulcerative colitis can be considered a systemic diseases because is often associated with extraintestinal manifestations. **Material and methods: Results:** A 54 years old, female patient, was admitted to the surgery clinic to treat a skin and subcutaneous tissue lesion spread across the entire left shank. Due to the presence of large amounts of ascites, gastroenterological consultation was required. The anamnesis has highlighted the appearance of skin lesions, with functional impotence, then abdominal volume increase, abdominal discomfort and transit disorders with softer stools and intermittent rectoragia. Clinical and paraclinical investigations revealed the final diagnosis of pyoderma gangrenosum, primary sclerosing colangitis, and extensive left colitis. Treatment with 5-ASA products, corticosteroids and ursodeoxycholic acid with favorable evolution was instituted. At the 3 months evaluation, the patient was without ascites, 1-2 stools / day, with no pathological product and lesion of the left shank undergoing healing. **Conclusions:** Reports on extraintestinal manifestation more severe and preceding intestinal findings are less frequent.

Keywords: ulcerative colitis, pyoderma gangrenosum, primary sclerosing colangitis

STATINS AND PRE-NEOPLASTIC GASTRIC LESIONS

Negovan Anca¹, Pantea Monica¹, Mocan Simona², Bataga Simona³

¹Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

²Department of Pathology, Emergency County Hospital Targu Mures

³Department of Internal Medicine I, UMFST Tîrgu Mureş

Background: The additional benefits of some frequently chronic used drugs like statins or aspirin are investigated for their possible effect on influencing various type of cancer, including gastric cancer. The possible role of statins for pre-neoplastic gastric lesions occurrence has not been investigated. The study aims to determine the influence of chronic statin therapy on premalignant gastric lesions (glandular atrophy, intestinal metaplasia and dysplasia) modulated by the most important aggressive environmental factors for gastric mucosa (H. pylori infection, low-dose aspirin- ASA, biliary reflux, smoking, alcohol consumption) **Material and methods:** The study included 566 patients who underwent an upper endoscopy, 222 patients with chronic statin therapy (atorvastatin 20-80 mg/day, rosuvastatin 5-20 mg/day at least 6 months) and 344 patients without statin intake. A complete set of biopsies from gastric antrum and corpus were routinely processed end examined and demographical, clinical and pathological variables are recorded. **Results:** Active H.pylori infection in gastric biopsies (p=0.45), biliary reflux (p=0.74), alcohol consumption (p=0.43) or prior ulcer disease (p=0.07; OR:0.59;95%CI:0.33-1.04) were not associated with increased risk for premalignant lesions in both statin and no-statin group. Smoking was associated with premalignant lesions in both groups (p=0.01; OR:2.24;95%CI:1.12-4.47, respective p=0.04; OR:1.72; CI:1.01-2.94), while chronic use of ASA had no influence (p=0.24, respective p=0.35). In multivariate regression models, treatment with statins had a protective effect (p=0.006; OR:0.59 95%CI:0.4-0.8), while smoking (p=0.01; OR:1.99 95%CI:1.17-3.39) and age >50 years (P<0.01, OR:3.09 95%CI:1.84-5.21) were predictors for pre-neoplastic lesions. H. pylori infection, gender, alcohol consumption, biliary reflux or prior ulcer disease were not (p>0.05) associated with glandular atrophy and intestinal metaplasia. **Conclusions:** In studied population, chronic statin treatment seems to be associated with a decreased risk for premalignant gastric lesions, while age over the 50 years or smoking habits, regardless the gender or ASA consumption, remain the most important predictors for gastric glandular atrophy and intestinal metaplasia.

Keywords: statin, stomach, glandular atrophy, intestinal metaplasia, smoking

LANGUAGE AND DISCOURSE, LITERATURE AND COMMUNICATION

EMIL BOTTA - CEREMONIES OF DAMNATION

Boldea I¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The atmosphere that dominates the visions of Emil Botta is one of irreparable sadness, agonizing anxiety and fatality of destiny, so that the feeling of self-consciousness is conjugated here with the serious emotions of alienation and the world's estrangement. From here comes the clear-obscure ambience, the hallucinations and melancholy, the incantations, the black and diffuse light, but also the unclear landscapes so relevant to this poetry born from the obsession of despair treated in the velvet colors of the ceremony of suffering. **Material and methods: Results: Conclusions:**

Keywords: damnation, sadness, anxiety, destiny, ceremony

A POET - HEROINE MOTHER

Cistelecan A¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The poem belongs to the series Ardelencele - literary criticism of feminist poetry. **Material and methods: Results: Conclusions:**

Keywords: Transylvanian poetry, identity, feminism

THE REPRESENTATION OF ANIMALS IN LIVIU REBREANU'S ION

Terian A¹

¹Department of Romance Studies, Faculty of Letters and Arts, Lucian Blaga University of Sibiu

Background: Drawing partially on the emerging field of animal studies, this paper aims to analyze the representation of animals in Liviu Rebreanu's *Ion* from a new perspective. The starting point of my study is that Rebreanu's fiction signals a decisive departure from the traditional anthropomorphic representation of animals and although it does not identify animals as an instance of alterity, it nonetheless succeeds in instrumentalizing this category in an original manner. Specifically, in Rebreanu's first novel, the writer puts forward a genuine tropological network (metaphors, similes, epithets, etc.), which, in turn, translates into a biopolitical vision wherein the animal element not only illuminates, but also gives structure to the human. Far from qualifying as a mere bestiary, this novel features a myriad of analogies between the human characters and animals, which provide the former with psychological depth and a more clear position within the biological and social scales. **Material and methods: Results: Conclusions:**

Keywords: animal studies, interwar Romanian novel, tropology, biopolitics, scale

COMPLEMENTARY THERAPIES. ELEMENTS OF PSYCHOLINGUISTICS.

Pitiriciu Silvia¹

¹Department of Romanian Language and Literature, Faculty of Letters, University of Craiova

Background: Defining the concept of complementary therapies involves the interference of natural medicine with psychology and linguistics. The hierarchy of domains and subdomains, the knowledge of their specificity and the interdependence of complementary therapies are of interest to both specialists (doctors, nurses, therapists, psychologists) and linguists. In the analysis,

we have delineated some psycholinguistic elements, simple and complex lexical units, which designate imbalances of the soul and the effects of phytotherapy on them. **Material and methods: Results: Conclusions:**

Keywords: complementary therapy, psycholinguistics, lexical, phytotherapy, meaning

POST-FACTUAL DISCOURSE AND TRUST IN INSTITUTIONS

Hosu I¹

¹Department of Communication, Public Relations and Advertising, Faculty of Political, Administrative and Communication Sciences, Babes-Bolyai University of Cluj-Napoca

Background: The paper studies the relation between media discourses and trust in institutions, focusing on the effects generated by such relations and their impact on community matters. **Material and methods: Results: Conclusions:**

Keywords: post-factual discourse, trust, media, institutions, communities

SENSE AND CONCEPTUAL METAPHOR. THE CASE OF POWER.

Sporis Valerica¹

¹Department of Romance Studies, Faculty of Letters and Arts, Lucian Blaga University of Sibiu

Background: My research is an analytical approach to power conceptual metaphors as captured by present Romanian TV journalism. I focused on two conceptual-metaphorical categories, which include the Source Domain POWER as well as the Target Domain POWER, a polysemantic lexical term in Romanian. The methods underlying the study of the conceptual metaphor of POWER include, in general, MIP and MIPVU, and in particular, the method used by Z. Kovecses in his research Perception and metaphor. The case of SMELL. It is an interesting experiment to capture the journalists' perception on power. I pursued the metaphorical conceptualization of POWER, especially in the space of current Romanian politics, as the excessive mediatization of the political life is a reality of our times. Metaphors are linguistic phenomena which embody human experience, they can rebuild reality, offering journalists the possibility to express reality in private terms, sometimes in line with the ideology promoted by the television channel. The corpus was incorporated by the author and it comprises live broadcasts selected from Romanian TV channels along 2018. **Material and methods: Results: Conclusions:**

Keywords: conceptual metaphor, TV journalism, source domain, target domain, politics and power

SYMBOLIC SPACE - IDENTITY AND POETIC COMMUNICATION

Chiorean Luminita¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: Making use of phenomenology, geo-criticism and the semio-stylistic approach of the lyrical discourse, our objective was to analyze the symbolic spaces a poet offers the reader, both being devourers and devoured by bookish spaces. Through correspondences between the spatial descriptive and the rhetoric of the lyrical discourse, and by using the different roles of descriptive strategies (flash, charade, mimetism, the ludic, the symbol), and the colloquial and proxemics strategies (the individual perception and use of space, the silent language of spatial relations), we will identify poetical images, fragments of poetical language of a happy spirit, isolated details of a creative identity, a symbolic and utopic space, perceived from a centripetal dimension (in an aborigine space) and a centrifuge one (in an exotic space), open spaces vs. closed spaces, all taking part in shaping a cultural pattern. Our interpretative approach aims to discover cultural identities promised by the reading of the spatial labyrinth, hinting at possible monographic details regarding the author. Our project, Symbolic spaces - cultural identity and poetical communication, whose reference is the topos, a pattern germinating socio-cultural identities, sets forwards as a first study case the (pre) Romantic Romanian poetry. **Material and methods: Results: Conclusions:**

Keywords: poetical space, cultural identity, geo-criticism, semio-stylistic analysis, discursive strategies

MEDIA DISCOURSE / MULTIMODAL TEXT AS RED / OPEN EDUCATIONAL RESOURCE

Szekely Eva-Monica¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: This study is generated by the reflections upon the innovative concept of the New Curricula of Romanian Language and Literature for secondary schools: multimodal text (text which combines two or more semiotic resources/ patterns of meaning construction) as an expectation for multimodal literacy in every discipline from the secondary school, according to Anglo-Saxon curricula. The most important hypothesis of our research as a case study is: if media discourses (news, reportages, photos, advertisements, statistics, documentaries, films etc.) would be used as multimodal texts and digital educational resources, the pupils / students / teachers products of activity as new RED / Open Educational Resources (projects, power point presentations, essays, reading journals, country / county/ city guides, books and films trailers, digital storytellings etc.) will have a richer, more expressive and creative language. Furthermore, the activities will get rid of routine, monotony and boredom, answering to the pupils / students needs and expectations. Our hope is that the conclusions will led us through results to the premises/ hypotheses that multiliteracy / multimodal media literacy and his opening to the transdisciplinary space does not reinvent everything, but certainly reorganizes already existing elements of traditional literacy in a new integrative perspective. **Material and methods: Results:**

Conclusions:

Keywords: multimodal text, multimedia literacy, open educational resources, creative language

GRAMMATICALIZATION AND (INTER)SUBJECTIVITY IN ROMANIAN. CASE STUDY: MODAL VERBS.

Terian Simina¹

¹Department of Romance Studies, Faculty of Letters and Arts, Lucian Blaga University of Sibiu

Background: The present paper analyzes the dynamics of the processes of (inter)subjectivization and grammaticalization in Romanian against the methodological framework put forward by, among others, Hubert Cuyckens and Kristin Davidse of the FunC Group in Leuven, and focuses on the manner in which they impact modal verbs. By examining a wide array of Romanian examples built mainly on verbs such as a trebui (should / must), a putea (can / may) and a avea (to have), I aim to highlight and explain the process whereby the repeated (inter)subjectivization of a modal verb can generate a new/other grammaticalization for it.

Material and methods: Results: Conclusions:

Keywords: (inter)subjectivity, grammaticalization, modal verbs

SOUNDS AND PHONEMES IN STANDARD ROMANCE LANGUAGES

Rus Laura¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The present paper explains and illustrates the differences between sounds, phonemes, allophones, minimal pairs in standard Romance languages (Romanian, French, Italian, Spanish, and Portuguese). We also present the major criteria that define the vowel and consonant system (the place of articulation and the way of articulation), calling the attention to those sounds with double statute: phonemes in one language and allophones in other Romance language. **Material and methods: Results:**

Conclusions:

Keywords: phoneme, allophone, minimal pair

HEALTH AND THE HUMANITIES

Buda DM¹

¹Department of Phylology, UMFST Tîrgu Mureş

Background: The paper focuses on the new trend in European and American academic discourse to integrate the Humanities into medical research, in order to reflect upon the implications of health care and of recent developments in medical technology. The resulting multidisciplinary field of research aims to renew the mechanism used traditionally in teaching Humanities as well as Medical Sciences, breaking the artificial boundaries that separate them and revealing new ways of perception towards Health, Art, Literature, Music, Ethics etc. **Material and methods: Results: Conclusions:**

Keywords: health humanities, medical humanities, multidisciplinary, technology

LINGUISTIC AND CULTURAL IDENTITY IN LITERARY TEXT

Bozedean Corina¹

¹Department of Phylology, UMFST Tîrgu Mureş

Background: Language is the key component of a writer's identity. Therefore, when he lives within a foreign culture and writes in a language other than his own, rather logical questions appear: whom does he speak for? and whom does he speak to? Creating in exile broadens the observational field for various subjects connected to linguistic and literary identity: a vacillating attitude then becomes obvious, that focuses on the writer's own artistic expression, with no regard for the potential audience or for the access to a larger readership through translation and self-translation. Several important names in European literature, Romanian included, faced this kind of choice, which proved to be source for both frustration and satisfaction. **Material and methods: Results: Conclusions:**

Keywords: identity, language, culture, literature

ENSOMATOSIS AND DISCURSIVE INSTANTIATIONS IN THE PICTORIAL EUROPEAN TRADITION (XVTH - XXTH CENTURIES)

Pop Andreea¹

¹Department of Phylology, UMFST Tîrgu Mureş

Background: In time, the dialectic of body and soul is subject to major variations, ranging from an all-spirit to an all-bodily state. By summoning some very well-known pictorial representations, going back as far as the XVIth century, the paper takes into account the hazards of incorporation showing both a bodily spirit and a spiritual body, sort of a metaphysical confusion of the two states. A pictorial language built around the human body comes gradually into use giving more details about this both ecstatic and painful contact of the two existential horizons. **Material and methods: Results: Conclusions:**

Keywords: body, embodiment, spirit, transcendence, pictorial language

COMMUNICATION THROUGH DIGITAL DIPLOMACY AND THE IMPACT OVER NATIONAL SECURITY

Natea Mihaela¹

¹Department of Phylology, UMFST Tîrgu Mureş

Background: Digital diplomacy is an important aspect of soft power and an important international relations tool in shaping the image of a state. Globally every international actor is seeking to attract good-will, and in doing so to promote its political, economic or cultural agenda abroad. The message is not addressed only to other political systems but to the citizen, seen as an individual that

can exist in any corner of the world. The digitalization offers new meanings and layers to the understanding of communications. By doing so states strive to create an image that could have an impact over national security, seen in the broad sense. The article studies the way in which states use digital means to promote their image and political agenda, starting from promoting cultural aspects to national security ones. **Material and methods: Results: Conclusions:**

Keywords: digital diplomacy, cultural diplomacy, digital era, national security

PRESENT-DAY MODELS OF COMMUNICATION AND PUBLIC RELATIONS

Nistor E¹

¹Department of Phylology, UMFST Tirgu Mures

Background: From a theoretical perspective, a lot of models have come out of the analysis of the communication process, but since they are purely descriptive, graphical and mathematical, these actually have a low relevance for the tendencies that connect the elements of communication to a dynamic, coherent and consistent complex. Such results of the scientific-mathematical studies include: Harold D. Lasswell's linear model, Osgood and Schramm's circular model, Dance's helicoidal model, Newcomb's ABX model, the model of dynamic correlation (also called kite model), the convergence model etc. The research of mass communication also led to the elaboration of other models, like the model of two-step flow, by Katz and Lazarsfeld, the model of news transmission, the mushroom inter-personal communication model, the magic bullet model, the agenda setting model, the model of dependency, the model of informational expectations and rewards, the model of silence spiral, etc. But it was only with the research carried on in the US by James Grunig and Todd Hunt, in 1984, that the four fundamental models of PR are configured, those that function explicitly even nowadays through various public types, starting with organizations and small communities and spreading over nations, peoples, federations etc. These PR models, present everywhere even since historic times are: the agent-publicity model, the public information model, the bidirectional-asymmetrical model and the bidirectional-symmetrical model. **Material and methods: Results: Conclusions:**

Keywords: communication models, PR models, magic bullet theory, silence spiral theory

COMMUNICATION IS REINVENTING ITSELF AT THE SPEED OF DIGITALIZATION

Pascan M¹

¹Department of Phylology, UMFST Tirgu Mures

Background: At present, in the public space we often hear about digitization, referring to the Internet generation and the digital world, we are witnessing a new evolution on the existence scale. As the speed of our being keeps increasing, the space is compressed by electronic communication. We are witnessing a real revolution in technological development and new electronic media for information storage, processing and communication, along with a new literacy, the virtual one, and a new type of communication, the digital one. Today, being an internet user is similarly a kind of elementary school. After the discovery of electricity, it took mankind nearly three hundred years until Thomas Edison discovered the light bulb, while nowadays, in only two or three generations, the world saw the discovery of quantum physics, the creation of the atomic bomb, then the invention of the first computers. A new technological leap was achieved through the revolutionary transition from analog to digital communication. During this time, we found ourselves in the global village Marshall McLuhan had prefigured in 1967, and we are just going through the Future Shock anticipated by Alvin Toffler. Due to its impact on all areas, digitization can be compared to the great Industrial Revolution of the 19th century. Digitalization essentially means the transformation of information translated from analog signals into digital signals, relying on the use of technology by storing and processing, searching and retrieving information among online users. Technical support for digitization is represented by electronic infrastructure. Information is processed and transmitted instantly over long distances through satellites or optical fibers. So we have instantly stepped in a new era, into a new world of communications, where communication is digitally reinventing itself through: the internet, E-mail, PDA, Smartphone, Satellite Radio, HDTV, Blue-ray, iTunes, Podcasting, Blog, RSS, Feed, BitTorrent, YouTube, Wikipedia, Flickr, iPhone, iPad, social media, electronic media, new media etc., and technological breakthroughs are going on, at an brisk pace. Where will this new digital world lead us after all?! **Material and methods: Results: Conclusions:**

Keywords: digitization, technology, new media, communication, digitalization

BRANDING AT FORTY

Sigmirean C¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: This paper aims to study the evolution of the branding concept from the point of view of its maturity. If we think of the initial concept from which branding started and we are talking about its current representation, we see the radical changes it has undergone. Today, when talking about branding, we are not just referring to a simple graphic representation, a motto, but we are talking about an entire organizational culture that starts with the positioning of a company, that uses all the consumer's senses in the process of getting its loyalty. Let me introduce you branding, at its forty years old. **Material and methods: Results: Conclusions:**

Keywords: branding, sensory branding, iconic brand, sonic brands

THE IDENTITY CLASH IN E. M. FOSTER'S A PASSAGE TO INDIA

Stefanovici Smaranda¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The paper is directed to the identity issues related to the cross-cultural encounter between two different cultures. My analysis will draw on the cultural values that shape the way the British and the Indians perceive and interact with the metropolitan and colonial space they share; it will also discuss the dilemma as to whether or not it is possible to have a constructive colonizer - colonized identity relationship by studying their cultures, beliefs, practices, values, and ideas. **Material and methods: Results: Conclusions:**

Keywords: cultural anthropology, identity clash, metropolitan and colonial spaces, passage, muddle

DIGITAL STORYTELLING IN THE NEW YORK TIMES

Hosu Ramona¹

¹Department of Journalism, Faculty of Political, Administrative and Communication Sciences, Babes-Bolyai University of Cluj-Napoca

Background: The present paper intends to analyze the multimedia communicative elements that build the structure of some narratives published in The New York Times. The intention is to examine the structures of meaning and the multidimensional symbolism of such digital media products. **Material and methods: Results: Conclusions:**

Keywords: digital storytelling, narration, multimedia features, meaning, symbolism

NEEDS ANALYSIS FOR MODULE DESIGN IN HELP2 - ENGLISH FOR NUTRITION

Pop Anisoara¹

¹Department of Functional and Complementary Sciences, Foreign Languages

Background: Healthcare Language Learning Programme 2 (HELP2) is an Erasmus+ project of Strategic Partnerships, a continuation and optimization of successfully finalized HELP1, with participants from 8 European countries (Czech Republic, Romania, Germany, Lithuania, Poland, Slovakia, Bulgaria, and Portugal). It aims to develop and implement innovative practices, to develop foreign language and intercultural skills in the area of healthcare in English, more specifically a comprehensive modular learning programme in line with the needs of the target groups. UMFST of Târgu-Mureş through the Department of Foreign languages as HELP2 partner is responsible, among others, for the design and piloting of a module in Nutrition. The target groups are students in higher education or language centers, healthcare staff (nurses, nursing assistants, dietitians) and other independent

informal learners in the healthcare field. We will present the results of the initial needs analysis (NA) process consisting in several systematic steps aimed at bridging the gap between the target groups' competence and their desired needs. As initial stage in any course design, NA will help us to respond with appropriate learning strategies, materials and methods for the Nutrition module. Needs identification is collected through an 11-item questionnaire and interview with students and specialists in nutrition, as well as survey of the research literature. Prioritisation of the highest need, expected content and abilities, will represent the needs analysis outcomes. **Material and methods: Results: Conclusions:**

Keywords: needs analysis, English for nutrition, course design

CHALLENGES IN TEACHING ROMANIAN LANGUAGE TO FOREIGN STUDENTS

Han Bianca¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The article sheds light upon some of the most ardent issues in teaching and learning Romanian language as a foreign language, as resulted from a case-study based research completed under the form of questionnaires addressed to teachers involved in the teaching process on the one hand, and the receiving students involved in the learning process, on the other. **Material and methods: Results: Conclusions:**

Keywords: foreign language teaching, Romanian as a foreign language, challenges in language teaching

INNER/OUTER TOPOGRAPHY OF CHARACTER IDENTITY IN ALEXANDRU DONE S DOWNSHIFTING

Nicolae Cristina¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: Alexandru Done s novel is built around an epiphanic moment that places the main character, Mihai, right in the middle of an existential crisis rooted in choices, changes, reconsidered boundaries. The narrative thread tackles in a humorous and entertaining way modernist and postmodernist issues such as self-discovery and self-fulfillment, the self and the other. The paper also concentrates on the representation of space seen as an extension of the self - the configuration of outer topography becomes a dynamic mirroring of the male protagonist s inner topography (and vice versa), while his identity journey unfolds in a world that orbits a self defined by love, deconstructing old identities and constructing new ones. **Material and methods: Results: Conclusions:**

Keywords: inner/outer topography, identity, alterity, love, the self

NAVIGATING SUFFERING AND JOY, HEALTH AND DEBILITATION IN BODY, MIND AND SPIRIT IN THE WOMEN OF BREWSTER PLACE BY GLORIA NAYLOR

Lirca Corina¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The paper is an interdisciplinary exploration of health issues within Gloria Naylor s fictional world as it was depicted in her first short-story cycle. Several positive and negative aspects of human life from the perspective of the body, mind, and spirit will be investigated, i.e. suffering and joy, health and debilitation, etc. Unexpected outcomes are anticipated, as well as potential new synergies and ideas may emerge, unlike the regular critical outcome. The basis of the study is to question how characters think, speak and act in relation to health, medicine, the body, the mind, healing and their spiritual side. We shall be using the Medical Humanities as our theoretical framework for exploring the topics under discussion, navigating, in body, mind and spirit. **Material and methods: Results: Conclusions:**

Keywords: Gloria Naylor, transdisciplinary space, medical humanities, African-American literature, gender issues

SNATCHES OF DIALOGUE IN FILM

Filimon Eliza Claudia¹

¹English Department, Faculty of Letters, History and Theology, West University of Timișoara

Background: Film dialogue is the meeting point of several disciplines, such as screen-writing, film studies, narrative theory and linguistics. The present paper focuses on the role of dialogue in two key parts of visual narratives, the climax and the ending. Recent productions of different genres are analysed in view of bringing film dialogue to the forefront, for an indepth understanding of films. **Material and methods: Results: Conclusions:**

Keywords: close listening, film dialogue, film genre, film theory, voiceover

TEACHING ENGLISH FOR DENTISTRY: CHALLENGES AND REWARDS

Marta Monica Mihaela¹

¹Discipline of Modern Languages, UMF Iuliu Hațieganu Cluj Napoca

Background: This article reflects on the experience of teaching English for Dentistry to undergraduate students in the Department of Modern Languages of Iuliu Hațieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania. The main aims of this contribution are to identify the most frequent challenges encountered from a teacher's perspective as well as some of the rewards associated with teaching English to future dental professionals. Thus, lack of formal training in English for Specific Purposes, lack of specialist knowledge at the start of the teaching career, the scarcity of English for Dentistry course books and the continuous progress in the field of dental medicine represent some of the most significant challenges. On the other hand, a high level of student involvement in class and visible learning outcomes, also reflected in positive formal and informal learner feedback constitute rewards able to compensate for the difficulties encountered in this particular teaching setting. **Material and methods: Results: Conclusions:**

Keywords: English for Dentistry, English for specific purposes, dental students, dental professionals

ERROR ANALYSIS IN A CORPUS OF MEDICAL ARTICLES

Naznean A¹

¹Department of Functional and Complementary Sciences, UMFST Tîrgu Mureș

Background: This study investigates a corpus of medical articles in order to identify different types of mistakes. The medical articles included in the corpus were randomly chosen from two Romanian journals indexed in the core collection of Clarivate Analytics and are all authored by Romanian medical and pharmaceutical specialists. All of the articles were processed manually. The aim is to highlight the mistakes to offer both translators and medical writers advice on the choice of terminology, grammar errors to avoid, and on other dos and don'ts of medical translation and medical writing. **Material and methods: Results: Conclusions:**

Keywords: error analysis, medical articles, medical translation, medical writing

BIG DATA-BASED MULTILINGUAL TERMINOLOGY EXTRACTION

Lako Cristian¹

¹Department of Phylology, UMFST Tîrgu Mureș

Background: In this paper, we propose a method, typically used for commercial website optimization, for retrieving candidate terms (CT) and building a multilingual glossary (Romanian and English and French) on psycholinguistics, employing search engine data (Google and Bing) and search engine optimization tools (Google KeywordPlanner, keyword density, etc). The output will be compared with existing monolingual glossaries. The approach can be successfully replicated for any other field of human activity. **Material and methods:**

Results: Conclusions:

Keywords: terminology extraction, psycholinguistics glossary, multilingual glossary building, alternative terminology extraction tools

A CRITICAL SELECTIVE APPROACH TO ELT METHODS AS A FACTOR OF LANGUAGE ACQUISITION SUCCESS

Rus Dana¹

¹Department of Phylology, UMFST Tirgu Mures

Background: The choice of adequate teaching methods is one of the most important factors impacting language acquisition success. The language instructor's theoretical and practical knowledge of different methodologies is an essential criterion for the adequate design of class activities which should meet proposed objectives. The present paper is an overview of the factors influencing the choice of English language teaching methodological tools with a special emphasis on the approach of teaching language skills at higher education level. **Material and methods: Results: Conclusions:**

Keywords: English teaching, teaching methods, English for specific purposes, language skills, language teaching objectives

STUDY ON COMMUNICATION PROTOTYPES AND THEIR APPLICATION IN TECHNICAL LANGUAGE

Ban Andreea¹, Bucur Mihaela¹

¹Department of Industrial Engineering and Management, UMFST Tirgu Mures

Background: Each form of communication has its own specificity and creates its own patterns. There are also prototypes that cross the barriers of a certain profile and which can be adapted to any situation for any type of communication. Thus, the present paper analyzes the variety of communication prototypes that exist in the specialized literature, as well as their visual codification with applicability in technical language. The authors have tried to identify concrete technical examples for each prototype, the purpose of the paper being to emphasize the importance of communication and of its models in the technical world. **Material and methods: Results: Conclusions:**

Keywords: communication, engineering, students, technical language

THE ROLES OF THE ESP TEACHER. FROM THEORY TO PRACTICE.

Marcu Nicoleta¹

¹Department of Law and Public Administration, UMFST Tirgu Mures

Background: This article is a research into the roles of the ESP practitioner as presented by Dudley Evans and Saint John A.M. (teacher, collaborator, course designer and materials provider, researcher and evaluator) and their correspondence in the ESP teaching practice. The purpose of this article is to identify practical examples that the ESP practitioners can benefit from in the development of their various roles and ultimately meet the goals of ESP courses. **Material and methods: Results: Conclusions:**

Keywords: ESP, practitioner, roles, ESP theory, teaching practice

HEAVEN AND HELL: ALDOUS HUXLEY'S VIEWS ON VISIONARY EXPERIENCE

Muresan Oana¹

¹Discipline of Modern Languages, Department of Medical Education, UMF Iuliu Hațieganu Cluj Napoca

Background: The paper discusses Aldous Huxley's essay Heaven and Hell (1956) in which, as the title suggests, he presents the two opposing types of visionary experience that can be induced by different means, from hallucinogenic drugs and hypnosis, to

fasting and isolation, or even illness. The author offers a cultural and psychophysiological perspective on the seemingly revelatory effects of psychedelic experience, at the same time warning the reader about the hazards of negative visions. The eight addenda which accompany the main text include more in-depth analyses of certain aspects presented in the essay in relation to visionary or mystic experience, supported by examples from science and the arts. Thus, the essay offers a scholarly perspective on the subject that is both original and compelling. **Material and methods: Results: Conclusions:**

Keywords: visionary experience, psychedelics, negative vision

THE SYMBOL OF THE SHADOW IN VERDI S OTELLO

Goia Letitia¹

¹Discipline of Modern Languages, Department of Medical Education, UMF Iuliu Hațieganu Cluj Napoca

Background: The tragedy of Othello has been read and interpreted countless times over the centuries, and it continues to be researched and analysed from various perspectives. However, what is specific for Shakespeare s plays is that they can also be studied in a subtler key, and Giuseppe Verdi can be counted among those who have understood the deep meaning of Shakespearean themes, and has also managed to express it in a musical mirror with the finest nuances. The whole opera Othello is not only a manifestation of the genius of the great composer, but a genuine hermeneutical endeavour, which resulted in a Shakespearean musical subtext. This paper focuses on the last scene of the play, with reference to the symbol of the shadow and its relevance in shaping the character of Othello. In Othello, Shakespeare s knowledge of the human nature meets Verdi s skill in exploring the psychological depth of the characters by means specific to the art of sounds: tonality, choice of voice type, melodic lines, leitmotifs, rhythm, selection of instruments or orchestration. Such an approach to Shakespeare from the perspective of his musical adaptations contributes to a fresh insight into the fascinating world of his plays. **Material and methods: Results: Conclusions:**

Keywords: shadow, Othello, Shakespeare, Verdi, libretto

FROM THE THEORIES OF TRANSLATION TOWARDS A STYLISTICS OF TRANSLATION

Zoltan Ildiko¹

¹Department of Phylology, UMFST Tîrgu Mureş

Background: The translation is the privileged space for achieving the linguistic contact between two languages, in other words, the conversion of a certain linguistic code into another linguistic code. The activity of the translator seems to be alternatively made up of a series of acts of language recognition in the system of the source language and a series of language production in the system of the target language. This model can be applied both to translation and interpretation. **Material and methods: Results: Conclusions:**

Keywords: language, translation, translator, linguistics

HOW THE HEALTH/ILLNESS METAPHOR DEPICTS ECONOMIC AND FINANCIAL REALITIES

Dalalau Daniela¹

¹Department of Management and Economy, UMFST Tîrgu Mureş

Background: The paper aims to highlight that the health/illness metaphor has been one of the most important metaphors which has been frequently used to describe and explain economic and financial phenomena. Therefore, a study has been carried out to identify and analyse the metaphorical expressions that are instantiations of the health/illness conceptual metaphor and have been used to depict economic and financial realities in specialized press articles. The study was based on a selection of economic and financial articles which were published in The Economist, and thus it focused on the corpus approaches to metaphor analysis. The quantitative and qualitative analysis of the data obtained indicates that the conceptualization of abstract economic and financial phenomena using the health/illness conceptual metaphor generates an elaborate metaphorical scenario that is based on one of the

most accessible and familiar source domains, namely our human health/illness experience. **Material and methods: Results: Conclusions:**

Keywords: conceptual metaphor theory, health/illness conceptual metaphor, metaphorical expressions, corpus analysis

SOMETHING ELSE IN TEACHING STRATEGIES IN HIGHER EDUCATION. INSIGHTS INTO AN ERASMUS + PROJECT

Han Bianca¹, Nicolae Cristina¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The article aims at presenting an insight into the implementation progress of an Erasmus+ Project that is being developed between Sept. 2018 and Feb. 2020. This project will design and disseminate a strategy to achieve the fundamental European goal of redesigning Higher Education, facilitating the application of Bologna principles across Europe. The objective will be pursued through the plan of an integrated curriculum where the delivery of academic content is coterminous with, and enhanced by, the acquisition of competences and transversal skills appropriate for the digital age. **Material and methods: Results: Conclusions:**

Keywords: Erasmus project, innovation in Higher Education, digital age

SUBJECT AND SUPERSTRUCTURE IN CONTEMPORARY HISTORIES OF ROMANIA

Cistelean A¹

¹Department of Philology, UMFST Tîrgu Mureş

Background: The paper discusses some recent histories of contemporary Romania (namely those written by Florin Abraham and Vladimir Pasti), from the perspective of the relationship between historical subject (the social classes) and the historical superstructures (the institutional network, the political and juridical framework). It argues that recent histories of Romania depict its evolution as superstructurally driven, as a fatal or contingent evolution determined exclusively by the superstructures, thus evacuating the fundamental role of the historical subject. **Material and methods: Results: Conclusions:**

Keywords: Romania, contemporary history, superstructure, historical subject, social classes

LAW

IS THERE A PATTERN OF ROMANIAN LISTED ENTITIES THAT APPLY THE INDIRECT METHOD FOR REPORTING THE OPERATING CASH FLOWS?

Neag Ramona¹, Pascan Irina¹

¹Department of Finance and Accounting, UMFST Tirgu Mures

Background: Romanian entities listed on Bucharest Stock Exchange (BSE) must prepare their individual financial statements in accordance with the International Financial Reporting Standards beginning with the financial year 2012. The international accounting standard no. 7 (IAS 7) allows companies to report the operating cash flows using either the direct method or the indirect method. The main objective of our research is to test whether companies with similar characteristics (ownership structure, performance, liquidity) choose to use the same method for preparing the Statement of cash flow. **Material and methods:** The analyse was conducted based on the individual financial statements of Romanian entities listed on BSE, prepared for 2016. Financial institutions were excluded from the study due to their peculiarities. Data was manually collected from the financial statements available on BSE website or on the websites of surveyed entities. Qualitative research methods (such as content analyses, in-depth analyses) and statistical tests were used in order to achieve the stated objective. **Results:** Our results show that the vast majority of surveyed entities choose to use the indirect method for reporting the operating cash flows. There is a tendency that entities from the same field of activity to have the same option for preparing and disclosing the operating cash flows. **Conclusions:** Romanian listed entities that choose to report the operating cash flows using the indirect method are defined by similar characteristics/features.

Keywords: international financial reporting standards, statement of cash flows, Romanian listed entities

ASPECTS REGARDING THE DEVELOPMENT OF HUMAN RESOURCES THROUGH THE INCREASE OF COMPETITIVENESS ON THE LABOR MARKET IN THE PRESENT CONTEXT

Marian Brindusa¹

¹Department of Law and Public Administration, UMFST Tirgu Mures

Background: Human resources represent one of the most important factors involved in the life of a society. The development of human resources through the increase of competitiveness on the labor market is of great need in the conditions of a society in an ongoing process of change. The labor market in Romania is, at present, in difficulty due to the migration of the qualified labor force on the one hand and, on the other hand, due to the lack of correlation between the educational competences acquired during the education process by young graduates and the labor market. **Material and methods:** The present study represents an analysis of the legislative frame-work and its implementation in relation with the established objectives regarding the development of human resources through the increase of competitiveness on the labor market and their degree of fulfilment. **Results:** The legislative acts that deal with the issue of development of the human resources through the increase of competitiveness on the labor market contain proper strategic and specific objectives. Their analysis shows, however, a discrepancy between these objective and the possibility of transforming them into reality. **Conclusions:** The lack of communication and collaboration between the local authorities, the private sector, on the one hand, and the education institutions on the other hand has negative effects upon the integration of young graduates on the labor market.

Keywords: resources, labor market, competitiveness, integration, young persons

THE PROFESSIONAL SECRET IN THE LIGHT OF THE PROVISIONS OF THE EU GENERAL DATA PROTECTION REGULATION

Kajcsa Andrea¹

¹Law and Public Administration, UMFST Tirgu Mures

Background: The issue of professional secret is connected with the exercise of certain profession and those that exercise these professions have the obligation to keep the professional secret. Chapter IX of GDPR regulates specific processing activities and, among others, creates the frame-work in which every member state of the EU can regulate those situations when the protection of personal data clashes with the professional secret obligation. **Material and methods:** The study uses the logical method, analyzes the legal provisions in force, of the GDPR and the national legislation in the field of professional secrecy. **Results:** We try to identify to what degree the professional secrecy, including the one provided by the law for the medicine practitioners, can be invoked in the hypothesis of an investigation carried out by the national authority in the field of protection of personal data. Furthermore, we shall try to propose certain good practices for those professions that have this obligation of professional secrecy, in relation to the GDPR. **Conclusions:** The GDPR does not oblige member states to adopt legislation that regulates personal data and professional secrecy, merely allows them. It is absolutely necessary for those that exercise profession that imply professional secrecy to take into serious consideration and analysis, in a constant manner, this european normative act in the field of personal data and to try and mark accordingly, in their activity, those information that fall in this category and to prevent them from being disclosed.

Keywords: personal data, professional secrecy, supervising authority

THE RIGHT TO DEFENSE - IN THE VISION OF ECHR JURISPRUDENCE

Coman Ramona Mihaela¹

¹Department of Law and Public Administration, UMFST Tirgu Mures

Background: The right to defense is one of the most complex rights, guaranteed by the Constitution, the Criminal procedure code, but also by the European Convention of Human rights. The right to defense has many aspects, among which the right to be informed promptly, in detail, of the nature and cause of the accusation against him, to have adequate time and facilities for the preparation of his defence, to defend himself in person or through legal assistance of his own choosing, to examine or have examined witnesses against him and to obtain the attendance and examination of witnesses on his behalf under the same conditions as witnesses against him. In order to provide effective protection, the European Court through its jurisprudence, set out guidelines for the implementation of this right. The paper proposes a theoretical and practical analysis of some issues that may arise in the criminal trial, by the violation of this fundamental right. **Material and methods:** A theoretical analysis of Article 6 of the Convention and the relevant practice regarding the violation of this article, analysing some of the decision of the European Court of human rights, but also the jurisprudence of the national Court. **Results:** Following the analysis of the national judicial practice, was identified some aspects that could be considered from the point of view of the Strasbourg Court the violation of Rights of Defense, in order to be used by the author in practice. **Conclusions:** Often judicial bodies in Romania override the right to defense, for example by offering too short time to prepare for defense, or the appointment of an ex officio lawyer even if the defendant has a chosen lawyer. These aspects are considered a violation of the right provided by Article 6 of the Convention, which could lead to the conviction of Romania by the European Court.

Keywords: right of defence, jurisprudence, effective protection

THE OFFENCE OF BRIBERY

Sabau Pop AO¹

¹Department of Law and Public Administration, UMFST Tirgu Mures

Background: The recent enactment of the new Criminal Code has brought a number of changes in the way the legislator treats

active and passive corruption. **Material and methods:** The decisions of The Constitutional Court of Romania; the decisions of the ordinary courts related to bribery; the criminal code. **Results:** The state s criminal policy, which must be permanently adapted to the social realities in which we live, has seen a change in the way the offence of bribery - a form of passive corruption - is treated. **Conclusions:** We remark the classification of the offence of receiving undue benefit in the objective aspect of the bribery offence, a redefinition of the notions of public and private civil servant, as well as a reduction of the punishments for these crimes.

Keywords: bribery, public servant, criminal law, crime, corruption

MANAGEMENT

THE ROLE OF HUMAN RESOURCES IN THE CONTINUOUS IMPROVEMENT OF THE PRODUCTION QUALITY

Blaga Petruta¹

¹Department of Management and Economy, UMFST Tirgu Mures

Background: In order to improve the production results, a number of techniques, methods or tools belonging to Quality Management and Human Resources Management can be applied to increase production capacity, the volume of manufactured products and the production quality. The paper aims to present the usage of quality tools and human resources management to achieve positive results, in terms of increasing production capacity, the volume of products and therefore, their quality, through staff motivating as an effect of the usage and application of quality tools in the field of electrical and electronic equipment manufacturing for motor vehicles. **Material and methods:** The paper highlights both the Quality Management tools applied within the company and a number of aspects that focused on the motivation and active involvement of the human factor in the processes of continuous improvement in order to increase the production efficiency. **Results:** Applying the tools of Quality Management and Human Resource Management in all the production departments of the company has led to the identification of the causes that affect employees' involvement in the process of continuous improvement in production. After analysing the identified causes, the management of the company has established to develop programs and actions involving employees in the continuous improvement process. These continuous improvement processes carried out in order to increase the production efficiency, have led to cost reductions, in the period under review, causing significant gains for the company. **Conclusions:** The process of continuous improvement within an organization should be regarded not just as a requirement of the quality standards, but must be applied with consistency in all activities, being the only process that guarantees a sustainable development in harmony with the evolution of the macro-economic and social environment.

Keywords: human resource, production, quality, quality management, continuous improvement

DIGITAL TRANSFORMATION AND ECONOMIC DEVELOPMENT. CHALLENGES AND OPPORTUNITIES ACROSS EU.

Szabo Zsuzsanna Katalin¹, Szabo Marietta²

¹Department of Management and Economy, UMFST Tirgu Mures

²Allianz, Allianz Hungaria Zrt. Hungary

Background: In the last decades we assisted that the penetration of ICT influenced the changes of the human existence, the interaction between people, the way of interaction within the society and the way in which societies involved individuals. The new "global information economy" is built on digital communication networks and information technologies. But the digital evolution is happening with an incredible speed, from 1993 when we get to use web 0.0 in just 20 years we assist and live in the web 4.0 environments. The web expansion in the last two decades from web of things to web of thought is a real provocation for governments worldwide. **Material and methods:** Publicly available databases were used. The different types of indicators used characterize the economic development from different points of view and in this way, they sustain the methodology and give a strong fundamental base for this study. For the statistical data processing, the SPSS software package was used. **Results:** The obtained results demonstrate that between EU Member states there are big discrepancies on all studied indicators. The obtained results underline that the development is determined by the mentality as well and shows the fact that Romania between the EU Member States is situated on the last places on many indicators. **Conclusions:** The paper is a scientific approach, analysis the key-success factors and the barriers of the development; presents a comparative study across EU using publicly available databases, and highlights burning themes such as: knowledge- based economy, information society and e-government as instrument of information society; the readiness of nations to manage the change, to use the benefits of ICTs, to use the advanced technologies innovation; the role of collaboration; future growth and education to change the mentality for the development toward a resourced based economy.

Keywords: economic development, comparative analysis, EU

CHALLENGES OF MODERN MANAGEMENT

On Angela¹

¹Department of Management and Economy, UMFST Tîrgu Mureş

Background: The most important challenge of modern management in the modern business world is gaining competitive advantage which basically means exceeding another organization's results by operating in more efficient and effective manners. **Material and methods:** The competitiveness is not just developing new superior products or introducing modern concept of services. **Results:** It also means operating methods that are embraced by the employees, internal solutions for tackling human relations, structures that better suits objective, new technologies that supports employees, partnerships with suppliers and customers, servant or magic type of leadership etc. **Conclusions:** This paper is focused on some provocative aspects of modern managerial activities in this competitive global environment.

Keywords: modern management, business, contemporary approach

ANTI-CORRUPTION TARGET, SOCIO-ECONOMIC DEVELOPMENT, EDUCATION AND INTEGRITY

Georgescu Maria-Ana¹

¹Department of Management and Economy, UMFST Tîrgu Mureş

Background: The definition used by the World Bank or by Transparency International in order to delineate corruption refers to the abuse of entrusted power for private gain. Corruption ultimately implies ethical decisions. That is how we get to the concept of integrity, which has as a characteristic part the incorruptibility. The most important instrument to measure this phenomenon is the Corruption Perception Index (CPI). **Material and methods:** In terms of methodology we used the secondary analysis of reliable international data and official national statistics about the recent evolution of corruption. We analyzed it in a quantitative way, namely the evolution of the phenomenon in Romania and also we revealed the important role of National Anticorruption Department (Directia Nationala Anticoruptie - DNA). **Results:** With a score of 48 points of the CPI in 2017, Romania ranks 59th among the world's countries and 26th among EU countries. We performed a comparison of the last years regarding the corruption offences investigated by DNA and the evolution of the number of final convictions. There are several factors that are related to the phenomenon of corruption, including economic development. From this perspective, we present the list of countries by GDP per capita, in which Romania ranks 59th out of 187 countries or territories analyzed in 2017. **Conclusions:** According to evolution of CPI, Romania has improved its situation, mainly beginning with 2012. Corruption control is very important, but our primary objective is to show that education, along with other socio-economic mentioned factors, can be a pillar of a society characterized by integrity.

Keywords: corruption, integrity, economic factors, education

SOCIAL INNOVATION IN INTELLIGENT TYPE COMMUNITIES

Tripon A¹

¹Department of Industrial Engineering and Management, UMFST Tîrgu Mureş

Background: The social economy is an essential pillar of the European social model. Romania has a serious deficit compared to the EU-25 average in terms of the capacity to provide social, education and health services. All these socio-economic deficiencies require increased attention and can be diminished or countered by supporting the development of social enterprises. **Material and methods:** At the regional level, we propose that, using the European Social Fund, we should engage in a project dedicated to both the establishment of new social structures / enterprises and the development of already operational enterprises. **Results:** 1. Initiating an online debate with 5 founders from UMFST Tg Mures; Initiative Group WE SUPPORT SOCIAL ECONOMY. 2.

Development of an online library and a section dedicated to the social economy in the Library of the Faculty of Management and Law. 3. Elaborating a group volume entitled Social Innovation - Realities and Perspectives. **Conclusions:** The project dedicated to the establishment of new social structures / enterprises, as well as to the development of already functioning enterprises, uses the experience of the initiative group WE SUPPORT SOCIAL ECONOMY at UMFST Tg. Mureş, and we have begun to integrate the experience of the co-authors of the group volume entitled Social Innovation - Realities and Perspectives (about to be finalized).

Keywords: social economy, project, initiative group, social innovation

ORTHOPEDICS

ACTUALITIES IN TOTAL KNEE ARTHROPLASTY REVISION

Solyom A¹, Bataga T¹, Gilyen B¹

¹Department of Orthopedics II, UMFST Tîrgu Mureş

Background: These days we use a huge amount of prostheses in primary knee replacement. According to the replaced surface, we can be categorized in unicompartmental also called "partial" knee replacement, bicompartimental and tricompartmental total knee prosthesis. Revision of any kind of this prosthesis are a main problem of orthopaedic surgeons. Our goal was to put in evidence the most common causes that led to revision surgery at the examined patients. We wanted to point out that the revision surgery is better to be performed at older ages, not to ruin the quality of life of the young patients. **Material and methods:** Authors used the data found in the international literature and in our patients database. We compare the results analyzing our patients data with the ones that are described in the international literature. **Results:** Our findings comparative to the international literature findings pointed out the fact that there is no difference between our findings and the literature according to the cause and the lifestyle of the patients. **Conclusions:** Total knee revision is a major problem in orthopaedic surgery. These findings led us to the conclusion that it is better to do total knee replacement and the revision surgery in older ages, because that way we can avoid worsening the patient's life quality.

