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CLINICAL - MEDICAL

CLINICAL - SURGICAL

NUTRITION AND DIETETICS

PHYSIOTHERAPY

PHYSICAL EDUCATION

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PHARMACY

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BASIC MEDICAL SCIENCES

THE FREQUENCY OF WEST NILE VIRUS AT PATIENTS WITH THE DIAGNOSIS OF ACUTE MENINGITIS WITH CLEAR CEREBROSPINAL FLUID

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Background: West Nile Virus (WNV) is a member of the genus Flavivirus, in the family Flaviviridae. WNV is transmitted to humans by mosquitoes, being maintained in a mosquito-bird-mosquito transmission cycle, and that's why humans and horses are considered dead-end hosts. In humans, there are various symptoms, from unapparent infection to mild febrile illness, meningitis, encephalitis or death. Infections attributable to WNV have been reported in many countries from Europe, Asia, Africa, Australia and North, Central and South America. Migratory birds are thought to be primarily responsible for virus dispersal, including reintroduction of WNV from endemic areas into regions with sporadic outbreaks. **Objective:** The aim of this study is to analyze data provided by the clinical observation sheets from Infectious Disease Clinic of Braila and investigate the frequency of West Nile virus meningitis in the general population from Braila county. **Material and methods:** We performed a retrospective study using the files of patients hospitalized at the Infectious Clinic of Braila between 2013 and 2016 with the diagnosis of acute meningitis with clear cerebrospinal fluid (CSF) who were afterwards tested for anti-West Nile virus antibodies, IgG and IgM. **Results:** Of a total of 87 patients (42,53% females and 57,47% males), 40 of them were tested for anti-WNV antibodies. 30% of them were positive tested (58,33% males and 41,66% females) and 70% negative tested (53,7% males and 46, 428% females). **Conclusions:** Males are more likely to suffer from acute meningitis with clear CSF than females. The highest percentage of positive tested patients was found in 2016, between August and September. This study also reveals that people from the countryside are more likely to suffer from WNV meningitis.

Keywords: West Nile, meningitis, frequency, infectious disease

THE CONFIDENTIALITY OF PATIENT COMMUNICATION WITH ITS PHYSICIAN.

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Background: Confidentiality is a concept mentioned in Hippocratic Oath - "Whatever I see or hear during the treatment time, or even outside of it about the patient's life, should not be under any circumstances spread. I will keep it for myself, considering it shameful to be spread" **Objective:** The present research aims to prove the importance of the confidentiality in the relationship between patient and doctor vs. doctor and patient. We would also like to highlight how the confidentiality is perceived by the patient. **Material and methods:** The survey was used as a psychological investigation method, which included 10 questions addressed to 90 patients from the data base of General Practitioners. The used criteria are: age (82% between 40-80 years old, 18% are under 40 years old), gender (79% - males, 21% - females) and residence address (54% urban and 46% rural). **Results:** The following study shows an increased rate of trust regarding the confidentiality between patient and physician. From a number of 90 patients, 64% trust their physician, 72% are having a freely conversation, 61% can talk without inhibitions, 93% know what confidentiality involves, 75% consider it a significant part in the doctor-patient communication, however, only 45% are positive that the conversation with their physician is kept private. **Conclusions:** The study demonstrates that the confidentiality is a necessary goal needed to be known and applied by both parties: patient and physician, according to deontological ethics.

Keywords: Confidentiality, Communication, Patient, Physician

ZINC AND HOMOCYSTEINE DYSHOMEOSTASIS COULD PLAY A ROLE IN DIABETIC PATIENTS' RETINOPATHY

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Background: Zn dyshomeostasis is often associated with diabetes and its related complications. Zn deficiency affects ocular development, cataracts and even diabetic retinopathy. Homocysteine (HC) also represents a risk

factor for cardiovascular and oculo-vascular diseases. **Objective:** The aim of this study was to evaluate the relationship between plasma Zn and HC concentrations and occurrence of diabetic and hypertensive retinopathy. **Material and methods:** A group of 29 diabetic patients' retina was photo-documented in the Ophthalmology Clinic in Mures county. Also, the participants have been evaluated regarding the HC plasma-concentration by chemiluminescence method (Immulate One) and Zn using Konelab20XTi analyzer at the Procardia Laboratory. **Results:** Average age of our study group is 65.27 +/- 10.12 (SD) years, and 51.72% of them are male. Zn-deficiency occurred in 58.6% of the patients, and serum HC levels were elevated in 91.67% of the cases. 44.82% of the cases presented signs of diabetic retinopathy, and in 41.37% of them have been diagnosed with hypertensive retinopathy. We found no statistically significant correlation between the serum Zn deficiency and diabetic or hypertensive retinopathy. Same results have been shown in case of HC. However, the statistical evaluation of the patients' results revealed that Zn deficiency could play a role in the manifestation of retinopathy ($p > 0.05$ and $RR = 3.000$). **Conclusions:** The majority of our sample presented elevated HC serum concentration, and more than half of the patients had Zn deficiency. The actual study may have demonstrated that there is no statistically significant correlation between retinopathies and HC or Zn dyshomeostasis, but it should be repeated with a larger sample size based on the increased value of RR.

Keywords: diabetic retinopathy, Zn-deficiency, homocysteine, hypertensive retinopathy

3D PRINTING METHOD FOR IMPLANTABLE BIOLOGICAL DEVICES

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Background: Continuous ECG monitoring in unrestrained rats represents a major advancement in cardiac electrophysiology experiments. To this end, the animals are implanted with commercially available radiotelemetry ECG transmitters. During the experiments, some of the transmitter cases may become damaged or contaminated (implant pocket infections). **Objective:** Our goal was to perfect a technique to produce biocompatible cases for implantable radiotelemetry transmitters, and thus to obtain disposable cases. **Material and methods:** A Prusa i3 3D printer and dedicated software (Autodesk 123D Design) were used to print the disposable cases. The cases were printed in acrylonitrile butadiene styrene, a strong, yet lightweight material, with good electrical insulating properties and good biocompatibility. Waterproofing was achieved by immersing the cases in acetone for 5 minutes. **Results:** Using 3D printing we produced ten radiotelemetry transmitter cases, of similar quality to the original, which were implanted in four rats. Four weeks after implantation, the transmitters were removed and the in-house assembled devices and the implant pockets were examined. There were no signs of device malfunction or structural impairment. Also, there were no signs of local inflammation, infection, or necrosis. Waterproofing was very efficient, all devices being watertight. **Conclusions:** 3D printing of radiotelemetry transmitter cases is a reliable method that allows replacement of the original cases with disposable ones. Printing is fast, allowing the production of a large number of devices in a short interval of time. During case replacement, the battery of the device may also be exchanged. For a better biocompatibility, the cases can be coated in silicone rubber, similar to that used on human cardiac pacemakers.

Keywords: 3D printing, radiotelemetry, ECG

THE RESIDENCY EXAM FROM THE PERSPECTIVE OF THE NOWADAYS MEDICAL STUDENTS IN THE 6TH YEAR

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Background: The study is based on the perception of the medical students in 6th year over the residency exam, regarding the structural changes in the examination methods and the emotional-affective influence. **Objective:** The study proposes to highlight how the medical students in the 6th year find this examination method, regarding the necessity and the importance of the exam in their professional training and also the effects of the exam preparation on their personal life. **Material and methods:** The psychological analysing method is a questionnaire, which aims through its questions to reveal the medical students' personal attitude towards the residency exam. The sample consists of 103 students in 6th year from several medical university centres, questioned in December 2016. **Results:** Interpreting the data, results that 49,2% of students consider that the residency exam is necessary and

45,8% do not. But all of them do not agree with the method of examination. Regarding the importance of the residency exam, 79,7% consider that it doesn't represent the essential knowledge gained over the six years. The majority of the participants believe that they should start studying in the second semester of the 6th year because 76,3% consider the preparation for the exam like a recapitulation. Regarding the effects of the learning process on the students' personal life, 60% of them say that this period is very stressful. According to the changes in the residency repartition, around 55% students consider that is a good change and it stimulates them to study harder.

Conclusions: The residency exam is necessary for the repartition on the specialities, but it is only a formality, due to an inappropriated partition of the medical specialities information. The period of study is stressful, with negative effects on the usual activities. Positive findings are the fact that the latest changes regarding the repartition, increase the students' interest in studying.

Keywords: residency, formality, stressful, repartition

ASSESSMENT OF SMOKING BEHAVIOR AT BOTOSANI COLLEGE STUDENTS

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Background: The frequency of smoking at teenagers is rising in our country, also the age for first trying a cigarette is precocious, all this showing an increased risk for future chronic diseases and the needs for more efficient community interventions in schools. **Objective:** Evaluation of Botosani college students' smoking practices in 2016 and risk factors involved. **Material and methods:** 305 students (from 9th compared to 12th grade) were questioned on a cross-sectional study made in October 2016, about their family smoking history, smoking onset and habits, the age of their first cigarette, frequency of exposure to second-hand smoking, the quantity of cigarettes smoked per day, and also attitudes towards smoking cessation. **Results:** In our sample, 40.51% of the males and 28.54% of females said that they have tried smoking at least once. In 40.42% of smokers both parents are smokers as well, whereas only 6.35% of the parents of non-smokers are smokers. The age of smoking onset is 12.73 in freshmans and 14.48 in seniors. 12th grade students were smoking 4.20 cigarettes a day, which is 3.50 more than 9th grade student's frequency (with 1.20 cigarettes). When asked if they have ever tried to quit, 5.00% of the 9th graders and 12.12% of the 12th graders responded affirmative. Out of all students who tried to quit smoking 6.87% were females and 12.06% males. **Conclusions:** The decision to start smoking as well as smoking behavior in teenagers are greatly influenced by whether the parents are smokers or not, also by group pressure and information received. We emphasize the important of efficient strategies and community interventions for education in school regarding the risks of smoking and proper cessation steps.

Keywords: smoking, cessation, students, community intervention

ELECTROMAGNETIC POLLUTION AND SLEEP QUALITY IN UNIVERSITY RESIDENCES

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Background: We live in a digital era, without knowing the price we pay for it. Mobile phone overuse, worldwide spreading WiFi, uncountable antennas lead to increase of electromagnetic (EM) pollution and side effects. Besides, technological development is far more accelerated than the knowledge of their consequences. **Objective:** The aim of this study was to determine the electromagnetic pollution in university student dormitories and to examine the relation between the electric field (E-field) intensity and sleep quality. **Material and methods:** From December 2016 to January 2017 a cross-sectional research was conducted on a representative population of young adults from 3 campuses, 7 student dormitories, 498 rooms. Questionnaires were administered including Pittsburgh Sleep Quality Index (PSQI) for evaluating the sleep quality. Indoor E-field intensity was measured by a frequency-selective radiofrequency dosimeter EME SPY 200. Kruskal-Wallis test, Dunn's Multiple Comparison Test, Spearman's Correlation Analysis were used for data analysis. **Results:** We obtained a statistically significantly higher E-field intensity in Dimitrie Cantemir (median: 0.8212), Sapientia (median: 0.0227) and Petru Maior (median: 0.0076) university dormitories. Our study did not reveal any correlation between the students sleep quality and the electromagnetic parameters. A relation between E-field intensity and PSQI was found only in Petru Maior university dormitory ($r=0.39$; $p=0.0001$). **Conclusions:** E-field intensity varies in function of localization of

dormitories. Additionally, majority of students have poor sleep quality and some of them (Petru Maior) present elevated sensibility to non-ionizing radiations.

Keywords: electromagnetic field, sleep quality, student dormitories

THE BENEFICIAL ROLE OF ZINC IN EXPERIMENTALLY INDUCED DIABETIC PERIPHERAL NEUROPATHY

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Background: Peripheral neuropathy is one of the most frequent complications of diabetes mellitus (DM). It is well known that hyperglycemia induces zincuria and therefore hypozincemia. **Objective:** As zinc (Zn) activates over 300 metalloenzymes, our study aims to highlight the effects of Zn supplements on the evolution of neurological complications in experimentally induced DM. **Material and methods:** The research was conducted on white Wistar male rats, divided into four groups of 10: normal control group (I), rats treated with zinc sulfate (II), rats with streptozotocin induced DM (III) and rats with DM under zinc sulfate treatment (IV). The clinical state of the animals, the diuresis and the glycosuria have been monitored daily, while the thermal and mechanical nociceptive thresholds weekly. After 12 weeks, the rats were sacrificed and the blood levels of antioxidant enzymes, glucose and glycated hemoglobin were determined. **Results:** All rats from the groups III and IV had hyperglycemia. The diabetic rats treated with Zn developed DM with a 44.2% lower hyperglycemia than the untreated ones. After analysing the antioxidant enzymes activity (catalase, superoxide dismutase), compared to the normal control group, it was observed a milder increase in group IV than in group III; the Zn supplements reduced the oxidative stress intensity. Furthermore, the association with Zn produced protection against hemoglobin glycosylation. The thermal hyperalgesia detected in the diabetic group has diminished significantly ($P < 0.001$) through long-term Zn administration (the equivalent to 6-7 years for humans). In addition to this, Zn reduced the pain threshold of the sensory nerve fibers. The reduced responsiveness to mechanical stimuli in the diabetic group came close to normal after Zn administration. **Conclusions:** The results highlight the beneficial role of zinc supplements on diabetic rats through the limitation of oxidative stress, protein glycosylation and through the amelioration of the peripheral neuropathy.