Keywords: knee replacement, revision, failure, cause

THE DIFFERENCES BETWEEN THE ARTHROSCOPIC AND OPEN RECONSTRUCTION IN ROTATOR CUFF TEAR TREATMENT

Gilyen B¹, Bataga T¹, Solyom A¹

¹Department of Orthopedics II, UMFST Tîrgu Mureş

Background: The rotator cuff is made from a group of muscles and their tendons (m. supraspinatus, m. infraspinatus, m. subscapularis, m. teres minor) surrounding the shoulder joint. Tear of the rotator cuff means tear of one or more of these tendons, which can occur at sportsman or after heavy physical effort. Treatment stands in conservative treatment or surgical intervention, the last one standing from open or arthroscopic reconstruction. **Material and methods:** We wanted to illustrate the difference between the open and arthroscopic reconstruction, and also the efficiency of both. Survey of the international literature, of the related studies, analyzing the results and deducting conclusions. **Results:** We analyzed 12 international studies, all studying rotator cuff tear reconstruction, we were checking the efficiency of the reconstruction, and of the rehabilitation. The data found in the international literature is clear, there is little difference between the open and arthroscopic treatment option. The choice between the open and arthroscopic intervention depends on the experience of the doctor and the needs of the patients according to the esthetic outcome. **Conclusions:** There is no difference between the efficiency of the two reconstruction types, but it is still mentionable that the esthetic outcome in the arthroscopic intervention is much more favorable. Also, intervention made in the lack of experience holds more risks in it.

Keywords: rotator cuff, arthroscopy, reconstruction

ARTHROSCOPIC MANAGEMENT OF THE TIBIAL PLATEAU FRACTURE - CLINICAL AND RADIOLOGICAL RETROSPECTIVE STUDY

Bataga T¹

¹Department of Orthopedics II, UMFST Tîrgu Mureş

Background: Tibial plateau fractures can be treated arthroscopically when the diagnosis permits. Using this method we can solve meniscus, ACL and chondral defects in one surgical session. This study is retrospective for 55 cases treated in our unit between

2011-2017. **Material and methods:** 55 patients were included in our study with Schatzker 1,2 and 3 type of fractures. 36 were male and 19 female with age between 25-58 years. 25 fracture were type 1, 19 were type 2 and 11 type 3. In type 2 and 3 fractures were associated with meniscus lesions and ACL rupture in 16 cases and chondral defects in 19 cases. We use for arthroscopic surgery the antero-lateral and antero-medial portals to visualise these lesions. Using the fluid for the procedure we take care to not provoke compartment syndrome. Using a K-wire guide, under fluoroscopy control, we fix the fracture with cancellous screws (with or without washer). Meniscus lesions are treated with suture in 11 cases and partial meniscus resection in 8 cases. The ACL lesions surgery were made with SMT autograft and fixed with bioresorbable screws. **Results:** The patients start next day after the surgery the rehabilitation protocol and have clinical and radiological review at 1,3,6,12,24,36,48,60 months. No complications are reported during the study. In 6 weeks after the surgery the patients have full range of motion. The HSS score has improved and was excellent for 79 % of the patients after 5 years of follow-up. **Conclusions:** Arthroscopic surgery became an important procedure in the treatment of this type of fracture. Using this minim-invasive procedure we avoid large exposure of the knee joint which gives a lot of complications and we can treat all associated lesions-ACL, meniscus, chondral defects-and we complete the information obtained by fluoroscopy.

Keywords: tibial plateau, arthroscopy, fracture

S53P4 BIOACTIVE GLASS USED IN TREATMENT OF BONE DEFECTS

Trambitas C¹, Russu O¹, Gergely I¹, Feier AM¹, Zuh SG¹, Pop TS¹

¹Department of Orthopedics I, UMFST Tîrgu Mureş

Background: One of the most challenging situations in orthopedic practice results from solving the bone defects caused by trauma, tumors, osteomyelitis or congenital pathology. These defects can be treated using autografts, allografts and biocompatible synthetic materials. **Material and methods:** Our study involving Bioactive Glass in treatment of bone defects was led between 2010 and 2016, by the same team of orthopedic surgeons in the Orthopedic Clinic of Tîrgu Mureş. In this study we included 4 patients with bone cysts confirmed radiologically. **Results:** The patients were physically evaluated to determine the range of motion and the level of pain postoperatively. At 12- and 24-months Rx examination of all the patients look to have good bone substitute integration, with the absence of osteolysis signs. **Conclusions:** Our clinical study shows that this bioactive substitute is a very good bone substitute and can be used as an option of autografts in some specific cases

Keywords: bioactive glass, bone defects, osteointegration

THE USEFUL OF PATELLA RESURFACING ON PATIENT WITH TOTAL KNEE ARTHROPLASTY

Pop TS¹, Russu O¹, Gergely I¹, Feier AM¹, Zuh SG¹, Trambitas C¹

¹Department of Orthopedics I, UMFST Tîrgu Mureş

Background: Patella resurfacing during total knee arthroplasty remains debatable and according to some national arthroplasty registries there is an important variation between countries and surgeons in resurfacing or not the patella. **Material and methods:** 75 patients who underwent total knee arthroplasty were grouped in two groups; first group (30 patients) suffered patella resurfacing and a second group (45 patients) without patella resurfacing. We evaluate the patients with level of anterior knee pain, Knee Society Score (KSS), patient satisfaction, revision cases and x-ray images. **Results:** Patients included in this study, shown no significant differences regarding the evaluated parameters. Non-resurfaced group, 15% of the patients complained of anterior knee pain post-operatively while 8% of the resurfaced patients complained of anterior knee pain. There was no revision needed in both groups regarding patellar surface, but we encountered in some cases with patellar resurfacing knee flexion contracture. **Conclusions:** Patella resurfacing remains a controversial debate among Orthopedic surgeons, and we have a lot of arguments for and against. One important thing in this problem is to choose the patients who really need the resurfacing of patella and not to do this procedure routinely.

Keywords: arthroplasty, knee, patella resurfacing

OPIOID USAGE AMONG TOTAL KNEE ARTHROPLASTY PATIENTS – A 12 MONTH PROSPECTIVE ANALYSIS

Gergely I¹, Feier AM¹, Russu O¹, Zuh SG¹, Czedula A¹, Trambitas C¹, Pop TS¹

¹Department of Orthopedics I, UMFST Tîrgu Mureş

Background: Opioids provide a significant reduction in pain after total knee arthroplasty and their usage is increasing among these patients. With increased usage, a rise in opioid related complications may be expected. The purpose of this prospective study is to assess the opioid usage of patients that undergo total knee arthroplasty. **Material and methods:** A prospective study was conducted between May 2017 and August 2018 at the Clinical County Hospital Tîrgu-Mureş, Department of Orthopedics and Traumatology. The study included 163 patients that underwent total knee arthroplasty. The control group consisted in patients that were diagnosed with radiological stage III and IV Ahlbäck knee osteoarthritis and included 112 patients treated conservatively. Three main senior surgeons agreed to take part in the study. Using an in-house made questionnaire, data regarding opioid consumption 1-month prior surgery and 12 months postoperative was collected. Demographic data, data regarding complications were also collected by a study nurse. Statistical data were evaluated using Microsoft Excel 2013 (Microsoft, Redmond, Washington, USA) and GraphPad InStat (GraphPad Software Inc., California, USA). **Results:** No differences between the groups regarding demographic data were registered. Prior to surgery, there was no difference between the groups regarding opioid usage ($p=0.432$). At three months, the control group consumed more opioids weekly but without any statistical difference compared to the other group ($p=0.102$). At 12 months follow-up, the patients that underwent TKA consumed less opioid analgesics compared to control group ($p=0.002$). **Conclusions:** The authors conclude that there is no immediate change in analgesic opioids usage after TKA. However, at one year after surgery there is a drastic decrease in opioids intake in patients that underwent TKA.

Keywords: opioids, total knee replacement, total knee arthroplasty, analgesics, pain reduction

RETURN TO PRE-INJURY SPORTS ACTIVITIES AFTER ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION

Gergely I¹, Pop TS¹, Czedula A¹, Zuh SG¹, Feier AM¹, Trambitas C¹, Russu O¹

¹Department of Orthopedics I, UMFST Tîrgu Mureş

Background: Acute return to sport is the most common requirement of patients that undergo anterior cruciate ligament (ACL) reconstruction. The ability to return to daily activities varies between patients. Most patients do not return to their pre-injury level of sports participation after ACL reconstruction surgery. Our prospective study aimed to evaluate the ability of patients that undergo ACL reconstruction to return to their pre-injury level of sports activity. **Material and methods:** A prospective trial was conducted reviewing data for two years at the Clinical County Hospital of Tîrgu-Mureş, Department of Orthopaedics and Traumatology. 58 patients matched our inclusion criteria. Tegner activity scale and Lysholm Knee Scoring was used to evaluate the pre-injury sports activity and knee function at 6, 12 and 24 months after the surgery using a translated version of the questionnaires. Statistical data were evaluated using Microsoft Excel 2013 (Microsoft, Redmond, Washington, USA) and GraphPad InStat (GraphPad Software, California, USA). **Results:** Mean period after ACL reconstruction surgery was 26 months (± 1.9 months). 63.7% ($n=37$) of patients were playing any type of sports before the injury and 24.1% ($n=14$) were high-level competitors. Pre-injury Tegner activity level was reported to be 5.2 ± 2.1 . After the injury, Tegner activity sports level was 2.9 ± 1.1 . Lysholm Knee Scoring score was 55.2 ± 11.4 after the injury. At the first follow up (6 mo.), there was no statistical difference in Tegner activity level compared to preoperative score ($p=0.203$). Lysholm Knee Scoring improved from 55.2 to 83.2 ($p<0.05$) at 6 months follow up. At final follow-up, both Tegner (preoperative 2.9 vs 24 months 5.4, $p<0.05$) and Lysholm Knee Scoring (preoperative 55.2 vs 24 months 91.5, $p<0.05$) significantly improved. **Conclusions:** Patients that underwent ACL reconstruction returned to pre-injury sports activities two years after surgery showing excellent knee function. The return to sports may be attributed to a proper physical rehabilitation after the surgical intervention.

Keywords: anterior cruciate ligament, sports, return to sports, subjective results, ACL reconstruction

TOURNIQUET USAGE IN ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION: PRELIMINARY RESULTS OF A PROSPECTIVE STUDY

Russu O¹, Feier AM¹, Ciorcila E¹, Zuh SG¹, Gergely I¹, Trambitas C¹, Pop TS¹

¹Department of Orthopedics I, UMFST Tîrgu Mureş

Background: There is no clear evidence or guideline regarding tourniquet usage in anterior cruciate ligament reconstruction (ACL). The objective of this study was to evaluate the consequence of tourniquet use on rehabilitation rate, pain and quality of life after arthroscopic ACL reconstruction. **Material and methods:** A prospective study was conducted in the Clinical County Hospital of Tîrgu-Mureş in the Department of Orthopaedics and Traumatology. The trial included sixty-eight patients who underwent anterior cruciate ligament reconstruction. Each patient was randomly assigned to one of the two groups: A - inflated tourniquet (280mmHg, n=40) and B - deflated tourniquet (n=28). Two subjective outcomes were recorded: visual analog scale (VAS) and IKDC questionnaire at 30 days and 60 days postoperative. Demographic data and range of motion at each follow-up were also documented. **Results:** The two groups did not differ in matters of demographic data and range of motion preoperatively and at each follow-up. Mean tourniquet time was 83 minutes. VAS score was increased in acute cases but without any statistically difference compared to chronic cases (p=0.133). IKDC questionnaire scores did not differ between group A and B at 30 days (p=0.442) and 60 days follow-ups (p=0.465). **Conclusions:** Tourniquet use proved to have no effect on pain, quality of life or rehabilitation rate two months after surgery. Minor difference in subjective pain reports can be observed in acute cases but they were considered without association to tourniquet use.

Keywords: tourniquet acl, acl reconstruction, anterior cruciate ligament, tunnel drill tourniquet, arthroscopic reconstruction ACL

ARTHROSCOPIC TREATMENT OF THE AVULSION OF TIBIAL SPINE

Russu O¹, Feier AM¹, Ciorcila E¹, Zuh SG¹, Pop TS¹, Trambitas C¹, Gergely I¹

¹Department of Orthopedics I, UMFST Tîrgu Mureş

Background: The aim of the arthroscopic treatment of tibial fractures, in this case the avulsion of the anterior tibial spine, is to achieve minimal invasive reduction and internal fixation of the joint fracture. By using this arthroscopic procedure, although the control of the articular reduction might seem difficult, the approach morbidity can be optimized. **Material and methods:** We present a case of a 13 year old male, without any previous personal or family medical history, who was admitted to our department diagnosed with avulsion fracture of anterior tibial spine type 3 Modified Meyers and McKeever. His injuries occurred while riding a bicycle 5 months prior to surgery. The injury mechanism was produced by direct trauma with anterior to posterior direction, full leg length hyperextension. The physical examination of the patient revealed decreased range of motion, extension deficit and pain during walking. Anterior drawer test was positive. MRI and CT pathologic findings: fusion in small quantity at the level of the suprapatellar bursa, lateral knee recesses, infrapatellar bursa. Grade III injury at the level of posterior horn of the medial meniscus and fibrinous lesions at the level of the proximal insertion of the posterior cruciate ligament. Complete fracture of the anterior tibial spine, with no clear signs of callus formation. **Results:** After arthroscopic reduction and fixation, the patient used an orthosis and mobilized with no weight bearing for 4 weeks. After 4 weeks, the patient is started on toe-touch weight bearing and advanced to full weight bearing by 10 weeks. Gentle quadriceps and hamstring strengthening should be initiated at 6 weeks. **Conclusions:** Patient selection is important when using this technique. Preoperative planning with CT interpretation is essential. In patients with complex proximal tibial fractures, the use of arthroscopy by an experienced surgeon can minimise the surgical trauma, provided stable fixation consistent with early mobilisation is performed.

Keywords: arthroscopic, avulsion, tibial spine, trauma, tibial plateau

OUR EXPERIENCE WITH TIGHTROPE FIXATION IN ACUTE ACROMIOCLAVICULAR JOINT DISLOCATION

Zuh SG¹, Gergely I¹, Russu O¹, Feier AM², Trambitas C³, Pop TS¹

¹Department of Orthopedics I, UMFST Tîrgu Mureş

²Department of Orthopedics II, UMFST Tîrgu Mureş

³Department of Anatomy, UMFST Tîrgu Mureş

Background: Acromioclavicular joint dislocation is a common injury especially affecting young adults and athletes. Without treatment this injury can cause severe articular instability, or a limited range of motion and shoulder pain. Regarding the severity of the injury the treatment can be conservative or there are various surgical options but there is no agreement on any one of them.

Material and methods: The aim of this study was to evaluate our postoperative outcome of the treatment of acute acromioclavicular dislocation using the tightrope system for fixation. Between January 2017 and August 2018, seven patients with acute acromioclavicular joint dislocation have been treated surgically. The severity of injury was Rockwood types III, IV and V. The radiological evaluation was made by comparing the acromioclavicular joint with the normal side and clinically evaluation by using the Visual Analog Scale and Constant score. **Results:** All dislocations were completely restored by the surgery and there was no dislocation at the last evaluation. All patients were satisfied with their functional results and cosmetic appearance. **Conclusions:** In conclusion our opinion is that the tight rope system can provide a secure reduction and also a very good functional outcome during the period of ligament healing.

Keywords: acromioclavicular joint, dislocation, tightrope

PATHOLOGY

PANCREATIC CANCER: NOT ALWAYS EASY TO BE MANAGED

Gurzu Simona¹, Bara T², Vlad Daniela Madalina³, Gabos S³, Sincu Mihaela³, Jung I¹

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Surgery II, UMFST Tîrgu Mureş

³Department of Pathology, Emergency Clinical County Hospital, Tîrgu Mureş, Romania

Background: Although G1 neuroendocrine carcinoma of the pancreas is a tumor with specific architecture and immunoprofile, its differential diagnosis might be difficult. Aim: To present two particular cases of pancreatic tumors with neuroendocrine-like aspect.

Material and methods: Case 1: A 36 year-old women showed a retropancreatic tumor that was surgically removed as an encapsulated retroperitoneal tumor and sended for histopathological examination. Case 2: A 38 year-old women was diagnosed with a pancreatic carcinoid that was surgically removed and stationary evolution was noted for 13 years after surgery. Then, hepatic metastasis occurred and hepatic metastasectomy was necessary. Somatostatin was prescribed, without tumor regression. One year after somatostatin therapy, hepatic metastasectomy was performed for the second time, and segmentar resection of colon and small intestine was necessary, due to probably therapy-induced intestinal necrosis. **Results:** Case 1: The microscopic examination showed proliferation of G1 neuroendocrine-like tumor cells that showed papillary structures and large hemorrhagic areas. The immunoprofile revealed focal positivity for chromogranin and synaptophysin and diffuse expression of CD56, vimentin, cyclin D1, Progesteron and nuclear beta-catenin. Based on the histological and immunohistochemical features, the final diagnosis was retropancreatic neoplasm with uncertain differentiation, possible pseudopapillary solid neoplasm of the pancreas. The patient is tumor-free at 3 months after surgery. Case 2: Based on the slowly evolution of the tumor, the immunoprofile was rechecked in primary tumor and both metastases, that revealed similar profile with case 1. The diagnosis of second metastases was of metastasis of a mixed tumor of the pancreas, with neuroendocrine and pseudopapillary solid neoplasm components. Changing of the chemotherapeutic protocol was indicated. **Conclusions:** In cases with unusual behaviour, transdisciplinary consult is mandatory for a proper therapeutic management.

Keywords: pancreas, neuroendocrine, chemotherapy

GROUP A STREPTOCOCCUS INFECTION – A FATAL OUTCOME, CASE REPORT

Beleaua MA¹, Fetyko Annamaria², Jung I¹, Zaharia Liana-Catalina³, Gurzu Simona¹

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Pathology, Emergency Clinical County Hospital of Tîrgu Mureş

³Department of Emergencies, Emergency Clinical County Hospital of Tîrgu Mureş

Background: Group A streptococcus/GAS infection is responsible of up to 30% case of strep throat in children and up to 15% in adults; being more commonly contracted in winter and spring seasons. Untreated or incorrectly treated infections can lead to several complications including death. The aim of this paper was to present a case of GAS infection with unusual behaviour.

Material and methods: A 31-year-old male was admitted in the Emergency Department with severe dyspnoea and fever for 1 week. The patient died in three hours after admission. He was known with a GAS strep throat at the age of 5 which led to rheumatic fever appearance. Immunotherapy with prednisone was administered which led to myocarditis appearance in 2006 and induced an iatrogenic Cushing Syndrome after a twelve years treatment and substitution with medrol was recommended because of the developed dependency. At the age of 20 bilateral hip arthroplasty was performed because of an aseptic necrosis of the femoral head induced by chronic corticotherapy. In 2014 a viral infection of the respiratory tract was diagnosed which led after one year to chronic kidney failure and chronic dialysis was performed till the present admission. **Results:** The autopsy revealed a cerebral abscess in the right occipital lobe induced by an acute bacterial endocarditis, occurring on the background of streptococcal endocarditis and corticotherapy-induced immune deficiency. Adverse effects of corticotherapy such as severe atherosclerosis, bilateral heart ventricular hypertrophy, mitral and aortic valve stenosis, atrophic kidneys and secondary adrenal failure were also found.

Conclusions: The possible complications that may appear on behalf of rheumatic fever are complex and challenging. Prevention should be carefully taken into account after a strep throat or scarlet fever infection.

Keywords: group A streptococcus, rheumatic fever, acute bacterial endocarditis, cronic corticotherapy

UNUSUAL METASTATIC BEHAVIOR OF COLON CANCER

Vlad Daniela Madalina¹, Bara T¹, Fulop Z², Jung I¹, Gurzu Simona¹

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Surgery II, UMFST Tîrgu Mureş

Background: Colorectal carcinoma usually shows metastases in liver and lung, and peritoneal carcinomatosis can also be associated. **Aim:** To present a case of carcinoma of the transverse colon with unusual metastatic behaviour. **Material and methods:** Case report: A 55 year-old women presented in 2018 with CT-identified adrenal mass. The patient was diagnosed in 2012 with pT2N2 adenocarcinoma of the transverse colon, with cribriform arhitecture and hepatic metastases. After right hemicolectomy and metastasectomy, FOLFOX and then FOLFIRI, as second line, was the chemotherapy regimen. After completion of chemotherapeutic cycle, long-time monotherapy with Avastatin was set up from 2013 to 2018. Right adrenalectomy was performed in 2018. **Results:** The adrenalectomy specimen showed an encapsulated tumor with necroses and hemorrhages on cut section. At microscopic examination, infiltration of the adrenal gland by glandular structures, with arhitecture similar to the primary tumor, was seen. The immunohistochemical profile of the tumor cells revealed negativity for Keratin 7 and 20, which atypical mixed (cytoplasm and nuclear) expression for CDX2. **Conclusions:** Although adrenal gland metastases are relatively specific after pulmonary, breast or kidney carcinomas, they can also occur in patients with adenocarcinomas of other organs. After chemotherapy, the immunoprofile is not always helpful for differentiation between a primary versus a metastatic tumor. **Acknowledgment:** This work was supported by a grant of the Romanian National Authority for Scientific Research, CNCS - UEFISCDI, project number 20 PCCF/2018, code: PN-III-P4-ID-PCCF-2016-0006.

Keywords: adrenal gland, metastases, adrenocortical carcinoma

PREVALENCE OF NON-INVASIVE FOLLICULAR THYROID NEOPLASMS WITH PAPILLARY-LIKE NUCLEAR FEATURES (NIFTP): A RETROSPECTIVE, 15 YEARS INSTITUTIONAL STUDY

Nechifor-Boila Adela¹, Zahan Ancuta-Elena¹, Borda Angela¹

¹Department of Histology, UMFST Tîrgu Mureş

Background: The new 2017 WHO Classification of Tumors of the Thyroid Gland brought important changes, among which the reclassification of non-invasive encapsulated follicular variant of papillary thyroid carcinomas (EFVPTC) as NIFTP (non-invasive follicular thyroid neoplasm with papillary-like nuclear features) is probably the most important. The present study aimed to analyze the prevalence of NIFTP in our institution over the last 15-years. **Material and methods:** The cases were retrieved from the Department of Pathology, Tîrgu-Mureş Emergency County Hospital, between January 2001 and December 2015. Non-invasive EFVPTCs were reclassified as NIFTPs after microscopical evaluation, in accordance with the WHO 2017 diagnostic criteria: encapsulated or clearly demarcated tumors, larger than 1 cm, with a follicular growth pattern, PTC nuclear features (score 2-3) and no vascular or capsular invasion. The presence of only one, secundary papillary thyroid microcarcinoma (PTMC) foci was accepted. **Results:** Based on the new classification, 125 from 131 (95.4%) cases of non-invasive EFVPTCs, were reclassified as NIFTPs. Most of the NIFTP cases occurred in patients younger than 55 years-old (73.6%), with a significant female predominance (86.4%). NIFTPs had a mean tumor size of 28.10±13.57 mm. Fifteen (12%) NIFTP cases were multifocal, revealing a secondary, PTMC foci. **Conclusions:** Our results, in line with other studies, demonstrate that the introduction of NIFTP will result in a decrease in the thyroid malignancy rate. The extent of that decrease will depend on the individual institutional rates of malignancy and on the prevalence of follicular versus classic PTC patterned lesions.

Keywords: prevalence, papillary thyroid carcinoma, NIFTP

AGGRESSIVE ANGIOMYXOMA OF VULVA: CASE REPORT

Sahlean DI¹, Badita Alexandra Adriana¹, Coros M², Badea M³, Morariu SH³, Baba D⁴, Cotoi OS⁴

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Surgery I, UMFST Tîrgu Mureş

³Department of Dermatology, UMFST Tîrgu Mureş

⁴Department of Pathophysiology, UMFST Tîrgu Mureş

Background: Aggressive vulvar angiomyxoma is a low grade mesenchymal tumor, which infiltrates into the vulval, perineal or pelvic regions of the deep soft tissues. It develops more frequently in women during the reproductive period. **Material and methods:** We present the case of a 54-year-old patient to which is performed a surgical excision for the presence of a relatively well-defined nodule with a gelatinous appearance located in the left labia. **Results:** The microscopic examination reveals a tumor growth consisting of a paucicellular cell proliferation of oval and fusiform cells haphazardously arranged, focally in nests and trabeculae. The cells have monomorphic, elongated and oval shaped nuclei without mitosis. Stroma is a mixoid and contains a proliferation of vascular structures of different sizes with thickened walls. The tumor does not ulcerate the skin and has infiltrative edges. Immunohistochemically, tumor cells are strongly positive for vimentin, estrogen receptors and progesterone receptors respectively negative for SMA and desmin. CD 31 and CD 34 markers are positive at vascular structures. **Conclusions:** In the face of a potential diagnosis of aggressive vulvar angiomyxoma, it is important to determine whether the analyzed tumor is completely excised because this lesion has a tendency to frequent recurrence and infiltrate deep soft tissues and surrounding organs.

Keywords: aggressive angiomyxoma, vulva, immunohistochemistry

DIFFUSE LARGE B CELL LYMPHOMA OF GERMINAL CENTER TYPE INVOLVING THE GALLBLADDER - A CASE PRESENTATION

Turdean S¹, Fetyko Annamaria¹, Bartha JR², Turcu M², Andrei I³, Cotoi OS⁴

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Pathology, Mures County Clinical Hospital

³Medical student, UMFST Tîrgu Mureş

⁴Department of Pathophysiology, UMFST Tîrgu Mureş

Background: Lymphomas of the gallbladder are extremely rare tumors **Material and methods:** a 56 year old female patient was admitted to the Mureş County Hospital for chronic abdominal pain and a laterocervical lymphadenopathy. Cervical node biopsy and cholecystectomy was performed for acute cholecystitis. Macroscopic examination of the surgical specimen was performed at gross sampling. After tissue processing for histology, hematoxylin and eosin colored slides and immunohistochemical stains with lymphoid markers were examined. **Results:** On microscopic examination, the laterocervical lymph node and the wall of the gallbladder showed a diffuse infiltrate consisting of medium to large atypical cells with increased number of mitoses. The tumor cells were positive for CD20, CD10, BCL2, BCL6 and LCA, with a Ki-67 proliferative index of 98%; and were negative for CD3, Cytokeratin AE1/AE2 and CD30. Based on the morphology and immunohistochemical profile the tumor was classified as diffuse large B cell lymphoma of germinal center type. **Conclusions:** primary lymphomas of the gallbladder are very rare, only about 40 cases being reported in the literature so a secondary nature of these tumors should always be taken in consideration. Complete clinical examination and immunohistochemistry is crucial for a correct final diagnosis and staging of the tumor.

Keywords: gallbladder lymphoma, B-cell lymphoma, metastasis

MANTLE CELL LYMPHOMA IN GALLBLADDER - CASE PRESENTATION

Turdean S¹, Fetyko Annamaria¹, Bartha JR², Andrei I³, Turcu M², Cotoi OS⁴

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Pathology, Mures County Clinical Hospital

³Medical student, UMFST Tîrgu Mureş

⁴Department of Pathophysiology, UMFST Tîrgu Mureş

Background: Mantle cell lymphoma is rarely observed in the gallbladder and its diagnosis before surgery is difficult. **Material and methods:** We report a case of a 78 year old man who was admitted to the Mureş County Hospital for chronic cholecystitis and tumor suspicion in the gallbladder. A laparoscopic cholecystectomy was performed. Following the cholecystectomy, at gross sectioning the gallbladder showed a diffuse thickening of the wall. Inside the gallbladder no tumor was found on macroscopic inspection. **Results:** At microscopic examination, the whole thickness of the gallbladder s wall was diffusely infiltrated by small lymphocytes resembling centrocytes with scant cytoplasm and cleaved or round nuclei. Based the morphology and immunohistochemical profile of the cells, the tumor was classified as mantle cell lymphoma with intermediate grade of malignancy. **Conclusions:** Mantle cell lymphoma is a non-Hodgkin lymphoma with a median survival of 4-5 years and it has a considerable variability of individual outcome based on the Ki-67 prognostic factor and clinical characteristics. Immunohistochemical analysis and ample correlation with clinical data is mandatory for a correct final diagnosis.

Keywords: gallbladder lymphoma, non-Hodgkin lymphoma, case report, mantle-cell

ABERRANT EXPRESSION OF P63 PROTEIN IN DIFFUSE LARGE B- CELL LYMPHOMA: A CASE REPORT OF EXTRANODAL TUMOUR INVOLVING THE MAXILLARY SINUS

Gabos S¹, Csilip Tunde¹, Szava D², Gurzu Simona¹, Horvath Emoke¹

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Oral and Maxillofacial Surgery, UMFST Tîrgu Mureş

Background: Diffuse Large B- Cell Lymphoma (DLBCL) of the maxilla is an aggressive lymphoid neoplasm with similar morphological features to DLBCL in other sites. It presents a heterogeneous phenotype, genetic and molecular alteration, in this context establishing of the correct diagnosis may be difficult in small biopsies. **Aim:** We present a case of DLBCL developed in the maxillary sinus infiltrating adjacent soft tissues, with aberrant phenotype, expressing p63 protein. The preoperative diagnosis was challenging due to small gingival biopsy available. **Material and methods:** Clinical history: A 41 year-old hard smoker man presented in maxillofacial surgery with a huge oral cavity tumour mass. Based on the clinical and radiological examination, an infiltrative malignant epithelial tumor was suspected. A small biopsy was performed, followed by a large surgical resection. The surgical sample was fixed, decalcified, and processed with standard histological techniques. Histologically, the tumor which infiltrated the gingival soft tissue and maxilla, was composed by a diffuse lymphoid infiltrate, rich in neoplastic immunoblasts and plasmablasts. Based on the localization and the morphology of the tumour cells, a plasmablastic variant of DLBCL was suspected. As differential diagnosis, a poorly differentiated carcinoma needed to be excluded. **Results:** The phenotype of tumour cells confirmed the immunoblastic variant of DLBCL, they strongly expressed CD20, CD79a, MUM1, PAX5 and LCA antigens, while CD38 and CD10 were negative. **Conclusions:** The clinical significance of aberrant expression of p63 protein in this case is underlined by the possibility of an erroneous diagnosis, if the p63 immunohistochemistry is not coupled with panCK.

Keywords: DLBCL, immunoblast, plasmablast

A FATAL CASE WITH INTESTINAL PERFORATION DUE TO EXTRANODAL NK/T-CELL LYMPHOMA, NASAL TYPE IN A PATIENT UNDER IMMUNOSUPPRESSIVE THERAPY

Horvath Eموke¹, Gabos S², Mocan Simona²

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Pathology, Emergency County Clinical Hospital Tîrgu-Mureş

Background: The extranodal NK/T-cell lymphoma is an aggressive, relatively uncommon lymphoid neoplasm in gastro-intestinal tract with noisy onset. The affected patients present often intestinal perforation and unfavourable outcome. **Material and methods:** Clinical history: a 58 -year old patient under immunosuppressive therapy was diagnosed with H. Pylori induced active chronic gastritis associated with Giardia Lamblia duodenitis and acute colitis. He presented shortly after endoscopic biopsies of gastric, duodenal and colon tissue symptoms of acute surgical abdomen due to multiple intestinal perforation as complication of a caecal tumor interesting circumferentially the intestinal wall, being associated with multiple mesenteric adenopathy. The patient was subjected to straight hemicolectomy. The evolution was unfavourable, he died shortly after the surgical intervention. **Results:** Histologically, the ileo-caecal region shows a destructive diffuse lymphoid infiltrate rich in apoptotic bodies, with angiocentric and angiodestructive pattern that effaces the normal bowel architecture with multiple mucosa ulceration and extensive areas of necrosis, causing discontinuity on the intestinal wall accompanied by acute fibrinopurulent peritonitis. Many of the cells in the lymphoid infiltrate have atypical appearance, expressing CD3, CD56, CD30 and TiA-1 with an activated cytotoxic profile. Other T and NK-cells antigens as CD4, CD5, CD8 and CD7 were negative. Reactive inflammatory cells, including small lymphocytes, plasma cells and eosinophills were also present. The diagnosis has been established on tumor cell morphology/ immunophenotype and clinical course, despite the fact that no FISH test was performed to detect EBER or EBNA-1. **Conclusions:** The interesting feature of this submitted case: based on clinical and endoscopical findings a malignancy was suspected, but the preoperative diagnosis was challenging due to due to limited endoscopic material available.

Keywords: tumor cell heterogeneity, acute surgical abdomen, extranodal NK/T-cell lymphoma

AN IMMUNOPHENOTYPE-BASED MOLECULAR CLASSIFICATION OF GASTRIC CARCINOMAS

Banias Laura¹, Jung I¹, Bara T², Fulop Z², Molnar C³, Simu Patricia⁴, Gurzu Simona¹

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Surgery II, UMFST Tîrgu Mureş

³Department of Surgery I, UMFST Tîrgu Mureş

⁴Department of Radiology, UMFST Tîrgu Mureş

Background: Gastric cancer (GC) remains the third cause of cancer-related death worldwide, the majority of patients being diagnosed in late stages. A molecular subtyping of GC may improve the case management and susceptibility evaluation for a properly targeted therapy. **Material and methods:** In this study, nineteen consecutive gastric carcinoma cases were included, diagnosed in our department in the last eighteen months. The diagnosis was based on the current WHO criteria. The molecular subtypes (epithelial, hybrid epithelial-mesenchymal and mesenchymal) were defined using tumor cell s immunophenotype, from an epithelial-mesenchymal transition point of view, assessed with the following immunohistochemical markers: E-cadherin, β -catenin, vimentin, maspin, V-SIG. For microsatellite status evaluation, MLH1, MSH2 and PMS2 were used. Stemness feature of the tumor cells was evaluated with CD44. These carcinomas were also tested for HER2 positivity. **Results:** Our series of cases included nine females and ten males with ages ranging from 45 to 79 years old, nine of them being over 70. The majority of the cases were diagnosed as poorly cohesive carcinoma and moderately differentiated adenocarcinoma. Most of the tumor pT stages were 3 and 4a, all of them presenting a microsatellite stable status. Fourteen cases presented lymph node metastasis and two cases presented distant metastases. Based on their immunophenotype, most of the tumors were molecularly subclassified as epithelial (42.11%), followed by hybrid (36.84%) and mesenchymal (21.05%). Four patients, all of them over 70 years old, died in the first twelve months after diagnosis, three of them with a mesenchymal molecular subtype and one with a hybrid subtype. Only one case showed HER2 positive reaction. A nuclear Maspin expression was observed in the invasion front of all the cases staged pT4a and in all the mesenchymal subtyped tumors. **Conclusions:** Nuclear maspin positivity represents an indicator for aggressive GC behavior.

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Keywords: gastric cancer, maspin, epithelial-mesenchymal transition

EXTRAMAMMARY PAGET'S DISEASE ASSOCIATED WITH SUBCUTANEOUS UROTHELIAL CARCINOMA METASTASIS: CASE REPORT

Badita Alexandra Adriana¹, Sahlean DI¹, Cotoi OS², Chibelea C³, Loghin Andrada⁴

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Pathophysiology, UMFST Tîrgu Mureş

³Department of Urology, UMFST Tîrgu Mureş

⁴Department of Histology, UMFST Tîrgu Mureş

Background: Extramammary Paget's disease (EMPD) is a rare slow-growing malignancy which occurs within the epidermis and originates in the pluripotent stem cells located in the interfollicular or in folliculo-apocrine-sebaceous units of the epidermis. Usually, primary EMPD is not associated with an underlying neoplasm, unlike mammary Paget's disease, whereas secondary EMPD is an expression of an underlying internal tumor. **Material and methods:** We present the case of a 54 years old female with a history of urothelial carcinoma and a right iliac fossa skin tumor, which was surgically removed. **Results:** On macroscopic evaluation an ulcerated-like superficial lesion was observed, underneath with a rounded, well-circumscribed white nodule. The microscopic examination revealed a dermal proliferation of sheets and nests composed of urothelial-like tumor cells, which were confirmed by immunohistochemistry, being strongly positive for CTK7 and p63. The superficial lesion in the epidermis was represented by a proliferation of atypical tumor cells with abundant pale to clear cytoplasm, large vesiculous nuclei and prominent nucleoli, which displayed a pagetoid extension through epidermis. The tumor cells expressed CTK7 and E-caderin and were negative for S100. **Conclusions:** EMPD is a rare lesion and determining its primary or secondary origin is of great importance for the treatment and prognosis of patients. Secondary EMPD represents a skin expression of an underlying internal malignancy, therefore it is essential to recognize the lesion and undergo thorough examination to rule out an associated malignancy.

Keywords: EMPD, skin, immunohistochemistry, pathology

GIANT CELLS – INFLAMMATION AND TUMORS

Sincu Mihaela¹, Morariu SH², Turdean S¹, Turcu M¹, Baba D³, Cotoi Titiana⁴, Cotoi OS³

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Dermatology, UMFST Tîrgu Mureş

³Department of Pathophysiology, UMFST Tîrgu Mureş

⁴IOSUD, UMFST Tîrgu Mureş

Background: Multinucleated giant cells are morphologically characterized by a thick cell membrane having an irregular surface, dense, granular, eosinophilic cytoplasm, and large irregular nuclei with visible nucleolus. According to the patterns of the nuclear arrangement, the following types of giant cells are commonly seen: Langhans giant cells with horseshoe-shaped nuclei at one pole of the cell, foreign body giant cells with nuclei randomly scattered throughout their cytoplasm, and Touton giant cells with a central ring of nuclei. They are formed by fusion of macrophages and are common in chronic granulomatous inflammation, specific inflammation (tuberculosis, syphilis, leprosy and sarcoidosis), and non-specific inflammation (foreign body granuloma, pilonidal disease and gout), but they can also appear in the morphology of tumor lesions. **Material and methods:** It is analyzed a number of 139 cases between 2017-2018, cases belonging to the Pathology Department from Mures County Clinical Hospital, in which the presence of giant multinucleated cells was the key to histopathological diagnosis. Standard HE staining, special stains and immunohistochemical reactions were used. **Results:** It is evaluated the morphology of the giant cells, different aspects based on their etiology and the context of their appearance. Out of the 139 cases, 52% (n=72) were men and 48% (n=67) were women. 10% (n=14) of the cases were diagnosed with pilonidal disease, 14.3% (n=20) with epidermoid cysts, and 6% (n=8) were tumor cases. Among the tumor cases, both benign tumors (benign fibrous histiocytoma, giant cell tumor of the tendon sheath) and malignant tumors (malignant fibrous histiocytoma) were identified, whose immunohistochemical profile is CD68 positive. 11% (n=16) of the cases presented granulomatous inflammation. **Conclusions:** The presence of multinucleated giant cells is the clue to histopathological diagnosis in various non-tumor and tumor lesions. The CD68 immunoassay positivity confirms the macrophage

origin of these cells.

Keywords: giant cells, inflammation, immunohistochemistry, CD68, tumor

SPECIFIC IMMUNOHISTOCHEMICAL PROFILE IN TUMOR CELLS. THE EXPERIENCE OF A SINGLE CENTER - PRACTICAL APPROACH

Cotoi OS¹, Moldovan C², Loghin Andrada³, Turcu M⁴, Turdean S⁴, Nechifor-Boila Adela³, Sincu Mihaela⁴

¹Department of Pathophysiology, UMFST Tîrgu Mureş

²Department of Medical simulation, UMFST Tîrgu Mureş

³Department of Histology, UMFST Tîrgu Mureş

⁴Department of Pathology, UMFST Tîrgu Mureş

Background: The diagnosis of malignant tumors is fundamentally based on immunohistochemistry, modern cytogenetic and molecular biology techniques. Immunohistochemistry has already become a classic investigation in all modern pathology laboratories by both manual and automatic methods. **Material and methods:** It presents the practical experience of a single center - Department of Pathology, Mures County Clinical Hospital, for one year, of immunohistochemical investigations performed by the automatic method for positive and differential diagnosis of malignant tumors. **Results:** It presents the most representative, morphological and immunohistochemical, aspects of malignant tumors, systematized by apparatus and organs. For vascular tumors, the following panel is used: CD31, CD34, SMA. For lung tumors: TTF1, P63, P40, CTK5 / 6, for neuroendocrine is used: Cromogranin, synaptophysin, NSE, CD56. Gastrointestinal tumors: pan-CTK, CTK7, CTK20, CDX2. Hepatic and pancreatic tumors: alpha-fetoprotein, CEA, CTK7, CTK8 / 18, CTK19. Urinary tract tumors: CD10, CTK 7, CTK 20. Prostatic and testicular tumors: PLAP, PSA, AMCR, CTKHMW. Female genital tract tumors: p16, CTK7, CTK20, WT1, p53, Calretinin, h-CG. Tumor of the mammary gland: ER, PR, Ki67, E-cadherin. Endocrine-thyroid tumors: Tyreoglobulin, TTF1. For the haematological pathology, the following panel is used: Line T-cell lymphomas: CD3, CD4, CD8, CD5; line B-CD20, CD23, bcl-2, bcl-6, PAX5, CyclinD1, TdT; Hodgkin's lymphoma CD30, CD15; Plasmacytoma CD138. For skin tumors: melan A, S100, HMB45 - this panel can be use for all types of melanoma including mucous or ocular melanoma. Tumors of soft tissues and bone: desmin, vimentin, CD99, CD68. Our laboratory has external collaborations with specialized laboratories for testing various genetic mutations: BRAF, EGFR, Her-2. **Conclusions:** The immunohistochemical and molecular profile of neoplasms is particularly important for targeted, personalized therapy and for patient prognosis.

Keywords: immunohistochemistry, tumors, malignancy, molecular, personalized therapy

CLEAR CELL SARCOMA: CASE REPORT

Tugui Alexandra¹, Toderic Ana-Maria¹, Milutin Doina¹

¹Department of Pathology, UMFST Tîrgu Mureş

Background: Clear cell sarcoma (CCS) is a rare neoplasm accounting for 1% of all soft tissue sarcomas. Classically, it involves tendons and aponeuroses with a predilection to the lower extremities. CCS situated in the dermis is a rare occurrence, and it is difficult to differentiate it from dermal malignant melanoma (MM) because they have similar morphologic and immunohistochemical features. The finding of a chromosomal translocation EWSR1-ATF1 gene fusion as a result of the t(12:22)(q13;q12) chromosomal translocation distinguishes it from melanoma, so FISH techniques are required. **Material and methods:** We present the case of a 75 years-old male with a lesion on the left arm, with no other clinical data. **Results:** Macroscopic evaluation revealed a dome-shaped, nodular lesion, 39 mm in diameter, firm to palpation, with a crust on its surface. The microscopic examination showed a superficial ulceration of the epidermis, underlying in the dermis with a nodular proliferation of cellular nests separated by fibrous bands, with no epidermal component. The nests are formed by round shaped cells with vesicular nucleus, large nucleolus and pale to clear cytoplasm. 6 mitosis/10 HPF were counted. Neoplastic cells displayed positivity for S100, HMB 45 and Melan A and they did not express CK AE1/AE3. The FISH technique was not performed due to its absence from our laboratory. **Conclusions:** CCS is a rare, aggressive malignant neoplasm, difficult to diagnose due to the histomorphological overlap with the features of malignant melanoma. Correct diagnosis is essential for an appropriate treatment. Molecular analysis remains the key to diagnosis. The particularity of this case is that even if it can occur at any ages, few reports have been published regarding the incidence risk over the age of 40 years.

Keywords: CCS, MM, FISH, immunohistochemistry

THE IMPORTANCE OF IMMUNOHISTOCHEMISTRY IN DIAGNOSING BREAST CANCER

Susan Cristina Iulia¹, Cotoi OS², Moldovan C³, Sincu Mihaela⁴, Georgescu R⁵, Turdean S⁴, Stauder Ana-Maria⁴

¹Department of Phylology, UMFST Tîrgu Mureş

²Department of Pathophysiology, UMFST Tîrgu Mureş

³Medical Simulation , UMFST Tîrgu Mureş

⁴Department of Pathology, UMFST Tîrgu Mureş

⁵Department of Surgery III, UMFST Tîrgu Mureş

Background: Although important progresses have been made in the treatment and detection of breast cancer, it is still the leading cause of cancer-related death in European women. A core needle biopsy must be obtained before any type of treatment is initiated to ensure diagnosis of invasive disease and assess biomarkers which are essential for grouping tumors into subtypes and establishing surgical and oncological treatments. This study aims to present breast tumors diagnosis using immunohistochemistry (IHC) techniques. **Material and methods:** We conducted a study on 138 breast core needle biopsies processed following standard histology and IHC protocols in the Department of Pathology of Tîrgu Mureş Clinical County Hospital. All malignant tumors were stained with markers for estrogen receptors (ER), progesterone receptors (PR), human epidermal growth factor 2 receptor gene expression (HER 2), ki67 proliferation index. Using these four markers we were able to group the tumors in four subtypes of breast cancer: luminal A (ER and/or PR positive, HER2 negative and low Ki67 with a cut-off value of 20%), luminal B (ER and/or PR positive, negative or positive HER 2 and high Ki67), non-luminal (ER and PR absent, HER 2 positive) and triple-negative (ER, PR and HER 2 negative). **Results:** 56% (n=77) of all biopsies were malignant lesions with the following subtypes: luminal A 33% (n=24), luminal B 42% (n=30), non-luminal 6% (n=4) and triple-negative 19% (n=14). 84% (n=65) were diagnosed with non-special type carcinoma (NST), 5% (n=4) lobular carcinoma, 3% (n=2) mucinous carcinoma, metaplastic carcinoma and papillary carcinoma. **Conclusions:** Most of the tumors were luminal B subtype, followed by luminal A, triple negative and non-luminal. ER/PR and HER2 are the only validated predictive factors, allowing the selection of patients for endocrine therapies and anti-HER 2 treatments.

Keywords: breast, carcinoma, subtypes, immunohistochemistry, HER2

PEDIATRIC ORTHOPEDICS

TITAN ELASTIC NAILING - GOLD STANDARD FOR THE TREATMENT OF LONG BONE FRACTURES IN PEDIATRIC POPULATION

Derzsi Z¹, Gozar H¹, Marginean R¹, Kiss Petra¹

¹Department of Pediatric Orthopedics and Surgery, UMFST Tîrgu Mureş

Background: The Titan Elastic Nailing technique for the treatment of tibia, femur, humerus and forearm fractures, in 3 to 14 year-old children has been commonly used in the last 25 years. It is a minimally invasive procedure for the reduction and fixation of this type of fractures. In the pediatric population this technique protects the very important growth plate and the periosteum. The elasticity of the implants allows the micromovements of the fracture site leading to secondary bone healing, which is important for restoring the proper trabecular structure. **Material and methods:** In our prospective, descriptive study, we included the first 5 patients operated by our team using this technique with closed fracture site reposition. The patients were between 4 and 12 years of age with closed tibia or femur fracture, under 50 kg. We have recorded the time of hospitalization, time of immobilization, time of complete recovery, pain, the esthetic outcome, the comfort of the patients, cost efficiency and occurring complications. We compared our data with a small control population treated by open reposition and other type of osteosynthesis. **Results:** In TEN group, we had shorter periods of hospitalization, no plaster cast or other type of immobilization. Walking was instituted 4 weeks earlier on average, and complete recovery was attained after 6 weeks, half of the time needed for the control group. All patients underwent closed fracture site reduction so the esthetic outcome was much better with a greater comfort. In our group, lower costs were implied in each case, and no complications occurred. **Conclusions:** Our first experience with this technique is positive and welcome for better functional and esthetic outcomes, for shorter hospitalization periods, because no immobilization is needed, and for cost efficiency.

Keywords: titan elastic nailing, closed reduction, pediatric population, minimally invasive

OLD VERSUS NEW – APPROPRIATE TREATMENT FOR FEMURAL FRACTURES IN ADOLESCENTS

Derzsi Z¹, Gozar H¹, Marginean R¹, Opris R², Szekely J², Kiss Petra¹

¹Department of Pediatric Orthopedics and Surgery, UMFST Tîrgu Mureş

²Department of Orthopedics I, UMFST Tîrgu Mureş

Background: With the development of the osteosynthesis techniques, we have better solutions for intramedullary nailing in pediatric population between 14 and 18 years old. The quality of materials is better and the outcome is more favorable. Older techniques use Kuncher, Ender intramedullary nailing, cerclage, classic steel plates, and they have higher complication rates including nonunion, malunion or refracture before or after nail removing. Newer techniques in this age group include intramedullary osteosynthesis with blocked centromedullary titanium or steel nails or locked compression plates (LCP), in cases where complex reconstruction is needed. **Material and methods:** We present our latest experience in treating the complications of Kuncher nailing and complex open femoral fractures with lack of bone tissue. We present three cases in total, one refractured femur before the removal of the Kuncher nail, one after the removal of the Kuncher nail, and a polytrauma with complex open femoral fracture. **Results:** Case 1: 14 year-old boy operated 8 weeks ago for femoral fracture, admitted in our unit and presenting angulation of the Kuncher nail and the femur. The case was treated with intramedullary blocked steel nailing. Good results. Case2: 16 year-old boy operated 4 years ago for femoral fracture; osteosynthesis was made using a Kuncher nail; he was admitted in the emergency room 2 years after the removal of the Kuncher nail presenting the refracture of the old trajectory. The case was treated with intramedullary blocked titanium nailing. Good results. Case 3: 16 year-old boy with open femoral fracture and a loss of big piece of bone tissue. The case was treated with intramedullary blocked titanium nailing. Good results. **Conclusions:** The blocked titanium or steel centromedullary nailing is a good option for the primary treatment of femur fractures in this age group or for the treatment of complications.

Keywords: centromedullary nailing, adolescent population, femoral fractures, complications

PEDIATRICS

IRON DEFICIENCY ANEMIA IN 3 MONTHS-3 YEARS OLD CHILDREN, ADMITTED FOR ACUTE INFECTIONS IN THE PEDIATRIC CLINIC NR 2 FROM TARGU-MURES

Horvath Adrienne¹, Papp Zsuzsanna¹, Kelemen Izabella¹

¹Department of Pediatrics II, UMFST Tîrgu Mureş

Background: Iron deficiency anemia (IDA) is frequently seen in children aged 3 months- 3 years in the developing countries and represents a risk factor for comorbidities such as infections and impaired psycho-motor development. **Material and methods:** We assessed all children aged 3 months- 3 years, admitted to the Pediatric Clinic nr. 2 from Tg-Mures during December 2017 and February 2018. The main diagnosis at admittance, gestational age, feeding patterns, anthropological measurements, signs and symptoms, laboratory data were studied. **Results:** IDA was found in 137 children aged 3 months- 3 years admitted to our hospital during three winter months. Children were admitted mainly for respiratory and gastrointestinal acute infections. Mild anemia (Hgb 10-11 g/dl) was found in 75,9% of the patients, moderate (Hgb 7-9,9 g/dl) in 21,8% and severe forms (Hgb < 7 g/dl) in three patients (2,3%). Ten children were born prematurely and 32 children were malnourished. Sixteen children were breastfed between 1 and 6 months, 47 for longer period than 6 months and 35 were actually fed with breast milk. Fourteen patients received cow s milk. Adherence to the WHO recommendation to begin complementary feeding after 6 months of age was observed in 68 patients, among whom 48 had mild, 19 moderate and 1 child severe IDA. Twenty-seven children received complementary food before 6 months of age and 13 patients did not receive it at all. At the time of admittance, only 9 patients were on oral iron therapy (6,57%) but 57 received recommendations at discharge in this respect. **Conclusions:** IDA was present in 46,44% of children aged 3 months- 3 years admitted for acute diseases during a period of 3 months. Mild anemia was found in the majority of cases. Half of the patients followed the WHO recommendations in respect of timing of complementary food introduction, which points to the importance of quality of complementary food.

Keywords: child, anemia, iron deficiency

DIAGNOSTIC ERRORS AT THE ONSET OF THE DIABETES IN CHILDREN

Grama Alina¹, Chincesan Mihaela¹, Borka Balas Reka¹, Grama O²

¹Department of Pediatrics I, UMFST Tîrgu Mureş

²Department of Gynecology II, UMFST Tîrgu Mureş

Background: Diabetes is a chronic metabolic disease caused by a relative or absolute insulin deficiency. Epidemiology data shows an increase in the number of diabetes cases at younger ages. Ketoacidosis is the most common way of starting at younger ages. Type 1 diabetes in children should be seen and accepted as ambivalent, both acute and chronic disease. This attitude must be understood and accepted both by the patient (child and his family) and by the medical team. **Material and methods:** The paper presents a critical analysis of the main diagnostic errors found at the onset of the disease. Recognition of initial symptoms by parents, educators and doctors is particularly important. The time interval between the first signs of disease and possible progression to the ketoacidosis coma is proportional to the child's age. **Results:** There are cases of atypical onset and diagnostic errors. If the diagnosis is delayed, the symptoms become more and more polymorphic and less suggestive of the onset of diabetes : nausea, vomiting, abdominal pain (which mimics the acute abdomen), severe asthenia, acidotic respiration, signs of dehydration, coma. The most symptoms are those secondary to hyperglycemia, glycosuria and ketoacidosis. Physiological and psychological particularities in children, low immunity and changes during puberty may determine the severity of the development and difficulties in the process of compensating for the disease. Diabetes mellitus in children presents a much faster development of complications. Poor glycemic control is one of the causes of ketoacidosis. Complications of the illness can have a fatal impact on quality and life expectancy. **Conclusions:** Recognizing the atypical symptoms of diabetes at onset by the family doctor or pediatrician is essential for the prognosis of disease.

Keywords: ketoacidosis, child, diabetes

KAWASAKI DISEASE AND THE EXTREMES OF AGE – 2 CASE REPORTS

Mărginean Cristina Oana¹, Man Lidia¹, Melit Lorena Elena¹

¹Department of Pediatrics I, UMFST Tîrgu Mureş

Background: Kawasaki disease (KD) is an acute vasculitis, of unknown etiology, self-limiting, occurring usually in children between 1 and 5 years of age. The incidence varies among countries, and the highest incidence is reported in Asian countries. The incidence of cardiac impairment reaches up to 25% in untreated children, and up to 4% despite the proper treatment. **Material and methods:** Outside the age range of 1 to 5 years, the diagnosis of KD can be a real challenge for the physician due to atypical or incomplete clinical picture. **Results:** The first case describes a 5-month-old male admitted in our clinic for generalized polymorphous exanthema and fever. The onset was approximately 14 days before the admission with exanthema, associating fever, diarrhea and conjunctivitis after 7 days. Therefore, he was admitted in the regional hospital. The laboratory test showed leukocytosis and increased inflammatory biomarkers. Therefore, he was transferred in our clinic. The second case involves a 9-year-old male child admitted in our clinic for fever and submandibular adenopathy. The onset was approximately 5 days before the admission with the adenopathy for which the ENT specialist recommended antibiotics, which he did not tolerate, associating also fever. In the 2nd day of admission, he presented severe desquamation of hands and feet. Both cases were diagnosed with KD. The echocardiography showed no cardiac impairment in the infant, while in the older patient it revealed mild dilation of the left coronary artery. Both patients received intravenously immunoglobulin and pulsed methylprednisolone. The evolution was favorable in both cases, but in the infant, the CRP levels persisted mildly elevated for approximately 2 months after the diagnosis. **Conclusions:** The outcome of children diagnosed with KD outside the age range of 1 to 5 years is unpredictable due to both the more-likely delay in diagnosis and increased frequency of coronary arteries impairment.

Keywords: Kawasaki disease, extreme ages, outcome, children

HEPATIC ABSCESS IN A 6 YEARS OLD CHILD-CASE REPORT

Solyom Reka¹, Voicu Lucia Sanda¹, Horvath Adrienne¹, Moreh Zsuzsanna¹, Papp Zsuzsanna¹

¹Department of Pediatrics II, UMFST Tîrgu Mureş

Background: Bacterial abscess of the liver is relatively rare. It could occur after some organic infection or some medical maneuvers like vein catheterization. Sometimes could be associated with some immunologic pathology. Usually, in liver abscess there are no specific signs and symptoms. An abdominal CT scan can be the best investigation to establish the diagnosis. **Material and methods:** Authors present a case of a 5-years and 11-months-old male patient admitted to the Pediatrics II Clinic with fever, loss of appetite, a general state of unwellness, and irregular stools. Clinical, paraclinical and laboratory examinations were performed as well as abdominal ultrasound and CT scan. **Results:** Following the examinations the lab analysis raised the suspicion of a bacterial infection, furthermore the ultrasound detected a non-homogenous, 10mm in diameter bilocular hepatic lesion. The result of the abdominal CT showed a multilocular hepatic abscess. Based on the paraclinic and imaging examinations the diagnosis of hepatic abscess of unspecified etiology is established. A broad spectrum of antibiotics is prescribed/administered and the patient is transferred to the Pediatric Surgery Clinic for special surgical treatment. **Conclusions:** Hepatic abscess in children is a rare pathology, however this diagnosis should be taken into account when we encounter signs of severe infection or sepsis. Thorough examinations are mandatory in cases such as this, as well as a targeted, multidisciplinary medical-surgical treatments. The main treatment is surgical but is important to associate with a specific antibiotic therapy. Draining is a good therapeutic way for a single abscess and also specific antibiotic therapy is obligatory to eradicate the abscess.

Keywords: hepatic, abscess, child, sepsis

TYPE 2 DIABETES IN CHILDREN – CASE PRESENTATION

Moreh Zsuzsanna¹, Becze Kinga¹, Solyom Reka¹, Bodescu Virginia¹, Voicu Lucia Sanda¹

¹Department of Pediatrics II, UMFST Tîrgu Mureş

Background: Until recently, type 2 diabetes was considered an illness characteristic to obese adults. However, the growing occurrence of obesity in children in the last years has led to a higher frequency of children being diagnosed with type 2 diabetes, at much younger ages. The resistance to insulin is characteristic to type 2 diabetes; it is mainly associated with obesity, nephropathy, AHT, dyslipidemia, Polycystic ovary syndrome (PCOS), non-alcoholic steatohepatitis (NASH) and systemic symptoms of inflammations. When 3 or more of the above criteria are met, the diagnosis of metabolic syndrome is established. For an adequate treatment it is absolutely necessary to differentiate type 1 and type 2 diabetes in the early stages. In case of type 2 diabetes the treatment consists mainly in a change of lifestyle, in tandem with a personalized diet and peroral drug treatment. **Material and methods:** We would like to present the case of a teenage girl, diagnosed at the age of 9 with precocious puberty and polycystic ovary syndrome. The patient was hospitalized in our department at the age of 14, manifesting obesity, hypocholesterolemia, and elevated glucose levels discovered at a routine medical check. Expanding the area of paramedical investigation, we were able to establish the diagnosis of type 2 diabetes, AHT, dyslipidemia; initiating the peroral antidiabetic drug treatment, associated with an adequate diet and antihypertensive treatment. **Results:** Under the established treatment the patient's condition improves, blood glucose levels return to normal, the patient loses weight and the blood pressure values reach the normal parameters, characteristic for her age. **Conclusions:** Although genetics have an important role to play in the pathogenesis of type 2 diabetes, we conclude that in order to avoid the appearance of complications educating patients to lead a healthy lifestyle as well as an early diagnosis of resistance to insulin are paramount.

Keywords: diabetes, obesity, type 2, hypocholesterolemia, antidiabetic drug

ANTIBIOTHERAPY OPTIONS IN CHILDREN WITH COMMON URINARY TRACT INFECTIONS

Duicu Carmen¹, Armean Iulia¹, Man Lidia¹, Pitea Ana Maria¹, Aldea C²

¹Department of Pediatrics I, UMFST Tîrgu Mureş

²Nephrology and Dialysis Department, UMF Iuliu Hațieganu Cluj Napoca

Background: Introduction. Urinary tract infection (UTI) represents a common bacterial infection in children, after respiratory tract infections. Lately, we assist to an increased prevalence of UTIs caused by resistant bacterial strains among children. There is a lack of information regarding local resistance to antibiotics of uropathogens. **Aim.** The aim of this study was to assess the antibiotic resistance of bacterial isolates in pediatric UTIs. **Material and methods:** We conducted a cross-sectional study on a group of 296 patients with UTI, aged between 3 weeks and 17 years admitted to the Pediatric Clinic I Tîrgu Mureş and to the Department of Pediatric Nephrology Cluj-Napoca, between January 2015 and May 2018. **Results:** The study group consisted of 296 children, 158 of these presenting febrile UTI. Male predominance was noticed (boys to girls ratio= 1.31: 1), consisting of 168 males and 138 females. We analyzed the antibiotic resistance of the bacterial isolates, and we found 36,15% patients presenting multidrug resistance. Of the whole group, 134 children had an underlying urinary tract abnormality. **Conclusions:** First-line antibiotics (Amoxicillin, Amoxicillin +/- Clavulanic Acid, Nalidixic Acid, Nitrofurantoin) can be used as empirical treatment of uncomplicated ITUs, whereas for febrile UTIs, a second-generation Cephalosporins may be used as the first-line therapy.

Keywords: urinary tract infection, child, resistance, antibiotics

THE ASSESSMENT OF COMPLICATIONS IN A GROUP OF PEDIATRIC PATIENTS WITH ACUTE GASTROENTERITIS

Pitea Ana Maria¹, Borka Balas Reka¹, Man Lidia¹

¹Department of Pediatrics I, UMFST Tîrgu Mureş

Background: Acute diarrhea is defined as a decrease in stools consistency and/or an increase in their frequency (over 3 in 24 hours); changing the stools consistency is more predictive for diarrhea than the number stools, especially in infants. Acute diarrhea usually takes between 7 and 14 days. Although most episodes of diarrhea in childhood are mild, acute cases can lead to significant loss of fluid, with dehydration and other complications. **Purpose:** Evaluation of complications in a group of children diagnosed with acute diarrheal disease. **Material and methods:** The study included 57 patients hospitalized in the Pediatric Clinic between June, 2017 and October, 2018, discharged with the diagnosis of gastro-enterocolitis or acute diarrheal-disease, excluding cases labeled as dyspepsia or other causes of diarrhea (food allergy/intolerance, malabsorption, inflammatory bowel-disease). **Results:** The group included children aged 0-14, most infants (70%) and toddlers (19.3%); 57.9% of the patients were males, 73.68% were from rural areas. Clinically, the most frequent manifestations were colic (21%), erythema (14%), meteorism (over 10%), but also inappetence, hepato-/hepatosplenomegaly, exanthema. Acute dehydration syndrome was present in 52.63% of cases (8.77% IIIrd degree), 5 cases (8.77%) showed metabolic acidosis and diselectrolymia (especially hyponatremia), 26.31% of the cases were reported to have vomiting and fever (15 cases), 5.26% of the children were hospitalized for paroxysmal manifestations during fever and 13 children associated increased transaminases, 22.8% (4 of them with marked hepatocytolysis). **Conclusions:** The most common complications associated with diarrheal-disease in the study group were acute dehydration-syndrome, in more than half cases, increased transaminases, metabolic acidosis, diselectrolymia, while fever, present in over a quarter of the patients, complicated in some of them with paroxysmal manifestations.

Keywords: acute gastro-enterocolitis, complications, acute diarrheal disease, child

PHARMACY

PREPARATION AND CHARACTERIZATION OF FENOFIBRATE-LOADED ELECTROSPUN NANOFIBERS

Szabo Zl¹, Csatai T¹, Sipos Emese¹

¹Department of Pharmacy Industry and Pharmaceutical Management, UMFST Tîrgu Mureş

Background: Fenofibrate acts as an antihyperlipidemic agent, reducing concentrations of plasma triglycerides. Unfortunately, among the numerous fibric acid derivatives, it exhibits the lowest and most variable bioavailability. The aim of this study was to prepare a fenofibrate-loaded drug delivery system, based on PVP nanofibers with the aid of electrospinning, intended for fast drug release in the buccal cavity. **Material and methods:** Physicochemical changes that appeared during the electrospinning process were tracked with a wide array of techniques, including attenuated total reflectance Fourier transformed infrared spectroscopy, differential scanning calorimetry, while nanofiber morphology was monitored by optical microscopy. Dissolution studies were carried out both in 0.025 M sodium-dodecylsulfate and in water, while drug-loading was monitored by UV spectroscopy. **Results:** The nanofibers presented beadless morphologies, with randomly aligned structure and smooth surfaces. Mean diameter as determined by spectroscopic studies was 710 ± 160 nm. The active substance content of the nanofibers was 6.65 ± 0.09 % w/w, indicating homogenous dispersion and repeatability of the process. Due to its high surface-to-volume ratio and high porosity, nanofibers showed immediate disintegration in water, without the precipitation of fenofibrate. In water a very high, approximately 40-fold increase in dissolution rate was obtained for the nanofibers, while in case of a surfactant solution, a less than 2-fold increase was observed. In both cases, the drug release was instantaneous from the nanofibers. **Conclusions:** Well-defined, nanofibrous mats were obtained by electrospinning of an ethanolic PVP-based solution of fenofibrate. The obtained drug delivery system disintegrated instantaneously, when in contact with water and showed a rapid drug release. An over 40-fold increase in dissolution rate was obtained in water, when compared to the micronized API. The obtained results underline the importance of nanofibers for the rapid dissolution and solubilization of poorly soluble pharmaceutical drugs. The support of the Hungarian Academy of Sciences and Studium Prospero Fundation (139/26.01.2017) is highly appreciated.

Keywords: nanofibers, fenofibrate, dissolution, electrospinning

PHYTOCHEMICAL AND PHARMACOLOGICAL PROFILES OF TWO PRODUCTS WITH TRIBULUS TERRESTRIS

Stefanescu Ruxandra¹, Negroiu Ancuta², Mare Anca³, Vari C⁴

¹Department of Pharmacognosy and Phytotherapy, UMFST Tîrgu Mureş

²student, UMFST Tîrgu Mureş

³Department of Microbiology, UMFST Tîrgu Mureş

⁴Department of Pharmacology and Clinical Pharmacy, UMFST Tîrgu Mureş

Background: *Tribulus terrestris* is an annual plant from the Zygophyllaceae family, known under the popular name of puncture vine. It recently became very popular among athletes and sports because of its believed anabolic properties. It is presumed that the administration of TT increases the level of testosterone or testosterone precursors in the blood, which explains the increasing number of nutritional supplements available on the market. The control of dietary supplements is of great importance in order to ensure their quality and their safety. The aim of the present study was to evaluate the composition and the pharmacological actions of an herbal drug and an herbal supplement, both obtained from the Romanian market. **Material and methods:** For the phytochemical analysis, total saponin and total polyphenolic content were determined. Anti-cataract evaluation was carried out using a glucose induced opacity model. Scavenging activity against DPPH and ABTS radical was determined using spectrophotometric methods. Antimicrobial activity was tested on 6 different strains: *Staphylococcus aureus*, *Enterococcus faecalis*, *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, MRSA. **Results:** The results showed that the concentration of saponins in the herbal supplement is almost three times lower than the stated concentration on the label. Both *Tribulus terrestris* products exhibited antioxidant activity in vitro, but only the herbal supplement had an antibacterial effect on all six strains. The extract contained in *Tribulus terrestris* capsules is capable of preventing the development of cataract in vitro. **Conclusions:** This

study raises awareness regarding the use of herbal supplements and the importance of a more accurate control before their release on the market. Acknowledgment: This research was supported with a project funded through Internal Research Grants by the University of Medicine and Pharmacy of Tîrgu Mureş, Romania, grant contract number 15609/10/29.12.2017.

Keywords: Tribulus terrestris, saponins, antibacterial, anticataractogenic, antioxidant

INTERPRETATION OF DATA FROM A CLINICAL STUDY CONDUCTED WITH THE ASSESSMENT OF THE SENSORY EFFECTS OF THE TREATMENT APPLIED BY TWO MESOTHERAPY PROCEDURES

Todoran Nicoleta¹, Todea Carla-Cudalba¹, Birsan Magdalena², Ciurba Adriana¹

¹Department of Pharmaceutical Technology, UMFST Tîrgu Mureş

²Department of Pharmaceutical Technology, UMF Gr. T. Popa Iaşi

Background: In the clinical study it was proposed to evaluate the treatment with a commercially available wrinkle serum (containing hyaluronic acid and keratinase) applied to the right/left hemifacies by *virtual mesotherapy* - VM (electroporation) and *fractional mesotherapy* - FM (microneedling), respectively. **Material and methods:** The responses from the questionnaires completed by the study participants (n=10 volunteers, aged 40-52, with different skin typologies) were grouped according to their frequency (n) and then expressed by mean frequency \pm standard deviation (SD). Statistical analysis was performed with GraphPad Prism software. Wilcoxon (pW) and Mann Whitney (pMW) tests were used for frequency analysis, and two-way ANOVA and Tukey's (pT) tests were used to analyse the data expressed as mean frequencies. The statistical significance was set at CI = 95%, p>0.05. **Results:** *Tolerability and sensoriality:* VM was pleasantly perceived during treatment (n=6), while FM only comfortable (n=6); irritation/redness of the skin after treatment occurred more severely at FM (n=5) versus VM (n=2); the unpleasant effects disappeared in a few hours after VM (n=6), while after FM they persisted even 48 hours (n=5); all the differences between VM and FM are statistically not significant (pW>0.1250; pMW>0.3429). *Treatment efficacy:* The skin brightness was the most significant effect perceived after VM (n=3), while after FM the wrinkle reduction (n=3). Overall, the *mesotherapy techniques* approached: reduce fine wrinkles, moisturize, and improve skin texture, brightness and firmness without significant differences in user perception (pT>0.9995), "a slight improvement" being the user appreciation that is statistically extremely different (pT<0.0001) from that of "no effect". **Conclusions:** Virtual mesotherapy by electroporation is the best option when rejuvenating effect is purposed, or when the treated skin has any form of sensitivity. Fractional mesotherapy by microneedling is the best treatment option when purpose involves regeneration processes.

Keywords: virtual mesotherapy, microneedling mesotherapy, facial wrinkle, skin brightness, cosmetic treatment

TESTING THE CLINICAL EFFECTIVENESS OF A COSMECEUTICAL ANTIAGING PRODUCT

Birsan Magdalena¹, Antonoaea Paula², Vlad RA², Silasi O², Todoran Nicoleta², Rusu Aura², Ciurba Adriana²

¹Department of Pharmaceutical Technology, UMF Gr. T. Popa Iaşi

²Department of Pharmaceutical Technology, UMFST Tîrgu Mureş

Background: Cosmeceuticals, a combination between cosmetic and pharmaceutical products, apart from improving the aspect of the skin and providing the necessary nutrients for preventing skin ageing, also ensure its biological function. The first objective that must be reached by a product intended to prevent skin ageing is to re-establish the optimal skin hydration level. The increase of the water content in the corneous layer can be achieved using ingredients with different mechanisms like re-establishing the natural moisturizing factor, increasing the absorption capacity of the epidermis through the aquaporin canals or exerting an occlusive effect that prevents water evaporation. **Material and methods:** The hydrating effect of a newly developed cosmeceutical product (PCT) was determined. PCT was formulated such to ensure the optimal hydration level for both mature and young skin. The study included six female subjects, aged between 50 and 65 years, Fitzpatrick phototype III, with dry skin on the internal part of the forearm. Repeated measurements were conducted to establish the capacitance of PCT at different testing times: T0, T30min, T1h, T4h after the application of the product on 16 cm² of skin. The measurements were conducted with a CorneometerR CM825 - Courage and Khazaka. **Results:** The hydrating effect after a single application of PCT was assessed with the capacitance values

obtained at T30min and T1h compared to T0, where there were no statistically significant differences. Nonetheless, the experimental data at T4h indicated a statistically significant variation compared to those at T0. The tested formula properly re-establishes the hydration level with a variation per cent of 1.5% and 124.3% compared to T0. **Conclusions:** The tests of the proposed formulation confirm the increase of the hydration level by more than 81%. The obtained values show a good hydrating effect of a lipophilic external phase containing emulsion.

Keywords: cosmeceutical, corneometry, hydrating

PSYCHIATRY

PSYCHOTIC PRODROME: EARLY INTERVENTION AND LONG TERM MONITORING

Szabo-Racos Elisabeta¹

¹Department of Psychiatry, UMFST Tirgu Mures

Background: The prodrome has been defined as the period between the first noticeable symptoms and the first psychotic symptoms (Beiser-1993). For a better nosological delimitation in 1966 the concept of At Risk Mental State (ARMS) was introduced, which paved the way to the paradigm of the Clinical High Risk for Psychosis (CHR-P), with its three subgroups: genetical risk, attenuated psychotic symptoms and short remitted psychotic episodes. **Material and methods:** DSM 5 proposes a series of diagnosis criteria for the attenuated psychotic syndrome, offering a much better early identification of the high risk for psychosis persons, with the aim of reducing misdiagnosis, inadequate intervention and the overbidding of unfavorable prognosis. This syndrome comprises subclinical psychotic symptoms which were associated with semnsignificant growth of the risk to develop a psychotic disorder in the following year. **Results:** Studies show that approximately a third of the patients with CHR-P converge to psychosis. Early intervention reduces these rates and insures a better socio-occupational functioning for patients. Early antipsychotic intervention is indicated as soon as psychosis becomes obvious, also during the prodrome, if there is an associated personality disorders such as schizoid, schizotipal or paranoid. Otherwise during the high risk periode, psycho-social interventions can be usefull. **Conclusions:** Identification and early intervention are a major priority representing an oportunity to improve the life of a person with a vulnerability for psychotic disorders. Atypical antipsychotic drugs improve also cognition. In the case of high risk patients, CBT was proven to be very usefull reducing psychosis incidence after 4 years.

Keywords: nosological, early intervention, psychotic prodrome

PUBLIC HEALTH

FISCAL POLICY RESPONSES TO THE ECONOMIC CRISIS WITH REGARDS TO THE PUBLIC SPENDING ON HEALTH IN THE EU

Gondor Mihaela-Liliana¹

¹Department of Finance and Accounting, UMFST Tirgu Mures

Background: Carrying out budgetary balance is an important goal which can become a challenge in the context of an economic crisis, but typically it is not referred to as an inherent goal of the health care system, considering that it could be reached by cutting public spending on health. The aim of the study is to present and to analyse the fiscal policy responses to economic shocks with regards to public spending on health and the influence on health system performance. **Material and methods:** By using official data (Eurostat databases) on fiscal balance and public expenditure on health in the European Union Member States during the contemporary financial crisis, for the period 2008-2014, the study presents and analyses the fiscal tools with regards to the public health care systems. **Results:** The study reveals a large variety of budgetary tools used by different governments to face the crisis, from cutting spending, particularly in the pharmaceutical sectors and hospitals (e.g. the diminishing of the salaries of health professionals/the budgets of public hospitals, the closure of public hospitals, the removing of some medical services from the benefits package, the increasing user charges for some health services, reducing the price of medical goods/services, improving the rational use, etc.) to increasing taxation as source for public health spending (taxes on soft drinks or on drinks with artificial sweeteners, excises on alcohol or tobacco, or both, the health contribution rate, etc.). The study reveals also a number of the EU Member States where the health public budgets were protected or frozen during the financial crisis. The potential effects of these budgetary measures on health system performance are discussed. **Conclusions:** Considering fiscal balance as an arithmetic figure/constraint to be respected, with no regard to the social consequences, represents an inefficient perspective. The solution would be the maximizing of the health system's performance.

Keywords: public spending on health, fiscal balance, health system performance

FINANCIAL TOOLS TO BOOST PUBLIC HEALTH PERFORMANCE IN THE EU – COMPARATIVE TRENDS

Gondor Mihaela-Liliana¹

¹Department of Finance and Accounting, UMFST Tirgu Mures

Background: Public budgetary tools related to the level of revenues to be provided and the flexibility and accountability of spending are essential to financing the health system. The aims of the study are (1) to identify priority issues on fiscal policy to boost public health performance in the EU, and (2) to compare and analyse different methods with different effects from different EU states. The objective is to create and promote a typology of fiscal measures for health reforms and a framework for fiscal quantification of reform effects. **Material and methods:** By using official data on health policy reforms (European Commission DG Health reports, European Semester, WHO reports) and Eurostat data on public expenditure on health, 2013-2017 period, the study compares and analyses the different national fiscal tools to boost public health performance in the EU. The study indicates several determinants for the feasibility of the reforms. **Results:** We found that health systems in the EU are continuously being reformed, with large variation in the scope, nature and rhythm, despite the common elements adopted in June 2006 (the European Union model). Since the crisis, the reduction of public spending on health care prevailed, with only a few EU countries implementing significant reforms to increase efficiency and performance. We found reforms designed to modify (1) coverage, (2) equity, (3) efficiency, (4) quality, and (4) availability of resources. The study points on the fairness and efficiency of the taxation system as the basis on which health services are built. **Conclusions:** Fiscal balance cannot be accomplished out of the way of performance. Comparing different fiscal measures and analyzing different reform effects in different member states could represent a basis for designing a sound fiscal policy to create the performance in the public health system.

Keywords: public spending on health, fiscal measures, public health performance, taxation system, health policy reforms

SOCIAL SCIENCES

ETHICAL AND LEGAL REFLECTIONS ON MEDICAL MALPRACTICE. JURISPRUDENTIAL SOLUTIONS.

Boila Lacrima Rodica¹

¹Department of Law and Public Administration, UMFST Tîrgu Mureş

Background: The deepening of the bioethics dilemmas in the social, political and legal context of the contemporary society triggers a wide debate, designed to enroll all the social factors in elucidating the controversial aspects. Our study is dedicated to the analysis of medical malpractice, which brings into question the observance of legislation, the patients rights and the rules of modern bioethics in medical practice. **Material and methods:** The ethical perspective gives profoundness to the research, revealing the complexity of the phenomenon, but also the vulnerability of those involved in the medical act, both patients and professionals, in the face of malpractice charges. **Results:** The research method is established by the analysis of certain relevant jurisprudential solutions regarding malpractice in order to demonstrate that in medical practice, either by ignorance or negligence, legal provisions are violated, provisions that reflect principles of modern bioethics such as informed consent, non-discrimination, patient access to the information in his/her medical file, the right to counsel and to obtain another opinion, the right to the security of his or her bodily integrity. **Conclusions:** By the conclusions expressed, we tried to demonstrate the need to improve the legal framework in order to guarantee the protection of patients interests more effective but also the respect owed to medical professions given the extent of complaints of medical malpractice that could lead to disciplinary, civil or criminal liability of the medical personnel and the impact of this phenomenon on public opinion, often distorted by mass media.

Keywords: bioethics, medical malpractice, professional error, Law no. 95/2006

IMPLEMENTATION OF THE APPLICATION-THEMATIC GUIDE "TOGETHER, WITHOUT ... DISCRIMINATION" IN THE COURSE "ETHICS AND NON-DISCRIMINATION OF THE VULNERABLE GROUPS IN THE HEALTH SYSTEM"

Pasca Maria Dorina¹

¹Department of Ethics and Social Sciences, UMFST Tîrgu Mureş

Background: The approach of new didactic strategies in the introductory-educational process in the university environment is necessary to represent the sine qua non of the success, equivalent and concrete materialized by the results obtained by the student. In this context, the present instrument represents the concrete way in which the course "Ethics and non-discrimination of the vulnerable groups in the health system" materialized the logistic option that was chosen. **Material and methods:** The Application-Thematic Guide is based on the direct collaboration between the teacher and the student during the classes, using the following methods: conversation, explanation, demonstration and exercise. **Results:** The present paper is a result of three years of practical work with the students: general medicine III year, general medicine assistant III year and nutrition and dietetics III year, who are directly involved in solving as well as initiating problem-situations that are existing not only in the health system. The structure of the guidebook is a balance between the theoretical and the practical parts including concepts, thematic and bibliographic applications. A distinct note is remarked in the thematic-application sequence, where the student's direct involvement is followed up, starting from complete and continue the sentence, quote message, opinion and your own experience, reaching out the point where they express their own opinions and attitudes. Applying this knowledge at the course proved to be more than beneficial, because students are forced to complete their own cognitive acquisitions in this context. **Conclusions:** The Application-Thematic Guide "Together, without ... discrimination!" Is a viable and accessible working tool, involving the student, using his / her own experience, solving the proposed items as necessary steps to create a new attitudinal behavior to the act of discrimination in the health system and beyond. It also prepares them with maturity to a correct practice from this point of view for their future medical profession.

Keywords: discrimination, student, involvement, guide, attitude

ANALYSIS OF HEALTH - RELATED SDGS INDICATORS. THE CASE OF EU AND ROMANIA.

Kardos Mihaela¹

¹Department of Management and Economy, UMFST Tîrgu Mureş

Background: Health and well-being, considered to contribute to economic growth, social development and poverty reduction, are specific targets of the Sustainable Development Goals (SDGs), acting as outcomes, determinants and enablers of sustainable development. More than 50 health-related indicators measure health outcomes, proximal determinants of health or health-service provision and accordingly, countries worldwide are monitored in terms of progress towards reaching health objectives. In this context, the article aims to provide an overview analysis of health-related SDGs indicators for the European Union, with special focus on the Romanian case. **Material and methods:** The methodology is based on methods of analysis and synthesis, interpretation and relevant comparisons of data available through research analysing Global Burden of Disease Studies published in 2016 and 2017 and health reports of The World Health Organization. **Results:** Significant achievements and a positive trend can be observed in various health areas in the EU countries (e.g. top positions in the general world ranking, increase in life expectancy, improvement of birth-related indicators), but still there are important challenges to address, especially regarding Non-Communicable Diseases including mental health, cardiovascular disease and diabetes and their associated risk factors: smoking prevalence, alcohol use and obesity. Inequalities between countries are readily visible: Eastern and Southern countries generally lag behind compared to Northern and Western countries and a particularly issue is the level of universal health coverage (UHC). The analysis results for Romania are even worrier, as for most indicators, it records the lowest scored within the European Union. **Conclusions:** European Union, as well as its national governments have committed to SDGs, but still, there is a long way from achieving health-related targets: only setting goals is not enough for reaching an overall success; it requires coherent multi- and inter-sectoral policies, a paradigm shift in focusing more on prevention, strengthening health systems for UHC and adequate financing.

Keywords: health-related indicators, sustainable development goals, health monitoring, European Union

THE SUSPENSION OF THE ENFORCEMENT EFFECTS OF THE ADMINISTRATIVE ACT, BETWEEN REGULATION AND PRACTICE

Moldovan Ximena¹

¹Department of Law and Public Administration, UMFST Tîrgu Mureş

Background: The administrative legal act, a species of the civil legal act, enjoys, under special legal provisions, some features that distinguish it from other civil legal acts. The jurisprudence, and especially the doctrine, were not constant with these traits, but enforceability is one of the features unanimously accepted by specialists and practitioners in this field. This feature of the administrative act involves a number of practical aspects when the lawfulness of the act is contested. A too general legal regulation of the conditions under which the court may order the suspension of the enforceable effects of the administrative act has led to extremely divergent jurisprudence solutions, which requires the legal regulations to be much more concrete. **Material and methods:** The material behind my research consisted in many books, scientific papers, and last but not least, the jurisprudence (case law) of the courts. I have understood to use the historical, sociological and quantitative methods as research means. **Results:** I have noticed that the lack of concreteness of these legal provisions most often leads to the rejection of the application for suspension of the enforceable effects of the administrative act with extremely severe consequences for the recipient, sometimes irreversible. **Conclusions:** The legislation concerning the suspension of the enforceable effects of administrative acts needs to be amended.

Keywords: law and public administration, law and public administration, administrative act, enforcement effects, suspensio

NEW TRENDS IN HEALTH TOURISM. AN OVERVIEW OF THE ROMANIAN OPPORTUNITIES IN THE GLOBAL CONTEXT.

Gabor Manuela Rozalia¹, Oltean Flavia Dana¹

¹Department of Management and Economy, UMFST Tîrgu Mureş

Background: Nowadays, more and more innovative tourism products became a temptation for the new consumers (prosumers), including health tourism and wellness tourism. Traveling abroad for healthcare is much easier today and various categories of tourists travel for improving their well-being. Today, health holidays represent an important percent of the international arrivals on holiday market. For example, OECD remarks that a lot of ex-communist countries, including Romania, are the most popular destinations for health and medical tourism. Romania also has potential to develop: babymoon tourism, dental tourism, spa and wellness tourism. Romania also has potential to develop: babymoon tourism, dental tourism, spa and wellness tourism. Medical tourism is a term that describes seeking medical treatment in another country and it is defined as the process of leaving home for treatments and care abroad or elsewhere domestically. Medical tourism is a relatively new phenomenon and nowadays is considered an important component of trade in health services. Such countries as India, Hungary, Turkey, South Korea, Mexico, and Costa Rica are now at the top of medical tourism and have high percentages of travel receipts relative to GDP. **Material and methods:** Our research is based on the literature review and previous researches made by the authors, regarding: babymoon tourism, medical tourism, spa and wellness tourism, dental tourism. **Results:** The results emphasize the opportunity for Romania to develop these new and innovative products for health tourism and highlights the international recognizing of the Romanian potential for this. **Conclusions:** According to the international tourism organizations (WTO and WHO) the consumption of health services abroad is an economic development opportunity for all the countries, especially for developing ones have chosen to develop medical services for foreign patients. Based on these considerations we recommend for Romania to follow the example of these countries to increase the share of exported healthcare in its total expenditure for healthcare. Health tourism is not a phenomenon of countries that have poor healthcare but is a phenomenon of choice.

Keywords: health tourism, medical tourism, babymoon tourism, dental tourism, spa & wellness tourism

THE TERRITORIALITY OF THE LEGAL NORM

Dogaru Lucreția¹

¹Department of Law and Public Administration, UMFST Tîrgu Mureş

Background: To present and analyze a problem in the field of the General Theory of Law, such as the action of the legal norm in the space, we will resort to the specialized doctrine, legislation and jurisprudence. **Material and methods:** We will present in this paper, the effects and results of the principle of territoriality, but also the exceptions to this principle, imposed by the need to maintain and develop the inter-states relations, and the need to maintain the legal order in the world. **Results:** So the exposure and analysis of extraterritorial exceptions we consider it is important and necessary. **Conclusions:** In conclusion, the territorial or spatial force of the legal norms is related to the state sovereignty, which is manifested in terms of territorial sovereignty, which is absolute and inalienable. So any legal norm has a territorial-state force, irrespective of whether this territoriality is for the full state-territory or is just for an administrative part. The same situation is the international treaties, their effects being applicable only to the territory of the Contracting State.

Keywords: spatial force, principle of territoriality, state sovereignty, diplomatic immunity, the extension of the law

THEORETICAL AND PRACTICAL ASPECTS REGARDING THE IMPLEMENTATION OF GDPR IN THE MEDICAL FIELD

Luntrară Lacrima Bianca¹

¹Department of Law and Public Administration, UMFST Tîrgu Mureş

Background: The need to ensure a uniform and adequate level of protection for individuals throughout the European Union and,

at the same time, the need to establish a mechanism to prevent possible discrepancies that would impede the free movement of data within the internal market were the main premises for the adoption and implementation of the General Data Protection Regulation. This endeavor of the EU legislator is a highly debated issue, especially in the medical field, given the sensibility of the data processed within it, under the direct application of the legal text and in view of the many responsibilities incumbent on operators. **Material and methods:** Scientific research of the legal text, of the materials elaborated in the specialty literature and of the practical cases highlighted until the present. **Results:** Since the adoption of the Regulation, there have been numerous discussions on the implementation procedures of this set of rules in the medical field, given the specific sensitivity. The complexity of the legal act, the novelty character, as well as the many established rights and obligations, determined, in the most concrete terms, the reconstruction of the entire mechanism for the processing of personal medical data. All public or private health institutions - polyclinics or individual offices are targeted by the application of GDPR, being responsible for the processing of personal data of patients under their care. In essence, the implementation of the analyzed legal provisions involves a careful internal organization, which implies numerous actions that surround the global risk management initiative initiated by the medical unit to improve the quality and safety of care. In practice, six stages of the implementation process are materialized. **Conclusions:** In the context of the GDPR's entry into force, must be emphasized the need to develop and implement a particularly effective confidentiality policy to ensure effective protection of fundamental rights.

Keywords: GDPR, liability, medical field

INDIVIDUAL LABOR DISPUTES. JURISPRUDENTIAL ISSUES.

Roba Roxana Maria¹

¹Department of Law and Public Administration, UMFST Tîrgu Mureş

Background: The individual labor dispute has as its object the exercise of certain rights or the fulfillment of obligations arising from individual and collective labor contracts or from collective agreements and employment relationships of civil servants, as well as from laws or other normative acts. The present study aims to analyze some controversial situations in judicial case law in the field of individual labor disputes. **Material and methods:** The study will use the logical, comparative and experimental method, analyzes the legal provisions currently in force, as well as the point of view of the doctrine and the solutions derived from the judicial practice. **Results:** Although the provisions of the Labor Code relating to the procedure for dismissal decision and the probation in individual labor dispute seem very clear in their content, they still give rise to divergent opinions in judicial practice, which is why we consider it appropriate to supplement them, expressly indicating the possibility of the court ex officio to invoke grounds for absolute nullity of the dismissal decision, within the complaint formulated by the employee. Regarding the probation, the courts do not always apply the legal provisions from the article 272 of the Labor Code, and they expect the employees to prove their rights. **Conclusions:** The conclusions are in the direction of expressing concrete proposals to amend the current regulations.

Keywords: compensation, employee, dismissal, reintegration

CONSIDERATIONS ON THE MAINTENANCE OBLIGATION BETWEEN SPOUSES AND EX-SPOUSES

Roba Roxana Maria¹

¹Department of Law and Public Administration, UMFST Tîrgu Mureş

Background: According to the Civil Code, irrespective of the marital status for which they opted, spouses have a mutual obligation to maintain themselves. This obligation is a priority, because spouses owe their maintenance to any other person. Under certain conditions the maintenance obligation also subsists between former spouses. **Material and methods:** Using the logical, comparative and experimental methods, the study will analyse the legal provisions currently in force taking into account the point of view expressed in doctrine and judicial practice. The obligation to maintain will be compared with similar institutions. **Results:** The maintenance obligation between spouses is based on the institution of marriage. Regarding the maintenance obligation between former spouses, this is not based on the idea of fault in the dissolution of marriage. The fault of one of the spouses in this respect is of interest only in determining the time limit of the right to obtain maintenance. **Conclusions:** The study contains concrete and motivated proposals to amend the legal provisions currently in force.

Keywords: maintenance obligation, spouses, marriage, former spouses

SURGERY

RIGHT HEMICOLECTOMY WITH TOTAL MESOCOLIC EXCISION AND CENTRAL VASCULAR LIGATION IN THE TREATMENT OF RIGHT COLON CANCER

Bara T Jr¹, Fulop Z¹, Gurzu Simona², Jung I³, Baniias Laura², Borz C¹, Bara T¹

¹Department of Surgery II, UMFST Tîrgu Mureş

²Department of Pathology, UMFST Tîrgu Mureş

³Department of Phylology, UMFST Tîrgu Mureş

Background: The principles of total mesocolic excision with central vascular ligation are based on the good results obtained after total mesorectal excision in the treatment of rectal cancer. The complete excision of the mesocolon requires a correct identification of the dissection plan between the mesofascial plane and the retroperitoneal fascia, followed by central vascular ligation of the blood vessels to remove central lymph nodes and resection of the affected colon. **Material and methods:** The technique of total mesocolic excision with central vascular ligation in the treatment of colon cancer has been introduced in our clinic in October 2017. We analyzed over a period of one year the cases of right colon cancer which underwent surgery using the new technique, after which we compared the results with those gained after using the conventional surgical technique, according to the number of the distant lymph nodes and the integrity of the visceral fascia of the mesocolon. **Results:** During the studied period 29 cases of right colon cancer underwent surgery, from which right hemicolectomy with total mesocolic excision and central vascular ligation was performed in 12 cases, respectively there were performed 17 conventional right hemicolectomies. In cases of total mesocolic excision the visceral fascia remained intact and the number of removed lymph nodes was significantly higher than in classical cases. **Conclusions:** In cases of colon cancer patients surgery remains the only curative treatment, therefore an appropriate technical approach and an improved surgical technique can lead to more precise patient standardization and improved long-term outcomes. Total mesocolic excision targets the intact layers and a maximal lymph node dissection. Removal of the lymph nodes increases the quality of the operation, resulting in less local recurrence.

Keywords: right colon cancer, total mesocolic excision, central vascular ligation

PROGNOSTIC FACTORS FOR POSITIVE RESECTION MARGINS IN BREAST CONSERVING SURGERY AND THE IMPACT ON OVERALL SURVIVAL AND LOCAL RECURRENCE

Radoi Cristina¹, Benedek Z¹, Oancea Maria Ruxandra¹, Suci N¹, Mocian F¹, Coros M¹, Georgescu R¹

¹Department of Surgery III, UMFST Tîrgu Mureş

Background: Breast-conserving therapy (BCT), the combination of lumpectomy and adjuvant radiotherapy represents the gold standard treatment for early-stage breast cancer. Margin status is the most powerful predictive factor associated with local recurrence. A positive resection margin increase 2 fold the risk of local recurrence. Thus, the study of resection margins represents a subject of great interest in breast-conserving surgery. The aim of this study is to find preoperative factors that influence the positive resection margins. **Material and methods:** This retrospective study was performed in a General Surgery Department from Targu Mures, using the medical records and pathological reports of 143 patients that were operated during 2009 and 2017 for breast cancer. Statistical analysis were done using GraphPad Prism, Fisher's exact test, Chi square test and Kaplan Meier survival curves. **Results:** We examined 143 patients who underwent BCS for breast cancer. 11 of these had positive resection margins, which means 7.69%. In our study, overall survival is 97,8% (only one patient dead out of 92 patients that could be followed postoperatively). In our series, neoadjuvant chemotherapy is very strong associated with positive resection margins ($p < 0,0001$). Also, the presence of DCIS represents a preoperative predictive factor for positive resection margins. On the other hand, we didn't find a statistical correlation between other preoperative factors (oncological surgery, inflammatory infiltrate, microcalcifications, necrosis, lymphovascular embolous, histological type and histological grade of the breast tumor, tumor location and tumor diameter, patient's age and patient's BMI, axillary lymph nodes status, immunohistochemistry profile of the tumor) and the surgical margins. **Conclusions:** We found 2 prognostic factors for positive resection margins, that should be considered when planning surgical

management of early-stage breast cancer.