Keywords: zinc, diabetes mellitus, diabetic neuropathy

ADAPTATION OF MEDICAL STUDENT FROM 1ST YEAR TO THE UNIVERSITY ENVIRONMENT

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Background: Given that the new environment requires a stressor for many of us, we wish to emphasize the importance of all measures used by each person to minimize the stress of external and internal conditions of the new environment, and the latter influence it has on students. **Objective:** This paper aims to analyze the causes that determine how to adapt the students of 1st year of medicine to the new environment, and the strategies used to overcome logistical obstacles adaptation. **Material and methods:** The present study is based on the questionnaire as a method of psychological investigation that followed by his scoring items adaptation issues medical students of 1st year. The target group was composed of a total of 105 students from 1st year of Medicine, from several academic medical centers, working as a sample. **Results:** After interpreting the results obtained, we prioritized that 33.3% of people surveyed have adapted in the first week, 33,3% in the first month, 17.5% in 1-2 days and 15,8% have not adapted yet. It is worth noting that there are factors that have facilitated adaptation (colleagues-54.4%, 40.4% -Standard life, 5.2% - family), but there are gaps in the process of adaptation (50.9% - New average, 24.6% -teachers,family -distance 22.8%, 1.7% -colleagues). **Conclusions:** According to the findings above, there are three major considerations highlighted: an existence of cause and effect in terms of time and how to adapt the students, the importance of how students cope with change and the effect that new environment has on each individual's personality.

Keywords: adaptation, stress factor, medical students, cause

THE PHYSICAL DEVELOPMENT PROFILE OF PUPILS FROM TIRGU MURES (2016)

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Background: The main anthropometric indicators of children (size, weight, thoracic perimeter, head circumference) in association with their acute and chronic morbidity, allows the health assessment of children from a given area, along with the risk factors involved, based on which it can be taken specific preventive measures. **Objective:** The study aims to assess chronic morbidity and physical development data of schoolchildren in Mures area, after the 2016 epidemiologic triage in schools. **Material and methods:** We relied on data recorded by the Mures Public Health Institution, from all children in Mures aged between 3 and 18 years, by using the evaluation of the physical development data (weight, height, age, sex) as well as the recorded morbidity data. The study included a total of 21.123 monitored children which is a representative sample for 2016. **Results:** Among the pupils included in the study, 57.63% were from urban area. In terms of morbidity, the following diseases arranged in descending order were monitored: eye refraction vices (14.85%), acquired deformities of limbs (8.46%), chronic diseases of tonsils (7.81%), sequelae of rickets (7.54%), acquired deformations of the spine (6.87%), endocrine obesity (6.61%) and iron deficiency anemia (3.96%). Students from the 12th grades are the first ones on the list of disharmonic growth, for both under and overweight, on the two residential environments, with the difference that in cities prevails those underweight and in villages those overweight, conversely than the averages computed for all the other studied age groups. **Conclusions:** When the chronic morbidity and physical development are associated, it is highlighted an intrinsic connection, the highest risk of disease being for children with below normal weight status and those with excess. We want to emphasize the importance of assessing population health status by physical development parameters also by neuropsychological perspective, morbidity, living conditions, in order to elaborate the risk profile and to intervene properly.

Keywords: growth, obesity, chronic diseases, anemia

THE IMPACT OF A PECULIAR VENOUS ANASTOMOSIS

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Background: Throughout time, medical literature particularized a limited number of distinct patterns of the renal veins. The already known versions are displayed by double left renal vein, multiple right renal veins and renal collar. **Objective:** Being one of the most meaningful exception of the renal blood supply, the retroaortic left renal vein is being reported here. Although the incidence may be not of great concern in consequence of the lack of symptoms, the abnormality should not be neglected in terms of surgical interventions. **Material and methods:** In the course of a customary dissection conducted on a 68-years old male body in the Departament of Anatomy of the University of Medicine and Pharmacy "Gr. T. Popa" Iași, it has been detected a rare deviation of the left renal vein. **Results:** The unintentional discovery revealed the left renal vein having a commonplace origin in the renal hilum, anterior of the renal pelvis and the left renal artery. The suprarenal vein, deriving from above and the genital vein from below have normal anatomic position and do not illustrate any discrepancy. The vein under discussion is oriented horizontally, in orthotopic position, towards inferior vena cava. Instead of having passed anterior of aorta, it developed behind it. **Conclusions:** The retroaortic left renal vein (RA-LRV) topography is an unlikely congenital anomaly. It has reference to the development of inferior vena cava and took place as a result of persistence of the dorsal portion of circumaortic collar instead of the ventral portion. RA-LRV is of extreme significance on the grounds that it could generate clinical implications such as renal hypertension, haematuria and proteinuria, lower abdominal pain and varicocele.

Keywords: RETROAORTIC RENAL VEIN, INFERIOR VENA CAVA, ANATOMICAL VARIATION, RENAL HYPERTENSION

ANATOMICAL PARTICULARITIES OF THE INGUINAL REGION IN LAPAROSCOPIC APPROACH

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Background: Laparoscopic approach of the inguinal region involves highlighting other anatomical elements, which in case of classical approach are slightly noticeable, eventhough structurally we are talking about the same anatomical elements. **Objective:** The aim of this study is to emphasize the importance of the anatomical knowledges in the laparoscopic approach. **Material and methods:** During the laparoscopic intervention everytime are noticed some anatomical landmarks which are useful for intraoperative orientation and some of them represent also the limits that should be considered for mounting the prosthesis to close the parietal defect. **Results:** The knowledge of anatomy of the abdominal wall and also the correct way for the preparation of the hernia sac are very important elements so as to the prosthetic material can be properly secured and prevent relapse. **Conclusions:** Laparoscopic technique can be considered nowadays a modern treatment alternative which assures the patient a short-term recovery and a faster reinstatement in the social environment. The condition for a successful intervention is aside from the operator's skills, the correct identification of the anatomical landmarks.

Keywords: inguinal region, anatomy, laparoscopic

DISTRIBUTION AND ANTIBIOTIC SUSCEPTIBILITY OF MICROORGANISMS ISOLATED FROM BLOOD CULTURES

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Background: Antibiotics are those agents that could be our greatest allies, but excess become our most fear enemies, by creating extremely resistant bacterial strains. With this study, we intended to observe deeply how that development is taking shape. **Objective:** We analyzed the antibiotic susceptibility of isolates, obtained from blood cultures, recovered at the Microbiology Laboratory of Mures County Emergency Clinical Hospital. **Material and methods:** We collected data from the electronic data base of the laboratory. All successive non-duplicate, clinically significant strains tested during a period from first of June 2016 until 31th December 2016 was included in our study. Recurrent isolates were considered for analysis only if there were phenotypically different. Pluribacterial samples were excluded from the study. **Results:** A total of 288 strains were involved in our study. The most frequent was *Staphylococcus aureus* (n=48, 16.7%), followed by *Klebsiella pneumoniae* (n=31, 10.8%), *Staphylococcus epidermidis* (n=28, 9.7%), *Enterococcus faecium* (n=22, 7.6%) and *Escherichia coli* (n=21, 7.2%). The most active antibiotic for *Staphylococcus aureus* was linezolid and vancomycin (both 100%). In case of *Klebsiella pneumoniae* the antibiotic with highest susceptibility was amikacin (100%) and tigecycline (93,33%). For *Enterococcus*, linezolid and tigecycline (both 100%) had the highest susceptibilities. **Conclusions:** Conclusions: Of all the analyzed isolates obtained from blood cultures, Gram-positive cocci were more frequent compared to the Gram-negatives. On the other hand, those Gram-negatives were more problematic, because of their low susceptibility to antibiotics.

Keywords: Isolates, Susceptibility, *Staphylococcus aureus*, Antibiotics

EXOCRINE PANCREATIC TUMORS: CLINICOPATHOLOGICAL AND IMMUNOHISTOCHEMICAL FEATURES

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Background: The mechanism of aggressiveness of the exocrine pancreatic tumors is still poorly understood. **Objective:** To evaluate the clinicopathological and immunohistochemical features of exocrine tumors of the pancreas. **Material and methods:** We evaluated the clinicopathological parameters related on the pancreatic lesions diagnosed at the Department of Pathology of Tîrgu-Mureş, Romania, between 2012-2016. For diagnosis,

the markers carcinoembryonic antigen (CEA) and keratins 7, 19 and 20 were used. The epithelial mesenchymal transition (EMT) was examined in cases of ductal adenocarcinomas using the antibodies E-cadherin, N-cadherin and β -catenin. **Results:** During the examined five years there were 183 cases diagnosed as pancreatic lesions: 109 (56,60%) tumors and 74 (40,40%) non-tumor lesions. From the 109 tumors, 94 were exocrine-type carcinomas, 14 cases were endocrine tumors and one case was diagnosed as cystic lymphangioma. Exocrine malignant tumors predominantly occurred between 51-70 years and show a relatively equal distribution between men (52,27%) and women (47,73%). From the 94 carcinomas of the exocrine pancreas, 78 were ductal adenocarcinomas. The other cases were serous tumors (n=8), pancreato-biliary adenocarcinomas (n=2), cystic mucinous tumors (n=4), and adenosquamous carcinomas (n=2). The poorly differentiated ductal adenocarcinomas showed loss of E-cadherin, focal positivity for N-cadherin and β -catenin cytoplasm-to-nuclear translocation. **Conclusions:** The aggressivity of poorly differentiated ductal adenocarcinomas might be explained by the EMT that occurs through the E-cadherin/ β -catenin pathway.

Keywords: pancreas, ductal adenocarcinoma, epithelial to mesenchymal transition

THE PROGNOSTIC ROLE OF TUMOR BUDDING IN COLORECTAL CANCER

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Background: In the clinical practice, evaluation of tumor budding in the invasion front becomes a daily duty of pathologist that seems to have a prognostic impact in patients with colorectal adenocarcinomas (CRC). **Objective:** To present our data regarding the particular features of tumor budding. **Material and methods:** In 49 consecutive cases of CRC, we have evaluated the clinicopathological and histopathological characteristics. Based on the number of the isolated cells in the invasion front, the cases were grouped in low- versus high-grade budding CRCs (≤ 5 versus > 5 isolated cells in the tumor front). **Results:** From the 49 cases, 23 were classified as low grade (group A) and 26 were considered to have high grade budding (group B). All of the cases from group B were diagnosed in pT3/pT4 stage and 17 of them showed lymph node metastasis. From group A, 19/23 cases were diagnosed in pT3/pT4 stage and only 3 patients showed lymph node metastases. The peritumoral stroma was not modified in cases from group A whereas 20/26 cases from group B showed a fibrotic or hyalinized stroma. The demographic parameters (age, gender) and tumor characteristics (localization, macroscopic aspect, size) did not show differences among the two groups. The median diameter was 42.52 ± 12.34 for group A and 45.84 ± 11.56 for group B ($p=0.92$). **Conclusions:** In CRC samples with high grade budding, the risk of lymph node metastases is higher than in patients with low-grade budding tumors but the depth of invasion is not influenced by the budding grade. colorectal cancer

Keywords: colorectal cancer, budding, prognosis

SERUM LEVEL OF FASCIN IN HEALTHY OVER 50 YEAR OLD MALES

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Background: Fascin-1 is an actin-bundling protein with important roles in cell migration. Fascin-1 is low or absent in most normal adult epithelia, yet its expression in carcinoma from many tissues correlates clinically with aggressive disease and reduced patient survival. **Objective:** The aim of our study was to see if Fascin is secreted in serum and to compare serum level according to age in healthy male patients. **Material and methods:** We collected serum from 46 healthy male patients and stored it at -80 C until serological determination of Fascin-1 was performed. Enzyme-linked immunosorbent assay (ELISA) serum determination of Fascin was performed using a kit from USBiological, Salem, MA, USA (Human Fascin no.cat. 024943, detection range 0.312-20 ng/ml), according to the manufacturer's standard protocol. **Results:** The median age was 64 years (IQR 53-78). The median Fascin serum level was 9.68 ng/ml and the median PSA level was 1.17 ng/ml. The median prostate volume was 27.1 cmc. The 51-60 years group had an median Fascin level of 8.96 ng/ml (range 3.96-17.63 ng/ml), the 61-70 group a 10.04 ng/ml (range 4.92-14.36 ng/ml) and the 71-80 group had a median of 8.62 ng/ml Fascin serum level (range 4.82-14.27 ng/ml), with no statistical difference of Fascin serum level between groups ($p=0.21$). **Conclusions:** We found that Fascin is secreted in serum of healthy males. Median level was 9.68 ng/ml. From our data serum level did not differ according to age in over 50 years old males. **Acknowledgements:** This paper was

supported by an internal grant financed by University of Medicine and Pharmacy, Tîrgu Mureş, Romania. "Fascin an eventual new biomarker in prostate cancer". Contract number: 17800/22.12.2015. Samples storage and ELISA determination was performed at Center for Advanced Medical and Pharmaceutical Research, University of Medicine and Pharmacy, Tîrgu Mures, Romania

Keywords: Fascin, serum, age, Healthy males

ADRENOCORTICAL CARCINOMA: HISTOPATHOLOGICAL DESCRIPTION OF NINE CASES OF A RARE MALIGNANCY.