Keywords: breast cancer, breast-conserving therapy, resection margins

INTENSIVE CARE UNIT HOSPITALIZATION AFTER LAPAROSCOPIC CHOLECISTECTOMY – PRELIMINARY RESULTS

Botianu PVH¹, Radoi Cristina¹, Benedek Z²

¹Department of Surgery III, UMFST Tîrgu Mureş

²Department of Surgery IV, UMFST Tîrgu Mureş

Background: Laparoscopic cholecistectomy is a frequently performed procedure which generates important costs and hospital admissions. Our study aims to find a pattern for the admission to the intensive care unit after this surgical procedure. **Material and methods:** We have performed a retrospective study on 273 patients operated in the Surgical Clinic of the Mures Clinical County Hospital between 01.01.-31.05.2018 in whom a laparoscopy was performed with the main aim to remove the gallbladder, following the reasons why the patients required an admission to the intensive care unit in the immediate postoperative period. **Results:** The number of the patients who required an admission to the intensive care unit after laparoscopic cholecystectomy is significant, most of the cases being old patients and/or with significant comorbidities who have required surveillance/treatment on the ICU for 24 hours after surgery. Excepting conversion to open cholecistectomy, intraoperative difficulties (significant adhesions after previous surgery, bleeding, placement of a transcistic drainage) do not seem to be associated with the need for admission to the ICU. **Conclusions:** Although it is regarded as a simple and minimally-invasive procedure, laparoscopic cholecistectomy is associated with a significant number of days of ICU hospitalisation, further studies being required to find out the exact factors associated with the need for ICU admission after this procedure.

Keywords: hospital, intensive care, laparoscopic cholecistectomy

MINIMALLY INVASIVE SURGICAL INTERVENTIONS IN THE ABDOMINAL WALL COMPARED TO CLASSICAL INTERVENTIONS

Oancea Maria Ruxandra¹, Rosca Ancuta Noela¹, Benedek Z¹, Sorlea S¹, Suciu N¹, Radoi Cristina¹, Coros M¹

¹Department of Surgery III, UMFST Tîrgu Mureş

Background: Minimally invasive abdominal wall surgery is a relatively new branch of classical surgery, gaining more territory over the last few years being addressed in several medical centers. The aim of this paper is to highlight this transformation in our clinic. **Material and methods:** We introduced a total of 3,974 patients with a pathology of the abdominal wall, of which 3254 patients had inguinal hernia, 143 patients with femoral hernia and 539 patients with umbilical hernia. We compared hospitalisation days and duration of surgery in different types of surgical techniques. **Results:** Studying the average time of the operating time over the years, no major difference was observed, regardless of the applied technique. From the point of view of the applied procedures, there were 454 no-tension-free procedures and a total of 3480 tension-free procedures with prostheses and 37 laparoscopic procedures. **Conclusions:** Even though minimally invasive surgery techniques are hardly the first choice, mainly because of the necessity of specific medical equipment, the high costs of the medical materials and for the duration of learning curve, these techniques present many incontestable advantages such as reduced operating time, faster recovery time, fewer hospitalization days and minimal recurrence rate.

Keywords: abdominal wall hernia, inguinal hernia, mesh, laparoscopy

UROLOGY

LOW SERUM FASCIN IS CORRELATED WITH ADVANCED AGE IN MALE POPULATION

Chiujdea S¹, Tataru OS¹, Hutanu Adina², Voidazan S³, Borda Angela⁴, Vartolomei MD⁵, Martha Orsolya¹

¹Department of Urology, UMFST Tîrgu Mureş

²Department of Clinical Laboratory, UMFST Tîrgu Mureş

³Department of Epidemiology, UMFST Tîrgu Mureş

⁴Department of Histology, UMFST Tîrgu Mureş

⁵Department of Cell Biology, UMFST Tîrgu Mureş

Background: Fascin-1 in male s blood products is a highly studied protein. Age was not proven to influence the serum level of Fascin-1. This study looks into the correlation between age and sera levels of Fascin-1, in a large cohort. **Material and methods:** We prospectively registered clinical and pathological data of 43 patients. Inclusion criteria were normal serum PSA (prostate specific antigen) and normal digital rectal examination. 18 patients with suspicion of prostate cancer and had a negative prostate biopsy (NPB) were added to study group. InStat 3 program is employed for statistics. We applied Mann-Whitney test, t Student test and Spearman test. p less than 0.05 reflected statistical significance. **Results:** We found that clinical attributes of 18 patients with NPB against 43 healthy patients did not look the same in age (mean 66.3 and 66.0, p=0.78), but there is a statistical variance in PSA (median 9.33 ng/ml and 1.39 ng/ml, p<0.0001), PSA density (median 0.19 and 0.04, p<0.0001) and prostate volume (median 53.50 cc and 27.20 cc, p=0.0001). Serum levels of Fascin-1 did not differ in healthy patients when compared with NPB patients (median 7.41 ng/ml vs. 7.09 ng/ml, p=0.34). When we look at the 61 patients altogether, we identified negative correlation (Spearman) between Fascin-1 and age (rho= -0.331, p=0,009). **Conclusions:** Serum levels of Fascin-1 differ according to age in healthy patients. Further research is needed to identify the role of Fascin-1 as a biomarker and if could predict oncological outcomes in cancer patients. An internal grant financed by UMF Tîrgu Mureş (17800/22.12.2015).

Keywords: fascin-1, biomarker, age, serum

ZINNER SYNDROME - CHALLENGES IN DIAGNOSTIC - CASE REPORT

Chibeleian C¹, Tataru OS¹, Porav-Hodade D¹, Vartolomei MD², Borda Angela³, Loghin Andrada³, Martha Orsolya¹

¹Department of Urology, UMFST Tîrgu Mureş

²Department of Cell Biology, UMFST Tîrgu Mureş

³Department of Pathology, UMFST Tîrgu Mureş

Background: Inherited cystic malformations of the seminal vesicle are rare. Frequently there is an association with ipsilateral kidney agenesis. This disease was first mentioned by Zinner, and since then only few cases have been published. Most patients with this inherited malformation are asymptomatic until adulthood. **Material and methods:** A 61-year-old male, was admitted to our hospital, presented with recurrent pain in his lower left abdomen for one year, accompanied by intermittent bowel obstruction, with no history of fever or hematuria. The digital rectal examination revealed a stenosis of the rectal canal, with the impossibility of prostate examination. On abdominal ultrasound, CT (computed tomography) scan and MRI (magnetic resonance imaging) a cystic tumor of 10/9.6/12 cm, adherent to the posterior bladder wall, prostate and sacral bone, associated with left kidney agenesis was found. An open pelvic surgery was decided to remove the cystic tumor. **Results:** On microscopy, the tumor was represented by a multilocular seminal vesicle cyst, with a muscular wall and an epithelium composed of columnar and basal cells, with lipofuscin pigment in the cytoplasm and nuclei with marked atypia. The epithelial component was positive for PANCK (AE1/AE3) and negative for PSA. **Conclusions:** Seminal vesicle cysts with ipsilateral renal agenesis are rare urological malformations. Both CT and MRI are good investigational tools for kidney and seminal vesicles malformations, while the histopathological examination contributes to a correct diagnosis.

Keywords: Zinner's syndrome, seminal vesicle cysts, ipsilateral renal agenesis

THE VALUE OF URODYNAMICAL INVESTIGATIONS IN STRESS URINARY INCONTINENCE

Ghirca Veronica¹, Chibeleian C¹, Porav-Hodade D¹, Nechifor A¹, Todea C¹, Brad A¹, Martha Orsolya¹

¹Department of Urology, UMFST Tirgu Mures

Background: In many cases, stress urinary incontinence (SUI) requires a surgical treatment, intending the improvement or remission of the symptomatology on long term. Under certain conditions can appear complications that can cause voiding dysfunctions. **Material and methods:** We performed a retrospective study over a period of 3 years in Mures County Hospital, Urologic Clinic and we included 34 female patients with stress urinary incontinence. The diagnosis protocol consisted in: clinical examinations, questionnaires, voiding diaries, ultrasound with the evaluation of the post-void residual urine, urine analysis and urodynamic investigations (uroflowmetry and pressure flow-study). **Results:** The average age was 64,25 \pm 8,25 (standard deviation). 7 patients had post-void residual urine evaluated on the ultrasound (80 ml \pm 48,99ml SD), the uroflowmetry curve was normal in 19 cases and pathological in 15 cases (Q_{max} = 11,93 ml/s \pm 3,73 SD), pressure flow-study revealed a low detrusor contraction in 13 cases with an average p_{det} = 11,46 cmH₂O \pm 4,7 SD, the loss of urine was 55,8 ml \pm 41,6 (SD). The presence of post-void residual urine, micturition effort and history of pelvic surgery and diabetes were statistically correlated with underactive detrusor diagnosis ($p<0,05$). **Conclusions:** Is very important to take into account the practice of urodynamical investigations, in selected cases, to the patients with SUI in order to establish the treatment management and to inform them of possible outcomes after surgery.

Keywords: urodynamics, uroflowmetry, pressure-flow study, underactive detrusor

LAPAROSCOPIC PYELOPLASTY FOR URETEROPELVIC JUNCTION OBSTRUCTION (CASE REPORT)

Todea C¹, Chibeleian C¹, Martha Orsolya¹, Ghirca Veronica¹, Tataru OS¹, Brad A¹, Porav-Hodade D¹

¹Department of Urology, UMFST Tirgu Mures

Background: The aim of this paper is to present a case of a young male with ureteropelvic stenosis who was treated by laparoscopic pyeloplasty. **Material and methods:** We present a case of a 30-year-old man who was added in Clinic of Urology from Targu Mures accusing right flank pain. Intravenous urography and Computer tomography revealed a typical ureteropelvic junction obstruction with third degree of hidronephrosis on the right side. The global renal function was normal. **Results:** Transperitoneal laparoscopic dismembered Hynes-Anderson pyeloplasty was performed with the insertion of a double "J" ureteral stent. The operative time was 240 minutes with minimal blood loss. The procedure was carried out successfully with no symptoms at 24 hours after the surgery. The lumbar drain was removed on the third postoperative day and the patient was discharged the next day. Four weeks after the surgery the ureteral stent was removed and the patient was symptoms free. **Conclusions:** In conclusion, we argue for the feasibility of laparoscopic pyeloplasty for ureteropelvic junction obstruction management.

Keywords: laparoscopy, pyeloplasty, ureteropelvic junction

SURGERY PLUS RADIOTHERAPY IN CERVICAL CANCER INCREASE THE INCIDENTS OF URETEROHYDRONEPHROSIS

Putnoki-Ciceo Z¹, Tataru OS¹, Vida AO¹, Chibeleian C¹, Porav-Hodade D¹, Martha Orsolya¹

¹Department of Urology, UMFST Tirgu Mures

Background: Post-radiotherapy ureteral stenosis is a prevalent complication in the treatment of cervical cancer. The aim of our study is to analysis which treatment approach for cervical cancer has the greatest impact on the upper urinary tract. **Material and methods:** Between 1st of January 2017 and 1st of October 2018, 107 patients with history of gynecological cancers were admitted in our clinic. Inclusion criteria: history of cervical cancer and ureterohydronephrosis at presentation (77, 72%). Exclusion criteria: ovarian cancer (8, 7.5%), uterine cancer (3, 2.8%) and no ureterohydronephrosis (19, 17.7%). **Results:** Median age was 57 years

and 24 (30.7%) patients had less than 50 years. The kidney was drained using percutaneous nephrostomy (PN) or internal ureter catheter (JJ). According to type of multimodal treatment the 77 women had: 7 (8.97%) hysterectomy (3 PN, 4 JJ), 28 (35.9%) surgery plus radiotherapy (15 PN, 11 JJ, 2 other urinary derivation), 2 (2.56%) surgery and chemotherapy (1 PN, 1 JJ), 8 (10.25%) surgery and radio-chemotherapy (1 PN, 7 JJ), 13 (16.66%) only radiotherapy (10 PN, 1 JJ), 4 (5.12%) radio-chemotherapy (4 PN), 2 (2.56%) only chemotherapy (1 PN, 1 JJ), 14 (17.94%) had no treatment for uterine cervix cancer (12 PN, 2 JJ). PN was done in 47 (60.2%) patients and JJ in 30 patients **Conclusions:** Ureterohydronephrosis is common in case of radiotherapy, and in some cases insertion of ureteral stent cannot be performed. If in selected cases, insertion of ureteral internal drainage systems, prior to surgery and radio-oncological treatment, can be useful compared to no drainage, needs further studying.

Keywords: ureterohydronephrosis, uterin cervix cancer, ureteral stent, hysterectomy, radiotherapy

PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH ROBOTIC RADICAL CYSTECTOMY

Porav-Hodade D¹, Martha Orsolya¹, Ghirca Veronica¹, Todea C¹

¹Department of Urology, UMFST Tirgu Mures

Background: Percutaneous nephrolithotomy in patients with radical cystectomy is a challenge because of the ureteral difficulty approach. Also, patients with robotic interventions are often reluctant to open surgery. **Material and methods:** Between 2009 and 2018 from 1341 PCNL, a total of 2 PCNL were performed in patients with robotic radical cystectomy. A patient with a Bricker ileal reservoir was presented with lumbar ureteral stone. The second with neobladder presented the staghorn stone of the inferior part of the kidney. In both patients flexible ureteroscopy failed because of lack of ureter orifice visualization. The retrograde pyelography was impossible in both cases. We percutaneous approach of the kidney under intravenous administration of contrast substance. In first case the ureteral stone was extracted from the ureter with Dormia probe. In second case two percutaneous tract were performed for the completed removal of the stone. An antegrade ureteral stent and a percutaneous nephrostomy was inserted in both cases. **Results:** The nephrostomy was extracted at 24 h after the intervention. The patients were discharge from the hospital at 48 h after the intervention. The stents were extracted 4 weeks later. Both patients were stone free after the intervention **Conclusions:** The percutaneous approach of renal lithiasis in patients with radical cystectomy is more difficult in the conditions in which the ureter can not be catheterized. However, the intravenous administration of contrast substance facilitates the approach, making intervention so similar to that in patients with normal urinary tract.

Keywords: cystectomy, lithiasis, nephrolithotomy

THE EFFICACY OF SHOCK WAVE LITHOTRIPSY IN PATIENTS WITH UROLITHIASIS AND BMI GREATER THAN 25

Brad A¹, Vida AO¹, Todea C¹, Porav-Hodade D¹, Simion Carmen¹, Chibelea C¹, Martha Orsolya¹

¹Department of Urology, UMFST Tirgu Mures

Background: The prevalence of kidney stones has risen alarming in the last half century, along with major changes in dietary habits. Meanwhile, another unintended consequence of dietary changes was the progressive epidemic of obesity in all industrialized countries. With the introduction of shock wave lithotripsy in patient lithiasis therapeutic algorithm, this method has become the treatment of choice for kidney stones with a diameter of less than 2 cm, and thanks to advances made between 80 and 90% of patients with renoureteral lithiasis have indication of treatment by SWL. The aim of this study was to evaluate the effectiveness of SWL in overweight and obese patients. **Material and methods:** We included all the patients with renal or ureteral calculi and a body mass index (BMI) greater than 25 kg/m², treated in Mures County Hospital, Urology Clinic, between 1 January 2013 and 31 December 2017. We included 293 patients that match the inclusion criteria. **Results:** From the 293 patients included, 144 (49.14%) were males and 149 (50.86%) were females. The mean BMI was 29.17±2.87 kg/m². The stone free rate after one SWL session was 69.79% but the overall stone free rate for SWL was 89.91%. The mean number of SWL sessions was 1.71. Among all patients, we had no major complication regarding the SWL session, only 4 patients from the group needed endourological surgery. **Conclusions:** The obtained data determine us to conclude that ESWL is the therapy of choice for patients with BMI greater than 25 kg/m² and urolithiasis because is a non invasive treatment, no need for anesthesia, the patient stay is short, complications occur

rarely and stone free rate is high.

Keywords: ESWL, lithiasis, BMI, stone-free

INITIAL EXPERIENCE IN LAPAROSCOPICAL SURGERY FOR UROLOGICAL PATHOLOGY IN THE CLINIC OF UROLOGY FROM TARGU MURES

Todea C¹, Martha Orsolya¹, Chibeleian C¹, Ghirca Veronica¹, Tataru OS¹, Vida AO¹, Porav-Hodade D¹

¹Department of Urology, UMFST Tîrgu Mureş

Background: The aim of this paper is to highlight the first laparoscopy experience in Clinic of Urology from Targu Mures.

Material and methods: The first laparoscopic surgery was performed in our Clinic in 22.04.2016. Since then we performed 65 laparoscopic interventions on different urological pathology. We performed 6 interventions in 2016, 12 in 2017 and 47 in 2018.

Results: From the total of 65 interventions, 24 were the excision of renal cyst, 12 were nephrectomies (for renal tumors), 16 were prostatectomy (for prostate cancer), 5 ureterolithotomies (for ureteral stones), 2 pyeloplasties (for ureteropelvic junction obstruction), 2 cases of surgical cure of varicocele, 1 suprarenalectomy (for suprarenal tumor), 1 partial nephrectomy (for renal tumor) and 2 exploratory laparoscopy. **Conclusions:** Laparoscopic surgical approach can be used successfully in urological pathology with minimal trauma, easier recovery, and faster socio-professional reintegration. Although we are in continuous training, our goal is to use the laparoscopic approach to diagnose and treat as many uro-oncological and non-oncological conditions.

Keywords: laparoscopy, surgery, urological pathology

THE ROLE OF NEUTROPHIL TO LYMPHOCYTE RATION IN PATIENTS WITH TA BLADDER CANCER

Balan D¹, Chiujdea S¹, Chibeleian C¹, Porav-Hodade D¹, Borda Angela², Vartolomei MD³, Martha Orsolya¹

¹Department of Urology, UMFST Tîrgu Mureş

²Department of Histology, UMFST Tîrgu Mureş

³Department of Cell Biology, UMFST Tîrgu Mureş

Background: The inflammatory response surrounding the tumour has a major importance in the oncologic outcome of bladder cancers (BC). One marker proved to be useful and accessible is NLR (neutrophil-to-lymphocyte ratio). **Material and methods:** We retrospectively selected 54 patients with pTa BC, that underwent transurethral resection of bladder tumor (TURBT) between January 2007 and December 2008. Inclusion criteria were: primary tumor, low-grade, with NLR prior to TURBT; NLR was considered altered if higher than 3. **Results:** The median age of the patients included was 63 years (IQR 55 - 72). Most of the patients had NLR3 group: 94.12% vs. 100%, p=0.04 (Table 1 + Figure 1b). Recurrence-free survival (PFS) Kaplan-Meier analysis did not show a statistical significance between NLR groups: 82.67% vs. 64.12%, p=0.26. However, in multivariable Cox regression analyses showed that NLR as a continuous variable was an independent prognostic factor for RFS (Table 2). During follow-up (106 months) 18 patients deceased with no impact of NLR as a prognostic factor in multivariable analyses (Table 3). Kaplan-Meier overall survival curve showed a 10-year overall survival of 70.27% in the low NLR group compared with 58.82% in the high NLR group, p=0.45. **Conclusions:** In this cohort, high NLR retained a statistically significant value, as an independent prognostic factor for bad prognosis of Ta bladder tumors. In low-risk non-muscle invasive bladder cancer NLR could represent a reliable biomarker for clinical decision making regarding the follow-up schedule.

Keywords: bladder cancer, neutrophil-to-lymphocyte ratio, bladder

CRITICAL ANALYSIS ON TRANSURETHRAL RESECTIONS OF BLADDER TUMORS, PILOT STUDY

Vida AO¹, Chibelea C¹, Ghirca Veronica¹, Brad A¹, Todea Moga C¹, Putnoki-Ciceo Z¹, Martha Orsolya¹

¹Department of Urology, UMFST Tîrgu Mureş

Background: Bladder cancer is one of the most common cancers in uro-oncological pathology. TURBT is the most common surgical urological procedures for all visible lesions. Complete resection of bladder lesion is not always possible during the first TURBT, either due to technical causes, instability of the patient, intraoperative complications. According to the EAU (2018) guidelines, reTURBT should be performed after incomplete TURBT, if there is no detrusor muscle in the specimen after initial resection, primary CIS, pT1 tumors. If reTURBT is indicated, this should be made within two to six weeks after the initial resection. **Material and methods:** We analyzed the data of n=159 (100%) patients, which in may-november.2018, suffered TURBT in our clinic. Of these patients, n=51 (32.07%) required reTURBT due to various reasons. **Results:** The average age of the patients examined was 71 ± 8.6 years. In 38 (74.5%) cases, tumors were multiple. The time between two interventions was between 4-20 weeks with an average of 11.75 ± 6.03 weeks. From the point of view of tumor localization: most tumors were located on the lateral walls. Analyzing the histopathological results of reTURBT in 8 (15.68%) cases we identified advanced neoplasm at re-stadiation, in 19.6% chronic cystitis, and in 49.01 % cases the diagnosis was identical to the diagnosis of the first TURBT. In 4 (7.84%) cases we identified CIS associated with bladder tumor. **Conclusions:** The management of secondary resection should be reassessed in accordance with the guidelines of the EAU guidelines. The causes of reTURBT s are related to the primary incomplete resection of multiple or large tumors. The primary resection must contain detrusor muscle for a definite histopathological diagnosis and for well-sustained therapeutic behavior. We need to continue the evaluation of TURBT results to identify other causes which can be corrected to increase the diagnosis, staging and proper management of our bladder cancer patients.

Keywords: bladder cancer, transurethral resection of bladder tumors, second look transurethral resection

POSTERS

BONE AND MUSCLE RECURRENCE IN CYSTIC ECHINOCOCCOSIS

Habor Adriana¹, Sidlovszky Noemi², Torok Edina², Jakab Noemi², Muresan Larisa²

¹Department of Physiology, UMFST Tîrgu Mureş

²Department of Internal Medicine I, UMFST Tîrgu Mureş

Background: Echinococcus granulosus is the parasite determining cystic echinococcosis, the disease part of those parasitoses which have the most severe and varied implications in both pathology and public health issues. **Material and methods:** We present the case of a 75-year-old urban patient known for Echinococcosis, first operated for bone cysts in the right coxofemoral joint at the age of 24, then in 2000 she was operated for a lung hydatid cyst and in 2011 needs surgical reintervention for relapse of bone echinococcosis. **Results:** After a 7-year lull, she returns due to the appearance of tumorous masses in the abdominal right flank, the right thigh, accompanied by pain in the right coxofemoral joint, functional impotence of the right lower limb, asthenia, inappetence. Based on clinical, immunological, imagistic examinations, the diagnosis of Cystic Echinococcosis localised in the liver, bone and muscle was established. Since the patient in association had ischemic heart disease NYHA III (New York Heart Association) congestive heart failure, surgical treatment was delayed and preoperative treatment with Albendazole 10-15mg/kg/day was started. Initially we will apply a laparoscopic drainage treatment and aspiration of the contents, afterwards saline instillation followed by aspiration. **Conclusions:** Cystic echinococcosis is the disease that occupies, together with trichinosis the first place in the zoonoses in Romania. The bone localization of hydatidosis, although much rarer than hepatic and pulmonary one, is characterized by semisolid cysts invading the spinal cord cavity, slowly eroding the bone, leading to pathological fractures.

Keywords: cystic echinococcosis, hydatid cyst, hydatidosis

INTESTINAL TOXICITY OF METHOTREXATE-IS IT WORTH IT?

Stan Ana Alwina¹, Copotoiu Monica¹

¹Department of Rheumatology, UMFST Tîrgu Mureş

Background: Methotrexate (MTX), a folic acid antagonist is a very useful drug in various autoimmune inflammatory diseases (notably rheumatoid arthritis and lupus). Even though it is considered a relative safety medication if not monitored properly it can lead to severe side effects. **Material and methods:** We present the case of a 30 yr old female patient, diagnosed with systemic lupus erythematosus (SLE) in 2012 (mostly cutaneous and articular involvement), who has tried various disease - modifying antirheumatic drugs (DMARDs) such as: Hydroxychloroquine (HQ), Azathioprine (AZT) and a human monoclonal antibody that inhibits B-cell activating factor (BAFF) - Belimumab alongside with glucocorticoids (GS). HQ and AZT were stopped after developing persistent cutaneous sting sensation and leucopenia, respectively, so she switched to MTX 10mg once weekly, due to high activity. **Results:** After two weeks of self - administration alongside with folic acid supplementation and low doses of GS, she experienced constipation followed by rectal tenesmus and bloody stools after taking laxatives. The MTX was administered for a total of 12 weeks. The colonoscopy revealed anterior anal fissure. The Quality of Life (QoL) was worsening, being unable to sit and experienced pain at bowel movement. Finally, after discussing with the supervising rheumatologist, she decided to stop the Methotrexate and within one week went back to normal. **Conclusions:** MTX is associated with intestinal injury assigned to inflammation and oxidative stress. Adverse effects should be taken seriously and the patient should get in contact with the prescribing doctor as soon as possible, in order to create the best plan before their quality of life is severely impacted.

Keywords: systemic lupus erythematosus, intestinal, toxicity, methotrexate, quality of life

THE RELATION BETWEEN HEART FAILURE, INFLAMMATION AND LOWER EXTREMITY ARTERY DISEASE

Magdas Annamaria¹, Tusa Anna Boroka², Incze A², Mathe L¹

¹Department of Internal Medicine VII, UMFST Tîrgu Mureş

²Department of Internal Medicine IV, UMFST Tîrgu Mureş

Background: Although, risk factors for heart failure (HF) and lower extremity artery disease (LEAD) are common, and LEAD is more frequent in HF patients, in most cases the latter remains underdiagnosed because of the reduced walking distance. Therefore, the aim of the study was to assess the relationship between the severity of LEAD and systolic function of the heart as well as a marker of inflammation **Material and methods:** In this observational study 48 non-diabetic LEAD patients were included admitted to County Clinical Hospital Tîrgu-Mures between January-October 2018. Ankle-brachial index (ABI) was measured with a handheld Doppler Bistos BT-200, 8 MHz device. Left ventricular ejection fraction (EF) was assessed with Philips Affiniti 70 Ultrasound Machine, by using Simpson method. Blood samples were collected to determine lipid profile and complete blood count to determine Red Cell Distribution Width (RDW) as a marker of inflammation. **Results:** Mean age was 68.63 ± 8.88 years, 70% were males and 30% females. Mean LDL-cholesterol was 100.4 ± 55.92 mg/dl, triglyceride level was 161.8 ± 104.5 mg/dl. We found negative but significant correlation between ABI and RDW ($p=0.0001$, CI: -0.7289 to -0.3291 , $r^2=0.31$). Ejection fraction was positively correlated to ABI ($p=0.03$, CI: 0.03099 to 0.5480 , $r^2=0.09$). **Conclusions:** Lower ABI is associated with an increase of RDW level, considered as a marker of inflammation which contributes to the progression of atherosclerosis. Lower ABI as also related to a decrease of ejection fraction. Therefore, LEAD patients should be screened for other vessel disease like coronary artery disease which perpetuates the incidence of heart failure. By a comprehensive evaluation of LEAD patients HF can be detected and treated in early stages and quality of life can be preserved.

Keywords: lower extremity artery disease, heart failure, ankle brachial index, red cell distribution width, inflammation

MEASURING INVESTORS' REACTION TO EARLY SIGNS OF FRAUDULENT CORPORATE BEHAVIOR IN FINANCIAL REPORTING - EMPIRICAL FINDINGS ON BUCHAREST STOCK EXCHANGE

Spatacean O¹

¹Department of Finance and Accounting, UMFST Tîrgu Mureş

Background: Even though the auditor profession has a strong position in fighting against fraudulent financial reporting, unfortunate corporate scandals occurred in the Romanian capital market landscape, weakening the investors confidence. Previously conducted research proved that investors have showed little or no interest for audit reports. On the contrary, evidences of irrational investment behavior were brought to light, meaning increase in stock prices whilst audit opinion was modified. Under such circumstances, we define the following research hypothesis: investors do not consider early signals that may reveal potential fraudulent reporting. **Material and methods:** Background research is performed upon a sample of BSE listed companies, previously identified as subject to fraud risk associated with financial reporting. The Beneish model, based on eight variables computed as financial ratios to distinguish between manipulated and non-manipulated earnings, is used for screening the fraudulent behavior patterns of such companies. The research hypothesis is tested by examining the stock price volatility measured to a 10 day average price, before and after the release of preliminary financial results of the companies selected, over the past five reporting periods. Questionnaire-based examinations conducted among the investors community will complete the basis for our conclusions. **Results:** It is expected to assess and deliver the investors reaction, either rational or irrational, measured through stock price volatility as a response to potentially fraudulent financial reporting. Conclusions will also be based upon the responses gathered through fraud risk-oriented questionnaire, disseminated among the Romanian investors community. We expect the research hypothesis to be validated by the investors reaction to the movement in stock prices, after the release of preliminary financial reports but not validated by the responses collected via questionnaire based examinations, since those responses may deviate from the real life investor behavior. **Conclusions:** Relevant conclusions will be based on the results obtained after performing the research activity.

Keywords: fraud triangle, fraud risk assessment, fraudulent financial reporting, corporate behavior, investor protection

ORAL SELF MUTILATION IN INSTITUTIONALIZED CHILDREN: REPORT OF A CASE FROM TÂRGU MUREȘ WITH REVIEW OF LITERATURE

Stoica Oana Elena¹, Stoica Alexandra², Bica Cristina¹

¹Department of Pediatric Dentistry and Orthodontics, UMFST Tîrgu Mureș

²Department of Odontology and Periodontology, UMFST Tîrgu Mureș

Background: Self-mutilation is defined as a behavioural disturbance that consists of deliberate and direct damage of body tissues. Functional self-mutilation is performed knowingly and includes habits, with children often using self-mutilating behaviour as a means of acquiring attention. Oral self-mutilation in institutionalized children occurs amid emotional, behavioral and mental disorders. Common to these children is the lack of basic feelings, fundamental for their normal mental development. **Material and methods:** We have studied a number of 48 articles about self-injuries in institutionalized children. For the study we examined a group of 16 abandoned children, with ages between 8 and 17 that are institutionalised in the same foster home. A 15-year-old girl was referred to the Department of Pediatric Dentistry from the University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, with laceration of the entire left half of the superior lip, self inflicted by repeated biting with her frontal teeth and with multiple cuts on her left arm. The patient had a history of depression, anxiety and other neurotic disorders and was under psychiatric treatment. **Results:** After reviewing the literature, it resulted that self harm among abandoned children is frequently encountered. Out of the group of 16 children just one case of oral self-mutilation was brought to light even though 50% of cases presented different kind of self harm injuries of the body. **Conclusions:** The proper treatment would require discovery and elimination of the intrinsic emotional factors and extrinsic contributing factors. Patient compliance, regular dental follow-ups, and psychological support are necessary in stabilizing the condition of these patients. Early detection of self inflicted oral lesions is important, so that they do not develop complications over time.

Keywords: habitual, behaviour, oral self-mutilation, orphans

STUDENTS' ENTREPRENEURIAL INTENTIONS: THE ROLE OF THE FAMILY BACKGROUND

Herman Emilia¹, Dalalau Daniela¹

¹Department of Management and Economy, UMFST Tîrgu Mureș

Background: One of the real challenges of young people in the actual economic and social environment is the acquisition and development of entrepreneurship key competences in order to choose an entrepreneurial career as a viable alternative to productive integration on the labour market. In this context, the purpose of this paper is to investigate the main factors influencing students' entrepreneurial intentions with particular attention to their entrepreneurial family background. **Material and methods:** In order to empirically test the research hypotheses, we gathered information based on a questionnaire which was applied to 617 final year undergraduate students, high school and university students, from two high schools (economics and non-economics) and two faculties of Petru Maior University of Tîrgu-Mureș, Romania. To test the research hypotheses we used descriptive statistics, the correlation and hierarchical multiple regression analysis. To investigate whether there were significant differences between the students in relation to the entrepreneurial intention, t-test statistics (independent samples t-test for equality of means) were used. **Results:** The research results highlight that students with entrepreneurial family background report a higher entrepreneurial intention than those without such a background. The entrepreneurial intentions of students are influenced positively by entrepreneurial family background, entrepreneurship education and entrepreneurial personality traits. Furthermore, the entrepreneurial family background negatively moderates the relationship between entrepreneurship education and entrepreneurial intention. **Conclusions:** We consider that both formal and informal entrepreneurship education have to act together, complementing each other, in order to increase the propensity of young people to choose an entrepreneurial career taking into account that "Europe needs more entrepreneurs", including Romania, as a EU member state, to generate inclusive economic growth and more and better jobs. More attention needs to be paid to both formal and informal entrepreneurship education in order to increase propensity of young people to choose an entrepreneurial career.

Keywords: entrepreneurial intentions;; entrepreneurship education;; entrepreneurial family background;; entrepreneurial personality traits;; students

MANAGEMENT OF CHRONIC MAXILLARY SINUSITIS AND ORO-ANTRAL COMMUNICATION, USING BUCCAL FAT PAD FLAP- A CASE PRESENTATION

Ormenisan Alina¹, Bereczki-Temistocle Despina Luciana¹, Cosarca Adina¹, Szava D¹, Balmos Alexandra¹

¹Department of Oral and Maxillofacial Surgery, UMFST Tîrgu Mureş

Background: Chronic maxillary sinusitis represents an inflammatory condition of the paranasal sinus, of either rhynogenous or dental origin. When referring to dental origin, periapical granuloma of the upper lateral teeth, represents a frequent cause of maxillary sinusitis. This dental condition can determine bone resorption involving the maxillary sinus floor, creating a communication and consequently developing hyperplasia, polyposis of the mucosal sinus lining, pus accumulation. If an oro-antral fistula develops, closure of the defect especially if the peripheral vascularization of the oral mucosa is impaired can be difficult. For the surgical defect closure vestibular, palatal flap are usually used and less often buccal fat pad flaps. **Material and methods:** We present the case of a 30 year old male patient admitted in the Oral and Maxillofacial Clinic in Targu Mures, presenting characteristic symptoms of chronic sinusitis: recurrent headaches, mild swelling of the left maxilla, periodic purulent rhinorrhea, cacosmia for 1 year previous the admission, toothpain (2.6 fractured, without endodontic treatment). CBCT shows thickening of the mucosal lining and full occupancy of the sinus probably with pus and polyps. Also the patient was treated for thyfoid fever with antibiotics 1 year before the admission. **Results:** Treatment pursued two goals: surgical treatment of the left sinus, removing the pathological content and tissue and closure of the surgical defect. Because of the oro-antral communication resulted by the extraction of 2.6 and the performed cystectomy, buccal fat pad was chosen for the defect reconstruction. Clinical follow-ups performed at 1 week, 2 weeks, 1 month and 2 months after surgery, showed a fast and complete epithelization of the buccal fat pad, without fistula or discomfort. **Conclusions:** The use of buccal fat pad flaps for oral defect reconstruction represents an easy and safe method. Also the rich vascularization of the buccal fat pad assures good healing even in immunocompromised patients.

Keywords: buccal fat pad, defect, oro-antral, oral, sinusitis

IMPLICATIONS OF TYPE I DIABETES ON PERIODONTAL STATUS IN CHILDREN

Esian Daniela¹, Kokoly Andrea¹, Bica Cristina¹

¹Department of Pediatric Dentistry and Orthodontics, UMFST Tîrgu Mureş

Background: Type I diabetes or insulin-dependent diabetes is the most common metabolic disorder affecting children aged 3-4, respectively 11-13 years. The implications of this disease on oro-dental status are complex and are reflected especially in the periodontal tissues which, in turn, by characteristic inflammatory changes may influence the evolution of diabetes. **Material and methods:** Forty children aged 5-17 years were selected for the study, respectively 20 female and 20 male subjects and two study groups were formed, a control group consisting of 20 healthy subjects and a main group of 20 subjects diagnosed with Type I diabetes. Evaluation of periodontal status was clinically performed by recording specific parameters, respectively the Oral Hygiene Index-Simplified (OHI-S), Caries Index (DMF-T), Papilla Bleeding Index (PBI) and Gingival Index (GI). **Results:** The results showed that for the main study group, the DMF-T Caries Index has higher values with prevalence of D (Decay) component, compared to the control group which the F (Filling) component predominates. Inflammatory periodontal changes are characteristic to children with diabetes type I with a particularly high incidence of Papilla Bleeding Index (PBI) compared to children in the control group. **Conclusions:** Specific inflammatory changes that occur early in children may be a sign of a metabolic imbalance caused by diabetes, therefore regular controls performed at an early age have an important role in detecting certain pathological changes, not only at the oral cavity but also throughout the organism.

Keywords: type I diabetes, periodontal status, Papilla Bleeding Index

WRITING AN ABSTRACT – A TOPIC TO BE INCLUDED IN THE ENGLISH COURSE FOR MEDICAL STUDENTS

Pascan Aurora¹

¹Department of Foreign Languages, UMFST Tîrgu Mureş

Background: A necessary addition to the classic syllabus of the language (especially English) courses for medical students in Romania seems to point to the academic needs of this category of learners. The introductory part of such a chapter, focused on the development of academic skills, would normally include types of studies in the medical field and types of scientific writing. **Material and methods:** A challenging assignment for the beginners in the area of medical research is the elaboration of a scientific abstract, after a thorough understanding of the structure and norms usually required by medical journals. This assignment was given to the 2nd year students, series 3 and 4, in 2018. **Results:** The elaboration of a medical abstract enriched students' specialty knowledge and sparked their interest in developing their research skills. In the process of writing, English challenges also occurred, and consequently this assignment added an important linguistic progress, mainly acquisition of medical vocabulary. **Conclusions:** Scientific abstracts, papers or presentations represent major themes of interest for the 1st and 2nd year students, who are not very familiar, if at all, with this kind of tasks. They develop students' scientific skills, including English, all being essential tools for their future research careers.

Keywords: English, medical students, abstract, writing

RADIATION DOSE IN RADIOLOGICAL DIAGNOSTICS

Antonescu Elisabeta¹, Szakacs Julianna²

¹Preclinical Department, "Lucian Blaga" University of Sibiu, Faculty of Medicine

²Department of Biophysics, UMFST Tîrgu Mureş

Background: At present, there is great interest in ionizing radiation research to reduce them and to find the necessary dose calculation methods to prevent additional patient loading but to ensure a high quality image. **Material and methods:** This is a retrospective study of the radiographs registered at V&G Clinic from Medias during 2017. The radiographs were performed with a PROTEC X-ray SYSTEMS radiographic device. A VacuTec DAP meter mounted on the radiological installation is used, recording the dose area product (DAP) that is the multiplication of the dose and the area exposed (Gy x cm²). The patients were divided into two groups according to gender and then, each group in 5 groups according to BMI. Variation of DAP value was measured according to BMI. **Results:** The total number of patients was divided into two groups: the first group had 442 men and the second group had 613 women. There is no correlation between DAP and BMI in the underweight and normal weight patients. For men, the closest relationship is seen in the group of patients with BMI > 35, which can be easily explained by the fact that at this level of BMI, not only the fat from the surface of the body, but also the visceral fat is involved. For women, there is a close link between BMI and the DAP value even for a BMI > 25 which could be explained by glandular fat involvement. There is no differentiation between men and women, it is observed that the group with class I obesity has a mean DAP by 17% higher than the normal weight group, and the class II obesity group has a mean value of DAP by 39% greater than normal weight group value. **Conclusions:** Excessive subcutaneous fat tissue increases the effective radiation dose for radiological diagnosis compared to non-obese patients.

Keywords: dose area product, effective radiation dose, ionizing radiation

SCOPOLAMINE. FROM THERAPEUTIC TO ILLICIT USE.

Podar Denisa-Marieta¹, Hancu G¹, Dumitru Diana Andreea¹

¹Department of Pharmaceutical Chemistry, UMFST Tîrgu Mureş

Background: Originally used in medical obstetrics in combination with morphine, subsequently as "truth serum" in criminal queries, scopolamine is considered today one of the most dangerous drugs used for criminal purposes. **Material and methods:** Scopolamine, also known as "Devil's Breath" or Burundanga, is an anticholinergic drug with a high diffusion through the blood-

brain barrier which induces anterograde amnesia. Physician Robert Ernest House found that subjects under the influence of scopolamine would be unable to lie because the drug temporarily destroys the brain's power of reasoning. Scopolamine alters cognitive ability in such a way that the persons are more susceptible to give information they would not confess otherwise. **Results:** James M. associated scopolamine with sodium thiopental to determine the CNS inhibition level ideally suited for the interrogation of prisoners in wartime. Subsequently, it was shown that to obtain real information from the subject a subcutaneous injection is required using an initial dose of 1/100g scopolamine hydrobromide, followed by two or three doses of less than 1/200g within 20-30 minutes. In this way, scopolamine was used "truth serum" to resolve some cases of unsolved murder. The veracity of scopolamine can be counteracted by the risk of overdosing when visual hallucinations occur, and the person can no longer distinguish the reality and can confess events that have not occurred. More recently, in Colombia, "Devil's Breath" is being used to commit crimes: robbery, kidnapping or sexual assault. Colorless and odorless, administered in food or alcohol, scopolamine makes the victims extremely cooperative and it also wipes out their memory. **Conclusions:** Currently, the therapeutic use of scopolamine is very limited (mainly as transdermal patches for treating motion sickness), due to the major toxicological potential and utilization risks.

Keywords: scopolamine, truth serum, crimes

PEER GROUP CONSULTATION - A USEFUL TOOL FOR THE PROFESSIONAL MEDICAL DEVELOPMENT

Muresan Simona¹

¹Department of Physiology, UMFST Tirgu Mures

Background: Peer group consultation represents a group consultation about a concrete question (problem) that is ideally performed in a fixed sequence of five phases. **Material and methods:** This " leaderless peer group supervision" is usually apply in medical teams in order to develop suggestions for targeted problems, but could be also use as a teaching method for medical students that stimulates medical reasoning and the critical thinking. **Results:** The method is apply in a group of 6-10 people, respecting the following sequence: the casting phase (one member of the group is the case/problem presenter, one is the moderator and the rest act as peer group consultants), the case/problem presentation phase (the presenter explains the general context of the problem and formulates the general question), the key-question phase (the presenter asks the targeted question with high relevance in the professional activity), the consulting phase (the moderator involve all the participants in the discussion, elaborating a structured answer-solution for the basic problem) and the conclusion phase (applying correctly the feedback rules, the team offers ideas to the presenter). **Conclusions:** For doctors and students, "peer group consultation" could become a useful tool not just for professional challenges, but also a chance to improve interaction and communication skills inside medical teams and to foster a culture of support.

Keywords: peer group consultation, problem solving, professional development

IS THERE A MATCH BETWEEN EDUCATIONAL OFFER AND HIGH SCHOOLS DEMAND IN MURES COUNTY?

Ciucan-Rusu L¹, Stefanescu Daniela¹, Kardos Mihaela¹, Spatacean O¹, Stefan D¹, Boanta A¹, Comes CA¹

¹Faculty of Business and Law, UMFST Tirgu Mures

Background: There is a fact that in Romania the higher educational offer is lightly larger than the demand of high schools graduates, therefore we propose several hypotheses for ours study: H1 - most of the graduates are not decided about their future career; H2 - there are many factors influencing their decision about continuing their studies; H3- the choice of specialization is correlated with staying or leaving the region. **Material and methods:** A survey based on an online questionnaire was launched in autumn 2018 targeting more than 600 respondents from high schools in the Mures county. The main objectives of the study are to assess the decision-making process regarding their near future career. Descriptive statistics was used to analyze the collected data and a set of indicators was developed in order to obtain the results. **Results:** The main findings regarding respondents options were: more than 80% intend to continue their education; they are more influenced by known students and family and less by teachers and colleagues; most of them intend to remain in the region, only 28% wants to leave; subsidies for the tuition weight

significantly in their decision; more than a half of them are sure about the future specialization. **Conclusions:** Based on our results we verify our hypotheses and the conclusions are as follows: H1 is not confirmed, the respondents being rather decided about their future career; regarding H2, there are few factors with significant influence on their decision; H3 is confirmed, most of the respondents intending to continue their university studies in the region. We consider these preliminary results as a basis for further research about the best marketing approach of a university.

Keywords: higher education, offer and demand, decision making, potential students behaviour

BILATERAL DEEP VEIN THROMBOSIS WITH FACTOR V LEIDEN DEFICIENCY

Sidlovszky Noemi¹, Iakab Noemi¹, Torok Edina¹, Habor Adriana¹

¹Department of Internal Medicine I, UMFST Tîrgu Mureş

Background: The genetic mutations involved in hereditary thrombophilias represent life-long prothrombotic risk factors, which require long term anticoagulant or antiplatelet therapy. **Material and methods:** We present the case of a 29-year-old male patient, who underwent eye surgery due to traumatic injury on his right eye. Anterior vitrectomy was performed followed by a period of 2 week immobilization, without thromboprophylaxis. The patient presented to the emergency department shortly after discharge, feverish and with progressive pain and swelling on his right calf. Routine laboratory examinations show positive d-dimer, CRP, mild leucocytosis and slightly elevated liver enzymes. Venous ultrasound of the lower limbs described subacute total occlusion of the distal portion of the right femoral vein, and bilaterally on the popliteal veins (DVT). Pulmonary angio-CT was performed to exclude any thromboembolic event. Abdominal ultrasound and abdominal CT revealed mild liver steatosis; antiphospholipid antibody testing was negative, thrombophilia panel showed Factor V G1691A Leiden deficiency. Initially enoxaparin therapy was instated, followed by oral acenocumarol, with close INR (International Normalised Ratio) monitoring. **Results: Conclusions:** Prolonged immobilization and Factor V Leiden deficit represent the risk factors for developing DVT in this particular patient case, who was diagnosed with hereditary thrombophilia.

Keywords: DVT, risk factor, factor V, anticoagulation, INR

CORRELATIONS BETWEEN OBSTRUCTIVE SLEEP APNEA AND HYPERTENSION

Pal S¹, Mathe L²

¹Department of Biochemistry, UMFST Tîrgu Mureş

²Department of Internal Medicine IV, UMFST Tîrgu Mureş

Background: Obstructive sleep apnea (OSA) represents an important public health problem, leading to intensified effort to breathe against the obstructed airway, fragmentation of the sleep and recurring hypoxic states during sleep. Being a common condition in the general population, OSA is more frequently diagnosed in patients suffering from cardiovascular disease. **Material and methods:** The observational study was conducted between 2016 - 2018, on 39 patients. The included subjects data regarding demographical (age, gender etc.) and medical (clinical and laboratory evaluations) information was recorded in a database and analyzed statistically. **Results:** The average age of included patients was 57.97 +/- 11.09 (SD) years, and 82.05% of them were male. A statistically significant correlation between BMI and AHI (p=0.0133) and also between BMI and the lowest O₂ saturation of the patients could be described (p=0.0101). Among the most commonly observed comorbidities - without considering OSA and HTA - obesity, pulmonary diseases (asthma or chronic obstructive pulmonary disease, hyperlipidemia, arrhythmias have been recorded. 20.51% of the subjects were smokers. Chronic ischemic heart disease was present in 56.41% of the cases, and 46.15% of them were suffering from type 2 diabetes mellitus. Only 12.82% of the included population presented a BMI below 30 kg/m². **Conclusions:** The average age of included patients was 57.97 +/- 11.09 (SD) years, and 82.05% of them were male. A significant correlation between BMI and AHI (p=0.0133) and between BMI and the lowest O₂ saturation could be described (p=0.0101). Among the most commonly observed comorbidities - without considering OSA and HTA - obesity, pulmonary diseases (asthma or chronic obstructive pulmonary disease), hyperlipidemia, arrhythmias have been recorded. 20.51% of the subjects were smokers. Chronic ischemic heart disease was present in 56.41% of the cases, and 46.15% of them were suffering from type 2 diabetes mellitus. Only 12.82% of the included population presented a BMI below 30 kg/m².

Keywords: obstructive sleep apnea, hypertension, obesity, cardiac disease

LOCAL THERAPY IN THE TREATMENT OF PERIIMPLANT MUCOSITIS

Lazar Luminita¹, Bukhari Csilla¹, Buka Imola¹, Vlasa A¹, Lazar Ana Petra²

¹Department of Preventive, Community Dentistry and Oral Health, UMFST Tîrgu Mureş

²Department of Pharmacology and Clinical Pharmacy, UMFST Tîrgu Mureş

Background: As much as the placement of dental implants has become a routine procedure in the oral rehabilitation the number of patients affected by peri-implant diseases is increasing. The purpose of our study was to assess the risks for peri-implant mucositis and to evaluate management measures. **Material and methods:** 15 partially edentulous subjects, who had more than one implant, at least one on the right and one on the left dental arch, diagnosed with peri-implant mucositis were treated. After mechanical debridement, oral hygiene instruction we applied a local antiseptic gel (chlorhexidine on the right dental arch and metronidazole in the left dental arch). Also we recommended for home use the same gel. Clinical parameters- probing pocket depth (PPD), clinical attachment level (CAL), bleeding on probing (BOP) and plaque index (PII) were evaluated at baseline, 1 week, 1 month and 3 months. **Results:** We observed statistically significant decreases in PPD, CAL, and BOP 1 week after oral hygiene instruction, mechanical debridement. The examination after 1-month and 3-months of appropriate oral hygiene and local use of the antiseptic gel shows that 11 of the patients had preserved same values of clinical parameters, without significant differences between the right and left dental arch. 4 patients showed signs of recurrence of peri-implant mucositis on both the right and the left side. **Conclusions:** Periimplant mucositis can be reduced with mechanical measures aimed at eliminating the plaque, without significant changes between the different drugs used. It's management is considered as a preventive measure for the onset of peri-implantitis.

Keywords: chlorhexidine, mechanical debridement, metronidazole gel, periimplant mucositis

THE UTILITY OF NBI ENDOSCOPY IN COLORECTAL CANCER FOLLOW-UP: CASE PRESENTATION

Petrut Madalina¹, Roman Adina¹, Onisor Danusia¹, Dobru Daniela¹

¹Department of Internal Medicine VII, UMFST Tîrgu Mureş

Background: Newest endoscopy techniques involving narrow-band imaging (NBI) are a useful tool in predicting histology of colorectal lesions, based on the presence of specific endoscopic criteria. NBI International colorectal endoscopic (NICE) classification allows real time optical differentiation between neoplastic and non-neoplastic colorectal lesions, doubled by the WASP classification when sessile lesions are identified. **Material and methods:** We present the case of a 61 years old male patient, known in his medical history with a highly differentiated rectal adenocarcinoma, for which radiotherapy and a segmental rectal resection with termino-terminal anastomosis were performed, followed by chemotherapy. Due to the lack of symptoms, the patient didn't follow up rigorously the recommended annual endoscopic reevaluations after surgery and presented for the first colonoscopy 8 years after resection. At colonoscopy, a protrusive flat lesion arising from the anastomosis line was identified, around 3 cm in diameter, that spread laterally occupying more than half of the lumen circumference. Differential diagnosis between a tumor relapse and a metachronous tumor seemed difficult. **Results:** Evaluated with NBI with magnification, the lesion was characterized as a granular lateral spreading tumor, O-IIa+Is type (Paris classification). It expressed components of NICE type II - consistent with tubulo-villous histology. Areas of clouded surface with dark spots inside crypts were consistent with a serrated lesion according to the WASP classification. Multiple focused biopsies were taken from the lesion that confirmed the optical diagnosis appreciated in vivo: low grade dysplasia tubulo-villous adenoma with sessile serrated component. Pelvic MRI did not show signs of depth invasion so piece-meal endoscopic polypectomy after lifting procedure was performed. **Conclusions:** Applying NBI endoscopic classifications is a key point in the management of lateral spreading tumors of the colorectum. Prediction of histology and invasive character using NBI endoscopic classifications should represent the first step in the therapeutic approach of colorectal lesions.

Keywords: narrow band imaging (NBI), NICE, WASP, sessile serrated, adenoma

COMPARATIVE EVALUATION OF DENTAL MEDICAL KNOWLEDGE DURING PREGNANCY: A QUESTIONNAIRE BASED STUDY

Tohati A¹, McGurk Diana²

¹Department of Preventive, Community Dentistry and Oral Health, UMFST Tîrgu Mureş

²dentist, dentist

Background: The purpose of our study was to evaluate the level of dental medical knowledge of pregnant women in Mureş County using a questionnaire. We intended to compare the results obtained in urban/rural areas in one year time interval. **Material and methods:** Our study comprised of two cross-sectional examinations, in 2016 and 2017, on 196 respondents from rural and urban areas of Mureş County, who were in the records of the Clinic of Obstetrics and Gynecology I and II Tîrgu Mureş. **Results:** Both in 2016 and in 2017 pregnant women in the urban area attended the dental office more often than women in rural areas. In the urban area, the percentage of pregnant women who reported having experienced dental problems during pregnancy decreased from 2016 to 2017, while the percentage rose in rural areas. Most women in both urban and rural areas consider that personal and child health can be affected by dental problems. The percentage of women who said they were not informed about the influence of dental conditions on pregnancy and fetus is over 70% in rural areas in both time periods and over 60% in urban areas. A percentage of over 90% of women surveyed in the urban area believes that a national program for the prevention of dental conditions could be beneficial. **Conclusions:** An alarming percentage of women in both environments have not been informed about the influence of dental and oral problems on pregnancy during both periods of time. In conclusion, a national dental program for pregnant women should be initiated and implemented in Romania. These women should benefit from competent information, monitoring, dental advice and basic and urgent treatment in due time.

Keywords: dental medical knowledge, pregnant women, urban and rural areas, national dental program

FIGHT AGAINST CORRUPTION ON NATIONAL AND EUROPEAN LEVEL

Popa ND¹

¹Department of Law and Public Administration, UMFST Tîrgu Mureş

Background: Corruption is seen as the biggest enemy of democracy. **Material and methods:** The European Union envisages implementation and consolidation of a common policy for all institutions in order to prevent and fight corruption, not only in the case of public institutions and officers, but also in private entrepreneurship field. **Results:** In Romania anti-corruption measures have been taken both legal and administrative wise. **Conclusions:** It is highly necessary that these measures should continue to be adjusted to the community's realities and regulations and meanwhile cope with the trend in this crime's evolution. Prevention measures are worth mentioning also- they are developed through activities of information, awareness, education and professional training organized by public and private institutions where vulnerability has been found in terms of corruption.

Keywords: corruption, public institutions, public officers

PRADER WILLI SYNDROME - CASE REPORT

Gluga Florina¹, Grigorescu Bianca¹, Stoian Adina¹, Bănescu Claudia²

¹Department of Pathophysiology, UMFST Tîrgu Mureş

²Department of Genetics, UMFST Tîrgu Mureş

Background: Prader-Willi syndrome (PWS) is a multisystemic rare genetic disorder (1:12-15000), present in every race, and affecting both sexes equally. It is characterized by neurobehavioral impairment caused by a deletion or disruption of genes in the proximal arm of chromosome 15. Infants present weak muscle tone (hypotonia), feeding difficulties, delayed psychosomatic development. In childhood an insatiable appetite comes out, leading to chronic overeating (hyperphagia), obesity and sometimes even type 2 diabetes. Affected individuals have mild to moderate intellectual impairment and learning disabilities. The syndrome may associate distinctive features such as: short stature with small hands and feet, underdeveloped genitals, almond-shaped eyes,

downturned mouth. **Material and methods: Case report.** A 10-year-old female patient attended the endocrinology compartment complaining of appetite disorders with hyperphagia and consecutive obesity, augmented in the last 4-5 years. The patient was on neuropsychiatric treatment from birth, for neonatal hypotonia, lethargy, decreased reflexes, delayed mental development. Behavioral problems such as temper outbursts, stubbornness, impulsivity, and even aggression, led to cessation of school education. She had many characteristic features of PWS: short stature (-2,12 SD), significant obesity (+2,7SD), small hands and feet; abdominal stretch marks and achantosis nigricans facial distinctive features (as almond-shaped eyes, convergent strabismus, bitemporal narrowing, dental anomalies and triangular mouth) were present. **Results:** Laboratory tests revealed an altered glucose metabolism (impaired fasting glucose level, insulin resistance), normal thyroid function; FSH, LH, estrogens were appropriate to the prepubescent phase. Genetic analysis pointed out an extensive deletion in heterozygous state at the SNRP gene level in 15q11.2 region. **Conclusions:** Clinical suspicion of PWS should be raised in the presence of features that have been commonly described. Genetic analysis has an overwhelming importance, as they establish the diagnosis. GH therapy (increases linear growth and muscle mass), dietary intervention, physical therapy, speech and occupational support should improve life quality in PWS patients.

Keywords: genetic tests, obesity, Prader-Willi syndrome

MANAGEMENT OF IMPACTED MAXILLARY CANINE-CASE PRESENTATION

Cosarca Adina¹, Camarasan Alina², Balmos Alexandra¹, Ormenisan Alina¹

¹Department of Oral and Maxillofacial Surgery, UMFST Tîrgu Mureş

²Department of Morphology of Teeth and Dental Arches, UMFST Tîrgu Mureş

Background: In dentoalveolar surgery impaction treatment is very common and involves frequently canine impaction treatment. Canine remains impacted mostly in the maxillary bone and for its management is required interdisciplinarity. Radiologic investigations are necessary for planning orthodontic and surgical approach. **Material and methods:** A 13-year-old girl presented to the orthodontist with space in the right maxillary bone. The intraoral periapical radiography revealed an impacted canine in oblique position in close relation with the lateral and central incisors. Surgical exposure and orthodontic management of impacted canine have been used to bring the impacted tooth into occlusion. After three months from surgery there were no signs of improvement, therefore more radiologic investigations were done, including CBCT images. Attached to the canine was discovered a cystic lesion and the treatment plan changed, finally the decision was to extract the impacted tooth. **Results:** The initial treatment plan failed because we did not use all the possible imaging methods available. **Conclusions:** Sometimes in association with impacted canine can develop tumoral or cystic lesions which can influence the surgical-orthodontic treatment, so thorough investigations should be done before surgery. CBCT images changed radically the initial treatment plan becoming essential.

Keywords: impacted canine, surgical orthodontic treatment, CBCT

LUNG METASTASIS OF MERKEL CELL CARCINOMA - CASE PRESENTATION

Moldovan C¹, Stauder Ana-Maria², Aberle Emese³, Cotoi OS⁴

¹Department of Medical Simulation, UMFST Tîrgu Mureş

²Department of Pathology, Mureş County Clinical Hospital

³Department of Pulmonology, Mureş County Clinical Hospital

⁴Department of Pathophysiology, UMFST Tîrgu Mureş

Background: Merkel cell carcinoma (MCC) is a rare, aggressive cutaneous neoplasm. More than 50% of MCCs appear in the head and neck of elderly people, in areas of skin exposed to sunlight, with the most common site of occurrence being the periorbital region. Recurrence and distant metastases occur rather frequently in MCC, but pulmonary metastases of this type of tumor are very uncommon. **Material and methods:** We present the case of a 78-year-old man who underwent a bronchial biopsy for a large mediastinal tumor. The biopsy was referred to the Department of Pathology of the Mureş County Clinical Hospital, where it was processed using standard histology and immunohistochemistry protocols. **Results:** In standard HE stain, the biopsic material displayed aggregates of small, round tumor cells, located in the connective tissue underlying the bronchial epithelium. The cytoplasm of the tumor cells was scant and the nuclei were round to oval, with evenly distributed chromatin and inconspicuous nuclei. Immunohistochemical stains revealed positivity for cytokeratin 20, cytokeratin AE1/AE3, CD56, and negativity for TTF-1,

chromogranin A, CD45 (LCA) and CDX2. **Conclusions:** The histological features of this tumor prompted a differential diagnosis with pulmonary small cell carcinoma, but the immunohistochemical profile, especially cytokeratin 20 positivity, helped establishing a diagnosis of Merkel cell carcinoma metastatic to the lung.

Keywords: lung, metastasis, immunohistochemistry, Merkel cell carcinoma

LAPAROSCOPIC APPROACH IN DISTAL PANCREATECTOMY

Tudor A¹, Molnar C², Kwizera C², Nicolescu C¹, Tudor Bianca³, Fulop Eموke⁴

¹Department of Anatomy, UMFST Tîrgu Mureş

²Department of Surgery I, UMFST Tîrgu Mureş

³Department of Microbiology, UMFST Tîrgu Mureş

⁴Department of Histology, UMFST Tîrgu Mureş

Background: Nowadays, laparoscopic approach tend to be widely used comparatively to open surgery, not only in non-oncologic conditions. The main advantages include short hospital stay, esthetic aspect of the wound, fast recovery. Nonetheless, the laparoscopic approach in pancreatic conditions is not an easy task due especially to its anatomical location. We are presenting a case of woman with a tumor of the tail of the pancreas. **Material and methods:** A 60 year old female patient was admitted in Clinical Emergency County Hospital of Targu Mures accusing abdominal pain in left upper quadrant and the epigastrium region. Laboratory analysis and abdominal computer tomography were performed. **Results:** A contrast CT scan was performed revealing a 39/32/41mm tumor at the junction of the body and the tail of the pancreas with a heterogenous aspect before and after contrast, with liquid and solid components that absorb the contrast solution. A laparoscopic distal pancreatectomy was performed with spleen and splenic vessels preservation and six days later, the patient was discharged with a good status. Two weeks later, the histological result revealed intraductal oncocytic papillary neoplasm. **Conclusions:** The laparoscopic approach concerning pancreatic conditions is not widely preferred. There are two techniques concerning the spleen preservation, namely the Warshaw technique with the sectioning of the splenic vessels in contrast with the Kimura technique with the splenic vessels preservation. In our case, the Kimura technique was used. Although the laparoscopic approach has many advantages, its use in pancreatic surgery should be used in very careful selected cases, especially in benign ones.

Keywords: laparoscopic, distal pancreatectomy, spleen preservation

SLUDGE AND OIL SEPARATOR PLACED ON OPEN CHANNELS

Nutiu E¹

¹Department of Industrial Engineering and Management, UMFST Tîrgu Mureş

Background: This paper relates to a sludge and hydrocarbon separator placed on open channels, with a possible use for the treatment of hydrocarbon-loaded pluvial waters and suspensions from the canals on the motorway. **Material and methods:** The proposed solution for the treatment of rainwater impregnated with slurries and hydrocarbons refers to the use of a separator which, as compared to other existing building solutions, is provided as novelty with hose bags filled with flakes of absorbent material. Structurally, the separator comprises a gutter connection to the inlet ribbon, an enlarged groove gutter, a hydrocarbon separator, parallelepipedic, provided with hose bags, filled with flakes of absorbent material, of low density - 50 g / dm³ - and with a high absorption capacity of the hydrocarbons - 18 liters / 1 kg absorber, with a collecting gutter of rainwater treated and a gutter connection at the outlet rig. **Results:** The advantages provided by the solution presented are the following:-secure a high level of hydrocarbon treatment from rainwater irrespective of their concentration.- reduces the running costs of the sludge and hydrocarbon separator, apart from the hydrocarbon separator, parallelepiped, the other components are gutters of different sizes and can easily be made.- Removing sacks with absorbent material, fully clogged, involves relatively low costs.- the danger of degradation of the drains and the separator during the cold period of the year - frost - by creating sloping lateral walls allowing the ice layer to expand from the bottom upwards and laterally.- the danger of placing the suspensions on the side walls of the gutters by making them inclined at an angle of at least 60 ° to the horizontal. **Conclusions:** Some preliminary experiments have shown that the use of this sludge and hydrocarbon separator on drainage and drainage ditches leads to 75-85% slurry removal yields and 90-98% petroleum products.

Keywords: separator, sludge, oil, open channels

GASTRIC PULSE GRANULOMA – CASE REPORT OF A RARE LESION WITH UNUSUAL SITE

Vlad Daniela Madalina¹, Pataki Simona², Torok A³, Mocan Simona¹, Fulop Emoke¹

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Histology, UMFST Tîrgu Mureş

³Department of Surgery II, UMFST Tîrgu Mureş

Background: Pulse or hyaline ring granulomas are rare benign entities, representing a foreign body reaction to vegetable particles. They occur most frequently in the oral cavity and the lungs, and rarely as extraoral lesions, of the gastrointestinal tract, knee, fallopian tube, ovary, skin, lymph nodes, prostate. Pulse granulomas were encountered more frequently in males, belonging to all age groups. Histopathologically, the lesions showed the presence of structureless hyaline rings with multinucleated giant cells.

Material and methods: We present a case of a 60-year old women with clinical diagnosis of pyloric stenosis, in which partial gastrectomy was practiced. Macroscopically, at the level of the pylorus, a thick stomach wall with circumferential narrowing of the lumen on a length of 15 mm was observed. On section, a 3x7 mm depression area covered by a flattened mucosa, with no evidence of ulceration, was seen, while the surrounding mucosa was without obvious macroscopic changes. **Results:** Microscopically, the gastric wall was deeply thickened due to a marked fibrosis process associating a granulomatous inflammatory process, formed around an eosinophilic, abscess-like, PAS positive material of vegetal origin, located in the gastric wall. The appearance of the lesion was very varied with rich cellular areas with numerous foreign body multinucleated giant cells and histiocytes, and predominantly ring-like hyaline deposition areas in the adjacent vascular structures. **Conclusions:** Extraoral pulse granulomas, extremely rare lesions are important to be recognized because they might indicate serious pathology (diverticulitis, fistula, perforation, ulcerative colitis, appendicitis, or anastomotic leakage). Showing no clinically pathognomic features, the diagnosis of pulse granuloma remains largely a microscopic diagnosis. Awareness of its distinctive histopathologic features would avoid delay in diagnosing and confusion with other histologic entities.

Keywords: pulse granuloma, hyaline rings, foreign body reaction

UTERINE CARCINOSARCOMA (MALIGNANT MIXED MULLERIAN TUMOR): A CASE REPORT

Nechifor-Boila Adela¹, Dutcus I², Carasca Carmen³

¹Department of Histology, UMFST Tîrgu Mureş

²Department of Gynecology II, Tîrgu-Mureş Clinical County Hospital

³Department of Pathology, Tîrgu-Mureş Clinical County Hospital

Background: Uterine carcinosarcomas (UC) are biphasic malignant tumors composed of two distinct neoplastic cell populations, epithelial and mesenchymal cells. **Material and methods:** A 53-year-old female was admitted to the hospital for postmenopausal vaginal bleeding. A curettage was performed and the specimen was send to the Department of Pathology. **Results:** On light microscopy, a tumor mass was revealed consisting of a biphasic proliferation of atypical endometrioid-like glands with areas of squamous differentiation admixed with a deceptively benign, low grade sarcomatous component, with myxoid areas. Immunohistochemistry showed positivity for Vimentin and Cytokeratin 7 in the epithelial component and positivity for CD10, Vimentine and SMA in the stromal component. The Ki67% proliferation index was high, especially in the epithelial component (70%), while immunostaining for p53 revealed a "wild-type" mutation profile. A diagnosis of low grade mullerian adenosarcoma was set and consecutively the patient underwent total hysterectomy with bilateral salpingo-oophorectomy and pelvic lymphadenectomy. A large, polypod, soft, 40 mm diameter tumor mass, with deep myometrial and cervical involvement was described at macroscopy. Histologic findings were those of UC with endometrioid adenocarcinoma or scumous carcinoma and sarcomatous components consisting of myxoid sarcoma or high grade leiomyosarcoma. Extensive lymphovascular permeation was found. **Conclusions:** We herein report a rare case of UC. The diagnosis of UC is challenging especially when dealing with a curettage specimen. However, an accurate diagnosis on the curettage specimen is extremely important for the correct management of the patient.

Keywords: carcinosarcoma, uterus, diagnosis

DEVELOPMENT OF DUAL MICRO-NANO TOPOGRAPHY ON TITANIUM BASED MEDICAL IMPLANTS

Strnad Gabriela¹, Petrovan Cecilia², Russu O³, Cazacu R¹, Chetan P¹, Bica Cristina⁴, Gaz Florea AS⁵

¹Department of Industrial Engineering and Management, UMFST Tîrgu Mureş

²Department of Oral and Maxillofacial Surgery, UMFST Tîrgu Mureş

³Department of Orthopedics II, UMFST Tîrgu Mureş

⁴Department of Pediatric Dentistry and Orthodontics, UMFST Tîrgu Mureş

⁵Department of Organic Chemistry, UMFST Tîrgu Mureş

Background: TiO₂ nanostructures are currently under intense research focus for their potential applications in medical implants. Electrochemical anodization (EA) of titanium-based materials is a cost-effective method that permits the synthesis of nanostructured TiO₂ layers when process parameters are optimized. On complex substrates, as medical implants are, the EA to produce highly ordered nanotubular oxide structures remains challenging, in the literature being few studies on this issue. **Material and methods:** Self-organized nanostructured oxide layers were developed on planar, cylindrical and threaded surfaces of Ti6Al4V alloy. EA was performed in phosphate-fluoride (1M H₃PO₄ with different HF additions) solution by using different process parameters (electrolyte concentration, anodization potential U, potential ramp U_r, and sample rotational speed n). Scanning electron microscopy (SEM) was used to evaluate the morphology of the oxide layers. **Results:** Self-organized nanostructured oxide layers with nanotubes/nanopores internal diameter in 25-100 nm range were developed on surfaces with an initial micro rough topography (Ra = 0.5-2 µm, resulting by CNC turning, grinding, or by sand blasting and acid etching - SLA). On planar surfaces, the optimal process parameters in our custom-built anodization cell are: 0.5 wt.% HF addition in electrolyte, U = 20 V, and U_r = 0.1 V/s. For cylindrical surfaces optimal process parameters are: 0.4 wt.% HF addition in electrolyte, U = 24 V, and U_r = 0.08 V/s. On threaded surfaces continuous nanoporous oxide layers covering all geometrical features - frontal apex, spiral channels, major diameter, minor diameter, thread flanks - were developed by using 0.4 wt.% HF addition in electrolyte, U = 30 V, U_r = 0.08 V/s, and n = 8 rev/min. **Conclusions:** Our results show successful development of nanostructured oxide layers superimposed onto micro rough topography of planar, cylindrical and threaded surfaces, which can lead to enhancement in implant surface bioactivity to promote its early integration and long term success.

Keywords: TiO₂ nanotubes, electrochemical anodization, Ti6Al4V, medical implants

CASE PRESENTATION: INTRADUCTAL CARCINOMA OF THE PROSTATE

Susan Cristina Iulia¹, Loghin Andrada²

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Histology, UMFST Tîrgu Mureş

Background: Intraductal carcinoma of the prostate (IDC-P) is an intra-acinar and/or intraductal neoplastic epithelial proliferation, encountered very rarely on prostate biopsies, less than 0.1%. **Material and methods:** We present the case of a 77-year-old man who underwent prostate biopsies in the Urology Department of Tîrgu Mureş Clinical Hospital for a suspicion of prostate adenocarcinoma. **Results:** On microscopy we observed a proliferation of prostate carcinoma cells filling large ducts and prostatic acini, displaying a dense cribriform pattern, with the basal cell layer at least partially preserved. The tumor cells were cuboidal with large pleomorphic nuclei, large nucleoli, and marked nuclear atypia. Positive stain with p63 demonstrated the presence of basal cells at the periphery of glandular structures, which was necessary to confirm the diagnosis of IDC-P, since no definitive infiltrating high-grade carcinoma was associated. This variant of prostate carcinoma is not graded. High-grade prostatic intraepithelial neoplasia (HGPIN) was ruled out by the architectural and/or cytological atypia which were greater in our case than in HGPIN. **Conclusions:** IDC-P has poor prognosis because of its association with high grade and high volume prostate carcinoma and, therefore, definite therapy may be indicated.

Keywords: prostate, intraductal, carcinoma, immunohistochemistry

MIRAGE OF DESIGNER DRUGS

Gabos Grecu I¹, Gabos Grecu C¹, Gabos Grecu Marieta¹, Barabas Iulia¹, Ferencz Melinda¹, Buicu Elena Gabriela¹

¹Department of Psychiatry, UMFST Tîrgu Mureş

Background: Designer drugs are considered drugs that resemble structurally with illegal drugs but often with a 4-5x higher impact on the human body and marketing are free. The forms of administration are changing with generations, but the physiological and psychological effects remain the same. **Material and methods:** An anonymous questionnaire, made by Google Forms, on an internet that include: gender, age, background, studies, designer drug knowledge, are completed by 180 people, and only 20 people who used the designer's drug, are completed their relationship and experience with this substances. **Results:** gender distribution when filling out the questionnaire was 136 women and 44 males, 151 people are urban, 29 rural. 71% were 20-29 years old, 12% were 40-49 years old, 7% were 30-39 years old, 4% were 15-19 years old and 3% were 60-69 years old. Depending on the type of occupation of 180 people, 154 are more intellectually requested and 26 have a physical occupation. The term "drug designer" is known by 54% (97) of people and 46% (83) do not know it. Of the 180 people questioned, 20 (11%) admitted that they had used this substance, 160 (89%), denied its use. Of the 20 consumers, a part used synthetic cannabinoids, and the other side synthetic amphetamine derivatives. 80% of consumers are of the opinion that the use of designer drugs is not a problem for them, therefore they do not feel the need to ask for help, 20% (4) have already tried to make use of help, one person out of four received the necessary help. **Conclusions:** Today, the Internet is used almost unanimously, a phenomenon that raises the e-platform first among designer drug information providers. It would also be possible, with the help of the Internet, to reduce the number of consumers through a medical education of the population about the risk of designer drugs.

Keywords: consumers, designer drugs, mirage, medical education, risk

COMPATIBILITY STUDY OF ADAPALENE WITH HYDROPHILIC CELLULOSE POLYMERS

Redai Eموke¹, Berta Lavinia-Anda², Ciurba Adriana¹, Antonoaea Paula¹, Birsan Magdalena³, Todoran Nicoleta¹, Rusu Aura⁴

¹Department of Pharmaceutical Technology, UMFST Tîrgu Mureş

²Department of Inorganic and General Chemistry, UMFST Tîrgu Mureş

³Department of Pharmaceutical Technology, UMF Gr. T. Popa Iaşi

⁴Department of Pharmaceutical Chemistry, UMFST Tîrgu Mureş

Background: This paper aimed to study the compatibility of adapalene (ADA) with different hydrophilic cellulose polymers as potential film formers for dermal pharmaceutical forms. **Material and methods:** Binary mixtures of ADA with hydroxyl-propyl-methyl cellulose in two types of viscosity (HPMC 1500, HPMC E5), hydroxyl-ethyl-cellulose (HEC 250M), and ethyl-cellulose (EC 10) were prepared in 1:1 weight ratio. Fourier transform infrared (FTIR) spectroscopy was used to determine the spectra by KBr pellets method in the range of 4000-600 cm⁻¹, performing 16 scans at 4 cm⁻¹ resolution. Differential scanning calorimetry (DSC) was performed on samples of 3.0 mg sealed in aluminium pans and the DSC curves were recorded in air atmosphere, in the range of 40-400 °C, with a temperature increase rate of 10 °C/min. **Results:** The melting endotherm of ADA at 328.28 °C and the polymers loss of water below 100 °C were identified in the DSC curves as specific thermal behaviors of the individual components of the mixture. The melting point of ADA is slightly shifted in the mixtures with HPMC 1500, HPMC E5 and EC 10, while it does not appear at all in the mixture with HEC. The characteristic peaks of ADA in the FTIR spectra of the analysed mixtures were identified as it follows: a strong band at 2900.99 cm⁻¹ assigned to OH (carboxyl) stretching vibrations, 2848.05 cm⁻¹ assigned to (-CH₂-) stretching vibrations, a strong band at 1688.97 cm⁻¹ assigned to C=O (carboxyl) stretching vibration, at 1235.87 cm⁻¹ assigned to R-O-Ar (aromatic ether). **Conclusions:** According to FTIR and DSC analysis results ADA may be used in polymeric films with HPMC derivatives and ethyl-cellulose.

Keywords: adapalene, cellulose polymers, polymer drug interaction, DSC, FTIR

MEASURING PULSE WAVE TRANSITION TIME IN LABVIEW

Perian M¹, Finascu B¹, Barmou Asmaa¹, Delibas Alina¹, Damian L², Marusteri M³

¹Department of Physiology, UMFST Tîrgu Mureş

²Department of Electrical Engineering, Stefan cel Mare University of Suceava

³Department of Informatics, UMFST Tîrgu Mureş

Background: Most of the actual methods for measuring the arterial blood pressure are using pneumatic cuffs to compress a medium size artery, which produces discomfort, endothelial lesions if inflation frequency is too high and muscular stretch. In patients without acute changes of vascular wall elasticity, the pulse wave velocity is proportional with arterial tension. Our objective was to develop a device and a software for pulse wave transition time measurements. **Material and methods:** The hardware was designed and built in the Physiology Dept. Laboratory at the UMFST of Tîrgu Mures and combines an ECG instrumentation amplifier and an infrared photoplethysmograph. Both signals are recorded using an acquisition board and stored in raw digital format. To minimize the electric noise acquired from the leads, we used a high CMRR circuit (AD621) produced by Analog Devices in the ECG module and a low noise operational amplifier (LMC6484) produced by Texas Instruments in the plethysmograph module. The analysis software was developed in LabView and allows the user to read, filter and measure the amplitude and the duration of the signals. **Results:** The recorded signals are of good quality, easily measurable and when the patient is at rest, they do not require filtering. However, when the device is used in conjunction with a cycloergometer, significant electric parasites are visible and the recording requires filtering. **Conclusions:** Our hardware is low cost and is capable to acquire ECG and plethysmographic signals from subjects even during stress test. The software that we have built is allowing precise PWTT measurements and it can be used for blood pressure indirect measurements using this cuffless method. This work was supported by the UMF Tîrgu Mureş research grant number 15609/9/29.12.2017.

Keywords: PWTT, ECG, plethysmography

PERIOPERATIVE METABOLIC CHANGES IN NORMOPONDERAL, OVERWEIGHT AND OBESE PATIENTS UNDERGOING LARGE JOINT REPLACEMENT FOR OSTEOARTHRITIS

Tilince Mariana Cornelia¹, Zazyva Ancuta¹, Pop TS²

¹Department of Cell Biology, UMFST Tîrgu Mureş

²Department of Orthopedics I, UMFST Tîrgu Mureş

Background: Obesity and overweight can influence the course and treatment outcomes of a series of disease, including osteoarthritis, as well as the metabolic response to major surgery. The aim of this study was to comparatively assess the changes in the metabolic status of normoponderal, overweight and obese patients undergoing large joint replacement for osteoarthritis. **Material and methods:** This observational study analysed the changes that occur in biological factors during 48 hour perioperative period of total hip/knee replacement, comparing the results in three groups of patients with different BMIs. For all patients (20 normoponderal, 35 overweight and 37 obese), serum levels of glucose, uric acid, cholesterol and triglycerides were determined both 24 hours preoperatively and within 24 hours postoperatively. **Results:** The patient groups were similar in terms of age and duration of hospital stay, with a significant difference in gender distribution - more female patients were obese and more male patients were in the normoponderal group ($p=0.049$). When comparing all three groups, we only found a significant difference between the mean values of serum glucose on day 2, with higher values in the obese compared to normoponderals ($p=0.025$, Anova and Bonferroni tests). When assessing each separate patient group, mean values on day 1 and day 2 were significantly different for serum levels of uric acid, cholesterol and triglycerides in all three groups ($p=0.0001$), with significant differences for glucose only in the obese group. **Conclusions:** Perioperative metabolic status changes have the potential to influence patient outcomes after major surgery. We found significant changes between pre- and postoperative levels of the assessed factors within each group, but when comparing all three groups, these were only identified for glucose postoperatively. Thus it seems that serum levels of the studied metabolic tests do not change with a patient's ponderal status after large joint replacements. (Private research grant SC CATTUS SRL contract no.5068/26.04.2016.

Keywords: metabolic changes, serum levels, obesity, joint replacement, osteoarthritis

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The 11th Conference of Ph.D. Students and Young Doctors

Days of the University of Medicine, Pharmacy,
Science, and Technology of Târgu Mureş
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ABSTRACT BOOK

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FARMACIE (PHARMACY)

POSSIBLE IMPLICATION OF LYMPHOTOXIN ALPHA IN THE INFLAMMATORY RESPONSE CAUSED BY SNAKE VENOMS

Boda F¹, Dogaru Maria², Banfai Krisztina³, Garai Kitii³, Kvell K³

¹Department of Inorganic and General Chemistry, UMFST Tîrgu Mureş

²Department of Pharmacology and Clinical Pharmacy, UMFST Tîrgu Mureş

³Department of Pharmaceutical Biotechnology, University of Pecs

Background: The local effects caused by *Viperidae* snake venoms include haemorrhage, inflammation, oedema and severe tissue damage. The inflammatory response generated by these venoms is caused by their proteinaceous components, primarily by snake venom metalloproteinases, phospholipases A₂s and L-amino acid oxidases. The inflammatory response is known to be accompanied by the release of various inflammatory mediators, such as interleukins (IL-1-beta, IL-6), prostaglandins (PGE₂) and tumor necrosis factor alpha (TNF-alpha). **Material and methods:** The inflammatory response was induced by incubating U937 cell cultures with 1.0 µg/mL *Vipera ammodytes ammodytes* snake venom solution. Following incubation, the total RNA was isolated from the cells and reverse transcribed to cDNA. Expression of genes was determined using a TaqMan® Array Human Cytokine Network Plate. The plate contained assays for various genes associated with the inflammatory response, including *LTA*, the gene encoding lymphotoxin alpha (LT-alpha). **Results:** The obtained results showed a 2.93-fold increase in the expression of *LTA* gene in U937 cell treated with snake venom as compared to untreated cells. The significant increase in *LTA* expression suggests a possible elevation of LT-alpha level. Since LT-alpha is known to orchestrate peripheral lymphoid organogenesis, our findings support reports that snake venoms can hamper local lymphoid organization, usually observed as local oedema at the site of envenomation. **Conclusions:** The significant increase in the expression of *LTA* in our study is a noteworthy result, as the influence of snake venoms on LT-alpha concentration has not been previously reported. As subsequent analysis of the effect of *Vipera ammodytes ammodytes* on genes associated with inflammation could not confirm the expression of the *LTA* gene, our results lack statistical significance. However, these results suggest a possible implication of LT-alpha in the inflammatory response caused by snake venoms through a presently unexplored mechanism of action.

Keywords: snake venoms, inflammatory mediators, lymphotoxin alpha, RT-qPCR

LEVOFLOXACIN TRIFLATE - SYNTHESIS, CHARACTERIZATION AND MICROBIOLOGICAL ACTIVITY ASSESSMENT

Lungu Ioana-Andreea¹, Uivarosi Valentina², Imre Silvia³, Mare Anca Delia⁴, Rusu Aura⁵

¹IOSUD, UMFST Tîrgu Mureş

²Department of Inorganic and General Chemistry, UMF Carol Davila Bucureşti

³Department of Analytical Chemistry and Drug Analysis, UMFST Tîrgu Mureş

⁴Department of Microbiology, UMFST Tîrgu Mureş

⁵Department of Pharmaceutical Chemistry, UMFST Tîrgu Mureş

Background: Antibiotic resistance is a growing threat worldwide. About 700.000 people die annually from infections with multi-drug resistant bacteria. Levofloxacin (Lvf) is a synthetic antibacterial agent of the fluoroquinolones class. Fluoroquinolones are fluorinated compounds based on the structure of nalidixic acid, which present excellent complexing capacity due to the particular chemical structure. Silver triflate is the silver salt of triflic acid, one of the strongest acids. The study aimed to obtain a new Lvf derivative with a broad antibacterial spectrum. **Material and methods:** Lvf triflate was serendipitously obtained in an attempt to synthesize a silver complex of levofloxacin. The obtained compound was characterized using elemental analysis (C, H, N), molar conductivity measurement, thermal methods (differential scanning calorimetry), and spectroscopic methods: Fourier-transform infrared spectroscopy (FTIR), electrospray ionization mass spectrometry (ESI-MS), ultraviolet-visible (UV-VIS) spectrophotometry, flame atomic absorption spectrometry (FAAS). The minimum inhibitory concentration (MIC) was determined against Gram-negative (*Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*) and Gram-positive (*Staphylococcus aureus* MRSA, *Staphylococcus aureus* MSSA, *Enterococcus faecalis*) bacteria reference strains by the microdilution method.

Results:

An almost white precipitate, soluble in dimethylformamide and dimethylsulfoxide was obtained. All the analysis suggest the synthesis of a new compound corresponding to Lvf triflate formula. The spectroscopic methods indicated the formation of the triflate salt through the N⁴-piperazine nitrogen. FAAS analysis found no silver content. The MIC determination of the new compound showed similar values to those of Lvf against all selected bacteria. **Conclusions:** The proposed chemical formula for the new compound corresponds to the triflate salt of Lvf. No silver complex of Lvf has been formed. Although the MIC determination showed similar values to those of Lvf against all selected bacteria, the compound could present other beneficial biological effects that could be investigated in further studies.

Keywords: fluoroquinolones, levofloxacin, silver triflate, levofloxacin triflate

CARIPRAZINE: A NEW ANTIPSYCHOTIC WITH A FAVOURABLE METABOLIC PROFILE

Bába L¹, Kun IZ², Kolcsár Melinda¹, Gáll Zs¹, Hack Beatrix³, Varga Z⁴

¹Department of Pharmacology and Clinical Pharmacy, UMFST Tîrgu Mureş

²Doctoral School, UMFST Tîrgu Mureş

³Student, Faculty of Medicine, UMFST Tîrgu Mureş

⁴Department of Pharmacology, Semmelweis University

Background: The second-generation antipsychotics (SGAs) present characteristic unwanted effects, mainly of metabolic nature. The severity of these side effects varies considerably between the different SGA. The newest SGA is cariprazine (CAR), which has minimal data regarding weight gain. The aim of this study was to compare weight gain potential of CAR with two well-known SGAs: olanzapine (OLA) and aripiprazole (ARI). **Material and methods:** The mentioned SGAs were administered perorally in two doses (OLA three times daily 0.5, 2.0 mg/kg, ARI three times daily 0.5, 1.0 mg/kg and CAR 0.1, 0.25 mg/kg once daily) to female Wistar-white rats (n=6/group) for six weeks. Body weight of the animals was measured weekly. After the animals were sacrificed, the perirenal adipocytes vacuoles were measured with an optic microscope at 20x magnification after haematoxylin-eosin staining to determinate the effect on adipocyte maturation. The results were compared with one-way ANOVA and Kruskal-Wallis tests. **Results:** A significant reduction in weight gain was observed from the third week of treatment by both of the doses of ARI (+10.58 and +5.18%) and CAR (+5.60% and +4.13%), while OLA did not influence the weight gain expressed as percent of initial body weight compared to the control group (+11.95%). All of the three drugs increased the lipid vacuole size in the treated animals, (means: OLA 2266, ARI 2472 and 2257, CAR 1815 and 2172 μm^2) except the higher dose of OLA (mean: 1625 vs. Control group: 1670 μm^2). **Conclusions:** In this experimental setting, the metabolic profiles of ARI and CAR were favourable, while OLA causes only a slight, but not significant increase in body weight. The three studied drugs induced adipocyte hypertrophy, however, further studies are needed to clarify CAR's metabolic effects, this new SGA with unique mechanism of action.

Keywords: antipsychotics, metabolism, adipogenesis

PRELIMINARY QUALITATIVE AND QUANTITATIVE STUDIES OF DIETARY SUPPLEMENTS (CAPSULES) WITH ANDARINE TO AID WITH THE DESIGN OF AN ANIMAL DOPING MODEL

Miklos Amalia¹, Farczádi L², Tero-Vescan Amelia¹, Imre Silvia³, Muntean Daniela-Lucia³

¹Department of Pharmaceutical Biochemistry and Environmental Chemistry, UMFST Tîrgu Mureş

²Department of Pharmaceutical Technology, UMF Iuliu Hațieganu Cluj Napoca

³Department of Analytical Chemistry and Drug Analysis, UMFST Tîrgu Mureş

Background: Andarine is a selective androgen receptor modulator (SARM), an unauthorized substance, currently used by athletes for illicit purposes and especially by adolescents, due to the anabolic effect on muscle and bone tissue. Easily accessible for purchase as dietary supplements via the Internet, these substances are a cause of concern regarding their abuse, because they do not have a clearly determined pharmacotoxicological profile. The purpose of our preliminary study was to determine the uniformity of mass and the uniformity of content of capsules (25 mg andarine declared) using a validated UHPLC method for andarine, for capsules - finished product- purchased from a website specialized on selling products for performance athletes. **Material and methods:** For the characterization of capsules, the uniformity of mass of single-dose preparations was performed following the methodology described in European Pharmacopoeia 8th Edition. For the quantitative determination of andarine a UHPLC method was

developed and validated, using a reversed-phase C18 column and mobile phase consisting of formic acid 0.1% and methanol. **Results:** The analytical method was validated with regards to within-run and between-run accuracy and precision, selectivity, and analyte extraction. An average mass of 570 mg content was obtained, with an RSD of 2.05%. The percentage deviation for individual capsule content was between -2.85% and 2.63%. Following the determination of the uniformity of the content, a 5.41% RSD was obtained with an average of 4.99 mg andarine/capsule. **Conclusions:** The tested capsules with andarine comply with the test for uniformity of mass having an individual percentage deviation under 7.5 %. Following the determination of uniformity of the content, it was determined that the capsules are underdosed (contain about 20% of declared label content), although the uniformity of content complied with current regulations. These tests are preliminary in order to aid with the design of an animal doping model for pharmacotoxicological studies.

Keywords: SARMs, andarine, dietary supplements

QUANTITATIVE DETERMINATION OF CANNABIDIOL IN FORMULATIONS FOUND ON THE ROMANIAN MARKET

Vlad RA¹, Farczádi L², Imre Silvia³, Ciurba Adriana¹, Antonoaea Paula¹, Todoran Nicoleta¹, Muntean Daniela-Lucia³

¹Department of Pharmaceutical Technology, UMFST Tîrgu Mureş

²Department of Pharmaceutical Technology, UMF Iuliu Hațieganu Cluj Napoca

³Department of Analytical Chemistry and Drug Analysis, UMFST Tîrgu Mureş

Background: Cannabidiol-CBD is an alkaloid found in *Cannabis sativa* which has important therapeutic effects in diseases such as: Parkinson's, epilepsy and cancer. Available as supplements, such kind of formulations with CBD are not subjected to quality control regulations, therefore their quality can vary widely. The aim of the study was to propose a new HPLC-UV method for the determination of CBD from supplements. **Material and methods:** Two products, one found in the pharmacy ~~XXXXXXXX~~ capsules with 150 mg of CBD and one bought from a food supplements store ~~XXXXXXXX~~ gelatine capsules which contained 500 mg of hemp oil have been studied. The mass uniformity of the two types of capsules (hard capsules-with coconut oil as the only excipient and the soft capsules with sun flower oil as excipient) was determined using the method from the current Eph described for quality control purposes. The cannabidiol content was determined by using a HPLC reversed-phase method. **Results:** An HPLC-UV method for the quantitative determination of cannabidiol was developed and its analytical performances (linearity, selectivity, carryover, between and within run accuracy and precision) were tested. All calibration curves were linear ($R > 0.99$) and no carryover effect was observed. No interfering peaks larger than 20% of the area of CBD peak in LLOQ standard solutions was observed. Accuracy determined for control standard solutions was between 97.95-103.01% (% bias); precision was between 0.11-1.84 percent (% RSD). The extraction method from capsules was optimized in order to achieve the best possible yields. The stability of the CBD was also studied and stability issues of CBD were discovered, as well as issues with extraction from capsules. Degradation in solutions has been observed thus caution is needed. **Conclusions:** A high pressure liquid chromatography method was developed and successfully used for the quantitative determination of CBD from commercially available capsules.

Keywords: soft capsules, hard capsules, UHPLC, cannabidiol

ANTIBACTERIAL ACTIVITY OF EXTRACTS OF FAG (SYLVATICA L.) AND MOLID (PICEA ABIES L.) AGAINST HUMAN PATHOGENIC AGENTS

Cosarca Sanda¹

¹Department of Botany and Cell Biology, UMFST Tîrgu Mureş

Background: Bark spruce as well as beech are considered to be by-products in the wood processing industry. The purpose of this study was to obtain from these sources, natural biologically active compounds with therapeutic applications such as bacterial activity against human pathogens. **Material and methods:** The total polyphenol content was determined by spectrophotometric methods, then the antimicrobial activity was tested by the microdilution technique. The methods used to obtain the extracts were: microwave extraction, ultrasonic extraction and classic extraction on the water bath. The bacterial strains on which these extracts were tested were: *Streptococcus mutans*, *Streptococcus pyogenes*, *Escherichia coli*, *Pseudomonas aeruginosa*. **Results:** The results showed that the extracts have a total polyphenol content of 38.80 to 102 mg GAE / g for dried beech extract and for the spruce bark

extract the total polyphenol content is between 102.82 and 228 mg GAE / g dry spruce bark, depending on the extraction method used. The extracts were active against aureus *Streptococcus mutans* and *Streptococcus pyogenes*. **Conclusions:** Thanks to these results, the extracts from the beech and spruce bark could be used in pharmaceutical preparations or as preservatives in the food industry.

Keywords: antibacterial, beech bark, spruce bark, polyphenols, polyphenols, extraction

PROINFLAMMATORY BIOMARKERS AS PREDICTORS IN RESPIRATORY INFECTIONS IN CHILDREN

Cotoi Titiana¹, Cotoi OS², Turdean S³, Turcu M³, Baba D², Marginean Cristina Oana⁴, Muntean Daniela-Lucia⁵

¹IOSUD, UMFST Tîrgu Mureş

²Department of Pathophysiology, UMFST Tîrgu Mureş

³Department of Pathology, UMFST Tîrgu Mureş

⁴Department of Pediatrics I, UMFST Tîrgu Mureş

⁵Department of Pharmacology, UMFST Tîrgu Mureş

Background: Lower respiratory infections are an important cause of morbidity and mortality in children, especially in young children. The WHO guidelines of 2014 have proposed 5 recommendations for the treatment of respiratory infections in children.

Material and methods: The paper presents the working methodology for the analysis of proinflammatory biomarkers in children with lower respiratory tract infections. The proinflammatory biomarkers analyzed include: high sensitivity PCR (hsPCR), IL-1, IL-6, TNF- α . The paper also includes a morphological study on the macroscopic and microscopic appearance of pulmonary lesions from the perinatal period, post-natal period and in small children. **Results:** This paper is part of the doctoral thesis and presents the working methodology, the respiratory infection monitoring record and the recording of the clinical and paraclinical parameters in patients with respiratory infections. The study is approved by the Ethics Committee of County Emergency Medical Hospital Muresand the Ethics Committee of University of Medicine, Pharmacy, Sciences and Technology of Tîrgu Mureş. Each patient will be enrolled after obtaining the informed consent of the parent or the legal guardian. Clinical and paraclinical evolution will be monitored for the type of treatment received. The morphological study analyzes the following pulmonary lesions from the histological and immunohistochemical perspective: pulmonary atelectasis, pulmonary dystelectasis, pneumonia and bronchopneumonia. **Conclusions:** The plasma level of proinflammatory markers will correlate with the type of therapy received and the evolution of the case. Tissue changes may occur early compared to the clinical and paraclinical parameters and provide a certainty of diagnosis.