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Background: Adrenocortical carcinoma is a rare malignant epithelial tumor derived from adrenal cortex cells. Histopathological diagnosis is based on macroscopic and microscopic characteristics with no specific immunohistochemical markers. The diagnosis of malignancy relies on clinical and pathological criteria or on the presence of metastasis. **Objective:** The aim of our study was to determine the prevalence and pathological characteristics of adrenocortical carcinoma in our institution over a twelve-years period. **Material and methods:** All cases of adrenocortical carcinoma operated on at Tirgu Mures Clinical Emergency County Hospital between 2005-2016 were retrospectively reviewed. Pathological data were taken from the database registers and pathological reports from the Department of Pathology. To establish the degree of aggressiveness, the Weiss system was applied to each case. It includes the evaluation of: nuclear grade, mitotic rate, abnormal mitoses, clear cells, diffuse architecture, necrosis and venous, sinusoid and capsular invasion. Each evaluation criteria are recorded as 0 (not present) or 1 (present). A score ≥ 4 define a malignant tumor, ≤ 2 a benign tumor and equal to 3 a tumor with uncertain malignant potential. **Results:** Nine cases of adrenocortical carcinoma were operated on. This represents about 12% of all adrenal lesions operated on between 2005 and 2016. Eight out of nine cases were considered as malignant tumors with a Weiss score equal or superior to 4. Among them, two presented also distal metastases. One case was classified as an adrenocortical tumor with uncertain malignant potential, with a Weiss score equal to 3. **Conclusions:** The evaluation of Weiss system on multiple sections is mandatory and plays an important role in identifying the aggressiveness of the adrenocortical tumor.

Keywords: adrenocortical carcinoma,, malignant,, Weiss system.

THE EFFECTS OF DOXORUBICIN, QUERCETIN AND MENADIONE ON HUMAN LEUKEMIA CELLS

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Background: Acute lymphoblastic leukemia is currently treated with doxorubicin (DOX), which influences cell-cycle arrest, mitochondrial depolarization and oxidative stress. Quercetin (QC) and menadione (MD) alter the viability of leukaemic cells and modulate the effects of doxorubicin. **Objective:** We aimed to evaluate the cell cycle distribution, the apoptosis/necrosis ratio and the oxidative status of Jurkat T leukaemia cells, while being treated in vitro with various doses of DOX, QC, MD. **Material and methods: The evaluation of the cell cycle distribution:** 10^6 cells were washed with PBS, incubated for 15 minutes in staining buffer in the dark at room temperature, and then analysed with flow-cytometry. Data acquisition and analysis: CellQuest and WinMDI 2.9 softwares and a Gaussian deconvolution algorithm were used. **The apoptosis/necrosis ratio assessment:** 10^6 cells were washed with PBS and double stained with fluorescein. The samples were analysed in flow-cytometry. Data analysis: WinMDI 2.9 software was used. **Oxidative stress evaluation:** cells were washed in a standard saline, resuspended and incubated for 10 minutes at 37°C in the dark. Cells were then centrifuged and resuspended. After staining for 15 minutes at room temperature in the dark, samples were diluted with 0.4 ml SS and measured in flow-cytometry. **Results:** DOX induces cell-cycle arrest, mitochondrial depolarisation and oxidative stress. The cellular viability decreases after 18 and 48 hours of exposure. The effects are present on 63-70% of the cells. QC/MD induce apoptosis and generate oxidative stress. In 18 hours treatment, the cellular viability decreases in 31-52% of the cells. DOX + QC/MD is demonstrated to produce an additive cytotoxicity, using less doses of doxorubicin. **Conclusions:** The present study suggests that the cytotoxic effects of the three drugs are additive. Therefore, by including QC/MD to DOX treatment schemes for acute lymphoblastic leukaemia, the

effects of chemotherapy could be improved.

Keywords: acute lymphoblastic leukaemia, doxorubicin, quercetin, menadione

VARIATIONS IN THE BRANCHING PATTERN OF THE ABDOMINAL AORTA- TWO CASE REPORTS

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Background: The abdominal aorta (AA) is the main blood vessel from the abdomen which releases both, visceral and parietal branches, assuring the arterial supply of the abdominal and pelvic viscera and musculocutaneous structures respectively. Lately, a lot of studies have been published regarding the anatomical variations of the AA's branches. **Objective:** The main purpose of this study was to investigate the occurrence of the variation pattern of the AA's branches in the cadaveric material at the Anatomy Department from the University of Medicine and Pharmacy. **Material and methods:** Between 2015 and 2017, during the anatomical practical classes for the first year students, we routinely dissected a total of 8 formaline-fixed human cadavers and we identified two variations. **Results:** In the first variation, the two inferior phrenic arteries (IPA) showed a different point of origin: the right IPA emerged directly from the AA while the left IPA was branching from the celiac trunk and partially covered the vascularization of the greater curvature of the stomach. In the second variation, instead of one middle colic artery (MCA), we found a pair of arteries which supplied the transverse colon. **Conclusions:** Vascular variations involving both visceral and parietal branches of the AA may occur and the physicians must be aware of this condition especially during surgical and interventional radio-oncological approaches of the pathology involving the abdominal cavity and wall to prevent any inadvertent complication.

Keywords: variation, abdominal aorta, branches

PATTERN AND SEVERITY OF INJURIES IN ROAD TRAFFIC ACCIDENTS INVOLVING PEDESTRIANS

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Background: Road traffic accidents remain the leading cause of death in young people. However, they more often result in injury to the victims rather than death. While car passengers have various safety measures, pedestrians remain vulnerable in collisions. From a forensic stand point, establishing the victim's injuries and their severity is crucial for the legal proceedings. **Objective:** This study aims to analyze injury severity and pattern in pedestrians, victims of road traffic collisions in Mures County. **Material and methods:** In this retrospective study, medico-legal reports issued during January-December of 2014, provided by The Targu Mures Forensic Medicine Institute, were analyzed. From 208 reports of road traffic accidents, 54 documented injuries to pedestrians and were included in this study. **Results:** 18/54 victims suffered injuries limited to one anatomical region; 36 were polytraumatized. 55% (30) of victims suffered injuries to the lower limbs, 44% were minor injuries and 56% fractures, mainly (33%) to the tibia and fibula. The upper limbs were injured in 26% (14) cases: 36% minor injuries, 64% fractures, 36% humeral. 16 cases of head injuries: 56% suffered brain injury, 44% suffered skull fractures. 57% of facial trauma were sinus fractures and hemisinus. 11 thoracoabdominal traumas, 54% rib fractures, half of them complicated with pneumothorax. Only 1 victim suffered internal organ damage. 8 suffered vertebral column trauma, without spinal cord injury. 2 victims were given more than 90 days of medical care, and other 2 suffered life threatening injuries. **Conclusions:** The most affected were the lower limbs, especially the calves; being granted the most days of medical care (over 90). Following closely was the head trauma, mostly intracranial bleeding. Fractures to the humerus were the main upper limb injuries. Rib fractures represent most of the thoracoabdominal trauma. The lumbar and cervical vertebrae were the most affected by fractures or contusions.

Keywords: pedestrian, injury, accident, forensic

MIMICKERS OF PROSTATIC ADENOCARCINOMA ON THE TRANSURETHRAL RESECTION OF PROSTATE SPECIMENS

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Background: The Transurethral Resection of the Prostate (TUR-P) is an endoscopic surgery procedure of the transitional zone (TZ) of the prostate in order to relieve moderate to severe urinary symptoms. It is well known that the main pathology of the TZ of the prostate is benign prostatic hyperplasia (BPH), but microglandular proliferations that can mimic prostate adenocarcinoma can also be found on the TUR-P specimens. **Objective:** The aim of our study was to evaluate the incidence of the microglandular lesions on the TUR-P specimens in our Pathology Department over a 10 year period, highlighting the microscopic features that are helpful in establishing a correct diagnosis. **Material and methods:** We analyzed all the TUR-P performed in the Urology Department and examined in the Pathology Department of the Tîrgu Mureş Emergency County Hospital between January 2006 and December 2015. For each patient we recorded the age and the histopathological diagnosis, and we analyzed the frequency of microglandular proliferations such as adenosis, basal cell hyperplasia, atrophy, etc. **Results:** A total number of 2439 TUR-P cases were examined over a 10 year period. The average age of the subjects was 71 years, ranging from 42 to 95. The most frequent histopathologic diagnosis was, as expected, BPH (74.45%), followed by prostate carcinoma (466 cases - 19.1%) and other microglandular lesions (77 cases □ 3.16%), with basal cell hyperplasia being the most common (51 cases □ 2.09%) followed by adenosis (11 cases □ 0.45 %) and other rare cases like atrophy (2 cases) and nephrogenic adenoma (5 cases). **Conclusions:** These benign mimickers of prostate adenocarcinoma must be recognized, when necessary with the use of the immunohistochemistry, in order to avoid a false positive cancer diagnosis.

Keywords: TUR-P, prostate, microglandular proliferations

ARE ALL INCIDENTALOMAS CLINICAL UNIMPORTANT? AN INTERESTING CASE OF A 16 YEAR-OLD PATIENT WITH CYSTIC PANCREATIC LESION

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Background: The extensive use of cross-sectional MRI led to increasing the frequency of the incidental detection of pancreatic cystic lesions (PCLs) up to 20%. Solid pseudopapillary neoplasm (SPN) is a rare pancreatic neoplasm of low malignant potential that occurs predominantly in young women, with over 90% of cases reported in women under the age of 20. Classic imaging characteristics include large size, mixed solid and cystic nature, encapsulation and hemorrhage. **Objective:** Our aim is to highlight the importance of cross-sectional imaging correlated with clinical parameters in the diagnosis and management of solid pseudopapillary pancreatic tumor. **Material and methods:** A 16 year-old girl presented to the hospital for unspecific gastrointestinal symptoms, such as nausea, diarrhea, low-intense abdominal pain and was diagnosed with gastroenteritis. Ultrasonography, computed tomography and MRI was used for the management of the case. **Results:** The girl had an ultrasonography made which revealed cystic lesion located in the head of the pancreas. Computed tomography showed a cystic mass in the head of pancreas outside the Wirsung's duct of 3 cm, well-defined, encapsulated, with inhomogeneous density and without vascular invasion. Based on the CT result she was misdiagnosed with pancreatic adenocarcinoma. Afterwards she was referred to our clinic where she was diagnosed with solid pseudopapillary neoplasm and the watchful waiting management was decided. MRI performed at 3 and 11 months after the diagnosis revealed no modification of the pancreatic mass. **Conclusions:** Because up to 60% of PCLs are classified as malignant or premalignant it is absolutely essential that an accurate diagnosis is rendered so that effective care can be given to each patient, from watchful waiting to surgical excision. Due to their rarity and nonspecific clinical presentation, SPNs are frequently misdiagnosed. Considering symptomatology, age, sex as well as morphology (well-defined, encapsulated, heterogeneous mass, outside of pancreatic duct) can be easily set the diagnosis of solid pseudopapillary neoplasm.

Keywords: solid pseudopapillary neoplasm, cystic lesions, young women

HISTOPATHOLOGICAL FEATURES OF THE CYSTIC LESIONS

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Background: Cystic lesions may occur anywhere in the human body and differentiation between a non-tumor or tumor lesion might be difficult. **Objective:** To present the histopathological aspects of non-tumor cystic lesions. **Material and methods:** The clinicopathological features were examined in 628 consecutive cases of cystic lesions diagnosed between 2014-2017 in the Pathology Department of the Clinical County Emergency Hospital of Tîrgu-Mureş, Romania. **Results:** From 628 cases, 555 (88.38%) were non-tumor lesions whereas the other 73 (11.62%) were diagnosed as benign, borderline or malignant tumors. The non-tumor cysts were prevalently located in the head and neck area (n=111). The most frequent encountered cystic lesions were located in the oral cavity (n=76). Hydatid cysts were identified in 20 cases. They occurred in patients with the average age of 42±11.13 years (range 24-76 years) preavailingly located in the liver (n=10) and lung (n=4) but also in some unusual location such as the joints (n=2), spleen (n=2), kidney (n=1) or abdominal wall (n=1). **Conclusions:** The non-tumor cysts present a particular predisposition for head and neck regions. The hydatid cysts are predominantly located in the liver and lungs.

Keywords: cyst, head and neck, liver

LIPID PROFILE AND BMI IN PATIENTS WITH TYPE 2 DIABETES MELLITUS UNDER INSULIN TREATMENT VERSUS ORAL ANTI-DIABETIC MEDICATION (OAM) TREATMENT

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Background: Diabetes mellitus is a chronic disease which is associated with metabolic disorders regarding both lipid and carbohydrate changes. Insulin is known as an anabolic hormone therefore some patients under its treatment may gain weight. **Objective:** The objective of the study is to evaluate in which manner insulin as an anabolic hormone influences the body mass index in type 2 diabetes patients. **Material and methods:** Our observational study comprises 155 inpatients from the Diabetes Department of the Emergency County Hospital of Tîrgu Mureş. Out of these, 112 were diagnosed with type 2 diabetes, 25 with type 1 diabetes, 9 with secondary diabetes and 8 of them were only on a diet. Retrospective data regarding anthropometric measurements, laboratory findings (fasting glucose, total cholesterol, triglycerides) and information about medication were collected from the patients' records. The ultrasonography procedure was performed to identify hepatic steatosis. **Results:** The study is based on type 2 diabetes mellitus patients aged between 35 and 88, from which 54.46% were female and 60.72% were from urban area. Patients were under treatment on either insulin (84.14%), oral anti-diabetic medication (70.53%) or a combination of them two (53.57%). Laboratory data showed that the triglycerides levels above 150 mg/dl found in blood were present in 50.89% of patients, and the total cholesterol level above 200mg/dl was found in 34.82% of patients. Hepatic steatosis was present in 57.14% of the patients investigated with ultrasonography. In the group treated with insulin we found that 44.55% of patients were obese, whereas in the group on OAM treatment the percent was lower, 35% respectively. **Conclusions:** Our study highlights the importance of the association of type 2 diabetes mellitus under insulin treatment with weight gain and even obesity.

Keywords: type 2 diabetes, insulin, obesity, BMI

THE EFFECT OF ENTEROLACTONE ON THE FATTY ACID TRANSPORT AND PROGRESSION OF STEATOHEPATITIS

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Background: Steatohepatitis is a common, diet related liver pathology correlated with insulin resistance and is a crucial part of the metabolic syndrome. What is more, it is characterized by increased intracellular FFA transport

and elevated TAG concentration in hepatocytes. One of protective mechanisms in this condition might be promotion of extracellular efflux stimulated eg. by polyphenols. **Objective:** The aim of this research was to determine if enterolactone affects fatty acids transport in steatohepatitis and thus reduce steatosis. **Material and methods:** The experiments were conducted on HepG2 cells incubated with either 50µM ENL and/or palmitic acid during 16h exposure. The expression of selected fatty acid transport proteins: FATP2, FATP5, CD36, FABPpm, ABCA1, MTP, ACBP and L-FABP was estimated by Western Blot procedure. Intra and extracellular lipid concentration were assessed by Gas-Liquid Chromatography. The data was analyzed with Student t-test, and results were considered to be statistically significant at $p \leq 0.05$. **Results:** Exposure to palmitate resulted in significantly increased intracellular TAG (68,1%) and FFA (36,8%) concentration. The addition of ENL lowered lipids accumulation and increased extracellular lipid fractions (70,5% and 48,6% respectively). What is more, expression of ACBP (34,3%) and L-FABP (45,2%) was also significantly increased after ENL and palmitate treatment without a considerable influence on membrane fatty acid transporters. **Conclusions:** Above results might explain the hepatoprotective effect of ENL, observed as lipid efflux, decrease of its intracellular metabolism and TAG accumulation. That suggests that changes in concentrations of intra and extracellular lipid fractions are caused by increased diffusion of FFA, rather than its active transport. This work was supported by the Medical University of Bialystok within the National Leading Research Centre funds, grant number: 206/KNOW/16.

Keywords: enterolactone,, lipid transporters,, steatohepatitis

IS IT POSSIBLE THAT ENTEROLACTONE INTENSIFY PRO-INFLAMMATORY FATTY ACIDS IN HEPATOCYTES?

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Background: High-fat diet is one of the main cause of hiperlipidemia and hepatic steatosis. Fatty acid composition of particular lipid fraction determinate further consequences of lipid overload such as development of inflammation . Therefore, the assesment of inflammatory pathway fatty acids enables to prognose the progression of steatohepatitis. **Objective:** The purpose of the present study was to evaluate if enterolactone (ENL,) natural lignan with antidiabetic properties, in the presence of increased palmitic acid biavailability, would modulate pro-inflammatory fatty acid concentration in hepatic triacylglycerols (TAG) fraction. **Material and methods:** The experiment was conducted on HepG2 cells cultured in standard growth medium (DMEM supplemented with 10% fetal bovine serum and 1% penicillin/streptomycin) for 5 days at 37 °C in 5% CO2 atmosphere. After this time, cells were seeded in 6 well plates and after reaching 90% confluence, selected group were incubated with Enterolactone (50 µM) alone or combined with palmitic acid (0,5 mM) for 16h. Intracellular fatty acid concentration were measured by GLC. **Results:** Our study revealed that ENL in HepG2 cells considerably elevated saturated (16:0,18:0, 20:0) and unsaturated (20:4) fatty acids composition in the intracellular TAG fraction compared with the control group. Moreover, in case of arachidonic acid (20:4) and stearic acid (18:0), the biggest increases were observed after incubation cells together with PA and ENL. **Conclusions:** Increased accumulation of pro-inflammatory fatty acids in TAG fraction of HepG2 cells after ENL treatment may suggest that it could contribute to inflammation development in this type of cells. Additionally, we confirmed that this effect is amplified during combined ENL with palmitate incubation. This work was supported by the Medical University of Bialystok within the National Leading Research Centre funds, grant number: 206/KNOW/16.

Keywords: enterolactone, inflammation, lipid overload, hepatic steatosis

CLINICAL - MEDICAL

INFECTIOUS DISEASES IN PATIENTS WITH DIABETES MELLITUS – EPIDEMIOLOGICAL AND CLINICAL ASPECTS

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Background: Patients with diabetes are at increased risk for infections. Clinical presentations are numerous, represented by urinary tract infections, respiratory infections, skin infections, candidiasis, cholecystitis and others, sometimes with greater severity than in other patients. **Objective:** The objective of this paper was to highlight some epidemiological and clinical aspects to patients with diabetes mellitus hospitalized with various infectious diseases. **Material and methods:** Retrospective, descriptive study, which included patients hospitalized in Clinical Infectious Diseases Hospital of Brasov during 01.01.2016-31.12.2016. They were analyzed: age, gender and environment origin of the patients, distribution of monthly admissions, types of infectious diseases, associated chronic diseases. **Results:** In period 01.01.2016-31.12.2016 in the Clinical Infectious Diseases Hospital of Brasov were hospitalized 172 patients with diabetes mellitus and various infectious diseases.; 56.4% were female and 80,81% were from urban areas; 55.81% of admissions were to patients aged over 65 years and 5,23% over 85 years old. Patients had acute diarrheal diseases (36,63% cases), Clostridium difficile colitis (12,21%), acute respiratory infections (25% cases), urinary tract infections (24,42%), skin infections (11,05%), oral candidiasis (18,60%); some patients had concomitant several types of infections. Most patients had associated chronic diseases, more frequently high blood pressure (60,47% cases), chronic ischemic heart disease (23,84%) and chronic kidney disease (17,44%). Some patients had concomitant several types of infections and many chronic diseases associated. **Conclusions:** 1. Hospitalizations for infections predominated in patients with diabetes mellitus from urban areas and to female gender. 2. Infections in patients with diabetes mellitus were various and frequent, dominated by diarrheal diseases, respiratory and skin infections. 3. They occur more frequently in elderly patients, with multiple associated chronic diseases, requiring appropriate treatment for all diseases.

Keywords: diabetes mellitus, infections, elderly patients

EXTRARESPIRATORY TUBERCULOSIS IN MURES COUNTY BETWEEN 2013 -2015

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Background: Extrapulmonary tuberculosis (ERTB) is a continuous presence between medical diseases. ERTB may affect any organ or system with a high risk of complication and sequelae. **Objective:** The aim of this study is to evaluate the data collected regarding ERTB also to improve diagnostic methods and treatment challenges. **Material and methods:** This is a retrospective study. We studied 75 cases of ERTB included in the evidence of tuberculosis (TB) in Mures County between 2013 □□□□□□□□ data was collected from 5 cities from Mures county: Targu-Mures, Sighisoara, Ludus, Tarnaveni and Reghin. **Results:** The main location of ERTB: osteo-articular TB 22,6%(84% Pott Disease), 24% lymphnode TB, 12% meningeal TB, 10% urogenital TB and intestinal/peritoneal TB, 6,6% laryngeal TB, 5,3% pericardial TB. ERTB was more frequent in men comparing with women (exception: genital and lymphnode TB). 75,9% of cases were under 60 years and 32% under 35 years (in the most active group of age). Bacteriological confirmation in ERTB was difficult and covered only 30% of cases. Histological confirmation was possible in other 30%. Diagnosis was done by associated working of pulmonologist, orthopedists, neurologists, surgeons, radiologists and general medicine specialists. Treatment was laborious, prolonged (8 month) and included antibiotics, associated surgery in 45.7% and corticoids in 35% of cases. 24% of cases have concomitant pulmonary TB. Compliance to treatment was only 82,3% despite the severity of the cases and the gratuitousness of all medical actions. HIV infection contributed with 5,7%. **Conclusions:** ERTB has a constant prevalence and a severe appearance in the last years despite the dramatic decrease of global TB. ERTB has to be a main element for differential diagnosis in un-elucidated cases especially in areas with high TB prevalence. Histological and bacteriological confirmation is still low and has to make better for a targeted treatment. Diminishing pulmonary TB cases may diminish also ERTB. Compliance to investigation and treatment has to be improved to ensure the favorable evolution. ERTB diagnosis and treatment benefited by a multidisciplinary team.

Keywords: extrapulmonary tuberculosis, confirmation, Multidisciplinary team

SYMPTOMS BURDEN AS STROKE RISK PREDICTOR IN NON-VALVULAR ATRIAL FIBRILLATION

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Background: Estimates reveal that one in five strokes is attributed to atrial fibrillation (AF). AF-related strokes are either fatal or associated with an increased recurrence rate, cognitive disability and impaired quality of life. Assessing stroke risk based on the CHA2DS2-VASc score is essential in selecting the adequate prevention strategy. However, considering the need for more effective stroke susceptibility evaluation and the weak evidence on particular risk predictors, further research is required. **Objective:** We aimed to assess the role of AF clinical features as stroke predictors and to identify particular symptoms which are associated with a higher CHA2DS2-VASc score and, implicitly, with a substantial stroke risk. **Material and methods:** Our analytical observational study retrospectively analysed 1077 non-valvular AF patients hospitalized in the Internal Medicine Clinic III between 2014-2016. Patients were grouped by demographic characteristics, AF pattern and the presence of three main symptoms: palpitations, shortness of breath and chest pain. Stroke risk was assessed using the CHA2DS2-VASc score. **Results:** The different CHA2DS2-VASc score demographic distribution (5.07 ± 1.65 in patients from rural areas vs. 4.79 ± 1.82 in the urban group, $p=0.01$) indicated a higher stroke risk in rural population. Regarding AF pattern, results revealed a linear increase in stroke predisposition ($p=0.0001$), following the type of the arrhythmia: the highest score in permanent AF patients (5.15 ± 1.64) compared to persistent (4.76 ± 2.04) or paroxysmal group (4.61 ± 1.72). Nevertheless, no significant association with patients admission heart rate was found ($p=0.23$). The multivariate regression analysis demonstrated a negative correlation of CHA2DS2-VASc score with palpitations ($rs = -0.35$, $p=0.001$) and a positive one with chest pain ($rs=0.24$, $p=0.031$), showing higher prediction rates in patients without palpitations. In contrast, no statistically significant correlation with dyspnoea was observed ($p=0.22$). **Conclusions:** Our study emphasized that a symptom-based approach allows preliminary stroke risk estimation in non-valvular AF patients, even before CHA2DS2-VASc score assessment, increasing its precision and optimizing the applied criteria when initiating prophylactic antithrombotic therapy.