Keywords: infection, children, proinflammatory, biomarkers, immunohistochemistry

FILOLOGIE(PHILOLOGY)

DISJUNCTIVE RECEPTIONS OF THE HOOLIGAN'S RETURN

Vancea Ioana Mihaela¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The aim of this paper is to highlight Norman Manea's international relevance as a writer in exile despite his book's poor reception among the Romanian literary critics. **Material and methods:** Therefore, we will offer a new key of lecturing the Hooligan's return from the World Literature theory perspective, using the book's translations as a main instrument. For this reason, we are proposing an exercise that Franco Moretti calls second hand criticism. However, because of language limitations we will analyze the dynamics of the novel only on the American and Spanish markets. **Results:** There is a wide range of references to Norman Manea both in Romanian and foreign countries and we assume, nevertheless, the impossibility of encompassing the entire acceptance of the novel in these cultures. **Conclusions:** Therefore, we will work with a small sample of it taking in consideration the main American magazines that offered reviews of Norman Manea's book such as The New York Times, The New Yorker, New Republic and San Francisco Chronicle. Moreover, with regard to the Spanish press, we will work with articles and chronicles taken from Letras Libres, ABC and La Vanguardia.

Keywords: translation, world literature, The hooligan's return, exile

ȘTEFAN AUGUSTIN DOINAȘ AND THE RESURRECTION OF THE BALLAD

Uilean Raluca-Nicoleta¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Ștefan Augustin Doinaș was part of Sibiu Literary Circle, together with Radu Stanca, Ion Negoițescu, Cornel Regman, Nicolae Balotă or Ovidiu Cotruș. This group was one of the modern orientation, founded in Sibiu, as successor to the ideas of the modernist invoice, which Lovinescu had started them in the interwar period. The essence of this group materialised around Lucian Blaga, and the meetings were intended for students with literary concerns. **Material and methods:** The poet was one of the signatories of the Manifest of the Literary Circle, which appeared in 1943 in the "Life" magazine, being an open letter addressed to Lovinescu. This publication was perceived as an adherence to modernism. In other words, the group were determined to join, as a sign of solidarity, the orientation initiated by Titu Maiorescu and strengthened by Lovinescu, that of modernity.

Results: This resurrection of the ballad was not necessarily a poetic rebellion, but an instrument that helped create modern poetic works. Attempting a revival of aesthetics and practice of cultural values, rejecting mediocrity and provincialism. To release poetry, the cerchists suggested the resurrection of the ballad, a literary species, which represented the emancipation against the scandal.

Conclusions: This "awake" of the ballad is a structure based on discipline and order, which helped to create a delicate poem. Sibiu Literary Circle was the ballad environment for recovery.

Keywords: modernism, resurrection, poetry, ballad

WRITINGS ABOUT TITU MAIORESCU

Gheorghita Aurora¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: One of the best studies of Liviu Rusu is Writings about Titu Maiorescu. The importance of this is that it reintroduced a great national personality in the present **Material and methods:** The laborious work of conceiving this work begins with the publication in a journal of a study about Titu Maiorescu, which led to the reconsideration and valorisation of his work and personality. **Results: Conclusions:**

Keywords: Titu Maiorescu, innovation, vision

NARRATIVE STRATEGIES IN GELLU NAUM'S NOVEL ZENOBIA

Rusu Teodora¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: "Zenobia" is one of Gellu Naum's most prominent writings, especially since it falls within the sphere of epic literature, autobiographical even, being, as the author himself is ironically naming it, a "homan". **Material and methods:** This novel is surrealist even in narrative techniques, the author-narrator-character presenting in a characteristic manner a chaotic, codified story, with elements that seem to both hide and show throughout the story. The action, its characters and its components are presented by using objective hazard, collage, remembrance, and, at the first impression, it functions as a wall between the reader and the text message, but, in truth, it hides in the substrate of the text, a planned structure. Also, the text has a strong mythical and symbolic weight, being a text of search and retrieval, of self-reunion, in such a way that shows the uniqueness behind the scenes, the unusual. **Results:** In essence, this novel speaks of love, Zenobia representing the lost half of the author-character, Naum. **Conclusions:** He writes his story as a dream, mixing biographical data with fantastic elements, walking the reader on the fine line between real and unreal, until he no longer recognizes the difference between these two.

Keywords: surrealism, unusual, mythology, objective hazard, homan

THEATRICALITY AND THEATRICALIZATION IN MATEI VIȘNIEȘC'S POETRY

Popa S¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: In Matei Vișniec's literature, there is a gap between poetry and theater, which consists primarily on the ability of creating, in both species mentioned, areas or dramatic situations by using a parabolic or symbolic dimension. **Material and methods:** Matei Vișniec wrote poems that follow closely to the plays he wrote, which both his poems and plays include the same ingredients: the presence of characters, narrative situations, symbols, irony, and life seen as a complex spectacle. Romanian critics, Bogdan Crețu for example, claim that one of the important characteristics of his poetry is fantasy. By using fantasy, the poet tends to transfer reality in a symbolic way. **Results:** Therefore, we will discuss two crucial aspects that involve the semnification of the theatrical dimension by analysing a couple of important example of poems from his six books and by consulting some critical point of views. The first meaning of this dimension is to reveal a daily spectacle of life by presenting his, apparently, ordinary situations and people. **Conclusions:** In this case, the concept of mask will be discussed and its relation between essence and appearance. The second meaning involves the aspects that underline the loneliness and anxiety in the modern times.

Keywords: Matei Vișniec's literature, poetry, theater, fanta, irony, mask, theatrical dimension, critical point of views, loneliness, anxiety.

LANGUAGES IN CONTACT

Bereczki Orsolya¹

¹Facultatea de Litere-Studii de Hungarologie, Univ.Babes Bolyai Cluj

Background: Via translating, translators have to face not only a "raw" text itself, but have to take into consideration the text's historical and cultural context as well. In some cases we may call a translator as the interpreter of a culture. **Material and methods:** We may put up a question: To what an extent can a translator be such an interpreter? A translator might face the difference between the source language culture and the target language culture, but it is his role to deal with it. This process is not an easy matter and it is not as simple as one would think it might be. It is very hard to translate not only words but the "cultures". If a translator would use word-for-word translation, then the product would probably be full of mistranslation and it would be incoherent. **Results:** When translators translate a text from a language to another, they use several methods, act in several ways.

They add some words, change others, translators process meanings, messages, intentions, deal with texts. In her book, *Languages in Translation*, Kinga Klaudy states that these complicated sequences of actions include the replacement of source language words by target language words; translators sometimes restructure the structure of the sentence, change the word order, omit or add certain elements. **Conclusions:** These operations are some choices to make by translators, in a translation used for sentences and smaller units of language within that text.

Keywords: translation, culture, language, translator, contact

EPIC CONVENTION AND AUTHENTICITY IN CAMIL PETRESCU'S PROSE

Marian Denisa¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Authenticity is the essence of the novel in Camil Petrescu's literary creations, whose aspiration to authenticity gives originality to poetry, provides theater vitality and "authentic moments of feeling" to novels. **Material and methods:** Authenticity is the illustration of reality through one's own consciousness, the writer himself testified, "The only reality I can tell is the reality of my conscience, my psychological content." **Results:** Substantiality is the conception that literature must reflect the concrete essence of life: love, jealousy, wounded pride, humiliated pride, knowledge, justice, truth, dignity, those absolute moral categories. The synchronization in Camil Petrescu's conception is the perfect alignment of literature with the philosophy and psychology of the age, since the act of creation is an act of knowledge, discovery and not invention: "We can know absolutely nothing but reflect in ourselves." **Conclusions:** Lucidity is the dominant feature of the characters of Camil Petrescu, analytical and introspective intellectuals, hypersensitive, intransigent and morally inflexible. Lucidity "does not kill real voluptuousness, it increases it".

Keywords: novels, interwar, psychological, epic, authenticity

ANTON COSMA AND VATRA LITERARY MAGAZINE

Constantinescu Paula – Mădălina¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: By saying the word Vatra we have the opportunity to bring to attention the colossal effort of those who have made a place for themselves in the Romanian literature. A magazine that reminds us of who we are and what capacities we have, but especially urges us to a universe in which the infinite manifests itself in its law especially on the word. **Material and methods:** By having managed to fight the affirmations of time, Vatra (Hearth) has several editors over the years, each passing through various moments of historical nature. I decided to turn my attention to Anton Cosma this time, who is at the center of time in a key position, leading the magazine in a period of transition. Anton Cosma blends harmoniously with the name of the magazine, so that by the function that he would acquire for a good part of time, it would amplify this domain. Becoming in 1981, in full communism, the editor of the magazine, the critic will delight with his endeavor to gather those skilled in the secrets of literature to fight for a continuous affirmation of Romanian literature. **Results:** One of the things that attracted my attention is the frequent column about the Romanian post-war novel, where the editor himself expresses his belief about the evolution of the novel by mentioning some themes and reasons, as well as the fine contouring of the Romanian desire to affirm and win his own freedom. Death of the Old World, New World's Genesis, adaptations and integrations are just some of the topics addressed by the critic. **Conclusions:** We will notice on the way that Anton Cosma will satisfy our craving to know as much as possible about the novel, but not only. The profound analysis of other critics and their works make us wonder whether the cosmanian universe was too little explored.

Keywords: Anton Cosma, the death of the old world, motives, novel, critic

MIRON RADU PARASCHIVESCU – THE AUTOBIOGRAPHICAL EXPERIENCE

Popa (Olah) Georgia-Daniela¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: My initial plan was to record a character who crossed numerous and tumultuous events that changed the face of Romania. **Material and methods:** This central character cannot be other than Miron Radu Paraschivescu who remained a witness of history through his attitude and faith.

My starting point in the structure of the work was set up by the pages of confessions that were firstly published in French and then in Romanian, untitled "Jurnalul unui cobai". This diary shows the inner storm in which struggles a soul like M. R. Paraschivescu. Paraschivescu's diary seems to be an undecided approach between an intimate writing and a work destined to be published that is why it has a sort of mannerism. **Results:** The author records in his diary funny happenings about interwar political class. **Conclusions:** The initial plan, the attempt of finding the image of M. R. Paraschivescu transformed itself in the attempt of finding information about the author according to his friends

Keywords: diary, poetry, confession, experience, autobiography

THE BEGINNINGS OF EXHINOXIST POETRY (DINU FLĂMÂND, ION MIRCEA, ADRIAN POPESCU)

Petrea (Sopterean) Laura-Alexandra¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: "Echinox" is a cultural magazine which appears at Cluj-Napoca starting with December, 1968. Initially it is edited trilingual Romanian language, Hungarian and German, and after 1993 are added pages in French and English. **Material and methods:** Dinu Flămând, Ion Mircea and Adrian Popescu are only three from the young poets who collaborate with lyrics since its first numbers. **Results:** In this magazine, Babeş-Bolyoi University gathers requirements, scholarship and work ethics but at the same time it is like a training workshop for the writers, not only for Romanian, but for Hungarian and German. **Conclusions:** Due to its collaborators requirements was built echinoxist literary movement, which was revealed in Romanian Literature after 1965

Keywords: magazine, poetry, 1968, languages, communication

ION NEGOIȚESCU. AUTOBIOGRAPHICAL PACT

Cocan Alexandrina¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: "Autobiographical pact" is a phrase suggested by Philippe Lejeune as a modality to express the identity relation between author, narrator and character. **Material and methods:** The autobiographical literature (diaries, autobiographies, memories) attentively submit to this convention, because the author of autobiographical works speaks about his own life and in this way he becomes the character of his own textual life. **Results:** Ion Negoitescu is an author who writes about his life in "Mirrors' Hour" and "Dragons' sentry". **Conclusions:** Both of them are distincted as being authentic and credible. The author himself claims that: "I will tell you everything about me, even the most uncomfortable things."

Keywords: Ion Negoitescu, autobiographical pact, diary, memories, authenticity

HISTORICAL REALITY AND MAGIC REALISM IN SALMAN RUSHDIE'S MIDNIGHT'S CHILDREN

Bratfalean (Bacain) Adriana¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: This study takes rise from the statement that Salman Rushdie's magnum opus *Midnight's Children* is a blend of real life and fantasy. In order to fuse historical reality with mythical elements the British Indian writer makes use of the narrative style of magic realism, in which the ordinary and the extraordinary are equally acceptable. **Material and methods:** The study aim is to analyze the narrative technique of magic realism used by Salman Rushdie to represent the historical reality in a fictional way. *Midnight's Children* tells the story of the eponymous children's lives, 1,001 children who were born within the first hour of 15th August 1947, on the very day that India gained its independence from the British Empire. All these children are gifted with special superpowers with magical traits that, down the ages, have been universally described in fairy tales across the world. Born with independent India, the *midnight's children* symbolize the hopes and the dreams for the new India. Perhaps this is the reason why Saleem Sinai, one of these children, the main character and in the same time the narrator of the novel can be considered an allegory for India itself, he imagining that his birth time (at the stroke of midnight) inextricably ties him to the fate of his nation. **Results:** The research methodology is analysis. **Conclusions:** The findings of this study are that, by using the narrative technique of magic realism, *Midnight's Children*, a partly autobiographical novel, bridges the real living experiences and the world of fiction, comprising the story of the telepath Saleem Sinai, whose life is a whirlwind of disasters that mirrors the downfall of postcolonial India.

Keywords: Salman Rushdie, *Midnight's Children*, autobiography, India, narrative technique, magic realism

ION AGÂRBICEANU – AN ADEPT OF "SAMANATORISTS" AND RURAL REALISM

Cercel (Cioban) Camelia Iustina¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The paper aims to highlight the aspects that contributed to the development of the Transylvanian interwar prose and the factors that led to Agarbiceanu's approach to the "Samanatorists" and realistic movement. This requires a brief presentation of the historical context, which has produced mutations not only at political level, but also at a cultural- artistic one. **Material and methods:** The "Samanatorists" literary movement influenced the debut creation of the Transylvanian prose writer through the program of the "Semanatorul"/"Sămănătorul" magazine, as well as by his collaboration with the magazines that were close to this ideology. Thus, if in Agarbiceanu's debut creations a Samanatorists influence is observed, later, as soon as he approaches the program of the "Viața românească" (The Romanian Life) magazine, he is heading towards a rural realism. His goal was not to idealize the life of the village, but to capture in a stylized, personal, realistic way the original hypostases of the Transylvanian villages. **Results:** Through a programmatic realism, the writer's prose constitutes an authentic document of Transylvanian life, during a long historical period. Agarbiceanu is among the few writers related to his native lands he has never left. That is why the gloomy reality of the Tara Motilor, that of his childhood in Cenade, the world of Sibiu people, discovered in Orlat, the peasants and intellectuals' discontent, - all these states are found in Agarbiceanu's literary creation, which led many to consider Agarbiceanu as the most representative Transylvanian writer before 1918. **Conclusions:** This study shows that Agarbiceanu is a follower of Ioan Slavici's prose, through the model taken from him in the novel *Jandarmul*, as well as a pioneer of Liviu Rebreanu's realism.

Keywords: Transylvanian interwar prose, Transylvanian interwar, Samanatorists, literary movement, realism

THE CONFIGURATIONS OF COMMUNISM IN THE POST 1989 NOVEL: THE DEPICTION OF THE TRANSITION IN DAN LUNGU'S NOVELS

Boştenaru Ioana¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The revolution from 1989 represented the victory of democracy not only from a political point of view, but also from a literary one, because the literary system escaped from the sphere of the ideological pressure. Thus, this moment marked a radical change concerning the literary paradigm, but also the literary imagery. **Material and methods:** The novels written after 1989 go back to communism and attempt to depict every aspect related to it from what happened in the horrific prisons to precarious daily aspects. However, not all the authors focus on the horridness of communism, some of them adopting a different tone, in spite of the fact that they refer to the same historical period. **Results:** Hence, the nostalgia after communism replaces the dark perspective in novels which point out the childhood or the adolescence in the communist period. **Conclusions:** Dan Lungu is one of these authors and this paper aims to underline the manner in which the disillusion in the postcommunist era is represented in his novels.

Keywords: communism, transition, society, change, nostalgia

CAMIL PETRESCU – PAMPHLETEER

Csala Bianca-Andreea¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Camil Petrescu sees the polemic as a necessity, a vital manifestation of literature, and he sees life as a struggle with death. He defends his image, showing that his portraitist is (almost) an impostor. Polemic is not for seraphic souls, it includes a cause that needs to be claimed or defended, involves participation, a clenching of forces. **Material and methods:** Camil Petrescu's controversial arguing conceals a fierce desire for ruins; intelligence keeps illustrating the bleak imbecile of a world that refuses to acknowledge its importance. All that implies, therefore, the polemic character of the writer's work, darnness, lucidity, dialectical passion, pride, is the expression of a drama of profound social significance. The polemic spirit of Camil Petrescu's work goes beyond dialectic, giving up this image and refusing to be content to reduce the drama of the intellectual just so. The evil comes and from within shows the writer, it follows that in Camil Petrescu there was always a fighting spirit that resisted the reality in which cases, some deplorable histrionic. **Results:** The accents of pamphlet lead Camil Petrescu's response to ingratitude, when E. Lovinescu is called chubby and gray-haired child of Romanian writing or swollen rubber dragon, the voluminous amphitruon with a large head of greyish and gray soap. **Conclusions:** Caricature greets are repulsive. Revenge feeds on a black anger in which the pamphlet repeats endlessly adjectives designed to thicken the opponent's ridicule: bulky, chubby, gray, naive, sedentary, swollen.

Keywords: pamphlet, polemic, authenticity, ingratitude, revenge

V. VOICULESCU AND ORIENTAL MYSTICISM

Marti Iulia Ramona¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The present study follows the way in which the writer V. Voiculescu engages spiritually in an experience of searching the true self starting from scientific theories, through art and ultimately reaching interiorization, directing attention to spiritual beauty. **Material and methods:** Demonstrating a particular sensitivity to fascinating India, the writer craves the solitude and asceticism of the Incas, and amends the sedentary and institutionalized practices of some of the Orthodox monks. **Results:** Voiculescu surprises in his works impregnated with Hindu motives not what the two Hindu and Christian traditions have different, but what they have in common: the inner dialogue with the divinity. **Conclusions:** The study also highlights the important role of the spiritual master in the two traditions, his nearness to the Antim Group and the cordial relationship with André Scrima V. Voiculescu taking on themes and motifs that he transposes into his literary work

Keywords: illumination, religion, literature, heart, mystic

THE CAMP OF CHILDHOOD. AN ANALYSIS OF THE 2000S NOVEL

Sigartau Simona¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Trecerea la un regim democratic asigură un soi de nostalgie față de vremea ordinii generale, față de un regim care asigură traiul decent fiecărui fiu al patriei. La polul opus, nemulțumirea mocnită a dus la o serie de reproșuri față de opresiunea cu majuscule. Între aceste două tendințe, două tipuri de raportare la trecutul communist, perioada de tranziție aduce la lumină episoade dintre cele mai frapante. Astfel, dezvoltarea societății românești postcomuniste se lovește de asumarea unor episoade care au șocat lumea. **Material and methods:** Copiii instituționalizați și eliminați ca avortoni inutili și demni de dispreț, femeii obligate să devină mame, sărăcia și migrația care a dus familia la disoluție- aceste episoade au asigurat vizibilitate, cazurile cele mai șocante au devenit subiect de roman. Traducerile și receptarea romanelor care abordează astfel de teme demonstrează în mod clar faptul că periferia câștigă o poziție centrală. **Results:** Lucrearea pe care o propun urmărește felul în care categoriile sociale marginalizate și discriminate devin actori principali în romanul publicat după 2000. Exportabilitatea temelor este susținută de ecoul puternic al evenimentelor comunismului, dar și a dezechilibrului social al perioadei de tranziție. Faptul că prezentul înseamnă dezechilibru economic (din care survin sărăcia, analfabetismul și abandonul școlar, problemele de sănătate etc) asigură materialul bogat al scrierilor exportate cu succes. **Conclusions:** În mijlocul statisticilor și numeroaselor soluții, există o oglindă, o formă sinceră de răspuns la privațiuni: copilăria. Societatea se vede în jocurile ei dezechilibrate, în sexualitatea precoce și atipică, în foame, în mizerie, în lipsa afecțiunii, în lupta pentru putere și supraviețuire. Copilul devine, în literatura douămiistă, reprezentantul unei categorii expulzate. Romanul actual renunță la inocența luminoasă, copilăria devine respirație în lagăr, o zonă dark a literaturii.

Keywords: douămiism, roman, copilărie, traducere, dezechilibru

THE MOTIF OF THE FLYER IN GREEK-LATIN LITERATURES AND ITS METAMORPHOSIS IN THE ROMANIAN LITERATURE

Someșan (Crișan) Laura Alina¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Nucleul prezentului proiect este motivul Zburătorului, între conceptul antic și viziunea actuală. **Material and methods:** De la început am vrut să ofer o privire și o definiție clară a conceptului de mit, reunind viziunile de bază de până acum cu o perspectivă care ține cont de evoluția actuală a civilizației. Termenul în cauză aduce din noaptea timpurilor omenirii primitive imagini insolite, adevărate flash-uri de un remarcabil unicat. Termenul mit, ca și tema în sine sunt un teren optim pentru redefiniri, reactualizări și ar permite o asamblare a ceea ce știm până acum, făcând posibilă și o contribuție personală în acest sens. Este surprinzătoare circulația motivelor, a personajelor, existând de obicei o infuzare și o recreare a acestora, respectiv o nuanțare conformă etnosului respectiv. Miturile, alături de legende și basme, alcătuiesc în ansamblu un Univers cu lumi multipolare, fabuloase, pline de miracole, chiar și pentru omul de azi. Mitul Zburătorului este unul dintre miturile fundamentale. Zburătorul, mitul erotic, personificarea invaziei instinctului puberal, își găsește echivalentul folcloric real în domeniul povestirilor superstițioase. **Results:** Mitul folcloric al Zburătorului simbolizează înmugurirea sentimentului de dragoste la fetele aflate la vârsta adolescenței. Trăirile tinerelor fete sunt declanșate de un personaj fantastic, cu o mare putere de seducție, care apare pe însurat, le face să se îndrăgostească de el, apoi pleacă, lăsând în urma lui doar melancolie, zbucium. Este ca o boală, o dragoste pătimășă, o iubire pasională, nestăpânită, care mistuie și distruge sufletul omului. **Conclusions:** Prezenta lucrare reunește viziunea greacă asupra conceptului de eros cu cea latină, modul în care legenda lui Amor și Psyche a fost preluată din folclorul grec în literatura latină la Apuleius, Capella și Fulgentius și modalitatea în care motivul Zburătorului este perceput în literatura română.

Keywords: mit, motiv, Zburător, Eros, Amor, Psyche, Apuleius

POETS FROM BIHOR: TWO PORTRAITS OF THE POST-WAR PERIOD

Mihok –Géczi T¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: This essay is part of a larger hermeneutical study and it seeks to point out the main features of Alexandru Andrițoiu and Ioan F. Pop's poetry. **Material and methods:** Therefore, the paper consist of two parts, one for each poet's work. It attempts to render a bird's-eye view on the evolution of two of Bihor county's best poets, taking into consideration both the stilistical inflexions and switches of their work. **Results:** While Alexandru Andrițoiu represents the wave of poets emerged immediately after WW2, Ioan F. Pop is one of those poets from Transylvania, who started to reveal his work only after the '89 Revolution. **Conclusions:** Accordingly, both of them are voices strongly convulsed by major events of the Romanian history, peculiarity which had a great impact on their poetry.

Keywords: poetry, Transylvania, Bihor, Alexandru Andrițoiu, Ioan F. Pop

NATURALISM IN ROMANIAN AND GERMAN LITERATURES

Cîrcu (Crișan) Oana Carina¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Prezenta lucrare urmărește dispersarea naturalismului în context istoric și cultural și maniera în care s-a exprimat în literatura română și în cea germană. Indiferent de coloratura naturalistă, de similitudini și particularități, sursele mișcării sunt comune: naturalismul francez. Paralelismele ce se pot stabili între un scriitor și altul nu exclud deosebiri sensibile, distingem reacții ilustrative la spectacolul lumii exterioare. **Material and methods:** Ideea dominantă a naturaliștilor români este ideea șansei, spre deosebire de naturalismul francez care nu oferă posibilitatea salvării nici unuia dintre personaje. Naturalismul românesc compensează prin lirism și printr-un fel deghizat de prelucrare jurnalistică, fie în linia reportajului, fie în cea a afecțiunii discursive, ceea ce la naturaliștii francezi și germani este ostentație programatică, execuție curată anti-romantică definită prin răceala crudă a observației. Punctul de separație între naturalismul francez, german și cel românesc este determinismul biologic și cel social. Problematika naturalismului german este mai puțin dominată de fatalismul biologic și cu mai multe posibilități de reflectare a contradicțiilor și cauzelor descompunerii moralei capitaliste. În Germania mișcarea are efervescența anticonformismului francez fiind totodată preocupată să evidențieze aspectele instinctuale ale vieții. Contrastul între legea afaceristă și mediul aristocratic, mult mai șters ca în Franța, se vede înlocuit cu asaltul brutal al amărăciunii legate de neîncrederea liberarilor într-o burghezie uzurpatoare. Naturalismul german, pe un fundal social negru, de lupte incomode și apetituri materiale nesățioase, aruncă omul de rând într-o situație lipsită de salvare. **Results:** Naturalismul presupune observația exactă, documentația, care zugrăvește viața, natura cu toate tarele ei. **Conclusions:** Naturaliștii dau la iveală urâtul, prezent în realitate dar urâtul este la fel de educativ ca și frumosul, de vreme ce în acest fel este sfidată morala burgheză, iar viciul, ipocrizia, descompunerea sunt date în vileag.

Keywords: Naturalism românesc, Naturalism german, fatalismul biologic, observația exactă, natura

CHILDREN'S LITERATURE "BEHIND THE SCENES" - A SHORT PSYCHOLOGICAL APPROACH

Bejan (Pintilie) Oana Codruța¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: It is generally agreed upon the importance and the influence of literature and reading on the development of children. The benefits of reading are well known: language and cognitive development, vocabulary enrichment, imagination and creativity improvement and, at a deeper level, literature can influence such matters as a child's values, behaviour, attitudes and concepts. **Material and methods:** Many questions arise from the statements listed above: Can the influence of literature be determined and evaluated? What kind of parameters can be settled for such an evaluation? Is the writer responsible for these changes? Is he or she the only one to take credit for the changes or are there other factors that contribute to the achievement of the

expected positive changes? Can reading stories help children overcome prejudices? How long do children retain the new formed attitudes? **Results: Conclusions:** Having these questions in mind as a starting point, we intend to undertake a short analysis on the way literature operates on a subconscious level.

Keywords: children's literature, character, values, psychological approach, personality, character

A SYNTACTIC CONTROVERSY – THE REORGANISATION OF THE SYNTACTIC FUNCTIONS IN THE NOUN PHRASE

Bostenaru Elena¹

¹Facultatea de Litere, Universitatea Babeş Bolyai, Cluj-Napoca

Background: This paper aims to approach the problems risen with regard to the changes pointed out in the new grammar of the Romanian Academy: GALR 2005/2008 and GBLR 2010. **Material and methods:** GBLR 2010 confuses the whole perspective on the Romanian grammar. **Results:** This new grammar revolutionizes the idea of syntactic function in the noun phrase. Consequently, the syntactic function of attribute is divided into five new syntactic functions: determiner, quantifier, possessor, modifier and complement. **Conclusions:** Thus, we will highlight each of them, underlining if this new perspective is viable or not.

Keywords: controversy, noun phrase, syntactic function, change, viability

ISTORIE(HISTORY)

THE BOXER'S MUTINY

Bui SV¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: This article deals with a small part of China's multi-millionary history namely the rebellion of boxer. **Material and methods:** The revolt took place the end of nineteenth end early twentieth centuries and was motivated by nationalist feelings and desire of the chinese to free themselves from economic westerners domination. **Results:** In the year 1900, for 55 days the most western embassies in Beijing were besieged by boxers. **Conclusions:** Eventually the uprising was defeated by westerners. Today, the boxers uprising is regarded with a sense of pride by the chinese.

Keywords: boxers, fights, embassies, imperial court, anti-occidentalism

COLD WAR AND THE AMPLIFICATION OF THE PROPAGANDA PHENOMENON

Lateş Augusta-Manuela¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Cold War can be defined as a conflict on a world scale without major conflicts but without direct conflict between the two blocks / superpowers. It was a confrontation between capitalism and communism, Western liberal democracies and totalitarian communist regimes, the free world / open society and the anti-imperialist world / popular democracies. **Material and methods:** Diplomatic, military, economic, espionage, arms race, military coalitions, propaganda campaigns, military operations of low intensity were used. The Cold War leaves behind an important legacy, maintained by popular culture and in the media, with themes such as espionage, the threat of imminent nuclear war. We can not talk about a direct military conflict, but rather about a diplomatic and strategic expression. Both powers use all the resources to counteract the other adversary. **Results:** The media has been one of the battlefields, having a major impact on a large scale and being accessible to the widest possible audience. Propaganda is a communication process that uses certain techniques and methods to achieve its goals. Propaganda aims to form certain attitudes and to impose social stereotypes, tends to condition the individual, creating automatic mechanisms to control and manipulate social behavior. The interest in propaganda grows and its importance becomes more and more important. **Conclusions:** With strong media literacy, this side of the media is growing strongly now. The united states use it to deny the opponent and the Soviet Union to promote the communist regime.

Keywords: Long Telegram, mass psychology, audience, cinema, foreign policy

LUDUŞ PEOPLE PARTICIPANTS IN THE 1951 ANTICOMMUNIST RESISTANCE MOVEMENT

Berar AI¹, Berar Marcela²

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

²., UMFST Tirgu Mures

Background: On October 23, 1956, the anticommunist Revolution of Hungary would break out. This revolution also had a special echo in our country. **Material and methods:** On October 27, 1956, student and worker demonstrations took place in Bucharest, Iaşi, Cluj, Timişoara and the Hungarian Autonomous Region. During this period, an anti-communist activity and a group of Ludus folks were involved, including Aurel Baghiu, one of the three leaders of the student movement in Timişoara, as well as those who were part of the National Liberation Committee, a group led by Ioan Faliboga, based in Tirgu Mures. This National Liberation Committee had ramifications in several localities in the country, with both Romanian and ethnic adherents. Three anti-communist resistance groups were known in Târgu Mureş: Faliboga, Kelemen and Vereş. Within the Faliboga group were active local residents who were born or lived in Luduş. The locality was then a commune, district center (raion). Among the Luduş people

investigated were: Grigore Șofron, Maria Bogdan, Constantin Hopârtean and Ilie Olteanu. Along with them, their families also suffered. Luduș people were also active in the 1956 student movements in Timișoara. Polytechnic student Aurel Baghiu, born in Luduș-Gheja, played an important part in the protest movement. **Results:** Unfortunately, all these movements were not successful, especially due to the intervention of the Securitate, but also by insufficient preparation by those who had organized these protest actions. **Conclusions:** Those involved in anticommunist actions were investigated, humiliated, judged, and finally received hard years of detention. Some of them died in communist prisons, and those who survived suffered for the rest of their lives for their desire to change the communist regime in Romania.

Keywords: revolution, students, Faliboga, Luduș, anticommunism

HEALING IN THE SIXTEENTH CENTURY. THE USE OF METALS - ANOTHER FORM OF LAPIDARY MEDICINE

Craciuneanu Monica¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The present study aims to demonstrate that the use of metals as a cure for various ailments, in the sixteenth century, was a form of lapidary medicine. **Material and methods:** In this sense, a comparison between the method of administering alleged remedies made of metals will be compared to those made of gems, observing the similarities between the two methods. Aside for defining the concept of "lapidary medicine", the reason for choosing this particular period, will also be made clear: the sixteenth century brought forth not only the timid first steps towards modern medicine, but mineralogy as well. In this sense the work of Georgius Agricola becomes relevant since not only was he a physician, but he also became known as the "Father of modern mineralogy", due to his interest and dedication to the field. **Results:** Lapidary medicine is loosely defined as the use of different stones (precious or semi-precious) in order to heal different ailments. This sort of practice was common from ancient times, well into the sixteenth century and in some cases even beyond. It was also not uncommon to use metals along with gems, in order to prepare remedies. **Conclusions:** Most of these alleged remedies proved to be fatal, particularly those which implied the ingestion of said remedies.

Keywords: mercury, gold,, century, sixteenth, gems, remedy

THE IMAGE OF ROMA AND THE ANTONESCU'S ERA

Giurgea (Naciu-Rușcea) Florinela¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The Holocaust during the Second World War killed not only Jews but also other minority ethnic, social or minority groups, considered a danger to the purity of the race in Germany and in the satellite or occupied countries. **Material and methods:** Less well-known, the Roma Holocaust, called in their language Porrajmos, meant forcible deportations, exterminations and sterilizations to which some 500,000 people were killed. **Results: Conclusions:** The paper follows the image of this ethnic group in the period before World War II and the eugenic researches in Romania and from the European level, the interest shown by the society and the leaders of the state, as well as the extent to which they influenced the destiny of those from the ethnic group of the Roma.

Keywords: Roma, eugenic research, Porrajmos, Holocaust, Antonescu

THE VISIBLE EXPRESSION OF AN INVISIBLE HISTORY

Puia Ecaterina¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: Tema prelegerii mele - Expresia vizibilă a unei istorii invizibile -o abordare imagologică, o viziune asupra romilor in istoriei- este de actualitate in contextual societății contemporane, având in vedere că romii reprezintă una dintre cele mai vechi

comunități etnice din România și una dintre cele mai numeroase. **Material and methods:** Raportul cu trecutul și cu celălalt apare adeseori ca o împletire de elemente transmise sau comunicate de un om sau o comunitate care trăiește după alte norme decât ale majorității și care ne sunt străine sau neconforme pentru că acei oameni au trăit altfel decât noi în decursul secolelor. Obiectivul principal îl constituie realizarea unei incursiuni istoriografico-imagologă care să vizeze existența acestei comunități, "cuceritori fără a purta războaie". Perspectiva istorică propusă în cadrul lucrării este fundamental în înțelegerea stării actuale. Trecutul romilor, marcat profund negativ de secole de robie, a lăsat urme adânci, până în ziua de astăzi, atât în dezvoltarea spirituală de-a lungul timpului a acestei comunități, cât și în relația romilor cu societatea. În prezent se confruntă cu teamă vizibilă de asumare a identității, de teama stigmatizării. **Results:** Neîncluderea problematicii romilor în politicile publice a condus la recăderea acestora în status-ul anterior și la stigmatizarea apartenenței etnice. În prezent, sechelele robiei sînt încă vizibile la populația țigănească. Secole întregi de aservire au știrbit încrederea țiganilor în propriul viitor, le-au șubrezit spiritul de inițiativă, dinamismul și au generat un soi de fatalism în fața evenimentelor, mergînd de la resemnare pînă la agresivitate. **Conclusions:** Mentalul colectiv alterat față de romi a construit stereotipul negativ, iar mentalul colectiv rrom, a internalizat și a întărit stereotipul negativ. Cu toate acestea acest "alterat" al istoriei, cuceritor fără a fi războinic, oferă o magistrală lecție de supraviețuire care îl preschimbă din victimă în învingător. Vorbim de o comunitate etnică care a dezvoltat nativ un orgoliu al supraviețuirii.

Keywords: imagologie, supraviețuire, identitate

THE REFORM OF THE EDUCATIONAL LEGISLATION, A NECESSARY DESIDERATUM FOR THE SOCIETY'S MANIPULATION IN COMMUNISM

Ciula Cl¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: În perioada comunistă totul era foarte bine controlat, totul foarte bine gândit, nimic nu era lăsat la întâmplare, astfel se ajunge la o nivelare socială radicală, care trebuia pusă în aplicare cât mai repede de o serie de oameni foarte fideli acestei noi guvernări. **Material and methods:** La început pentru implementarea acestor directive s-au folosit, de vechii specialiști și profesori care au îmbrățișat noua ideologie de partid, dar au fost și o parte a acestora care nu au renunțat la idealurile lor, dar au avut mult de suferit, fiind alungați din instituții, întemnițați sau și mai rău, o parte din ei asasinați. Astfel prin eliminarea acestora se ajunge la o situație paradoxală în care pe plan intern era nevoie de noi cadre bine ideologizate, bine resetate mintal pentru a duce la bun sfârșit procesul de comunizare a țării. Pentru a realiza această sarcină, una din reformele care a ajutat enorm și care s-a dovedit vitală pentru viitorul societății comuniste a fost reforma învățământului. **Results:** Aceasta a suferit modificări în funcție de orientările dictate de către conducerea partidului mult iubit. **Conclusions:** Astfel în articol este redat cum a fost modificată reforma educațională în perioada de stalinizare a României din 1948 până în 1968, când cu ajutorul acesteia se reușește crearea de noi cadre în învățământ precum și în alte domenii; reforma educațională din 1968 necesară pentru implementarea noilor direcții pentru cadrele noi formate; modificările survenite după revoluția culturală din 1971 și implementarea acestora în noua legislație care intră în vigoare în 1978 și care cimentează regimul naționalist socialist din România.

Keywords: Reformă educațională, minirevoluție culturală, istoriografie, regim comunism

REPRODUCTION OF THE ELITES. TRANSNISTRIA CASE

Cazac D¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The Phenomenon of reproduction or transformation of elites can be observed especially in the South-Eastern Europe in the states that were under U.S.S.R. control. **Material and methods:** Depending on the flexibility of the political regime, the reproduction of elites was specific to each of these states. The case of Republic of Moldova, and implicitly, Transnistria, was a more dramatic one comparing to its neighbours, that resulted into an armed conflict. The research implied consultation of different articles and scientific material, written by Moldovan, Transnistrian and foreign authors. As well, some official documents were consulted from archives. **Results:** The key factors that influenced the Transnistria separation and determined the transformation of the local elite can be considered - the lack of capacity of the elites from Chisinau to manage the situation created by the national liberation movement and a strong support for separatist from Moscow. **Conclusions:** Present paper aims to reflect the evolution of

the elites from Transnistria and to identify the particularities of its transformation.

Keywords: crisis, coup, communism, war, nationalism

THE IDEA OF EUROPE UNITED IN THE SECOND INTER-WAR DECADE

Standavid AG¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The great economic crisis between 1929-1939 was the major event that marked deeply the period between the Two World Wars. At the turn of the two decades of the inter-war period, the economic crisis would also delineate inter-war relations.

Material and methods: In this climate of skepticism and lack of perspective, the project of unification of French Foreign Minister Aristide Briand was highlighted. **Results:** Recognized internationally as a leading figure with extensive diplomatic experience, Briand is distinguished by its constant activity open collaboration among states, dialogue and cooperation in promoting the idea of ~~XXXXXXXXXXXX~~tensions and collective security. In this regard, the Briand-Kallergi Project - a peace project promoted under the aegis of the League of Nations - was noted. The Briand project, dating back to 1932, is considered to be the best structured and conceived project with a visionary perception. It will be found over the decades implemented in post-war European construction.

Conclusions: The failure of this project was largely due to the economic crisis, international relations amid tension rise of right-wing regimes corroborated with the conciliation policy and the hesitant attitude of the League of Nations - the international policy chief.

Keywords: economic crisis, project, Briand, collaboration

TRANSYLVANIA IN THE VENICE CHRONICLES AT THE END OF THE XIV CENTURY AND IN THE XVII CENTURY

Cosma L¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: At the end of the sixteenth century and during the first half of the seventeenth century, Venice was subject to unprecedented pressures, facing economic crises, demographic stagnation, wars that ended with great losses of territory and strategic positions (Cyprus, 1571 and Crete, 1669). **Material and methods:** With regard to this specific and general European context of relations with the Ottoman Empire, there should be included the relations of Serenissima with Transylvania and the contributions of the analyzed authors to the shaping of the previously mentioned context. The authors referred to in this research can be included into the category of those who have written an ecclesiastical history and / or political history, their works and edited historical sources, being useful for the nuanced recollection of the evolution of the relations between Serenissima and Transylvania from 1571 to 1669. These authors can be placed in the general Italian context of historical writing (appetite for a recent and general, universal history) of the analyzed period, due to their original themes, forms and solid intellectual Abstract. Their references with regard to Transylvania highlight the predilection for general events (wars, peace talks, personalities, international relations, etc.). **Results:** They mostly rely on the observations and information of some direct participants to the events, most of them visiting, fulfilling diplomatic missions, having administrative positions beside the Transylvanian personalities of the time. Besides the quality of the information, it impresses with the large number of authors (12) and works (20) that refer directly to Transylvania and its relations with Serenissima. **Conclusions:** Although the authors present or analyze in a complex and relevant manner the situation of Transylvania from a geographical, economical, financial, ethnical, political, etc. point of view, we must take into consideration that their works are rather chronological, not logical, analytical, without diminishing their value as documentary sources.

Keywords: Transilvania, Veneția, cronicarii de la sfârșitul secolului al XVI-lea și

THE ROMANIAN REVOLUTIONARIST POLITICS IN THE HABSBERG PERIOD BETWEEN 1848-1849

Gyenge J¹

¹Scoala Doctorala de Litere, Stiinte Umaniste si Aplicate, UMFST Tirgu Mures

Background: The revolution of Romanians from Transylvania is mentioned among the revolutionarist events from the European Habsburg Empire, but it has strong connections with the revolutionarist pasoptist movement which took place in Romanian Danubian Principalities. **Material and methods:** The previous events, from 1847, which wanted an urban regulation, created a general dissatisfaction of the poor and made sensitive the spirits of the Romanian Transylvanian elite, created a high tension, with social and national tempt, on which baze the news about the eruption of the revolution in Vienna and Pesta aimed at the transformation of the absolutist regim into a constitutional monarch, given rise to a true revolutionis fever. **Results:** The revolution between 1848-1849 was a bourgeois-democratical one which had as orders of the day the main problems, social and national of Transylvania, like the abolishment of the serfage, and the national freedom of Romanians. **Conclusions:** The revolution was against feudalism, absolutism, and had a bourgeois-democratical character, as a result of the program of the revolution and the social forces.

Keywords: revolution, elite, to free, nation, absolutism

MEDICINĂ CLINICĂ (CLINICAL MEDICINE)

DIABETES MELLITUS-RELATED ATRIAL PROARRHYTHMIC REMODELING IN PATIENTS WITH STABLE CORONARY ARTERY DISEASE

Serban RC¹, Pintilie Irina², Somkereki Cristina¹, Perian M¹, Chinezu Laura³, Banescu Claudia⁴, Scridon Alina¹

¹Department of Physiology, UMF Tîrgu Mureş

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³Department of Histology, UMF Tîrgu Mureş

⁴Department of Genetics, UMF Tîrgu Mureş

Background: Diabetes mellitus (DM) has been incriminated as a contributor to atrial fibrillation (AF) occurrence. We aimed to assess whether DM is associated with atrial proarrhythmic remodeling in patients with stable coronary artery disease (CAD) undergoing coronary artery bypass grafting (CABG) surgery. **Material and methods:** Data regarding atrial electrical (ECG and action potential parameters), structural (left atrial size, inflammatory and adipocyte infiltrates, fibrosis), autonomic (sympatho-vagal tone), and molecular (expression of CACNA1C, SCN5A, GJA5, KCNQ1, KCNE2, KCNJ2) proarrhythmic remodeling were compared between 11 diabetic and 19 non-diabetic patients with stable CAD and no AF history. Pre-CABG and post-CABG atrial arrhythmias were evaluated using Holter ECG monitoring. **Results:** All baseline characteristics were similar between patients with and without DM (all $p > 0.05$). Action potential and ECG parameters, and the expression levels of the six studied genes were also similar between the two groups (all $p > 0.05$), but the low frequency-to-high frequency ratio of the heart rate variability was significantly lower in diabetics ($p = 0.01$). There were no significant between-groups differences regarding left atrial size, inflammatory infiltrates, or fibrosis (all $p > 0.05$), but diabetics presented more subepicardial adipose tissue than non-diabetics ($p = 0.02$). The number of pre-CABG atrial premature beats and the occurrence of post-CABG AF were also similar between the two groups (both $p > 0.05$). **Conclusions:** With the exception of higher vagal tone and more subepicardial fat, diabetics displayed similar atrial proarrhythmic remodeling and similar pre- and post-CABG atrial arrhythmic burden with non-diabetics. These data suggest that, by itself, DM does not cause sufficiently important atrial remodeling to ensure the occurrence of atrial arrhythmias. This work was supported by a grant of the Ministry of Research and Innovation, CNCS-UEFISCDI, project number PN-III-P1-1.1-TE-2016-0382.

Keywords: atrial arrhythmias, diabetes mellitus, ischemia, remodeling

¹H NMR RELAXOMETRY, NEW METHOD IN EVALUATING THE HEALING PROCESS IN PERIPHERAL NERVE INJURIES?

Bumbu Anamaria Victoria¹, Fecete R², Perian M³, Brinzaniuc Klara¹, Muhlfay G⁴

¹Department of Anatomy, UMFST Tîrgu Mureş

²Physics, Technical University of Cluj-Napoca

³Department of Physiology, UMFST Tîrgu Mureş

⁴Department of Otorhinolaryngology, UMFST Tîrgu Mureş

Background: A challenging subject in plastic surgery is the hand trauma, especially the peripheral nerve injuries and their reconstruction methods. Nerve regeneration process takes time, and it is important as surgeon to know what type of reconstruction method to use, and also how to assess if the nerve healed or not. In vivo and in vitro experimental methods like electric conductivity and ¹H NMR relaxometry correlated with inverse Laplace analysis, were combined to characterize the regeneration process after peripheral nerve injuries. The objective of this study is to evaluate the nerve regeneration, after reconstruction either with direct suture or silicone graft. **Material and methods:** Two equal groups of sixteen Wistar Albino rats were used in this study. The left sciatic nerve was interrupted and reconstructed using for the first group direct suture, and for the second group silicone graft. After the surgery, at 4, 6, 8 and 10 weeks the rats were euthanized and ¹H NMR relaxometry measurements were performed. **Results:** ¹H NMR transverse relaxation time T_2 -distributions were obtained and characterized as water content associated with blood vessels reservoirs, epineurium, perineurium, endoneurium and collagen fibers. We found that: i) the first component of an advanced PCA (principal component analysis), is able to differentiate the healthy from injured sciatic nerve mainly due to in vivo

electric conductivity and water content in epineurium, perineurium and endoneurium; and ii) the second PCA component can differentiate between the two types of reconstruction via bound water to collagen fibers. **Conclusions:** We combine, for the first time, the ^1H NMR relaxometry measurement with in vivo and in vitro electric conductivity measurements to assess the peripheral nerve regeneration after injury. It was demonstrated that the direct suture reconstruction leads to a better regeneration than the silicone graft.