Keywords: atrial fibrillation, stroke, symptoms

PERINATAL INTERVENTIONS AND NEONATAL FACTORS ASSOCIATED WITH PROLONGED LENGTH OF HOSPITALIZATION AND SUCCESSFUL BREAST-FEEDING

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Background: During the past two decades, considerable efforts have been made to ensure skilled birth attendance. Length of neonatal hospital stay arises from the retention of the neonate within a health care institution in order to resolve any clinical problems before discharge. Prolonged stay of the neonate within the hospital further exposes it to infection and increased cost of health care among other factors hence the increasing pressure to decrease neonatal hospital length of stay. The purpose of our study was to determine the factors influencing length of hospital stay among newborns admitted to an urban public academic hospital. **Objective:** To assess the perinatal interventions and neonatal risk factors associated with prolonged length of hospitalization (LOS) and successful breast-feeding (SBF) during admittance in an academic Maternity Center. **Material and methods:** All newborns born over a 1 year period who were consecutively admitted to the hospital ($N=1443$) were included in our retrospective study. **Results:** Overall 7706 days were offered to 1443 newborn infants admitted during 356 days, Mean 5.34, SD 2.5, minimum 1day, maximum 25 days in our analyzed group. Mean length of stay was 6.59 days (SD 2.59) for those infants born by cesarean section compared with vaginal birth 4.81 days (SD 2.30). For those infants born with small birth weight for gestational age the mean of LOS was 6.24 (SD 3.74) compare to those infants with birth weight appropriate for gestational age mean 5.15 (SD 2.12), $p<0.05$. Being born too large for gestational age needed mean LOS 5.23 days (SD 1.68) compare to those infants appropriate for gestational age, $p<0.05$. **Conclusions:** Factors associated with LOS were cesarean delivery, presence of jaundice, need for performance blood count and gestational age 37 weeks of less. A trend toward significance was noted between LOS and SBF.

Keywords: length of hospitalization, perinatal interventions, successful breast feeding

METABOLIC BALANCE AND CARDIOVASCULAR RISK FACTORS IN TYPE 2 DIABETIC PATIENTS ON DIFFERENT THERAPY

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Background: Metabolic imbalance, increased glycosylated hemoglobin and ultra-sensitive C reactive protein levels represent risk factors for cardiovascular complications in diabetic patients. In diabetes, macro- and microangiopathy are the main complications including ischemic cardiomyopathy, early arteriosclerosis and nephropathy (early marker: cystatin C). **Objective:** The aim of this study was to evaluate metabolic balance, cardiovascular risk factors and kidney function in type 2 diabetic subjects; furthermore, to reveal differences regarding laboratory parameters in patients receiving metformin compared to diabetic subjects on other treatment. **Material and methods:** A prospective clinical research was conducted in 2015 at the Procardia Laboratory in Tîrgu Mureş, Romania on 88 type 2 diabetic adults included in two groups depending on their treatment: metformin vs. other therapy. Routine laboratory tests were made such as glycaemia, lipid profile, urea, creatinine (Konelab20XTi). Also, other parameters were determined: HbA1c, U-CRP and cystatin C. Serum malondialdehyde (MDA), a marker of lipoperoxidation, was determined by TBARS reaction with HPLC. 20 healthy volunteers provided normal values for MDA concentration. **Results:** Average age of diabetic patients was 65.8±9.9 (SD), 52.3% being females. 53.4% of the subjects presented elevated HbA1c (>7%), 40.9% had increased U-CRP levels (3-10 mg/L). We found positive correlation between HbA1c and glucose values ($r=0.5123$, $p<0.0001$). Serum LDL level was elevated at 10.2% of the patients. Metformin-treated patients had slightly higher values of glycaemia and HbA1c levels ($p>0.05$), but significantly higher level of serum triglycerides ($p=0.0058$) compared to the other subgroup. Positive correlation was found between serum creatinine and cystatin C ($r=0.4478$, $p<0.0001$). MDA concentration was significantly higher in diabetic patients ($p=0.0027$) compared to the non-diabetic subjects, especially in the metformin-treated group. **Conclusions:** We observed several, but mainly not significant differences between the two groups of diabetic patients. Elevated U-CRP was common, which represents risk factor for cardiovascular complications. Use of statins and aspirine could decrease CRP and LDL levels.

Keywords: type 2 diabetes, cardiovascular risk, metformin

COMPARISON OF THE ACCURACY OF PET-CT VERSUS CT IMAGING IN A HUNGARIAN COHORT OF NON-SMALL CELL LUNG CANCER PATIENTS

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Background: PET is a noninvasive nuclear imaging technique that can measure metabolic activity, while the CT scan is mainly used to detect and localize changes in the body structure or anatomy. Despite the current widespread use of PET-CT and CT scan the exact reliability of these two imaging techniques remains controversial. **Objective:** Our main purpose in the current study was to compare the accuracy of PET-CT and CT imaging with the histopathological reports. This is the first single center study in Hungary that aimed to summarize the role of PET-CT and CT imaging in the diagnose of lung cancer patients. **Material and methods:** This study included 700 suspected lung carcinoma patients with available PET-CT, CT imaging and histopathological results. We investigated the accuracy of the mentioned imagistic methods depending on the TNM status, type, and differentiation of the tumor. **Results:** The accuracy of CT scan was 49.1% regarding the T status, and 73.01% regarding the lymph node status (the differences were considered significant, with a p value of 0.001 and 0.004, Paired t test). The accuracy of PET-CT also regarding the N status was 81.07%, and the difference between the PET-CT results and histopathological N staging was not significant ($p>0.05$, Paired t test). In the PET positive cases the malignant tumors were mostly moderately (38.22%) and badly (33.76%) differentiated carcinomas and only 28.03% of the malignant lesions were well differentiated ($p=0.38$). **Conclusions:** The present study provides information about the accuracy and reliability of PET-CT. This functional imagistic method is not only more useful

during the diagnose of lymph node metastases than the CT scan but it can also provide information about tumor differentiation. Further studies in a large number of patients are necessary to clarify the exact role of PET imaging in the diagnose of tumor differentiation.

Keywords: PET-CT, metastasis, tumor differentiation

THE INFLUENCE OF SMOKING ON CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Background: Chronic Obstructive Pulmonary Disease is an obstructive pulmonary dysfunction, characterized by the occurrence of chronic bronchitis and emphysema. It is defined by hypersecretion of mucus, chronic productive cough, loss of lung elasticity and hypoxemia. Nowadays there is an increasing number of smokers who will develop this disease after a certain period of time, smoking being a factor of direct aggression to the respiratory epithelium. **Objective:** This research wants to show the bad influence of smoking upon respiratory system, especially the occurrence of chronic obstructive pulmonary disease. **Material and methods:** The retrospective study was conducted in Pneumology Hospital in Aiud. I chose by chance 100 patients and 56 of them were men and 44 women, aged between 25 and 82 years, in the last 5 months of the last year, 2016. It was based on investigations that helped me to head to the results. The best method for assessing respiratory disfunction is performing spirometry, more exactly I used forced expiratory volume in one second. **Results:** As a result of the study, I discovered that more smokers than nonsmokers developed, in time, chronic obstructive pulmonary disease. From 100 patients, 41% are smokers with COPD, 23% are smokers without COPD, 19% are nonsmokers with COPD and 17% are nonsmokers without COPD. In 64 smokers, 41 have the disease, so we have a probability of 64% ($p=0,64$) of smokers to develop COPD. According to forced expiratory volume in one second, I noticed that 16% of smokers have a mild disease, 32% have average disease and 12% have severe disease. **Conclusions:** We observed a difference between smokers and nonsmokers according to the occurrence of COPD. The recommendation for a better public health would be giving up on smoking for the people who already smoke and urging to a healthy life, without smoking for people who don't smoke.

Keywords: smoking, chronic obstructive pulmonary disease, public health

TO STUDY THE DIPPING PATTERN OF BLOOD PRESSURE BY CIRCADIAN BLOOD PRESSURE VARIABILITY ASSESSMENT IN NORMOTENSIVE, CONTROLLED AND UNCONTROLLED HYPERTENSIVE INDIVIDUALS.

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Background: Optimal BP fluctuates over a 24 hour sleep-wake cycle, with values rising during the day and falling after midnight. The reduction during the night compared with average daytime BP is referred to as the night-time dip. Ambulatory Blood Pressure (ABP) monitoring may reveal a normal, blunted, abolished or reversed overnight dip in BP as well as the differences in the dipping patterns of normotensive (NT), controlled (CHT) and uncontrolled hypertensive (HT) individuals. A study conducted by Friedman et al showed a higher prevalence of non-dipping pattern and nocturnal hypertension in HTs. This is clinically important because non-dipping BP is associated with a higher risk of left ventricle hypertrophy and cardiovascular mortality. **Objective:** To study the dipping pattern in NT, CHT and HT individuals. **Material and methods:** An observational cross-sectional study was conducted at SKNMC & GH on volunteers and hypertensive patients. Individuals were grouped as NTs ($n=30$), CHTs ($n=15$) and HTs ($n=43$). ABP recording was done for a period of 24 hours, with recordings taken 30 minutes apart. **Results:** Highest percentage of Normal Dippers were seen in CHTs (67%) followed by NTs (53%) and HTs (46%). Highest percentage of Non-Dippers were seen in HTs (42%), followed by NTs (40%) and CHTs (27%). No significant difference was seen in the dipping patterns on applying Kruskal Wallis nonparametric test. **Conclusions:** The study was able to depict the different patterns of overnight BP dip in the 3 groups. To the best of our knowledge, this was studied in the Indian population for the first time. Higher percentage of non-dippers was found in HTs making them vulnerable for complications. Non-dipper NTs have a greater risk for developing hypertension and thus need follow up. Higher percentage of normal dipping in CHT is a positive sign in the prognosis and needs further follow up studies. The results of this study can be used for pharmacotherapy based on overnight BP dipping

status in hypertensive individuals.

Keywords: ambulatory blood pressure monitoring, dipping pattern, hypertension

SIMULTANEOUS EXTRAHEPATIC PORTAL AND ILIAC VEINS THROMBOSIS AFTER ABDOMINAL SURGERY - A CASE REPORT AND REVIEW OF LITERATURE

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Background: Extrahepatic portal vein thrombosis (EPVT) is the most frequent cause that leads to portal hypertension in non-cirrhotic patients. The etiology of this condition is related to systemic risk factors (prothrombotic or myeloproliferative disorders,) and local risk factors (abdominal cancer, inflammatory lesions, injuries to a portal venous system by surgery, trauma, vascular procedures, cirrhosis). **Objective:** To present a case of portal vein thrombosis extended into right portal branch, superior mesenteric vein and simultaneous free-floating thrombus into common iliac vein extended into inferior vena cava, appeared after abdominal surgery in a diabetic 50 y.o. man. **Material and methods:** An acute episode of abdominal pain started after a food abuse was interpreted as a surgical emergency and a surgical procedure was performed at the level of right iliac fossa. Discharge diagnosis was hemoperitoneum secondary to rupture of sigmoid mesocolon. Repeated abdominal and vascular ultrasound and thoracic-abdominal CT scans performed after 7 days and later revealed the presence of thrombosis into portal vein with extension into right portal branch associated with superior mesenteric thrombosis and free-floating thrombus into common iliac vein extended towards IVC. No other possible causes were identified and thus an acute episode of pancreatitis and surgical manoeuvres were considered as causes of these thrombotic events. Parenteral anticoagulation (LWMH) was started accompanied with symptomatic therapy associated with non-selective beta-blocker. **Results:** After 4 weeks of anticoagulation a partial recanalization of portal and iliac veins were identified. No gastrointestinal bleeding was observed. **Conclusions:** After a diagnosis of acute EPVT the cause must be identified and appropriate treatment should be started, without neglecting the risk of pulmonary embolism or bleeding. In this case the etiology is linked to abdominal surgery and requires prolonged anticoagulation related to simultaneous portal and iliac vein thrombosis. After our knowledge this is the first case published in literature.

Keywords: extrahepatic portal vein thrombosis, iliac vein thrombosis, abdominal surgery

INDICATIONS OF IMPLANTABLE CARDIOVERTER-DEFIBRILLATOR IN ARRHYTHMOGENIC CHANNELOPATHIES FROM THE CASUISTRY OF AN TERTIARY CARDIOLOGY CENTER

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Background: Most frequently, sudden cardiac death (SCD) is caused by ventricular arrhythmias secondary to structural heart disease or primary electrical abnormalities of the heart. Cardiac channelopathies can predispose to malignant ventricular arrhythmias. The implantable cardioverter defibrillator (ICD) has a lifesaving role for high-risk patients. **Objective:** We aimed to assess the indications for ICD implants and the type of the implanted device in patients with arrhythmogenic channelopathies. **Material and methods:** Primary records of luBCvT Targu Mures between 2009-2016 were analyzed retrospectively. Patients with a diagnosis of arrhythmogenic channelopathy who underwent an ICD implant procedure were included in the study. Data regarding implant indication, the type of device and procedure were analyzed. **Results:** Fifteen patients met the inclusion criteria, 7 men and 8 women, aged 41+/-14. Eleven patients were diagnosed with long QT syndrome (LQTS) and 4 cases with Brugada syndrome (BS). For BS patients, in 75% of the cases it was primary prevention (PP) of SCD, in 25% of cases secondary prevention (SP) and in all cases a single-chamber defibrillator was used. Repeated syncope associated with type 1 Brugada ECG pattern, single episode syncope with positive EPS or asymptomatic patients presenting type 1 Brugada ECG pattern, represent cases in which ICD was implanted for PP. Regarding LQTS patients, all ICDs were implanted for SP, all of the patients had documented symptomatic arrhythmia. For these patients, the single-chamber defibrillator was the choice in 73% of the cases and 27% were dual-chamber defibrillators because the need for atrial stimulation due to beta-blocker induced bradycardia. **Conclusions:** All ICDs implanted in patients with LQTS were for SP, while patients with BS were implanted an ICD, in most of the cases, for PP.

Single-chamber devices were used for BS patients, while LQTS patients received a single/dual-chamber ICD based on the need for atrial pacing due to bradycardia in the context of beta-blocking treatment.

Keywords: implantable cardioverter defibrillator, arrhythmogenic channelopathies, primary/secondary prevention, single/dual-chamber ICD

TOMORROW'S VALVULAR SUBSTITUTE - TRANSFORMATION OF A PORCINE HEART VALVE INTO A TISSUE ENGINEERED HEART VALVE IN UNDER A WEEK

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Background: Well known shortcomings of current valvular substitutes □ the limited life span for the biological valves and the lifelong anticoagulation therapy for the mechanical valves, underline the imperative need for a new generation of valvular substitute. Using scaffolds, stem cells and bioreactors, regenerative medicine seems to hold the answer. Biologic scaffolds represent sterile extracellular matrix protein networks obtained from tissues, after all cells have been removed. These biologic structures, resembling the target tissue, can be implanted as is or seeded with stem cells. **Objective:** To illustrate the easy obtainment of tissue engineered, extracellular matrix-based new valvular substitutes. **Material and methods:** n=80 fresh porcine pulmonary valves were dissected and prepared in our laboratory. The decellularization method was represented by shaking tissues with detergents and enzymes solutions. Absence of cells was investigated using DAPI (4',6-Diamidino-2-Phenylindole) nuclear staining for different valvular regions - leaflet, sinus and vascular wall. Following the cell removal procedure, two groups were constituted - cross-linked and non cross-linked valves. The stabilized group underwent the extended protocol of seven days comprising a chemical stabilization with PGG (penta-galloyl glucose) and GA (glutaraldehyde) whereas the non cross-linked group's procedure was reduced to five days after removing the stabilization steps.

Results: 80 acellular porcine pulmonary valves were obtained, 43.75% (35) cross-linked, using PGG and GA and 56.25% (45) non cross-linked. DAPI stainings confirmed cell absence in valvular extracellular matrices.

Conclusions: New biologic valvular substitutes can be obtained using a simple procedure, with multiple potential advantages: viability after scaffold cellular repopulation, non-immunogenic due to cells absence, tromboresistance obtained through seeding with endothelial cells. **Acknowledgments:** This work was supported by a grant from the Romanian National Authority for Scientific Research, CNCS-UEFISCDI, project number PN-II-ID-PCCE-2011-2-0036 and by a Grant from the Competitiveness Operational Programme 2014-2020, Tissue engineering technologies for cardiac valve regeneration, VALVE-REGEN, ID P_37_673, MySMIS code: 103431, contract 50/05.09.2016

Keywords: valve, pathology, regenerative, scaffold

THE ADRENAL GLANDS: WHERE IS THE BOUNDARY BETWEEN BENIGN AND MALIGNANT MASSES USING COMPUTER TOMOGRAPHY AS A METHOD OF DIAGNOSIS ?

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Background: Adrenal masses are most easily diagnosed using imaging methods. 1% of them are discovered incidental. Insecurities about the adrenal's pathology can be decisive for the prognosis. **Objective:** The purpose of this study is to find out which routine CT parameters can be useful to assess the pathology features of an adrenal mass: benign or malignant? **Material and methods:** 41 consecutive, oncologic patients (mean age +/- SD 65.54 +/- 9.56 years, 24 males (58.5%) with adrenal lesions in the process of active imaging surveillance were enrolled. We included 33 patients with adrenal adenoma (42 lesions) and 8 patients with adrenal metastasis (10 lesions). The CT findings: size, shape, edge, density on non-enhanced and enhanced CT for each lesion were retrospectively analyzed. We also tested the diagnostic efficacy of normalized lesion-to-liver ratio post contrast administration in the venous phase as a new diagnostic approach in differentiating benign from malignant lesions. **Results:** The mean diameter of the 42 adrenal adenomas (24 unilateral, 18 bilateral masses) was significantly lower than of the 10 metastasis (6 unilateral, 4 bilateral masses) (10.39 mm vs. 26.72 mm, p < 0.0001). Renal cancer (22%), colon and pulmonary cancer (15%, each of them) are the most likely types of cancers which disseminate on the adrenal

glands. The lesions appear frequently unilateral. The characteristic CT findings of adrenal adenoma include: well-circumscribed, rounded or ovoid masses, heterogeneous attenuation with low-attenuation foci on non-enhanced CT images and heterogeneous enhancement after contrast administration with no statistically significant differences compared with adrenal metastasis ($p > 0.05$). The lesion-to-liver ratio had a statistically significant lower value in patients with adenoma lesions compared with the metastatic lesions (0.44 ± 1.09 vs. 0.55 ± 0.25 , $p = 0.003$), with a diagnostic accuracy in differentiating the two entities of 0.78 (95%CI 0.52-0.82), a sensitivity of 87.5% and a specificity of 60.61% with a cut-off value of > 0.4 . **Conclusions:** According to our results, renal cancer is most likely to give adrenal metastasis. The lesion-to-liver ratio in the venous phase post contrast administration may differentiate adrenal adenoma from adrenal metastasis by CT examination.

Keywords: adrenal masses, computer tomography, adenoma, metastasis

THREE-DIMENSIONAL CHARACTERIZATION OF THE LEFT ATRIAL ARCHITECTONIC IN ATRIAL FIBRILLATION

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Background: Atrial structure modifications are linked to the development of Atrial fibrillation (AF). It is known that the left atria is predominantly affected by the remodelling that occurs in atrial fibrillation. **Objective:** The aim of this study was to evaluate the Left Atrial architectonics, the morphological characteristics in patients with Atrial fibrillation, determined three dimensionally with Multislice Angio CT. **Material and methods:** A total of 61 patients were enrolled in two groups: 33 patients with atrial fibrillation and the control group which consisted of 28 patients with stable angina. Multislice Angio CT and transthoracic echocardiography was performed for each patient. **Results:** By comparing the cardiac CT and transthoracic echocardiography we found that there was no statistically significant difference between the two groups regarding the transverse left atrial diameter measured using transthoracic echocardiography ($p = 0.8144$), whereas the CT exploration of the left atrial diameter was statistically significant by comparing the two groups: the AF group had a mean of $81.1 (\pm 10.3)$ mm, the NoAF group a mean of $67.1 (\pm 5.1)$ mm, ($p = 0.001$). The left atrial volume measured using the cardiac CT was also proven to be significantly different in the two groups: AF patients had a mean AS volume of $145.03 (\pm 45.3)$ mm whereas the control group had a mean of $86.66 (\pm 17.5)$ mm, ($p = 0.0013$). The left ventricle ejection fraction measured by transthoracic echocardiography was also different in the two groups: the NoAF patients had a mean ejection fraction of $50.53\% (\pm 3.44)$ and the atrial fibrillation patients had a mean of $48.78\% (\pm 3.62)$, ($p = 0.0264$). **Conclusions:** Atrial fibrillation patients presented positive left atrial morphological modifications determined with CT exploration: larger transverse left atrial diameter, larger left atrial volume, larger pulmonary venous ostial area, and larger coronary sinus diameter compared to control group. No differences were found in the transverse left atrial diameter determined with transthoracic echocardiography.

Keywords: atrial, fibrillation, imagistic

EVALUATION OF THE OUTCOME OF AUTOLOGOUS STEM CELL TRANSPLANTATIONS IN MALIGNANT LYMPHOMAS PERFORMED IN CLINICAL HEMATOLOGY AND BMT UNIT TG.MURES

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Background: Autologous stem cell transplantation (ASCT) represents an important method in the treatment of malignant lymphomas including both non Hodgkin and Hodgkin type. ASCT is an optimal treatment in cases when the first line chemotherapy or combined chemo- and radiotherapy fail. **Objective:** An observational overview of patients with malignant lymphomas who underwent ASCT in Clinical Hematology and BMT Unit Tg.Mures. Evaluation of the patients' pre- and posttransplantation status and the occurring complications. **Material and methods:** We performed a retrospective observational analytical study on a ten-year period between 2006-2016. The analysis involved 117 classical Hodgkin's lymphoma and 70 patients with non Hodgkin lymphoma who underwent high-dose chemotherapy treatment followed by ASCT in the Bone Marrow Transplantation Unit of Targu Mures. **Results:** The median age was 33 years (range, 19 to 66 years) in case of non Hodgkin lymphoma patients and 42 years (range, 16 to 62 years) in case of Hodgkin's lymphoma patients. The average engraftment

period was 12 days for neutrophil granulocytes and 18 days for thrombocytes. The most common complications after transplantation were: bacterial infections, hemorrhagic complications and electrolytic disorders. **Conclusions:** Autologous hematopoietic stem cell transplantation is an effective treatment for early and late relapsed malignant lymphomas. The appearance of complications is more frequent in the engraftment period.

Keywords: autologous stem cell transplantation, malignant lymphoma, stem cell engraftment

SILENT ISCHEMIC STROKE WAS REVEALED AFTER SCREENING FOR COGNITIVE DYSFUNCTION IN HYPERTENSIVE PATIENT WITH NEW ONSET ATRIAL FIBRILLATION–CASE REPORT

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Background: Cerebro-, and cardiovascular pathologies caused by chronic arterial hypertension are very common in older patients. Cerebrovascular damages significantly increase the risk of cognitive impairment. However, screening for cognitive dysfunction is not part of the routine clinical assessments. **Objective:** Our aim is to present the case of a hypertensive patient who was admitted to the Cardiovascular Rehabilitation Clinic Tîrgu Mureş with a recently diagnosed atrial fibrillation, but he left the Clinic with new diagnoses. **Material and methods:** In this report we describe the case of a 75 year old arterial hypertensive male patient with new onset atrial fibrillation. Apart from the routine clinical assessments, the evaluation of cognitive functions and depressive state were performed. For cognitive dysfunction screening we used: the gold standard Mini Mental State Examination (MMSE), the higher sensitivity Montreal Cognitive Assessment (MOCA), the General Practitioner Assessment of Cognition (GPCOG) used in primary care. The shortened 13 items form of the Beck Depression Inventory BDI-13 was used to assess depression. Detection of cognitive dysfunction was followed by magnetic resonance imaging. **Results:** We established that our patient has cognitive impairment according to our screening instruments with the result of 21 points at MMSE, 21 on MOCA, 1 on GPCOG. BDI -13 questionnaire (11point) showed moderate depression which could influence the results of cognitive tests. The particularity of this case is that, not only hypertension specific microvascular impairment was described by the radiologist, but also sequel of a former stroke in the territory of the left middle cerebral artery and a possible meningioma. Furthermore, given the high risk of this patient despite normal fasting glucose level, impaired glucose tolerance was diagnosed with glucose tolerance test. **Conclusions:** Screening for cognitive dysfunction in high risk hypertensive patients can be easily performed and in several cases as ours, can unmask silent cerebrovascular pathologies, having prognostic and therapeutic consequences.