Keywords: Anatomy, Plastic surgery, peripheral nerve regeneration, ^1H NMR relaxometry

THE INFLUENCE OF NICOTINE AT SOCIAL ADJUSTMENT LEVEL OF THE SCHIZOPHRENIC PATIENT

Barbu B¹, Burus (Muresan) Daniela¹, Gabos Grecu I¹

¹Department of Psychiatry, UMFST Tîrgu Mureş

Background: Schizophrenia is the most severe mental disease, which affects the adults and young persons worldwide. Regardless of progress made by antipsychotics, patients have a bad social integration with many modifications on day to day skills. Smoking is often met at schizophrenic patients and has 62% prevalence, almost three times more than general population. The smoking is major contributor factor to standardized mortality rate in schizophrenia, almost double than general population. Various theories made association between smoking habits and schizophrenia. One of them is self medication theory. In regards to smoking the mechanism include the possible regulation of available dopamin at CNS level. **Material and methods:** 20 patients have been randomly assigned on 4 groups with different intakes of nicotine additional to their smoking habits. The patients have been evaluated one week before nicotine intake, two hours after intake and one week after nicotine intake. The batteries used were : MCCB, SAS, PANSS **Results:** Three out of four groups presented a slight cognitive improvement after alternative nicotine intake. The control group in which patients resumed their regular smoking habits, were requested to smoke two cigarettes two hours before testing did not presented any improvements during all three consecutive testing. For groups where patients were administrated additional nicotine intakes (chewing tobacco; sniffing tobacco and nicotine patch) they showed cognitive improvements after additional nicotine intake, but one week after additional nicotine intake, their subsequent cognitive performances aligned with initial testing. **Conclusions:** As a result of patient testing we can conclude there is an association between clinical symptoms, nicotine addiction and social adjustment. Nevertheless a causal connection can't be established, but a relationship between nicotine addiction and psychotic symptoms may have a certain value on smoking management for schizophrenic patients. More longitudinal studies in which a larger number of patients to be included are necessary to explore this situation.

Keywords: Psychiatry Department, Schizophrenia, Schizophrenia, nicotine addiction, self medication

A NEW SURGICAL NAVIGATION METHOD FOR FINE NEEDLE BIOPSY OF THE SKULL-BASE

Fábián Z¹, Németh Z², Sándor B²

¹Department of Oral and Maxillofacial Surgery, UMFST Tîrgu Mureş

²Department of Oral and Maxillofacial Surgery, Semmelweis University

Background: The pterygopalatine fossa (PPF) is a key region of the skull-base, it serves as a neurovascular crossroad between different regions of the skull. We present the application of a new method in a case of a 35 years old female patient with a history of adenoid cystic carcinoma (ACC), multimodally treated 10 years ago. During the latest follow-up, a high intensity mass in the PPF was identified on the T2 weighted MRI, raising the suspicion for ACC metastasis. **Material and methods:** We have planned a fine needle aspiration cytology (FNAC) of the lesion. In order to minimize the odds for a false negative result, the authors decided to carry out the procedure through the maxillary sinus with the help of a needle guiding navigation device. The MRI of the patient was registered with the CT scan using landmarks from the skull-base. The model of the skull and lesion was obtained by means of segmentation of the CT scan and left PPF region from the MRI. The navigation guide was printed on 3D printer using steam-serializable resin. **Results:** The aspiration procedure was carried out. Using a quick staining procedure, the result of the cytology was delivered shortly after the aspiration. The diagnosis confirmed the ACC. The patient was referred to stereotactic gamma ray

therapy. **Conclusions:** This new minimal invasive method assures the precise aim of the lesion minimizing false negative results. It is a zero-day foolproof method, unlike dynamic navigation does not rely on the ability of the surgeon to react to visual feedback from the monitor of the navigation device. The calibrated length of the lesion does not allow the needle to pass behind the lesion. It is cost effective, it can be used in an outpatient base, even in local anesthesia.

Keywords: surgical navigation, surgical guide, fine needle cytology, adenoid cystic carcinoma

THE IMPACT OF LYMPH NODES ON SURVIVAL IN PATIENTS WITH ANORECTAL CANCER

Fülöp ZZ¹, Gurzu Simona², Bara T¹, Bara Jr. T¹, Drágus Emóke³, Baniaş Laura², Jung I²

¹Department of Surgery II, UMFST Tîrgu Mureş

²Department of Pathology, UMFST Tîrgu Mureş

³Department of Urology, UMFST Tîrgu Mureş

Background: The lymph node status in rectal cancer represents a major prognostic factor in terms of survival. An inadequate node sampling or a wrong examination can result an inaccurate staging and an incorrect treatment. We intended to verify the role of the total number of lymph nodes and the lymph node ratio on the tumor staging and on the overall survival rate. **Material and methods:** We conducted a retrospective study, which targeted 276 anorectal cancer patients, who undergone surgery during April 2013 and March 2018 at the 2nd Surgery Department in Târgu Mureş, Romania. Our study data was based on the clinical and histological records of the patients. We evaluated patients' characteristics, their overall survival rate, respectively the number and status of lymph nodes. **Results:** The mean age of patients was 65.22 years. A significant correlation was observed between the total number of lymph nodes harvested and the tumor stage ($P < 0.001$). We found a significantly strong correlation among the lymph node ratio and the tumor stage ($P < 0.0001$). The association of the lymph node ratio with the survival rate resulted a significant negative correlation ($P < 0.001$). **Conclusions:** The fact that a statistically significant correlation was present between the lymph node ratio and the survival rate, demonstrates that the lymph node ratio is able to serve as an independent predictor of disease free and overall survival. Dissimilarly to the lymph node ratio, the total number of lymph nodes harvested cannot serve as a reliable independent predictor of the survival rate. **Acknowledgement:** This work was supported by a grant of the Romanian National Authority for Scientific Research, CNCS – UEFISCDI, project number 20 PCCF/2018, code: PN-III-P4-ID-PCCF-2016-0006

Keywords: anorectal cancer, lymph nodes, tumor stage, survival rate, correlation

MEDICAL HYPNOTHERAPY IN CASES OF BOURNOUT

Mariş Adina¹, Nireştean A¹, Gabor Elena²

¹Department of Psychiatry, UMFST Tîrgu Mureş

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Background: The aim of this paper is to highlight the importance of medical hypnotherapy ☒☒a short-term therapeutic method ☒☒ in addressing cases of burnout. Launched in the US, medical hypnotherapy is very effective in the treatment of many ailments. This paper is part of a comprehensive study and includes 3 case studies that are representative for the applicability of medical hypnotherapy in cases of burnout. Having a very high incidence in all work environments, burnout syndrome has been treated so far by conventional methods -- drug treatment and psychotherapy ☒☒the utility of hypnotherapy in burnout therapy remaining to be confirmed. **Material and methods:** From a group of 30 patients on whom medical hypnotherapy was applied, 3 representative cases were selected. Two types of sessions were applied: optimization of beliefs using positive suggestions and regression to the root causes of patient's issues. Each patient was tested before and one month after therapy, using a set of psychological stress tests (MBI), dimensional and categorical aspects of personality (DECAS, PID5), symptomatology (Hamilton), aspects of occupational stress (JSS, ASSET), stress correlation with personality type A (SWS). Each patient participated in 3-6 sessions, due to different individual reactivity. The results were observed immediately after the first session, confirming the effectiveness of the method. **Results:** Following the medical hypnotherapy sessions, all patients showed improvements in the psychological functions (memory, attention, motivation, will), improvements in the decision making, developed a stronger positive ego, better communication and social skills, reduction of stress and exhaustion, reduction of chronic fatigue and increase in the quality of life of patients in all cases.

Conclusions: Medical hypnotherapy is very effective in burnout syndrome therapy because it is acting directly on the patient's

subconscious, which can implement positive changes in the depth of his or her psyche with beneficial effects on their personality and quality of life.

Keywords: medical hypnotherapy, patient, efficacy, burnout s

CONSERVATIVE TREATMENT OF UTERINE FIBROID-ACTUALITIES AND PERSPECTIVES

Bodi Zsuzsanna Valeria¹

¹Department of Gynecology I, UMFST Tîrgu Mureş

Background: Background: Symptomatic uterine fibroid commonly needs surgical treatment, but a high number of patients prefer a less invasive intervention because of shorter recuperation and preservation of fertility. Objective: Evaluation the rate of reintervention after myomectomy (abdominal, laparoscopic and hysteroscopic), endometrial ablation (EA) and embolization of the uterine artery (UAE) at patients with uterine fibroid and identification predictive factors for reintervention as like patient characteristics and comorbidities. **Material and methods:** analysis of current literature. **Results:** The highest rate of reintervention was observed after EA, then after UAE and myomectomy. During first year post intervention necessity of reintervention was three times higher for EA and double for UAE compared to myomectomy. Mean period until reintervention was 149 dys for myomectomy, 158 days for EA and 175 days for UAE. For myomectomy subtypes rate of reintervention was the highest for hysteroscopic and the lowest for abdominal method. Estimated reintervention rate for five years was three times higher for all of procedures than in the first year. For myomectomy subtypes this estimation was the highest for abdominal procedure. Survival without reintervention was significantly lower after EA and UAE than after myomectomy. Main predictive factors for potential reintervention were: age, presence of associated comorbidities like abdominal and pelvic pain, excessive bleeding, anemia, pelvic inflammatory disease. **Conclusions:** EA and UAE were associated with increased risc of reintervention. Patient characteristics and comorbidities have a high influence in postoperative outcomes. Estimated rate of reintervention should be an important consideration in patient management.

Keywords: fibroid, hysterectomy, myomectomy, embolization, ablation

INFLAMMATORY SERUM BIOMARKERS IN ANEURYSMAL SUBARACHNOID HAEMORRHAGE AS A PROGNOSTIC FACTORS OF DELAYED CEREBRAL ISCHEMIA

Gherasim ND¹, Balasa A¹, Balasa Rodica¹

¹Department of Neurology, UMFST Tîrgu Mureş

Background: Subarachnoid hemorrhage (aSAH) has a high mortality rate and survivors of early brain injury suffer from delayed neurological deficits. Delayed cerebral ischemia (DCI) increases both mortality and morbidity. Reliable biomarkers reflecting the severity of the delayed brain injury could be beneficial in patients who survive early brain injury. The main objective of this presentation is to review the current literature regarding the biomarkers linked to the inflammatory response after aneurysmal subarachnoid hemorrhage. The primary goal of this thesis will be to examine multiple peripheral serum biomarkers for their prognostic potential and association with selected clinical and imagistic variables after aSAH **Material and methods:** To accomplish this goal we intend to conduct a review of the current literature regarding inflammatory biomarkers in order to select the ones most likely to offer correlation with delayed cerebral ischemia. The selected biomarkers will be tested in a prospective, observational, single-center clinical study at Targu Mures University Hospital. **Results:** Several inflammatory biomarkers that are elevated after SAH have been reviewed in multiple papers. Despite some promising studies indicating that blocking these markers might benefit patients after aSAH, there have not been successful clinical trials linking inflammatory biomarkers to delayed cerebral ischemia. In the acute period after aSAH, IL-1, IL-6, S100 β , CRP, show promising results. Each of these biomarkers has been demonstrated to correlate with neurological outcome, however, they don't have the sensitivity and specificity needed for use in clinical practice. **Conclusions:** This paper reviews biomarkers that used in combination with current imaging examinations such as trans cranial Doppler, may potentially monitor and predict patients with risk of delayed cerebral ischemia and may improve their outcome by determining the right timing of therapeutic intervention.

Keywords: subarachnoid haemorrhage, inflammatory biomarkers, delayed cerebral ischemia, transcranial Doppler, modified Rankin score

SEX-BASED DIFFERENCES OF MULTIPLE SCLEROSIS PATIENTS TREATED WITH INTERFERON BETA-1B – AN ANALYSIS OF THE PERIPHERAL IMMUNE PANEL

Barcutean Laura Iulia¹, Andone S¹, Romaniuc Andreea¹, Maier Smaranda¹, Bajko Z¹, Balasa Rodica¹

¹Department of Neurology, UMFST Tîrgu Mureş

Background: Multiple sclerosis (MS) is a chronic, immune-mediated disease of the central nervous system, characterized by two entwining processes: demyelination followed by axonal loss, neurodegeneration. The predisposition for women to be affected by auto-immune conditions, such as MS is well-known and much attention has been directed towards studying this phenomenon. **Material and methods:** The objective of the current paper was to analyze the peripheral immune panel of recurrent-relapsing MS patients (RRMS) treated with interferon β -1b (IFN β -1b) and to identify the different immune responses based on gender differences. 35 female patients and 18 male patients with RRMS treated for more than 10 years with IFN β -1b were selected, defining two groups: F-RRMS respectively M-RRMS. The evaluation was based on the clinical status calculated by Expanded Disability Status Scale (EDSS), the evolution of the disease, annual relapse ratio (ARR) as ARR_0: the total number of recurrences and ARR_1: recurrences on treatment. A peripheral immune panel that included pro and anti-inflammatory was assessed in all patients. **Results:** For F-RRMS the following significant positive correlations were found: IL_17F and ARR_1, TNF α and EDSS and a negative correlation between TNF α and ARR_1. For M-RRMS we found positive significant correlations for TNF α and EDSS and TNF α and ARR_0, respectively negative correlation between IL_21 and EDSS. No significant correlations between IL_17F and the other variables were found for the M-RRMS group. **Conclusions:** IL_17F levels, markers of active inflammation tend to correlate with a high number of relapses on treatment, indicating that in females, a higher activity can be monitored using said biomarker. The levels of TNF α correlated in both groups with a higher disability status but lost its specificity in the female patients regarding the activity of the disease, a possible indicator of long-term IFN β -1b exposure.

Keywords: Pathophysiology, Cytokines, Multiple Sclerosis, Auto-immunity, Interferon beta

10 YEARS OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN OUR CLINIC: PRELIMINARY DATA

Mocian F¹, Benedek Z¹, Rosca Ancuta¹, Sorlea S¹, Coroş M¹

¹Department of Surgery III, UMFST Tîrgu Mureş

Background: Global epidemic of obesity is one of the major health issues in the twenty-first century. Laparoscopic sleeve gastrectomy (LSG) has rapidly gained popularity as a primary bariatric procedure. This study aims to analyze the preliminary data of our 10 years experience in LSG. **Material and methods:** We performed a retrospective review of our database of LSG performed from November 2008 to November 2018 as a primary bariatric procedure. **Results:** A total of 218 LSG were analyzed and 121 patients (56%) were women. The mean patient age was 43 years (range from 20 to 67) and mean preoperative body mass index was 44 kg/m² (range from 35 to 78). The mean operative time was 90 min (range from 40 to 330) with a mean hospital stay of 4 days (range from 2 to 17). **Conclusions:** LSG is becoming the most performed bariatric procedure, despite the sparse long-term follow-up data. In this study we took the first step in analyzing the preliminary data, continuing in the future with another study in which we will analyze the follow-up results.

Keywords: Surgery, Bariatric surgery, Laparoscopic sleeve gastrectomy, Obesity, Preliminary data

PRIMARY OSTEOSARCOMA IN URINARY BLADDER- CASE REPORT

Deé Edith¹, Loghin Andrada², Chibelea C³, Borda Angela²

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Histology, UMFST Tîrgu Mureş

³Department of Urology, UMFST Tîrgu Mureş

Background: Extraskelatal osteosarcomas are rare, highly malignant mesenchymal tumors. Their most important feature is production of osseous matrix, which is not connected to the bone or periosteum. Usually are located on the lower, upper extremity and retroperitoneum. Only a few cases were reported in the bladder (37 cases). **Material and methods:** A 44-year-old male was admitted to our clinic, with a 2-month history of dysuria and flank pain. Cystoscopy revealed an exophytic mass in the bladder, which was sampled during transurethral resection and sent for histopathological evaluation. Cystoprostatectomy was performed based on previous result. **Results:** Macroscopic examination of the surgical specimen revealed an exophytic tumor placed on the anterior wall of the bladder, involving the lateral walls also. The mass measured 33x60 mm, it was grayish and solid. Microscopically the tumor was composed of atypical, oval to spindle shaped cells rimmed by osteoid, which was mineralized and deposited as irregular trabeculae with malignant osteocytes. No epithelial component was found in the surgical specimen. The tumor invaded the muscular layer of bladder, without extension to the perivesical fat, but the prostate was infiltrated. Stage pT4 was established. **Conclusions:** Osteosarcoma in the urinary bladder are rare tumors, with aggressive behavior and poor prognosis. Usually are advanced stage at presentation, like in our case pT4. The stage of disease at the time of diagnosis is the best predictor of survival.

Keywords: extraskelatal, osteosarcoma, rare, aggressive, osseous matrix

THYPRO AND THYPRO-39: THE ROMANIAN LONG AND SHORT VERSION OF THE THYROID-SPECIFIC QUALITY OF LIFE QUESTIONNAIRE THYPRO

Zahan Elena Ancuța¹, Torquil Watt², Paşcanu Maria Ionela³, Nădăşan Valentin⁴, Nechifor-Boilă Adela¹, Merlan Iulian³, Borda Angela¹

¹Department of Histology, UMFST Tîrgu Mureş

²Department of Endocrinology, Copenhagen University Hospital Rigshospitalet, Copenhagen, Denmark

³Department of Endocrinology, UMFST Tîrgu Mureş

⁴Department of Hygiene, UMFST Tîrgu Mureş

Background: Thyroid disorders are almost never life-threatening but they may have significant impact on patients' quality of life (QoL). ThyPRO is a thyroid-specific QoL recently developed questionnaire, applicable to patients with benign thyroid disorders. The aim of our study was to develop a validated Romanian version of the ThyPRO questionnaire. **Material and methods:** Thyroid disorders are almost never life-threatening but they may have significant impact on patients' quality of life (QoL). ThyPRO is a thyroid-specific QoL recently developed questionnaire, applicable to patients with benign thyroid disorders and measuring relevant aspects of patients' QoL. The aim of our study was to develop a validated Romanian version of the ThyPRO questionnaire, both long version (ThyPRO) and short version (ThyPRO-39). Standard methodology for translation and linguistic validation of patient-reported outcomes (PRO) was applied. The questionnaire was completed by 130 patients with benign thyroid disease seen at Department of Endocrinology in Emergency County Hospital, Tîrgu Mureş, Romania between October 2015 and March 2016. Internal reliability of the Romanian version of the ThyPRO (ThyPRO) scales was assessed for multi-item scales using Cronbach's alpha coefficient. Cross-cultural validity is analysis of differential item functioning (DIF). **Results:** The translation process proceeded without difficulties and any disagreements were accepted by the developer. Cronbach's alpha coefficients for these 13 scales ranged from 0.78 to 0.93 for the ThyPRO (85-item) and 0.784 to 0.867 for the ThyPRO-39. In the 85-item ThyPRO, nine instances of DIF were found, and most were minor, explaining <3% of the variation in scale score, but DIF in positively worded items were larger, with R²'s around 10-15%. **Conclusions:** ThyPRO is a validated version of original ThyPRO questionnaire and is ready for use for assessing health-related quality of life in Romanian patients with benign thyroid diseases.

Keywords: benign thyroid disease, quality of life, questionnaire, Romanian versions

THE HOLISTIC APPROACH OF THE PATIENT WITH DEPRESSIVE AFFECTIVE DISORDER THROUGH COMPLEMENTARY THERAPIES

Buruş (Mureşan) Daniela¹, Gaboş Grecu I¹, Barbu B¹, Sabău (Curticăpean) Daniela¹, Sălcudean Andreea¹

¹Department of Psychiatry, UMFST Tîrgu Mureş

Background: Biorezonance is part of alternative medicine, which complements allopathic medicine. Biorezonance therapy is individualized according to the biorhythm of the treated person and incorporates high and low potencies. Biorhythm regulates and controls the oscillatory frequencies of the human body to initiate precise healing processes. **Material and methods:** The study is conducted on 34 people diagnosed with depressive affective disorder of varying degrees who are treated with biorezonance therapy with the help of a biorezonant medical device. The first biorezonance method, of the 34 patients participating in the study, 28 had values of the hyporeactive biorhythm, 2 patients were normal and 4 had hyperactivity biorhythm values. According to the Hamilton Depression Rating Scale from the 34 patients in the study, 14 were in poor depression, 19 were in moderate depression and 1 in severe depression. The evaluation of the depression was done with the Hamilton scale at the beginning and at the end of the 10 biorezonance therapy sessions once a week and the biorhythm measurement. **Results:** After 10 biorezonance therapy sessions. In the evolution of biorhythm, we note that 8 patients are no longer hyporesponsive, 6 of them reaching normal values; and 2 of them have a hyperreactive biorhythm, which means they are unstable, the rest of the patients did not show significant changes. According to the Hamilton scale, of the 34 patients: 8 have recovered, 19 are in mild depression and 7 are in moderate depression. **Conclusions:** The biorhythm of patients with depressive affective disorder improved by 19% after the 10 biorezonance therapy sessions. According to the Hamilton scale, 23.52% of all patients have no depressive affective disorder. Biorezonance treatment is useful in depressive patients.

Keywords: Psihiatrie, Clinica de Psihiatrie nr.1 Tg.-Mureş, Depression, biorezonance, therapy, complementary m

THE MENINGIOMA- STATISTIC STUDY

Stemate Cecilia¹, Bondari Simona¹, Trifan F²

¹Department of Radiology, UMF Craiova

²Department of Neurology, UMF Craiova

Background: Meningiomas are the most frequent benign brain tumours, with symptoms that typically begin gradually and depend on which part of the brain is being affected (headaches, changes in vision, weakness in an arm or leg, seizures, changes in personality or confusion, memory loss). **Material and methods:** We analysed the statistical data of the patients admitted in the neurology hospital in Craiova, over a period of 6 years (2011-2016) to determine the incidence of meningioma, as well as the age and gender distribution, in order to compare them with international ones. **Results:** The meningioma incidence over 6 years, with gender and living area repartition, shows that it is more common in women, with no major differences in rural or urban area. From the total of patients admitted in the clinic, under 1% were diagnosed with meningioma. Concerning the age distribution, it was obviously that it is more common in patients in the age interval 55-84, most of them arriving with other diseases, but the CT or MRI scan revealed the existence of the meningioma. In the United States, the annual incidence of symptomatic meningiomas is approximately 2 cases per 100,000 individuals. Incidence rates increase with age, with an increase in adults age 65 and older. Women are diagnosed more often than men. International. The overall incidence of meningioma in Norway is 1.5 per 100,000 population among men and 2.8 in women. The incidence in Italy is 13 per 100,000 population. The frequency of meningiomas in Africa is nearly 30% of all primary intracranial tumors. **Conclusions:** The results confirm the United States and Norway statistics: meningiomas are more common in women, and their number is higher after 60 years old, but with a higher incidence of 5 patients at every 100,000 in our study.

Keywords: neurology, radiology, meningioma, incidence, age distribution

TOXIC MEGACOLON AS A COMPLICATION OF CLOSTRIDIUM DIFFICILE INFECTION AFTER AN ODONTOGENIC ABSCESS: A CASE REPORT

Benedek Z¹, Sorlea S¹, Mocian F¹, Rădoi Cristina¹, Oancea Ruxandra¹, Suciuc N¹, Coroș M¹

¹Department of Surgery III, UMFST Tîrgu Mureș

Background: Clostridium Difficile is the major cause of nosocomial antibiotic-associated infection with the main symptoms of diarrhea and life-threatening inflammation of the colon. Surgical intervention may be necessary in up to 80% of patients due to the complications of the enlarged bowel, perforation and even Gram-negative sepsis following pathological changes in the intestinal mucosa. The potential risk of progressing to severe clinical outcomes sometimes is unpredictable and the mortality rate could be 50% even after proper medical treatment and surgical intervention. **Material and methods:** We report a case of a 24-year-old female who was admitted to a municipal hospital with clinical signs of an odontal inflammatory process. After repeated surgical treatment and antibiotherapy (fluorokinolones) she presented acute abdominal pain on the 14. postoperative day. The explorative laparotomy was negative. Due to the history of diarrhea following the antibiotics, Clostridium Difficile was isolated from her stool, she was transferred to the Department of Infective Diseases. After a few days without any favorable clinical outcome she was discharged in order to transfer to the Surgical Department of Mures County Hospital. Her clinical condition was stable on the Intensive Care Unit, but on the 8.day from admission she presented abdominal distension and acute respiratory failure. Despite the immediate surgical intervention and ICU care for the MSOF she died within 15 days of hospital admission. **Results:** The findings of this case report, derived from evolving clinical practice, provide greater clarity in the interpretation of CDI diagnostics which can be silent without any positive isolation and negative laparotomy at the first phase of the disease. **Conclusions:** CD infection can be considered as the complication of postoperative antibiotic treatment and the main cause appears to be the combination of fluoroquinolones with gastric antiseoretors. In the first phase the changes of the colon (sometimes negative CD tests) can be minimal with the manifestation of a false acute surgical abdomen but with the appearance of the toxic colon the evolution is complicated by ARDS and MSOF.

Keywords: Clostridium Difficile, Toxic megacolon, Subtotal colectomy

A STUDY REGARDING THE QUALITY OF LIFE IN WOMEN WITH ENDOMETRIOSIS WHO UNDERWENT PRIMARY SURGERY

Stanca M¹

¹Department of Gynecology I, UMFST Tîrgu Mureș

Background: Endometriosis is a complex disease that affects women around the world primarily of reproductive age. The main objective of this study was to evaluate the outcome of surgical interventions in terms of diminishing algal symptoms and increasing quality of life of patients with endometriosis. **Material and methods:** The data base of this retrospective study was obtained by accessing the H3 Concept program and the surgical registers. Patients were included in the study if they were subject to either both laparoscopic or laparotomy surgery related to endometriosis in our Clinic between January 1, 2013 until October 1, 2018. The method of contact with patients, asking them about the quality of life after the surgery, was by phone. **Results:** A total of 378 patients with endometriosis were included in the study. We found that 79% had undergone surgery for ovarian endometriosis, 8% for endometriosis-associated sterility. The presence of endometriosis outbreaks was also found at the peritoneal level in 10% of the patients, 2% in the recto-vaginal septum, 1% in the uterus, 0.5% in the fallopian tubes. Out of 378 patients with endometriosis, 59% said their lives improved significantly without experiencing any endometriosis-like pain, 11% say they felt better after surgery but still experience some discomfort, 12% say they feel the same as before the surgery. 8% say that after the intervention they felt great but in less than a year the disease reoccurred, out of which more than a half refuses the idea of ~~reintervention~~ reintervention, preferring the alternative therapies. From those who were presented with endometriosis-associated sterility, 52% said they were able to get pregnant after surgery. **Conclusions:** There has been an improvement in the quality of life in patients with endometriosis as a result of surgery. We recommend this therapeutic approach in patients with endometriosis resistant to conservative treatment.

Keywords: Obstetrics-Gynecology, Endometriosis, quality of life, pain

CLINICAL AND PARACLINICAL DIAGNOSIS IN A PACIENT WITH GRAND MAL SEIZURE

Stemate Cecilia¹, Bondari Simona¹, Trifan F²

¹Department of Radiology, UMF Craiova

²Department of Neurology, UMF Craiova

Background: A young male, 27 years old, is presented to the emergency room for a grand mal seizure followed by paretic deficit in right limb. **Material and methods:** The clinical examination revealed muscle hypotonia, paretic deficit in right limb with diminished tendon reflexes and positive Babinski sign on the right side. The CT scan revealed a 22/17 mm spontaneous hypodense area left parietal supraventricular, diffuse delimited with digitiform aspect without pathological contrast outlets in favor of tumor mass. This result needed more accurate investigations, so the MRI showed in the FLAIR sequence disseminated infra and supratentorial areas with nodular appearance, with dimensions between 2 mm right occipital, 10mm mesencephalic and 33 mm area left parietal. Post-contrast it was observed a capture ring at the left posterior parietal area, with late gadophilia, 13 mm size. The blood analysis showed only an elevated ESR rate of 35mm/hour, but based on the imagistic results suggestive for toxoplasmosis /cysticercosis, an HIV test was performed, who was positive, with increased titer for toxoplasma gondii antibodies. **Results:** He was diagnosed with HIV infection. Cerebral toxoplasmosis. Grand mal seizure. He was treated with anti-epileptic drugs, steroids in the beginning, followed by antiretrovirals and anticonvulsant, with favorable evolution. **Conclusions:** This case proves that without a good relation between clinical, imagistic and paraclinical areas of medicine is hard to set the right diagnosis, even if it looks easy on the first glance.

Keywords: neurology, radiology, Grand mal seizure, cerebral toxoplasmosis, HIV

STUDY OF PERSONALITY DIMENSIONS IN PSORIATIC PATIENTS

Decean Luminita¹, Buicu Gabriela², Popa C³, Mihai Adriana²

¹Department of Microbiology, UMFST Tîrgu Mureş

²Department of Psychiatry, UMFST Tîrgu Mureş

³Department of Ethics and Social Sciences, UMFST Tîrgu Mureş

Background: Psoriasis is a psychodermatosis with a chronic course, associated with a decreased quality of life. Specialized literature shows the negative impact due to pain, functional limitations, depression and social isolation, all common in patients with psoriasis. **Material and methods:** The study included 50 individuals in the records of Tîrgu Mureş Dermatology Clinic who had been diagnosed with psoriasis. Diagnosis of psoriasis was confirmed by dermatological examination and biopsy. To quantify the severity of the disease we used Psoriasis Area and Severity Index (PASI). The study aimed to identify the personality dimensions of these patients according to the Big Five model and DECAS personality inventory, standardised and validated on the Romanian population. We used Dermatology Life Quality Index (DLQI) and Spitzer Quality of Life Index to assess quality of life. To interpret the results obtained after test administration, we used SPSS-11 program, Window's version. **Results:** The results obtained after statistical analysis were a general average age of the entire sample being 49,59 years old, 27 were male, 23 female. After statistical processing, the results obtained for each personality dimension reveal a positive association between a low level of the dimension of Emotional Stability and a low level of the quality of life in patients suffering from psoriasis. $M=3,6$; $SD=2,01$. Subjects received high scores on the following schemes: Emotional Deprivation, Mistrust/Abuse, Abandonment/Instability. **Conclusions:** Psoriasis, due to the chronic nature and the necessity of administrating long term treatment, impose changes in the patients and their families lifestyle. The present research can serve as a starting point in drawing up plans for intervention to correct through psychological counselling and psychotherapy in addition to the medical treatment, the main aim being to increase the quality of life.

Keywords: psoriasis, quality of life, personality dimensions

THE ROLE OF T LYMPHOCYTES IN THE PATHOGENESIS OF MULTIPLE SCLEROSIS

Balasa Rodica¹

¹Department of Neurology, UMFST Tîrgu Mureş

Background: Multiple sclerosis (MS) is an autoimmune CNS disorder mediated primarily by CD4+ T lymphocytes in individuals with genetic susceptibility, overlapping with environmental triggers. **Material and methods:** MS has a major neuropathological and therapeutical heterogeneity. The arguments in favor of the autoimmune hypothesis are: morphology of lesions (perivascular, venous infiltration, areas identical to those in the EAE), genetics (association with a genetic polymorphism that is implicated in the autoimmune response), therapeutic (partial success in therapies that influence the immune response). **Results:** The pro-inflammatory and possibly destructive function of T cells are: peripheral activation of autoreactive CD4 + T cells, reduced NK cell activity, reduced number and function of CD4/CD25 regulatory cells. The cytotoxic effect is less understood than the one of the CD8 T lymphocytes. There are 2 major types of Th cells. Th1 cell: mediates CD8 cells via IL-2; mediates differentiation of the B cells; mediates the delayed immune response to viruses, bacteria, parasites. Th2 cell: releases IL-4, IL-10; mediates the differentiation of the B cells via IL-4; mediates macrophage deactivation via IL-4; are involved in delayed responses and stimulate the differentiation of the B cells. **Conclusions:** In conclusion, CD4 lymphocytes play a central role in the pathogenesis of MS.

Keywords: Multiple Sclerosis, B cells, Immunity, T lymphocytes, pathogenesis

RESPIRATORY DISTURBANCES DURING SLEEP IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE AT THE PNEUMOLOGY CLINIC, TARGU MURES, ROMANIA

Szathmary Mioara¹

¹Department of Internal Medicine IV, UMFST Tîrgu Mureş

Background: COPD (chronic obstructive pulmonary disease) will be in 2020 the third leading cause of death. The risk factors for COPD are: smoking, exposure to noxes, genetic factors, aging, airways hyperresponsiveness. COPD and sleep apnea syndrome (SAS) may coexist (overlap syndrome OS) and they are common in obese COPD patients. **Material and methods:** There were analyzed 55 patients admitted to the Pneumology Clinic with COPD exacerbations (May/June 2018). We studied demographic data, sleep questionnaires, Epworth somnolence-scale, the causes of hospitalization, risk factors for diseases (smoking, alcohol use, occupational exposure), comorbidities, specific treatment. **Results:** 78.2% of the cases were in the group of age 50-79 (40 males, 15 females). 16.4% admit daily alcohol consumption, 49.1% occasional consumption. Smoking in both women and men had a large percentage (in total 78%), but in men smoking reached higher odds. 95.3% of COPD patients were heavy smokers (20 packs/years). 22.81% of the patients were obese, 27.27% overweight and 5.45% with cachexia (causing muscle hypotonia). We performed in all patients somnography. From 55 patients, 41(74.5%) had OS (SAS+COPD) and 15(27.2%) had sleep disturbances due to nocturnal dyspnea and bronchial hypersecretion. Patients with OS had in 20 cases (48.1%) pulmonary hypertension (core pulmonale), global cardiac failure, systemic hypertension, or arrhythmia. 39% of OS patients had diabetes and 46.3% dyslipidemia. Only 30 (73%) patients from OS patients could follow the correct treatment with CPAP (Continuous Positive Airways Pressure). **Conclusions:** Patients with OS have an increased clinical severity due to the combination of both respiratory diseases ,plus cardiovascular and metabolic complications. The presence of SAS should be sought in all COPD patients with risk factors (obesity, alcohol use, smoking), snoring and diurnal somnolence. Because of comorbidities, the treatment in a multidisciplinary team is the best solution. The CPAP treatment of OS is mandatory to prevent complications.

Keywords: Medicina Clinică(Clinical Medicine), Medicina Clinică(Clinical Medicine), COPD, sleep apnea, obesity, smoking, CPAP

RESPIRATORY DISTRESS DUE TO PERSISTENT DUCTUS ARTERIOSUS SOLVED BY SURGICAL LIGATION

Sánta Réka¹, Simon Márta¹, Cucerea Manuela¹

¹Department of Pediatrics IV, UMFST Tîrgu Mureş

Background: Persistent ductus arteriosus is a physiologic shunt indispensable in the intrauterin life, which generally closes in the first days of life, if remain patent might result severe hemodynamic consequences. Treatment is not free of notable side effects. The aim of this case report is to raise awariness of the importance of early diagnosis of the hemodinamically significant persistent ductus arteriosus among prematures. **Material and methods:** Case presentation: An 11 weeks old premature infant born at 24 weeks of gestation was admitted to our unit with signs of respiratory distress due to bronchopulmonary displasia, complicated with reccurent pneumonia. The echocardiographic evaluation performed at the age of 4 weeks described patient ductus arteriosus, and had been concluded to be one of the underlying causes. At 11 weeks of age she was proposed to ductus closure by surgical ligation. After a complication free postoperative period she could gradually be weaned from supplemental oxygen. **Results:** The diagnosis was delayed by lack of access to echocardiographic evaluation at the referring hospital. Doe to the late diagnosis, therapeutic options were limited. **Conclusions:** Further diagnostic tools are warranted in order to be able to select patients that need treatment prior to the duct becoming clinically significant, and also to have the possibility to choose the optimal modality of treatment in each case.

Keywords: Pediatrie, Neonatologie, persistent ductus arteriosus, oxygen therapy, surgical ligation

RELATIONSHIP BETWEEN OSTEOPOROSIS AND CORONARY ARTERY DISEASE

Suciu Claudia-Floriana¹, Varga Andreea¹, Petra Dorina-Nastasia¹, Iancu DG², Ţilea I¹

¹Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

²Student, UMFST Tîrgu Mureş

Background: Osteoporosis and coronary artery disease (CAD) are important morbidity and mortality risk factors, particularly for postmenopausal women. Even though generally, CAD and osteoporosis are thought to have no interconnected pathomechanism their shared risk and potential genetic factors have catalysed multiple studies that reported a possible association between the two conditions. The main objective of our study was to evaluate a possible relationship between osteoporosis and CAD in postmenopausal women. **Material and methods:** A total of 42 postmenopausal women aged 60 and older with a diagnosis of osteoporosis were included in the study and comprised the osteoporosis group. 37 age-matched women without osteoporosis represented the control group. Bone mineral density (BMD) measured by dual ~~XXXXXXXXXX~~ ~~XXXXXXXXXX~~ absorptiometry was examined in both groups at the lumbar spine and bilateral femoral neck. The following variables were assessed for both groups: age, age at climax, body mass index, calcium and phosphate serum values, intact parathormone, erythrocyte sedimentation rate, co-morbidities (diabetes, thyroid disorders, CAD, chronic kidney disease, smoking, alcohol-related illnesses, vitamin D supplementation and bisphosphonate medication). Univariate and multivariate statistical analyses were performed to determine the relationships between osteoporosis risk factors and CAD. **Results:** Subjects with lower femoral neck BMD were more predisposed to CAD than those with normal femoral neck BMD ($p < 0.05$). Furthermore, CAD individuals with osteoporosis presented increased values of ESR, a higher incidence of thyroid disorders, diabetes and a younger age at menopause when compared to the individuals with osteoporosis and no CAD. **Conclusions:** Our study highlights a possible association between osteoporosis and CAD particularly in individuals with an increased risk for osteoporosis. In order to establish the temporal variation of this association, additional longitudinal studies should be employed.

Keywords: osteoporosis, coronary artery disease, comorbidities

CHRONIC GASTRITIS ASSOCIATED WITH HELICOBACTER HEILMANNII INFECTION IN A FEMALE TEENAGER- A CASE REPORT

Mărginean Maria Oana¹, Meliț Lorena Elena², Mocan Simona³, Dobru Ecaterina Daniela⁴

¹Department of Pediatrics III, UMFST Tîrgu Mureș

²Department of Pediatrics I, UMFST Tîrgu Mureș

³Department of Pathology, UMFST Tîrgu Mureș

⁴Department of Internal Medicine VII, UMFST Tîrgu Mureș

Background: *Helicobacter heilmannii*, a rare entity in humans, an even scarcer finding in children, is usually transmitted to populations living in rural areas by domestic animals. Similar to *Helicobacter pylori*, its primary colonization site is the antrum, although fundal localizations are not uncommon. Therefore, the infection presents most frequently as a mild active chronic gastritis in the antrum. However, severe cases of peptic ulcer disease, gastric carcinoma and gastric lymphoma have also been reported in relation with chronic *Helicobacter heilmannii* infection. **Material and methods:** We report the case of a female teenager diagnosed with *Helicobacter heilmannii* induced gastritis in order to underline its rarity in pediatric ages. **Results:** Our case concerns a 14-year-old female patient, from a rural area, who complained of chronic epigastric pain. She had a history of chronic gastritis due to a *Helicobacter pylori* infection, which had been successfully eradicated. The laboratory test revealed only elevated levels of serum total protein and albumin and the abdominal ultrasound was normal. The upper digestive endoscopy revealed hyperemia of the lower esophageal mucosa, edema and paving stone appearance of the gastric mucosa. The histopathological exam from the gastric biopsy described a chronic, active pangastritis associated with *Helicobacter heilmannii* infection. The standard triple therapy regimen used for *Helicobacter pylori* eradication was initiated including esomeprazole and clarithromycin combined with amoxicillin for two weeks. The patient's evolution was favorable. **Conclusions:** The prevalence of *Helicobacter heilmannii* is low, especially in pediatric populations, but its identification is essential in individuals presenting with gastro-intestinal symptoms. Infected individuals have a higher risk of developing gastric MALT lymphoma in comparison to those affected by a *Helicobacter pylori* infection. Randomised clinical trials are yet to be performed in order to evaluate the most suitable course of treatment for *Helicobacter heilmannii* eradication.

Keywords: *Helicobacter heilmannii*, adolescent, chronic gastritis

THE ROLE OF NEUTROPHIL/ LYMPHOCYTE RATIO IN CHILDREN'S GASTRITIS

Meliț Lorena Elena¹, Mărginean Maria Oana², Mocan Simona³, Mărginean Cristina Oana¹

¹Department of Pediatrics I, UMFST Tîrgu Mureș

²Department of Pediatrics III, UMFST Tîrgu Mureș

³Department of Pathology, UMFST Tîrgu Mureș

Background: *Helicobacter pylori* (*H. pylori*) is a common pathogen that can lead to a wide diversity of pathologies. The neutrophil/ lymphocyte ratio (NLR) is a valuable, novel and inexpensive marker of systemic inflammation and malignancies. The aim of this study was to establish correlations between NLR and *H. pylori* infection in children. **Material and methods:** We performed a prospective study on 137 children admitted in a tertiary Pediatric Clinic, who were divided into 2 groups according to the histopathological exam of the gastric biopsies: group 1 (study group) 50 children and group 2 (control group) 87 children without histopathological abnormalities. Clinical and paraclinical parameters, endoscopic aspect of gastric mucosa and NLR were assessed in both groups. **Results:** We noticed that the median age was similar between the 2 groups (12.86±3.796 for the study group and 12.10±3.87 years for control group), without significant differences regarding the gender. The frequency of *H. pylori* infection was significantly higher in children from the rural area ($p=0.0089$). We noticed that loss of appetite and epigastric pain were significantly more frequent among children with *H. pylori*-induced gastritis than in control group ($p=0.028/p=0.035$). The urease test was significantly positive in the study group versus control group ($p<0.0001$). The NLR did not differ significantly between the 2 groups ($p=0.2147$), but the leukocytes and neutrophils count was significantly higher in children with *H. pylori*-induced gastritis ($p=0.0076$, $p=0.0306$). **Conclusions:** Loss of appetite and epigastric pain were significantly more frequent among children with *H. pylori* induced gastritis. Likewise, the leukocytes and neutrophils count was significantly higher in this group. Even though NLR is

considered an inflammatory marker, in our study it did not correlate significantly with *H. pylori*-induced gastritis.

Keywords: *Helicobacter pylori*, gastritis, children, neutrophil/ leukocyte ratio

SHORT-TERM CHANGES OF LABORATORY PARAMETERS IN OVERWEIGHT PATIENTS UNDERGOING SURGERY

Szász Orsolya-Zsuzsa¹, Nyulas Kinga², Pál S², Tilinca Mariana Cornelia³, Nemes-Nagy Enikő²

¹Department of Surgery III, UMFST Tîrgu Mureş

²Department of Biochemistry, UMFST Tîrgu Mureş

³Department of Cell Biology, UMFST Tîrgu Mureş

Background: Osteoarthritis occurs frequently in patients having increased BMI and it's located especially at the hip/knee joints. Arthroplasty represents the gold standard in the treatment of this disease, the intervention influences laboratory parameters. The aim of the study was to compare laboratory parameters before and after arthroplasty in patients suffering from osteoarthritis and to assess the relationship between laboratory findings. **Material and methods:** The study was made on 57 overweight patients at the Clinic of Orthopedics and Traumatology of the County Hospital in Tîrgu Mureş between 2016-2017. Biochemistry tests (plasma glucose, uric acid, triglyceride, cholesterol) and inflammatory markers (fibrinogen, high sensitive C-reactive protein) were determined before surgery and 24 hours after arthroplasty. Dynamics and relationship between the measured laboratory tests were assessed and BMI, waist circumference, cardio-metabolic comorbidities have been evaluated. **Results:** After arthroplasty significant decrease of uricemia, cholesterolemia, plasma triglyceride concentration and significant increase of hsCRP were observed, compared to the previous values. After intervention plasma glucose level was slightly higher, the difference was not quite significant. Negative correlation could be found between preoperative triglyceridemia and HDL-cholesterol level and positive correlation of triglyceride concentration with LDL-cholesterol and uricemia. BMI showed positive correlation with postoperative plasma fibrinogen. Hypertension was the most frequent cardio-metabolic associated disease. **Conclusions:** Significant differences occurred before and after surgery in the level of hs-CRP and several biochemical tests suffered notable changes. During the first day after surgery metabolic status was deeply affected. Laboratory components of the metabolic syndrome were present in close relationship in several patients. Further studies are necessary testing a complex range of laboratory parameters in patients with similar pathology to improve the support given for their recovery. Financial support for this study was provided by the SC CATTUS SRL with the involvement of UMPH Târgu Mureş, contract no. 5068/26.04.2016.

Keywords: overweight, arthroplasty, inflammation

THE INFLUENCE OF CHILDREN WITH DIABETES MELLITUS ATTACHMENT STYLE IN CHRONIC DISEASE MANAGEMENT

Lica Maria-Melania¹, Mihai Adriana²

¹Department of Pediatrics II, UMFST Tîrgu Mureş

²Department of Psychiatry, UMFST Tîrgu Mureş

Background: Diabetes Mellitus is the most common chronic disease in children over the world. The medical concern about the psychological mechanisms that mediate better adaptation of diagnosed children to the illness and a high adherence to treatment led us, in this study, to determine the importance of the dynamics of family relationships and especially the influence that the child's attachment has on therapeutical success and his well-being. **Material and methods:** A sistematic review of a vast scientific international literature regarding families' with children with diabetes mellitus (IDDM) relationships and dynamics, was done. **Results:** There is an important relationship between the attachment style of the child with IDDM and his behavior towards the physician and medical prescriptions, with repercussions on motivation and self-involvement in maintaining a good health. Thus, an insecure, avoidable or disorganized attachment has been associated with a high perceived stress, difficulty in emotional regulation, limited capacities to seek solutions, difficulties in dealing with medical staff and low adherence on the therapy. **Conclusions:** Although it is difficult to measure the rate of physiological influence that attachment has to glycemic balance and behavioral adherence of children with diabetes mellitus, including this factor in psychological assessment of children with IDDM provides to the clinical practice, a direction toward a personalized intervention.

Keywords: Pediatrics, Pediatrics, diabetes mellitus, child attachment, adherence, s

PREDICTIVE FACTORS FOR TREATMENT OUTCOME IN POSTMENOPAUSAL OSTEOPOROSIS

Mihai Gabriela¹, Pop Raluca-Monica¹, Gasparik Andrea Ildiko², Pascanu Maria Ionela¹

¹Department of Endocrinology, UMFST Tîrgu Mureş

²Department of Public Health and Healthcare Management, UMFST Tîrgu Mureş

Background: Postmenopausal osteoporosis is characterized by low bone mineral density (BMD) associated with increased fracture risk causing significant health care costs and diminished quality of life. The aim of the current study was to evaluate various factors which might have a predictive role in the response to treatment in postmenopausal osteoporosis. **Material and methods:** This is an observational study including 44 patients diagnosed with postmenopausal osteoporosis with at least a year history of treatment with bisphosphonates, Denosumab or Teriparatide, recruited from the Endocrinology Department of the Mures County Hospital. The variables analyzed were: age, menopause onset, age at diagnosis; smoking status, history of fragility fractures; type of antiosteoporotic treatment and duration (months), BMD and T score (evaluated by DXA), anthropometric parameters: height(cm), weight(Kg), BMI(kg/sqm). Treatment response was defined as the change in T score and BMD. **Results:** The mean age was 67±1.1 years with an average 12±0.9 years between menopause onset and osteoporosis diagnosis. In regression analysis using BMD % change as outcome, the significant predictive factors were age ($\beta = -1.077$ p< 0.01), age at menopause onset ($\beta = 0.669$, p<0.01), number of years between menopause and treatment initiation ($\beta = 1.026$, p<0.01), Denosumab treatment ($\beta = 1.026$, p<0.01), and treatment duration ($\beta = 0.447$, p<0.04), the model explaining 53% of the outcome variation ($R^2 = 0.53$, p=0.009). **Conclusions:** Younger age with later menopausal onset, and later osteoporosis onset are predictive factors for a better response to treatment in postmenopausal osteoporosis. Bisphosphonates treatment followed by denosumab is correlated with a better response, with the limitation of the small sample size (small number of Teriparatide treated patients).