Keywords: arterial hypertension, cognitive dysfunction, screening

BRONCHOSCOPY IN LUNG CANCER

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Background: Bronchoscopy is a very important procedure for diagnosis and staging of the lung cancer (LC). Worldwide LC continues to be the most frequent of all cancers and a main cause of death. **Objective:** Analysis of the LC histological types (after bronchoscopy with biopsy), gender and age distribution, risk factors, common symptoms at the patients' hospital admission. **Material and methods:** We conducted a retrospective study using database of LC patients from the Pulmonology Clinic of Tîrgu-Mureş, during one year. **Results:** We found 113 cases of primary LC. The histological types were: squamous 57.52%, adenocarcinoma 22.12%, small cell 12.39%, large cell 5.31%, sarcoma 1.77%, and 0.89% laryngeal cancer. 91 patients (80.53%) were males and 22 (19.47%) females. The age distribution revealed 31.86% patients between 61-70yo, 26.55% between 71-80yo, 25.66% between 51-60yo, 9.73% between 41-50yo, 4.43% between 81-90yo and 1.77% under 40. 61.95% of patients came from rural area and 38.05% from urban area. The most common symptoms on the onset were: cough (76.1%), dyspnea (70.80%), chest pains (45.13%), weight loss (44.24%) and hemoptysis (21.23%). As for the risk factors, smoking has expressed a very high percentage 79.65%, much over the country average of smoking in general population 26%. Professional exposure to toxic environment was associated to smoking in 27.43% of cases. **Conclusions:** Lung cancer is a common disease admitted in the Pulmonology Clinic (1 case every 3 days). Squamous cancer is the most frequent type of LC in direct correlation with smoking. LC affected mostly

males, between 61-70yo. The common met symptoms were unspecific (cough, dyspnea) but weight loss and hemoptysis raised the suspicion for LC and recommended bronchoscopy. Smoking remains the main risk factor for LC with an extremely high incidence (three times over the country incidence) and has been frequently associated with professional exposure.

Keywords: lung cancer, bronchoscopy, smoking

HISTOPATHOLOGICAL FEATURES OF PANCREATIC LESIONS

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Background: Pancreatic lesions are difficult to be diagnosed and their histopathological features might influence the therapeutical management. **Objective:** To present the histological aspects of pancreatic lesions. **Material and methods:** In 76 consecutive cases of pancreatic lesions (biopsies and surgical specimens) diagnosed at the department of pathology of the Clinical County Emergency Hospital in Tîrgu-Mures, Romania, during 2013-2015, we examined the clinicopathological and immunohistochemical (IHC) data included in the histopathological reports. **Results:** From 76 cases, 23 were non-tumoral lesions diagnosed as acute/chronic pancreatitis with or without pseudocysts. The other 53 cases were diagnosed as benign or malignant tumors. The predominant histopathological tumor type was ductal adenocarcinoma (n=37) followed by malignant neuroendocrine tumors (n=8) and cystic tumors (n=8). All of the ductal adenocarcinomas originated from the pancreatic head whereas the neuroendocrine carcinomas and cystic tumors were located in the tail with or without extension through the pancreatic body. The neuroendocrine carcinomas were diagnosed based on the tumor cells positivity for at least two of the three neuroendocrine markers synaptophysin, chromogranin and neurone specific enolase. From the 8 cystic tumors, three were benign serous adenomas, four cases were mucinous cystic neoplasms (two of them with invasive components) and one was a cavernous hemangioma. All of the four mucinous cystic neoplasms expressed HER-2 positivity and showed neuroendocrine differentiation emphasized by synaptophysin and chromogranin. **Conclusions:** The histopathological subtypes of the pancreatic tumors depend on their localization. The ductal adenocarcinomas originate from the head of the pancreas whereas neuroendocrine tumors or neuroendocrine components rather occur in the distant pancreas.

Keywords: pancreas, carcinoma, pancreatitis

DEPRESSIVE DISORDERS AND COPING MECHANISMS AMONGST STUDENTS FROM THE UNIVERSITY OF MEDICINE AND PHARMACY OF TARGU MURES

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Background: Depression is one of the most frequent diseases spread worldwide. It is a disorder which affects the way of thinking and daily activities such as sleeping, eating and working. Students represent a vulnerable category for developing depressive disorders but the individualised coping mechanisms give the possibility of mastering or tolerating the internal and external factors which exceed their personal resources. **Objective:** The aim of this study is to highlight the incidence and the intensity of depressive disorders amongst students from the University of Medicine and Pharmacy of Targu Mures and the coping mechanisms engaged by them. **Material and methods:** Our study is based on questioning the students from the University of Medicine and Pharmacy of Targu Mures, using Beck Depression Survey and the Coping Scale. Apart from this, we also considered the presence or absence of diseases and students workplaces. Our study involved 300 students from General Medicine, 50 students from each year of study, monitoring their obtained scores and also their main coping mechanisms. **Results:** Among those 300 students included in the study, 77% were females and 23% males, with the age between 18 to 30. Taking into consideration their workplace, 4% out of them have a part time job. When it comes to diseases, 17,33% have chronic diseases and the rest of 82,67% are healthy. The percentage of students from all six years of study who have depressive disorders of different intensities are as follows: 1st year 32%, 2nd year 46%, 3rd year 36%, 4th year 44%, 5th year 46% and 6th year 24%. After analysing the scores obtained from students related to each coping mechanism resulted the predominance of a raised average of positive reinterpretation scores. **Conclusions:** Depressive disorders are present in different intensities in all the six years of study and the students, irrespective of their study year, utilise the positive reinterpretation as the main coping mechanism.

Keywords: depression, students, coping

THE CRUCIAL IMPORTANCE OF BLOOD CULTURE COLLECTING HABITS

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Background: Collecting blood cultures before introducing antimicrobial therapy is a standard of care of the critically ill patient. The habits by which these blood cultures are collected, for example the number of sets collected or the technique applied, may alter the positivity rate of the blood cultures and ultimately influence patient treatment. Consequently, the habits are important qualitative indicators which require proper evaluation.

Objective: Aim of the study is to evaluate certain parameters regarding blood culture collecting habits at the Mures County Emergency Clinical Hospital. **Material and methods:** The microbiology department's database was utilized to gather information concerning the blood cultures collected during the year 2016 (from 1st of January to 31st of December). Amongst other parameters the number of positive blood cultures, the collection method and isolated organisms were analyzed. For each isolate the significance was assessed based on available information and categorized into significant, possible contaminant and contaminant. **Results:** A total of 2742 blood cultures were included in our study. More than 90% of these were single sets. From the total amount, 742 (27.06 %) were positive blood cultures, growing one or more bacterial isolates. Furthermore, within the positives, the contaminants made up 117 (4.26 %), the possible contaminants 230 (8.38%) and the significant isolates 395 (14.38 %). Contaminants and possible contaminants were bacteria that inhabit the skin, mostly coagulase-negative staphylococci and coryneforms. **Conclusions:** The study reveals the strikingly low number of multiple set collections of blood cultures. This complicates the interpretation of the results and at times clouds their significance. Even though the clearly contaminated blood cultures summed up at an acceptable rate of 4,26 % compared to international standards, the almost doubled amount of possible contaminated ones undoubtedly masked the actual and true value of the contaminated blood cultures which probably is much higher.

Keywords: Specimen collecting habits, Contamination rate, Antimicrobial therapy

POLYSOMNOGRAPHIC EVALUATION OF OBSTRUCTIVE SLEEP APNEA SYNDROME SEVERITY

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Background: Obstructive sleep apnea syndrome (OSAS) is one of the most common sleep-related breathing disorder and it is characterized by recurrent obstructions of the upper airways in association with symptoms like daytime sleepiness and cardiopulmonary dysfunctions. OSAS and its severity are determined by polysomnographic evaluations, which measure the apnea-hypopnea index (AHI) alongside other specific parameters during sleep. **Objective:** The aim of this study is to determine if OSAS worsens during rapid eye movement (REM) sleep and to analyze the effect of periodic leg movements (PLMS) with associated arousals on the AHI in patients with OSAS. **Material and methods:** A number of 102 patients with suspected sleep-related breathing disorders who underwent overnight polysomnography were included in this retrospective study. Different polysomnographic variables like AHI, number of respiratory events during different sleep stages, PLMS and associated arousals were statistically analyzed to determine the impact of periodic leg movements, arousals and sleep stages on sleep apnea severity. **Results:** The mean age was 46±14 years and total sleep time recorded 215.5±79.2 min, out of which REM sleep duration was 17.7±19.1 min while non-REM (NREM) sleep lasted for 194.9±77.0 min. Overall, patients presented higher AHI in REM sleep than in NREM sleep (45.26±32.99 vs. 36.97±29.42, p<0.05). A significant statistical correlation (p<0.05) was found between PLMS with microarousals and OSAS (AHI≥5). The difference between AHI value in REM and NREM sleep remained statistically significant in patients presenting PLMS (51.61±39.73 vs. 39.73±28.52, p<0.05). **Conclusions:** The results of this study confirm that sleep apnea worsens during REM sleep, which means that sleep stages are a contributing factor to OSAS severity in both women and men, independent of age. Also, PLMS are significantly correlated with arousals and the AHI, but they don't affect the severity of sleep apnea.

Keywords: polysomnography, apnea-hypopnea index, sleep stages

DIAGNOSIS AND TREATMENT OF HYPERCAPNIC ENCEPHALOPATHY WITHIN THE COPD EXACERBATIONS

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Background: COPD is frequently associated with severe exacerbations and complications. Respiratory failure with hypercapnia requires elaborated treatment in ICU (Intensive Care Unit). **Objective:** Evaluation of severe COPD exacerbations (risk factors, clinical features, treatment). **Material and methods:** The study included 93 patients with severe COPD exacerbation, hospitalized in the Pneumology Clinic and ICU Tîrgu-Mureş (during 2 years). **Results:** Age distribution: the majority of the patients were over 61 years-old. Gender distribution: 78.5% were male (sex ratio M:F 3.6). Only 93.5% patients had medical insurance. The main risk factors for COPD were: smoking 88.2% (high percentage comparing the country average 26%) and professional exposure 8.6%. The main risks factors for exacerbations were lack of treatment adherence (37.6%), active smoking (33.3%) and airways infections (100%). We found different stage of the disease but stage IV was predominant (65.6%), stage III (33.3%), stage II (1.1%). All the patients had one or more symptoms connected with hypercapnic encephalopathy: 91.4% rest dyspnea/orthopnoea, 40.8% obnubilation, 34.4% cyanosis, 37.6% headache, 35,5% asthenia/muscle exhaustion. Multiples comorbidities contributed to the exacerbation severity: diabetes (21.5%), hypertension (54.8%), obesity (19.4%), lung cancer (11.8%), ischemic cardiac disease (34.4%), and heart failure (10.8%). Patients had maximal bronchodilation medication, antibiotics, cardiovascular support. Hypercapnia and acidosis required in 74.19% endotracheal intubation (ETI) or noninvasive mechanical ventilation (NIMV - 21.5%). We noted a small rate of recovery that was prompted by the advanced age, advanced stage of the disease and intricate comorbidities. **Conclusions:** Smoking remains the main risk factor for COPD occurrence and for exacerbation. COPD exacerbation may evolve with great severity in advance age of patients, with multiples comorbidities and severe airways obstruction. Respiratory failure and hypercapnic encephalopathy had suggestive symptoms that required hospitalization in ICU, complex treatment and mechanical ventilation - NIMV or ETI.