Keywords: Poster presentation, Clinical Medicine, Postmenopausal Osteoporosis, treatment, outcome

CLINICAL IMPORTANCE OF THE LUNG ULTRASONOGRAPHY IN HEART FAILURE: THE B-LINES

Szabó IA¹, Ágoston G², Benkó Tímea Noémi³, Kocsis L³, Fehérvári L⁴, Frigy A⁴

¹Department of Pathophysiology, UMFST Tîrgu Mureş

²Department of Family Medicine, University of Szeged

³Student, UMFST Tîrgu Mureş

⁴Department of Internal Medicine IV, UMFST Tîrgu Mureş

Background: Pulmonary congestion is a common and important pathophysiological finding in heart failure. It has a key feature in the management and prognosis of patients with heart failure. The lung parenchyma examination has been traditionally considered limited for ultrasound techniques due to the fact that ultrasound energy is rapidly dissipated in air. However, the presence of water in the lungs opens up the pulmonary acoustic window and allows to examine the lung parenchyma. B-lines may be more familiar for radiologists, known as radiological Kerley B-lines, a sign of extravascular lung water on chest X-ray. In pulmonary congestion the lung ultrasound shows B-lines, which are comet-like signals arising from a pleural line with a movement synchronized with respiration. The assessment of the number and spatial extent of B-lines on the antero-lateral chest wall is useful for the identification of subclinical and symptomatic congestion, with high sensitivity and excellent specificity. Lung ultrasound also provides useful information in the management and prognosis for patients with heart failure. Lung ultrasound is an excellent diagnostic opportunity for the cardiologist. It is feasible, radiation free, low cost, can be done at bedside and allows non-invasive detection, in real time of pulmonary congestion. **Material and methods: Results: Conclusions:**

Keywords: lung ultrasonography, B-lines, heart failure, congestion

THE INFLUENCE OF RELIGION ON THE NATIONAL CAMPAIGN FOR ORGAN DONATION IN ISRAEL

Gurman G¹

¹Department of Anesthesiology and Critical Care, Ben Gurion University of the Negev, Israel

Background: Even if nowadays, the diagnosis of brain death (BD) is well-specified and argued not only clinically but also instrumentally, and although there is no known case in which a deceased patient in terms of central nervous system functions has ever recovered, even partially, the psychological barriers to organ donation are serious, and sometimes insurmountable. **Material and methods:** In Israel, another impediment is added to this well known situation. It is the opposition, sometimes tacit and sometimes obvious and clear, of the authorities belonging to the two dominant religions in this country: Judaism and Islam. The Israeli system includes the possibility for every adult citizen to give their consent, during their lifetime, for their organ donation in case of death. Unfortunately, the Israeli law contains a paragraph that over time has proven to be a serious impediment to the struggle to obtain organ harvesting after death through BD: the approval of the family of the deceased. Both decisions, the citizen's decision before death and the family's decision after the tragic event are influenced by religious precepts. **Results:** Thus, the percentage of the adult population owning the potential donor card is only 14%, and the percentage of accepting organ harvesting after the diagnosis of BD has been averaged over the past years only around 50%. Several years ago, the Israeli National Transplant Center organized a survey among families whose member died diagnosed with BD. The study took into account the distribution of the population of Israel in four religious categories: a Jewish majority (75%), an Islamic minority (21%) and a small proportion of Christians and Druze (two religious entities distinct from Muslim religion but part of the Arabic population). The refusal rate was 75% for Muslim families, 65% for Christian families (Arab families), 45% for Jewish families and only 25% for Druze families. The list of reasons why families have accepted organ donation for transplantation included: altruism, perpetuation of the memory of the deceased, fulfillment of his last desires, and accepted social norms in the family. More interesting are the reasons of refusal. If we include the opposition of the two religions (Jewish and Muslim) to the degradation of the corpse because of faith in reincarnation, then religious refusal amounts to 74%, followed by the respect of the deceased's desire and the refusal to accept BD as an irreversible outcome. **Conclusions:** The solutions to this difficult situation are easy to imagine but very difficult to implement, providing results only partially. It is a permanent campaign of persuasion, of presenting the altruistic aspect of this problem, done through all written and electronic means of communication, and highlighting the fact that is hard to dispute, and that any citizen who is healthy today can become a candidate for a vital organ transplant tomorrow.

Keywords: brain death, organ donation, Israeli law, religion

MEDICINĂ DENTARĂ (DENTISTRY)

STUDY ON THE REDUCTION OF THE SENSITIVITY OF PROSTHETIC DENTAL PREPARATIONS USING SOFT LASER THERAPY

Pribac V¹, Popsor S¹

¹Department of Prosthetic Dentistry and Oral Rehabilitation, UMFST Tirgu Mures

Background: This study has the aim to evaluate the effectiveness of diode laser therapy on dentinal sensitivity in prosthetic dental preparations. The null hypothesis of the research is that the application of laser radiation leads to a significant reduction, of the level of sensitivity in the prosthetic dental preparations. **Material and methods:** This study was attended by 25 patients, who presented 60 vital teeth prepared to cover them with various crowns. For desensitization of we used the Epic X Biolase laser diode with a wavelength of 980nm, with the setting of 1.5W, a discontinuous frequency of 30ms / 30ms, the laser beam was handed the abutments to the surface through a fiber optic tip 400 µm unfocused. We applied the laser beam for 90 seconds on each abutment with concentric circular movements to cover the entire surface. In cases where sensitivity remained, we performed the desensitization stage again for 90 seconds, increasing the power at 2 W, the remaining parameters were the same. **Results:** After the laser desensitization, 48% of the patients felt no discomfort. Other 40% of the patients felt a slight discomfort, and only 12% felt a severe discomfort or still pain after the desensitization. For this 52 % of the patients, a second laser session was necessary. There were statistically significant differences between the initially dentinal hypersensitivity and the situations after the laser sessions assessed through the VAS (p= 0.001). **Conclusions:** Based on the present study and within its limits, using the 980 nm diode is an important adjuvant in the attempt to reduce the sensitivity during the process of prosthetic abutments. The results of the application of soft laser therapy on the investigated group confirm the null hypothesis of the research, the use of laser leads to a significant reduction, of the sensitivity in the prosthetic dental preparations.

Keywords: Prosthetic Dentistry, Prosthetic Dentistry, Desensitization Diode Laser Prosthetic

PRELIMINARY RESULTS ON SOME DYNAMIC OCCLUSAL PARAMETERS IN DEPRESSIVE PATIENTS WITH CRANIOMANDIBULAR DISORDERS

Albert Luminița¹, Popsor S¹

¹Department of Prosthetic Dentistry and Oral Rehabilitation, UMFST Tirgu Mures

Background: The association of the craniomandibular disorder (CMD) with occlusal features and the psychological status is often encountered and underlined by many authors. This study has as objective to determine the occlusion (OT) and disclusion (DT) times in depressive patients with CMD, the null hypothesis considering that the two occlusal parameters in depressive patients are prolonged compared to their average values. **Material and methods:** Eleven patients with confirmed depressive illnesses under treatment and moderate CMD were examined by T-Scan III occlusal analysis system. We assessed OT and DT in the patient's group, and the obtained data were statistically analyzed to compare them with their accredited average values. Unpaired t-test, Welch, and Mann-Whitney test assessed if the mean and medians of the registered values and the average values of the occlusal parameters differ significantly. **Results:** The OT in the patient group was significantly prolonged compared to the average value (p=0093). No significant difference between the collected DT data and the average of this parameter (p= 0.5844). **Conclusions:** In this study, the significantly prolonged OT in depressive patients with CMD may be due not only to occlusal discrepancies in the mandibular arc of closure but also to behavioral factors. The antidepressants may have an important role, considering some of their side effects as lethargy, fatigue, motor control deficiency, articular and muscular pain. As well, is well known that the antidepressants are useful in the CMD treatment also.

Keywords: dentistry, dentistry, craniomandibular disorders, occlusion time, depressive patients

EVALUATION OF USING DIGITAL ORTHOPANTOMOGRAPHY TO ASSESS MANDIBULAR ASYMMETRIES: A DIGITAL STUDY USING A PUBLIC DOMAIN SOFTWARE

Gânscă Oana-Maria¹, Păcurar Mariana¹

¹Department of Pediatric Dentistry and Orthodontics, UMFST Tîrgu Mureş

Background: Objective: the aim of this study is to evaluate the mandibular asymmetries on digital ortopantomography of two types of patients, patients with and without unilateral crossbite, using a public domain software: ImageJ. **Material and methods:** Analysis described in this study involves linear and angular measurements taken from nine anatomic points marked on digital images. The measurements are made automatically by a specific plug-in, Lemos Asymmetry Analysis, part of ImageJ software. Radiographs of 36 patients have been selected: 16 patients with unilateral crossbite and 20 patients with normal occlusion. The selection was made after analysing the orthodontic files from Orthodontic Department of Faculty of Dentistry, UMFST Targu-Mures. **Results:** No significant differences were found considering the ramus measurements between the two samples. Severe asymmetries of mandibular corpus and moderate deviations of Pogonion were found on crossbite group. Significant asymmetry of condyle's height was found on non-crossbite group. **Conclusions:** Digital orthopantomographies can be used to analyse the mandibular asymmetries and to diagnose a facial asymmetry in addition to other clinical examinations. The proposed analysis helps finding the cause of mandibular asymmetry and planning the orthodontic or surgical treatment.

Keywords: Orthodontic Department, MD1, Mandibular Asymmetries, Digital Orthopantomography

PROSTHETIC VERSUS ORTHODONTIC APPROACH IN THE PARTIAL EDENTULISM CAUSED BY DENTAL INCLUSION IN YOUNG PATIENTS

Craciun Adriana¹, Suci V², Cerghizan Diana¹, Janosi Kinga¹, Bica Cristina²

¹Department of Prosthetic Dentistry and Oral Rehabilitation, UMFST Tîrgu Mureş

²Department of Pediatric Dentistry and Orthodontics, UMFST Tîrgu Mureş

Background: In young patients, resolving the partial edentulism caused by dental inclusion is a challenge for the prosthodontist, orthodontist and dento-alveolar surgeon due to the oro-facial anatomical factors and especially the maxillary bone tissue's specific parameters. The aim of this study is to highlight the role of local anatomical structures in achieving the objectives and the most optimal treatment plan in extreme situations of partial edentulism caused by dental inclusion. **Material and methods:** This study includes patients with permanent superior canine inclusion, with or without temporary canine persistence. CBCT examination consists of a quantitative and qualitative assessment of the following parameters: thickness and height of the bone tissue, bone density, the distance between adjacent dental structures, apex position of the included teeth. **Results:** In young patients, the bone density is lower, and the quantity and quality of the bone tissue is favorable for the application of the various treatment methods compared to limited treatment options of adult patients. **Conclusions:** Using advanced 3D dental imaging systems contribute significantly to the accuracy of the prosthetic-orthodontic-surgical complex diagnosis. These imaging systems help to establish optimal treatment objectives according to the patient's age and the condition of the loco-regional anatomical structures.

Keywords: CBCT, Prosthetic treatment, Orthodontic treatment, Dental inclusion, Young patients

ORAL MANIFESTATIONS AND DENTAL RESTORATIVE MATERIALS WEAR IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE (GERD)-REVIEW

Bechir Farah¹

¹Department of Prosthetic Dentistry and Oral Rehabilitation, UMFST Tîrgu Mureş

Background: Gastroesophageal reflux disease (GERD) is a very common condition, whose consequences are localized mainly in the esophagus. In addition to esophageal alterations, extra-esophageal manifestations have frequently been reported. However, there are few studies that have evaluated the relationship between GERD and oral environment effects due to the salivary pH of these patients. This systematic review was carried out to evaluate the association of GERD, dental erosion, microstructural

changes in dental restorative materials, oral tissue lesions and even osteonecrosis of the jaw. **Material and methods:** Studies were identified in PubMed and Web of Science via a systematic research strategy. A total of 280 citations were evaluated, of which 46 full text articles selected dated between 2012-2018, with 30 articles published between 2015-2018. **Results:** The prevalence of dental erosion found in these studies was increased, 29 of the full text articles linking GERD to this manifestation and one identified GERD as a risk factor for bruxism. 7 studies were performed on children and adolescents. Several studies linked GERD to oral soft tissue lesions and one research found that acid reflux typical to this condition may contribute to the osteonecrosis of the jaw. A study showed significant positive associations between tooth loss, GERD and functional dyspepsia in women and all of the articles found low levels of salivary pH. One study indicated that in dental medicine, gastric juice has a significant impact on resins, while 3 studies confirmed that contemporary ceramic materials perform as an effective and aesthetic solution for patients with this disease. Dental metal alloys are susceptible to corrosion and leach trace metal ions in saliva. **Conclusions:** Dental practitioners should carry out a diagnostic protocol, so they can refer the patient to the gastroenterologist based on the oral manifestations observed.

Keywords: GERD, oral manifestations, dental erosion, acid reflux, dental materials

AMELOBLASTS, SALIVARY ACINAR CELLS AND PANCREATIC DUCTS AS BASE PRODUCING DEFENDERS AGAINST ACIDITY – DISCOVERIES BY MOLECULAR PHYSIOLOGY

Varga G¹

¹Department of Oral Biology, Semmelweis University

Background: Ameloblasts produce tooth enamel, the hardest tissue of the human body with extreme high mineral concentration. Conversely, salivary acinar cells and pancreatic ducts secrete the most watery fluid of the organism. But they epithelial cell types and they all share one common function. They all achieve very high level of base delivery in the form of bicarbonate into their apical surfaces. The production of bicarbonate is a vital function of all of this organs. In enamel formation, the large number of protons liberated during hydroxyl-apatite formation has to be neutralized, in the mouth the consumed acidity must be counterbalanced, while in the intestine gastric acid should be brought to neutral pH in order to reach optimal conditions for digestion and absorption. **Material and methods:** The lecture to be presented will describe and compare the molecular mechanisms of epithelial ion transport leading bicarbonate production of ameloblasts, salivary acini and pancreatic acini. **Results:** When these molecular mechanisms are damaged, the result is a serious misbalance and deteriorating diseases. This work was supported by the Higher Education Excellence Program of Hungarian Ministry of Human Capacities to Semmelweis University, Therapy Research Modul and by the Hungarian Human Resources Development Operational Program (EFOP-3.6.2-16-2017-00006). **Conclusions:**

Keywords: pancreatic juice, saliva, dental enamel, defense mechanisms

DENTAL ANOMALIES OF NUMBER, THE BOUNDARY BETWEEN ORTHODONTIC TREATMENT AND PROSTHETIC

Pacurar Mariana¹

¹Department of Pediatric Dentistry and Orthodontics, UMFST Tîrgu Mureş

Background: Numerical dental anomalies (anodontia and supernumerary teeth), introduced in Angle class I, are less frequent (3-5%) in young people, but takes clinical issues in the current developments of dental and involve a interdisciplinary therapeutic approach. The authors have proposed an analysis of the relative frequency of a comparison of these two types of disorders and evaluation of therapeutic possibilities orthodontic and surgical or orthodontic and prosthetic, having regard to the location at the frontal area, where aesthetic requirements are major, in according on the existence of a growing organism, where the prosthetic solutions will adjust to bone age. **Material and methods:** The study was carried out on a sample of 145 patients, aged 9-19 years, who had orthodontic treatment, in the orthodontic Department of Orthodontics of the period 2015-2018. Patients were divided by age into two groups, 9-13 years and 13-19 years. Patients had complete documentation: study designs, photographic examination, OPT and lateral cephalometric. Based on these documents established anodontia frequency and supernumerary teeth, by age, sex and teeth, and the types of equipment used. **Results:** The frequency of the two types of malocclusion is

approximately equal, so anodontia had a higher prevalence in women: 4.5% in the second age group, compared to 3.8% male and supernumerary teeth were more frequently in males, 4.2% in the first age, female gender compared to 3.9%. Most patients received treatment complex, 2-3 devices (mobile and fixed), where there is a preponderance of therapy of anodontia prosthetic camouflage the absence of the front teeth. **Conclusions:** Anodontia therapy, especially those spread is a challenge for the clinician, braces being changed every 2-3 years and prosthetic solutions being made after completion of growth. Complexity of supernumerary teeth involves a complex investigation, sometimes CBCT with mixed therapy, surgical-orthodontic with fixed appliances and retainers long.

Keywords: Dentistry, Orthodontics, anodontia, supernumerary, orthodontics, prosthetic

HUNGARY, AS PARTICIPANT OF THE ADVOCATE (ADDED VALUE FOR ORAL CARE) AN EU HORIZON-2020 SUPPORTED PROJECT

Márton Krisztina¹, Madléna Melinda², Kivovics Péter²

¹Oral Biology, Semmelweis University

²Community Dentistry, Semmelweis University

Background: ADVOCATE brings together top principal investigators from prestigious universities, the public sector, and the private sector to address the most common diseases affecting humanity, as measured by the recent Global Burden of Disease Study. Recently, Hungary is leading in the orofacial cancer related death-rate in Europe, while other oral health parameters as dental caries, tooth loss and advanced gum disease are also in the mid-low level, despite of the huge preventive oral health strategies, introduced at the end of the 20-th century. Therefore, partners of this study from the Semmelweis University, (Budapest) expect a promising teamwork in improving oral healthcare statistics in Hungary as well as in the other Eastern European countries.

Material and methods: ADVOCATE strives to optimise delivery of oral health and wellbeing to the population in EU Member States. This requires a change in oral health care delivery towards prevention. The change will be achieved by developing a model that promotes a preventive rather than restorative oral health care system: The oral health care model 2020. It has three main objectives: Design an innovative healthcare system, which promotes chronic disease prevention; Establish a set of harmonised indicators which acknowledge success in the prevention of disease and avoidance of unnecessary treatment; Provide evidence-informed guidance to policy and decision makers for improved health systems planning. The project is funded by the EU Horizon 2020 programme and is coordinated from University College Cork by Professor Helen Whelton. One part of the project's work centres around analysing large volumes of data from oral healthcare insurers in European countries. The project is using big data to see if dental professionals can help push for change towards a more preventive approach. This includes change on an individual level, so that members of the public are aware of what measures they can take to prevent oral disease. However, it is oral care professionals who give the public preventive advice and so the project aims to increase the focus on prevention in practice by supporting oral care professionals in delivering effective disease prevention. This approach uses extrinsic and intrinsic motivation to achieve the desired behaviour. Extrinsic motivators will be identified by the project through analysing the impact of historical changes in system design on oral care outcomes, whilst taking account of the context and population characteristics. The comparison of outcomes of diverse oral care systems will also be helpful. Intrinsic motivation will use a newly developed dashboard which can illustrate variation in oral health, treatment and prevention using both high level claims data and patient reported data using an innovative patient engagement application. The dashboard indicators are measures which are considered valid, important and relevant measures for oral health and oral health care and have been developed based on a literature review, an expert meeting, the Delphi method, and a World Café. A diverse stakeholder base was engaged in identifying and defining the most appropriate measures. Groups consulted included general dental practitioners, patients, insurers, and policy makers from Denmark, Germany, Ireland, Hungary, Netherlands and United Kingdom. The approach is being tested by general dental practitioners in field studies in the six partner countries. Aridhia (one of the partners) has provide secure electronic template for partners to work on anonymised data. The project's work in developing an oral healthcare dashboard and a patient app hold clear relevance in these terms. **Results:** The dashboard brings together data from several European countries, enabling healthcare professionals, policy-makers and the general public to gain deeper insights into important questions around oral healthcare. **Conclusions:** As the oral health care delivery system is not as overly complex as other health care systems, the oral health care model 2020 may serve as a blueprint for other health care system reforms.

Keywords: orofacial cancer, oral health, ADVOCATE, strategies

MEDICINĂ PRE-CLINICĂ (PRE-CLINICAL MEDICINE)

THE PREVALENCE OF CANDIDA SPP. IN LOWER RESPIRATORY TRACT SPECIMENS

Ciurea Cristina Nicoleta¹, Pinteă Simon Ionela Anca¹, Man A¹

¹Department of Microbiology, UMFST Tîrgu Mureş

Background: The study aims at establishing the prevalence of *Candida* spp. in the respiratory tract secretions in Mureş County area, in the current year. **Material and methods:** A retrospective analysis was performed using the laboratory data from 377 sputum and tracheal aspirate specimens, which were submitted and analyzed at the Microbiology Laboratory of Mures Clinical County Hospital between 1st of January and 19 October 2018. The quality of sputum was evaluated using the Bartlett score. The patients were grouped on gender and age categories. **Results:** The prevalence of *Candida* spp. in the respiratory tract secretions was 28.65%. *Candida* spp. were isolated mostly in sputum samples (73.15%), while 26.85% were isolated in tracheal aspirate specimens. However, from all the positive sputum samples, 39.24% presented a Bartlett score >1, while for 60.76%, the score was 0 or less, showing contamination with saliva. After excluding the invalid results, the real prevalence of *Candida* spp. in the respiratory tract secretions was 15.91%. The species prevalence was slightly different before and after excluding the invalid samples (60.19% vs. 56.67% for *C.albicans*, 25.93% vs. 31.67% for *C.non-albicans* and 13.89% vs. 11.67% for multiple *Candida* species coinfection). *Candida* spp. were more commonly encountered in males (74.07%). Age distribution of the total samples showed that 7.41% of the patients were younger than 50 years, 21.30% were aged between 51-60 years, 34.26% were aged between 61-70 years and 37.04% were older than 71 years. The gender and age distribution hadn't significantly changed after excluding the invalid specimens. **Conclusions:** *Candida* spp. were frequently isolated in the laboratory. The majority of the sputum samples did not meet the quality bar of the Bartlett score, and these isolates were not reported to the clinician. The airway sampling failed to prevent the contamination of the specimens with *Candida* spp. from the oral cavity.

Keywords: *Candida* spp., respiratory tract secretions, sputum quality

THE REASONS OF TOBACCO CONSUMPTION AMONG PUPILS FROM 9TH CLASS IN CHIŞINĂU

Topada Aculina¹, Nădăşan V¹, Abram Z¹

¹Department of Hygiene, UMFST Tîrgu Mureş

Background: Teenagers are attracted to cigarettes for many reasons that occur in their lives with age or are dependent on their entourage. Our general aim was to analyze the particularities of tobacco consumption among pupils from 9th class in Chişinău, Republic of Moldova. **Material and methods:** The study included 12 schools from Chişinău the sample comprised 368 pupils (177 girls and 191 boys) from grade 9 classes. The survey instrument was an anonymous online questionnaire applied earlier in the ASPIRE project that included a set of items regarding tobacco consumption among pupils. The reasons to smoke / not to smoke, were measured on a five level scale: not important, slightly important, important, very important and extremely important. We categorized the answers in two categories: unimportant (not important and slightly important), and important (important, very important and extremely important). **Results:** Pupils considered that smoking was important to reduce tension (28.8%) and help people to better cope with frustration (10.9%). About 10% considered smoking was important for adolescents to be more respected, have more friends and go out for more meetings. Among the reasons considered important by young people not to smoke were: smoking is harmful to health (95.1%), smoking may affect the health of others (93.7%), cigarette smoke is disturbing to those around the smoker (89.4%), and smoking is a miserable habit (84.5%). Pupils regarded as unimportant the fact that smoking is too expensive (33.4%) and that smoking helps you lose weight (78.0%). **Conclusions:** The main reasons teenagers smoked were to reduce stress and socializing more easily, and the main reasons not to smoke were the negative effects of tobacco use.

Keywords: smoking, pupils, schools

USING THE QUALITY INDICATORS FOR THE PROCESS OF MONITORING AND QUALITY IMPROVEMENT IN A CLINICAL LABORATORY

David Eliza¹, Dobreanu Minodora¹

¹Department of Clinical Laboratory, UMFST Tîrgu Mureş

Background: According to the SR EN ISO 15189:2013, definition 3.18: "the quality is the degree in which a series of inherent characteristics fulfill particular demands". The quality indicators (QIs) are elements or events that we can monitor (they must be quantified) during a process, to establish the quality of the process, the degree in which it follows the initial demands. **Material and methods:** The study group included all the analyse requests received by the laboratory during 01.01.2015-31.10.2018, for the Biochemistry, Hematology and Coagulation Departments. The first stage of the study took place between 1st January 2015 and 31st December 2015, when the quality indicators were selected for the pre-analytic process through intern assessment, risk analyse, reporting the nonconforming events and using the risk management tools; and respectively, the acceptance thresholds for the selected indicators were determined. In the second stage of the study, a quality indicators template sheets were established. Monthly for each QI it has been calculated Six Sigma using the Westgard calculators (<https://westgard.com/six-sigma-calculators.htm>). In the order to assess the tendency of change and the control level over the process there was used a control chart for attribute data: u-chart. **Results:** The percentage for nonconforming specimens was 2.46%, with Six Sigma value of 3.5. The highest percentage were found for the following indicators: "hemolysed specimens" for the Biochemistry and Coagulation Departments (0.99%; respectively 0.90%) and "coagulated specimens" for the Hematology Department (0.24%). **Conclusions:** Quality indicators monitoring must have a well defined beginning, a continuing and an argued ending. Based on the results, we can say if the processes take place in the right conditions, and that are also of good quality.

Keywords: Six Sigma, quality improvement, quality indicator, process, clinical laboratory

RETROSPECTIVE ANALYSIS OF INTRAOCULAR LENS CHARACTERISTICS AS DETERMINING FACTORS FOR POSTERIOR CAPSULE OPACIFICATION

Fisus Andreea Dana¹, Borda Angela¹, Horvath Karin²

¹Department of Histology, UMFST Tîrgu Mureş

²Department of Ophthalmology, UMFST Tîrgu Mureş

Background: Posterior capsule opacification (PCO) represents the migration of cells from the anterior to the posterior capsule, that occurs due to a robust wound-healing response. Four years post cataract extraction surgery, approximately 31% of patients will require Nd:YAG laser capsulotomy for PCO. The aim of the study is to evaluate the influence of intraocular lens (IOL) material and design on posterior capsule opacification development. **Material and methods:** This retrospective study continues our previous research that reviewed patient charts that underwent Nd:YAG laser capsulotomy for PCO, between 2013 and December 2016, including in the final study 106 patients. We compared the patient's data with charts from Tg Mures Ophthalmology clinic, that underwent cataract surgery, including in the study 6840 patients. We included only patients that received cataract surgery using identical technique. IOL characteristics as: material of the lens, design of optic edge and asphericity, design of haptic and haptic angulation, were used to determine the influence of each IOL characteristic in the development of PCO. **Results:** Looking into how lens material influences PCO development, we can note that 73 lenses included were hydrophilic and 83 were hydrophobic lenses. As for haptic design: 13,87% were C loop haptic and 4,95% were modified C loop. 102 lenses implanted in the research period had square edge optic design. **Conclusions:** The major benefit of IOL design innovation is the format of the optic edge. The square edge of the optic creates a physical barrier in the migration of the cells, from the anterior capsule, this being to date the only preventive measure. Using laser capsulotomies as a barometer of PCO development is useful, but it still cannot clearly emphasize the true incidents of the pathology.

Keywords: haptic angulation, hydrophilic lens, posterior capsule opacification, square edge, hydrophobic lens

EPIDEMIOLOGY AND PLASMID PROFILING OF KLEBSIELLA SPP. ISOLATED FROM HOSPITAL ENVIRONMENT

Pintea Simon Ionela Anca¹, Ciurea Cristina Nicoleta¹, Toma Felicia¹, Mare Anca Delia¹, Man A¹

¹Department of Microbiology, UMFST Tîrgu Mureş

Background: Clonal spreading of bacteria in hospital environment is one of the factors that contribute to the intensification of antibioresistance phenomenon. The aim was to evaluate the epidemiology of Klebsiella isolates from hospital environment and the hierarchical relationship based on their plasmid content. **Material and methods:** Environmental and biological samples from different hospital sections were bacteriologically processed, the isolated bacteria being identified and maintained on -70°C glycerol stocks. General data were noted from the laboratory records. Plasmid DNAs from Klebsiella isolates were extracted by alkaline lysis. The plasmids were separated by electrophoresis in 0.7% agarose gel containing GelRed nucleic acid stain, for 2.5 hours at 100V. The specific plasmid bands were profiled using PyElph software and the band similarity was computed into a dendrogram. **Results:** During 1.01.2012 - 30.03.2014, a number of 317 samples were processed, and 61 (19.2%) Klebsiella spp. were identified. Most isolates originated from intensive-care units (50.8%) followed by surgical (24.6%) and medical wards (18%), respectively food-processing units (6.6%). Klebsiella spp. were isolated from surfaces (54.1%), respectively from biological products from patients and medical staff (45.9%). From all Klebsiella isolates, 45 were processed for DNA extraction. Two main clusters were identified: one (22 isolates) with only one visible plasmid and the second (23 isolates) with two or more plasmid bands. The second cluster was heterogenous, divided in subclusters with different plasmidic profiles. There was a semi-consistent distribution of bacteria on the hospital's wards, probably to the patients' workflow. Cluster one included isolates from ICU/surgery and haematology-transplant units. In cluster two, representatives from ICU/surgical wards were more prevalent. **Conclusions:** More than half of the Klebsiella isolates derived from ICU/surgery units, mainly from stool samples, but also from furniture and medical devices. Plasmidic profiling may help in the initial evaluation of bacterial spreading paths in hospital environment

Keywords: plasmids, electrophoresis, Klebsiella, hospital infection

A RARE CASE OF ACUTE MYELOID LEUKEMIA POSITIVE FOR FOUR SOMATIC MUTATIONS

Tripon F¹, Benedek I², Lazar Erzsebeth², Banescu Claudia¹

¹Department of Genetics, UMFST Tîrgu Mureş

²Department of Internal Medicine III and Family Medicine, UMFST Tîrgu Mureş

Background: Until now several types of genetic abnormalities such as aneuploidies, somatic mutations or copy number variations (CNVs), were described on patients with acute myeloid leukemia (AML). The aim of this case-report study was to described a rare case of AML patient with several mutations. **Material and methods:** The DNA was extracted from leukocytes and amplified using specific primers and techniques for fms-like tyrosine kinase 3- internal tandem duplication (FLT3-ITD) and tyrosine kinase domain (FLT3 TKD, FLT3 D835) mutations, DNA (cytosine-5)-methyltransferase 3A (DNMT3A R882) mutation and Nucleophosmin 1 c.863_864ins (NPM1 insertion, type A-D). Multiplex Ligation-dependent Probe Amplification (MLPA) was performed in order to detect CNVs (by using P036, P070 and P377 kits from MRC Holand). **Results:** The patient was positive for FLT3 ITD mutation [variant allele ratio (VAR) 86%] and TKD mutation, DNMT3A R882H mutation and NPM1 c.863_864ins (VAR 42%). The MLPA analysis do not reveled CNVs. Based on the karyotype result, mutational status and MLPA results of our patient had an intermediate risk according to the ELN 2017 risk classification. Unfortunately, the patient died early, after 3 days from clinical diagnosis and the target treatment with FLT3 inhibitors could not be initiated. **Conclusions:** Given the fact that the association of all mentioned mutations are rare, we consider that is mandatory to report such cases considering the fact that the DNMT3A mutations until now were not included in AML classification. Last but not least, the positive diagnostic must be performed in the shortest time in order to initiate the target therapy were is necessary. **Acknowledgement:** This work was supported by the UMFST Tîrgu Mureş, Romania, Research Grant number 15609/13/29.12.2017". Most of the equipment used belong to the "Centerfor Advanced Medical and Pharmaceutical Research" of the UMFST from Tîrgu Mureş, Romania.

Keywords: mutation, AML, acute myeloid leukemia, FLT3 DNMT3A NPM1, CNVs MLPA

CHARGE SYNDROME DUE TO A DE NOVO 13Q DELETION – A CASE REPORT

Bogliş Alina¹, Crauciuc AG¹, Tripon F¹, Cosma Adriana-Stela¹, Balla Beata Magdolna¹, Bănescu Claudia¹

¹Department of Genetics, UMFST Tîrgu Mureş

Background: CHARGE syndrome, caused by a mutation in the CHD7 gene on chromosome 8q12 in the majority of the cases, is characterized by a specific pattern of congenital anomalies: coloboma, heart disease, choanal atresia, mental and growth retardation, genital hypoplasia, ear deformities. However, other chromosomal imbalances (deletions, translocations, duplications) and environmental factors may be involved in the etiology of the CHARGE syndrome. **Material and methods:** We present clinical and cytogenetic characterizations of a 4-months-old female patient with CHARGE syndrome suspicion. The conventional cytogenetic analysis was performed from the fresh peripheral blood. **Results:** The patient's clinical evaluation revealed a facial dysmorphism with triangular facial shape, hypertelorism, low-set ears, and ear deformities, bilateral iris coloboma, congenital cataract, micrognathia, camptodactyly, and generalized hypotonia. Imagistic investigations showed ventriculomegaly, agenesis of the corpus callosum and choanal atresia. She also presents an ostium secundum atrial septal defect. Karyotype analysis identified a partial deletion of the long arm of chromosome 13. Parental karyotypes were normal. **Conclusions:** Since CHARGE is a rare syndrome, any suspicion should be analyzed by karyotyping to exclude any chromosomal abnormalities. In this report, a rare de novo 13q deletion of a patient with CHARGE syndrome and review of the literature was performed.

Keywords: CHARGE syndrome, choanal atresia, coloboma, agenesis of the corpus callosum, 13q deletion

HEART VALVES BIOREACTOR PRECONDITIONING – PRELIMINARY RESULTS

Movileanu Ionela¹, Brinzaniuc Klara¹, Harpa M², Cotoi OS³, Preda Terezia², Al Hussein H², Simionescu D²

¹Department of Anatomy, UMFST Tîrgu Mureş

²., UMFST Tîrgu Mureş

³Department of Pathophysiology, UMFST Tîrgu Mureş

Background: Bioreactors are manufactured laboratory systems, used in Regenerative Medicine and Tissue Engineering for tissue preconditioning. By using them in the lab, tissues and organs obtained using regenerative medicine are progressively exposed to in vivo conditions. **Material and methods:** This study is part of a grant that was approved by the Ethics Committee of UMFST Targu Mures. Using an Aptus Heart Valve Bioreactor we performed preliminary studies on the two well known heart valve prosthesis: a mechanical one (a 3D printed Saint Jude Medical like heart valve prosthesis) and biological one, porcine pulmonary valve obtained in our laboratory after chemical, physical and enzymatic removal of resident cell, through a process known as decellularization, following a 10 days protocol. During a period of 2 days the valves were continuously exposed to increasing heart rates and systolic and diastolic pressures, until reaching a maximum heart rate of 70 beats per minute and 20/5 mmHg pressure pulmonary circulation parameters. Their function was permanently observed using a video camera attached to the bioreactor upper lid. **Results:** Using the recordings took by the camera, the valve performance and a series of parameters could be quantified - morphologic aspects of the leaflets (movement, opening area, coaptation, leaflet thickening, appearance of ruptures and lacerations) as well as of the valvular annulus (movement, excursion, presence of traumatic lesions) and hemodynamic parameters (the cardiac debit, the liquid flow). **Conclusions:** Using bioreactors, engineered devices, in vivo conditions can be recreated in laboratories to progressively adapt the regenerated tissues to the conditions in which they will further function. Furthermore, a more comprehensive understanding of the functions can be performed, evaluating their behavior in similar conditions to the living organism. **Acknowledgement** This work was supported by a grant from the Competitiveness Operational Programme 2014-2020, Tissue engineering technologies for cardiac valve regeneration, valve-regen, idP_37_673, Mysmis code:103431, contract 50/05.09.2016.

Keywords: bioreactors, regenerative medicine, tissue engineering, heart valve

EXPRESSION OF AQUAPORIN 1, AQUAPORIN 2, PAX 2 AND PAX 8 IN HUMAN FETAL KIDNEY

Ráduly G¹, Pap Zsuzsanna¹, Dénes L¹, Szántó Annamária¹, Pávai Z¹

¹Department of Anatomy, UMFST Tîrgu Mureş

Background: The kidney develops from the metanephric mesenchyme and the mesonephric duct. The aquaporins are membrane proteins which promotes the transport of the water through a biological membrane. Aquaporin 1 (AQP1) is situated in the membranes of the epithelial and endothelial cells. Aquaporin 2 (AQP2) is found in the kidneys collecting tubule cells, and its main function is the vasopressin mediated reabsorption of water. Pax2 and Pax8 are transcription factors involved in the development of the pronephros and metanephros. **Material and methods:** We studied the expression of AQP1, AQP2, PAX2 and PAX8 expression, using immunohistochemical techniques, in kidney samples collected from 34 post mortem fetuses of 9 to 24 weeks of gestation. **Results:** AQP1 expression is present in the Bowman capsule, proximal tubule and the descendent limb of loop of Henle. The AQP2 expression is present in the distal tubules and the collecting ducts of the fetal kidney. The Pax2 protein has a nuclear expression in the structures developed from the ureteric bud and in the metanephros' mesenchyme. The Pax8 expression is present in the proximal tubule's epithelial cells, in the Henle loop's cells and also in the collecting ducts. **Conclusions:** The studied markers allows the following of the fetal nephrogenesis. In the beginning of the fetal period the Pax2 is expressed in the mesenchymal cells surrounding the ureteric bud. The Pax8 is expressed in the ureteric bud in different stages of development. The AQP1 is expressed intensively in the proximal tubules and the descending loop of Henle. AQP 2 is expressed in the distal tubules and the collecting ducts.

Keywords: Anatomy, Embryology, AQP1, AQP2, PAX

THE IMPACT OF THE NEW 2016 TNM CLASSIFICATION OF MALIGNANT TUMORS IN A SERIES OF PAPILLARY THYROID MICROCARCINOMA CASES

Szász Emőke - Andreea¹, Nechifor-Boilă Adela¹, Borda Angela¹

¹Department of Histology, UMFST Tîrgu Mureş

Background: In the new AJCC/Tumor-Lymph Node-Metastasis (TNM) cancer staging system, recently published, there is a new definition of extrathyroidal extension (ETE): tumor invasion into strap muscle. In this study, we aimed to investigate the impact of the new 2016 TNM classification in a series of papillary thyroid microcarcinoma (PTMC) cases. **Material and methods:** All consecutive PTMC cases registered at the Department of Pathology, Tîrgu-Mureş Emergency County Hospital between 2003 to 2014 were reviewed. According to the 2009 TNM, ETE was defined as limited tumor extension into either adipous perithyroid soft tissues or into strap muscles (sternohyoid, sternothyroid or omohyoid muscles) or only strap muscles invasion, according to the 2016 TNM Classification of Malignant Tumors. All cases were assessed based on both 2009 and 2016 TNM Classification and the results were compared. **Results:** Our study included 206 PTMCs. We found 18/206 (8,7%) cases with ETE in accordance with the 2009 TNM and no case (0/206) with ETE when applying the 2016 TNM criteria. The difference was statistically significant ($p < 0,001$). These cases were therefore reclassified from pT3 in pT1a in the new classification system. As regard the AJCC stage, 191- 13- and 2 cases were classified in stage I, II and III of the 2009 TNM, respectively; according to 2016 TNM, 204 cases are considered in stage I (99% vs. 92,7%) and two cases in stage II (1% vs. 6.3%) and no cases in stage III. **Conclusions:** In our study, all PTMC cases previously associated with ETE (in accordance with the 2009 TNM) were now staged pT1a. This significant change within the new AJCC/TNM staging system, reduce the overstaging and consequently the overtreatment of these indolent PTMCs.

Keywords: papillary microcarcinoma, extrathyroidal extension, 2016 TNM staging system

METASTASIS TO THE THYROID GLAND OF RENAL CLEAR CELL CARCINOMA - CASE REPORT

Nagy Blanka¹, Szász Emőke - Andrea², Nechifor-Boilă Adela², Borda Angela²

¹Department of Pathology, UMFST Tîrgu Mureş

²Department of Histology, UMFST Tîrgu Mureş

Background: Renal clear cell carcinoma (RCC) is a malignant tumor that can metastasize to many locations, but unusually spreads to thyroid. RCC metastasis to thyroid can be asymptomatic and may be detected incidentally or it can co-exist with multinodular goiter. **Material and methods:** We report a case of a 66-year-old female with thyroid gland enlargement diagnosed of symptomatic multinodular goiter. A total thyroidectomy was therefore carried out and sent for histopathological evaluation. **Results:** Macroscopic examination of the surgical specimen revealed in the left and right thyroid lobe nodules with heterogenous appearance containing gelatinous colloid, focal hemorrhage, fibrosis and calcification. Microscopically: adjacent benign thyroid tissue, we found two foci (5x4mm and 4x4mm diameter) of cells with clear cytoplasm and small irregularly shaped nuclei, separated by sinusoidal vascular structures. Immunohistochemical examination showed strong immunoreactivity with CD10. The neoplastic cells were negative for thyroid transcription factor-1 (TTF-1), Thyroglobulin Cytokeratin7 and 20. These findings proved that these two foci, are the metastasis of RCC. After the histopathologic evaluation, the patient was referred for further clinical investigation. **Conclusions:** The possibility of finding of an incidental metastatic RCC in the thyroid gland from a previous unknown or non-digamosed primary tumor is rare and account only for less than 1% of malignancies. In these cases a complete immunohistochemical analysis are helpful for establishing the correct definitive diagnosis.

Keywords: metastasis, RCC, thyroid gland

BISPHENOL A - EFFECTS ON ATRIAL ACTION POTENTIAL PARAMETERS

Halaşiu VB¹, Balan Alkora Ioana¹, Finaşcu BA¹, Cozac DA¹, Perian M¹, Şerban RC¹, Scridon Alina¹

¹Department of Physiology, UMFST Tîrgu Mureş

Background: In experimental studies, acute exposure to high doses of bisphenol A (BPA) was associated with proarrhythmic ventricular effects. Few data are known so far about the effect of BPA on atrial electrophysiology. We aimed to evaluate the effects of chronic BPA exposure on atrial action potential parameters. **Material and methods:** Eleven female Wistar rats were divided into two groups: Control (n=5) and BPA (n=6). BPA rats received BPA (50µg/kg/day) in the drinking water for 9±2 weeks. The right atrium was isolated from each rat and electrically stimulated at 1Hz. Depolarization velocity and action potential duration to 50% (APD50) and 90% (APD90) of complete repolarization were assessed at baseline and after exposure to adrenaline (10⁻⁵M), acetylcholine (10⁻⁵M), and Ca²⁺ (1.25mM). **Results:** No difference was found regarding the baseline values of action potential parameters between the two groups (all p>0.05). Action potential changes in response to acetylcholine and Ca²⁺ were similar between the BPA and the Control rats (all p>0.05). In BPA, adrenaline caused a nonsignificant shortening of APD90 (36.65 [29.50-40.00] ms versus 37.95 [33.90-43.10] ms; p=0.39), while in Control a nonsignificant prolongation of APD90 was observed (50.70 [37.90-64.32] ms versus 37.40 [35.47-42.52] ms; p=0.13). When comparing the APD90 changes in response to adrenaline between the two groups, the difference was of borderline statistical significance (-1.20 [-5.40-2.80] ms versus 13.30 [2.8-19.6] ms; p=0.051). **Conclusions:** Chronic exposure to relevant BPA doses did not alter atrial electrophysiology in either baseline conditions or following parasympathetic stimulation or Ca²⁺ overload. In conditions of adrenergic stimulation, BPA was associated with paradoxical APD shortening, which may increase the risk of atrial reentrant arrhythmias. This work was supported by the UMF Târgu Mureş research grant number 15609/29.12.2017.

Keywords: action potential duration, adrenaline, atrial electrophysiology, bisphenol A

EVALUATION OF A NOVEL AND HIGHLY-EFFICIENT MURINE MODEL FOR THE STUDY OF THE IMMUNE RESPONSE TO MYOCARDIAL INFARCTION

Mareş RG¹, Szabo IA¹, Marinkovic G², Cotoi OS¹, Şchiopu A³

¹Department of Pathophysiology, UMFST Tîrgu Mureş

² Cardiovascular Research - Immunity and Atherosclerosis, Lund University

³Department of Clinical Sciences, Lund University

Background: The myocardial infarction (MI) model most frequently used nationally and internationally is extremely labor intensive, time-consuming and associated with high animal mortality. Recently, we have implemented a minimally invasive MI model in mice at the Research Facility of the University of Medicine, Pharmacy, Sciences and Technology (UMFST) of Targu Mures. **Material and methods:** The mice are anesthetized using continuous isoflurane inhalation. Through a minimal intercostal opening, we "pop-up" the heart out of the thorax and ligate the left coronary artery at approximately 3 millimeters from the origin. The mouse is continuously monitored electrocardiographically and successful ligation induces persistent ST segment elevation. The heart is re-inserted into the thorax and the pneumothorax evacuated. Mouse recovery and survival are highly dependent on keeping the heart exposure time to a minimum. **Results:** This model largely reduces the amount of intra-operative time and favors quick and efficient recovery. Our results indicate a surgical time between 2-4 minutes with fast postoperative animal recovery up to 3 minutes. Consecutively, we achieved survival rates of up to 78% periprocedural and over 95% at 1 month post-MI. To determine the ischemic area at risk we used Evans Blue staining and the triphenyl tetrazolium chloride reaction to distinguish viable versus non-viable tissue. We established protocols for detailed histological and flow cytometry characterization of the infarcted hearts, in order to analyse the dynamics of the inflammatory cell populations locally and in the circulation. We recorded increased numbers of neutrophils and inflammatory Ly6C^{hi} monocytes in blood and myocardium in the immediate period after MI, and increased reparatory MerTK^{hi}Ly6C^{lo} macrophages. **Conclusions:** We implemented at UMFST Targu Mures a highly-improved MI model and the associated techniques as important tools to investigate the pathogenic mechanisms triggered by MI. This will open new opportunities for the experimental study of MI and efficient testing of new therapies for this disease.

Keywords: myocardial infarction, murine model, inflammatory cells

ORGANIZATION OF DOCTORAL SCHOOLS IN ITALY

Izzotti A¹

¹Department of Health Sciences, University of Genoa, Italy

Background: In Italy PhD School depend on the central Ministry for Teaching, University and Research (MIUR) located in Rome. **Material and methods:** Each University manages PhD School under the guidelines and the supervision of MIUR. PhD schools have been recently aggregated to eliminate schools with a little number of students. This intervention has been intended to increase the efficiency of PhD school and to erase those not having adequate scientific quality. As an example, the PhD School of Health Sciences at the University of Genoa include 6 courses dealing with Cancer Prevention, Vaccinology, Infective Diseases, Nursery, Work Medicine, Forensic Medicine. Each student must produce at least one scientific papers per year published in international peer reviewed journals having the impact factor. The school lasts 3 years and accordingly the minimum scientific production is of 3 papers in indexed journal. **Results:** The scientific production of PhD student is monitored by MIUR for further 3 years following PhD to evaluate each PhD School. Another criterion used by MIUR to evaluate PhD Schools is the scientific reputation of teaching professors calculated on the basis of their scientific production as indexed on Irisweb (MIUR database) recording Pubmed indexed papers and citation rates (total number of citations, H index). **Conclusions:** Finally the level of internationalization is also taken into account. The number of PhD student is given by MIUR to each PhD school on the basis of these criteria.

Keywords: PhD schools, scientific papers, MIUR database, h-index

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