Keywords: COPD exacerbation, ICU, noninvasive ventilation

TREATMENT WITH PROSTAGLANDINS IN NEWBORNS WITH CRITICAL CONGENITAL HEART DEFECTS

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Background: Prostaglandins E1 (PGE1) are vasodilators, used in newborns with critical congenital heart defects, that require maintaining patency of the ductus arteriosus (PDA), until corrective or palliative surgery could be performed. **Objective:** The purpose of this study was to evaluate the efficacy and safety of prostaglandin treatment in newborns. **Material and methods:** 90 newborns with critical congenital heart defects admitted to the Neonatal Intensive Care Regional Center of Tîrgu Mureş during January 2014 to December 2016 were analyzed retrospectively by searching medical observation sheets. **Results:** From the total of 90 newborns included in the study, 49% of the group has had antenatal diagnosis of congenital cardiac defects. The postnatal diagnoses were: transposition of great vessels 37%, coarctation of the aorta 32%, pulmonary stenosis 10%, aortic stenosis 9%, hypoplastic left ventricle 4%, tetralogy of Fallot 3%, complex cardiac malformations and common atrioventricular canal both with 2% and total anomalous venous return 1%. We found a significant correlation between prenatal and postnatal diagnosis (p < 0.05). **Conclusions:** PGE1 therapy can be lifesaving in newborns with PDA depending critical heart defects, but because of the side effects it is recommended to use the lowest doses that produce beneficial effects for a period as short as possible.

Keywords: prostaglandins, critical congenital heart defects, newborn

URINARY IODINE CONCENTRATION (UIC) AMONG PREGNANT WOMEN IN MURES, COVASNA AND HARGHITA

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Background: The iodine status of our population after the universal salt iodization program is not known. Iodine deficiency during pregnancy can interfere with normal fetal growth and development. In pregnancy, the UIC is high, due to increasing of renal clearance. A UIC of 100 µg/L (WHO criteria) is considered the minimum for iodine sufficiency. **Objective:** The purpose of this study was to analyze the iodine status in pregnant women and to identify correlation between UIC and smoking status, bread intake, iodized salt, provenience, prenatal vitamin use, weeks of pregnancy and BMI. **Material and methods:** A prospective study was performed which included 76 pregnant women at 20-42 weeks gestation. They had no known thyroid disease and hadn't eaten seafood in the last 30 days. Questionnaires and urine samples were collected at the Endocrinology Clinic Mures, Covasna and Harghita, and UIC (mcg/l) were measured. **Results:** 47,9% had UIC less than 100 µg/L, 23,28% had UIC less than 50 (severe deficiency), 24,65% had UIC more than 200 (risk of adverse reactions). We had 16 smokers (mean UIC=147.2) and 51 non-smokers (mean UIC=112.0), 26,4% ate more than 5 slices of bread(133.8), 95,6% used iodized salt(123.2), 58,6% were from urban area(134.8), 44,4% had superior education(129.3), 48,4% took iodine containing vitamins(112.4). No significant correlation has been found between the UIC and smoking status($p=0.1602$), bread intake($p=0.8294$), iodized salt($p=0.9286$), provenience($p=0.1183$), prenatal vitamin use($p=0.3414$), weeks of pregnancy($p=0.6547$) and BMI($p=0.1616$). **Conclusions:** Our geographical area was considered an endemic zone for thyroid goiter, due to the absence of the iodine in the soil. According to our study, half of the pregnant women suffer from iodine deficiency but theres is an important heterogeneity of UIC in our population. We haven't found a correlation between the parameters outlined above.

Keywords: UIC, pregnancy, smoking, vitamins

CHILD DEATH . PREVALENCE , CAUSES AND RISK FACTORS.

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Background: The main negative indicator that characterizes the health of the children and the health system performance is pediatric mortality. More than half of the deaths among the children are due to the diseases than can be prevented and treated through simple measures. **Objective:** The research question of this study refers to the screening of the main death causes among children, to highlight the prevalence of certain features that are involved in casuistry and to determine the main risk factors. **Material and methods:** This is a retrospective of a five years period study, from 2009 until 2013. This report reviews the deaths of 122 children, aged under 18, which was admitted to the Paediatrics Clinic(I) of Targu-Mures. **Results:** The percentage of cases that resulted in death of the number of admissions decreased twice over 5 years, so in 2009 the deaths represented 1,7% of the total number of admissions, but in 2013 were decreased to 0,9%. The prevalence of masculine gender in death cases is higher two times than female gender(13m:6f) and where is a maintenance in all the years of the male deaths. The death's structure on the area of the deceased's origin has the dominant index in rural areas, where we have a two or even three times higher incidence. The highest percentage of 51,6% is present between 3 months age, which is more than a half of all deaths batch. The pathology of respiratory cumulative incidence has the highest percentage in each of these 5 years and has recorded significantly a gradual decline from year to year, from 79% to 58%. **Conclusions:** The number of the death cases is decreasing in each year. The male gender has the biggest prevalence in comparison with the female gender. In the rural areas there is the highest number of cases. The main affected age group is represented by children between 3 month respiratory pathologies predominate in each of the 5 years.

Keywords: mortality, children, pediatrics

DIAGNOSTIC CHALLENGES IN INHERITED TUBULAR TRANSPORT ABNORMALITIES: BARTTER SYNDROME

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Background: Bartter syndrome was first described in 1962 and since then the advances in molecular diagnostics revealed several closely related gene mutations with autosomal recessive inheritance that lead to the alteration of salt reabsorption in the loop of Henle. Main characteristics of Bartter syndrome are found in one out of one million children in Europe and consist of hypokalemia, hypochloremia, metabolic alkalosis and hypercalciuria. **Objective:** Our paper presents the intricate aspects of a Bartter syndrome case associated with a few distinctive features (hypocalciuria) and severe failure to thrive. We aim to raise awareness among our peers about a rare genetic syndrome. **Material and methods:** A seven weeks old premature infant was brought to the hospital for failure to thrive (gestational age 35 weeks, birth weight - 2300g; weight at presentation - 2200g, after a previous four weeks admission. The first examination revealed a moderate general appearance associated with decreased subcutaneous tissue and generalized hypotonia, dysmorphic facial features (low implanted ears, micrognathia, anteverted nose). Laboratory findings included hypokalemia (2.68 mmol/l), hypochloremia (87 mmol/l), moderate metabolic alkalosis (pH=7,53), increased blood urea (67mg/dl) and creatinine (1,2 mg/dl) levels and low urinary levels of sodium (27 mmol/l), potassium (14,9 mmol/l), magnesium (0,4 mmol/l), chloride(23mmol/l) and calcium (0,01 mmol/l). Standard investigations revealed leukocytosis (18.820 x 103/ul), mild anemia (Hb=10,6 g/dl) and thrombocytosis (584,000/mm³). Treatment with potassium, saline solution and spironolactone was initiated. **Results:** Within 22 days overall status improved, and the patient was discharged. Due to lack of family compliance and to the syndrome itself, further progress was unsatisfactorily, with several readmissions for urinary tract infections, and malnutrition. **Conclusions:** Early diagnosis of Bartter Syndrome assures a relatively good prognosis, but poor compliance to the treatment and specific gene mutations could determine progress towards renal failure.

Keywords: metabolic alkalosis,, genetic syndrome,, failure to thrive,, dysmorphic features

TRIGGER FACTORS OF BIPOLAR DISORDER TYPE 1

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Background: People with severe mental healths problems, such as bipolar disorder have a lower life-expectancy, than the general population. The bipolar disorder, characterized by episodes in which the person's mood and activity levels are significantly disturbed, affects about 60 million people worldwide. **Objective:** The purpose of this study is to establish the most common reasons of patient's initiative to appear in a psychiatric institution, and to evaluate association between the efficacy of therapy and bipolar disorder's seasonal character. **Material and methods:** This is a retrospective and descriptive study (based on observation sheets) including a cohort of 65 patients presented in Psychiatric Clinic No 1 of Tg Mures from january 2015 to december 2016. We have followed and focused on the causes of exacerbation of bipolar disorder according to sex, age, location, studies, type of personality and hospitalization period. **Results:** Distribution by sexes shows an incidence of 78,46% in females and 21,54% in males. The patient's median age is 49,9 years old. The urban:rural division was 55,27%:44,73% in 2015 and 33,34%:66,66% in 2016. The most cases were hospitalized in maniacal episodes with a spring and summer peak. The instabil and schizoid personality type was the predominant among patients. The most cases has high school and superior education, and in all of the situation we found chronic sleep disorder. The main purpose of hospitalization are variable: intrafamiliar and workplace conflicts, sorrow, non compliance in drug therapy, childbirth, alcohol use, divorce, mental and physical fatigue. **Conclusions:** Certain lifestyle, environmental factors all play a role in bipolar symptoms development. Seasonal changes also can trigger or aggravate extreme highs or lows and make patients to stop taking their medication, in response the efficacy of the treatment is decreased as acute relapse.

Keywords: bipolar disorder, trigger factors, hallmark of the condition

POSTOPERATIVE NEUROMONITORING AND LABORATORY TESTING IN NEUROSURGICAL PATIENTS

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Background: The fundamental goal after neurosurgical procedures is to detect, avoid and treat complications in the early postoperative phase. The intracranial pressure measure is a well-described prognostic factor, specifically for mortality, but for now it isn't available in our clinic. **Objective:** This study aimed to establish the importance in the utility of laboratory analysis and neurological evaluation in predicting the outcome of neurosurgical patients. We analyzed also, how these parameters can prevent complications. **Material and methods:** We have conducted a prospective, observational, hospital-based study including 15 postoperative neurosurgical patients, aged between 39-78 years, admitted to Anesthesiology and Intensive Therapy Clinic I of Targu Mures, during a period of two months (08.01.2017-07.03.2017). We evaluated the GCS, FOUR and APACHE III Clinical scores, the usual laboratory analyses: glycaemia, sodium, coagulation parameters (platelets, INR, apTT). Datas were analyzed using Microsoft Excel. **Results:** Statistics reveals that in most cases neurosurgery interventions are indicated for subarahnoidian hemorrhages caused by traffic accident. Based on GCS and FOUR score from the 15 sample of patients, 13 suggest poor prognosis. By the predicting hospital mortality indicator, APACHE III presents more than 100 points in 4 cases. Early profound hyperglycaemia and apTT value oscillation appears in 8 situation. INR values were between 1 and 2. Sodium, like the principal determinant of total extracellular volume, was at normal range, in 2 case we met hypernatremia. Thrombocytosis and trombocytopenia occurs in 4 situation. **Conclusions:** The clinical scores underline the importance of standardized repeated neurological assesment, but aren't the most reliable parameters. Hyperglycaemia and apTT abnormalities are associated with higher morbidity and mortality.

Keywords: postoperative neurosurgical patients, coagulation parameters, laboratory analysis

INCIDENTAL FINDING OF TETRALOGY OF FALLOT IN A POSITIVE CONGENITAL HYPOTHYROIDISM SCREENING PATIENT – CASE REPORT

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Background: Congenital hypothyroidism (CH) is a complete or partial loss of thyroid hormone production in newborns. National neonatal screening programs help with early diagnosis. Timely hormonal replacement prevents severe intellectual disability. Some patients with CH associate cardiac, skeletal and urogenital anomalies. **Objective:** We present the case of an incidental finding of Tetralogy of Fallot (ToF) on routine examination in a newborn admitted to confirm the diagnosis of CH after positive neonatal screening. **Material and methods:** A 20 days old term newborn, male, vaginal birth, BW= 4000g, Apgar Score 9 was referred to our center due to positive newborn screening for CH. Clinical exam was consistent with CH features: prolonged neonatal jaundice, bilateral palpebral edema, dry skin, macroglosia, umbilical hernia, hoarse voice. Also a harsh systolic ejection heart murmur over the left sternal border and bluish discoloration of the lips were incidental physical findings at admission. The patient was hypoxemic. The rest of the exam was unremarkable. Laboratory findings show mild unconjugated hyperbilirubinemia, low levels of Free T4=0,13ng/dl and T4=1,73mcg%, elevated TSH=>60.00 mcUI/dl confirming CH. Echocardiography confirms the cyanotic heart malformation as ToF: RV hypertrophy, aorta dextroposition, subaortic ventricular septal defect ~7,1mm with bidirectional shunt and severe pulmonary stenosis with max gradient=100 mmHg. **Results:** The patient was started on low Levothyroxine initial dose, daily (~ 3 mcg/kg/d). There were no "tet" spells during his staying. It was subsequently referred to a cardiovascular surgery department for surgical correction. **Conclusions:** The final diagnosis is CH with associated ToF. Although the association of heart defects in CH is not uncommon, in this particular case the diagnosis of ToF was an incidental finding as the fetal morphology during pregnancy missed it. With correct and prompt treatment both have good long-term survival with excellent quality of life.

Keywords: Congenital Hypothyroidism, Tetralogy of Fallot, cardiac defects, neonatology

CORRELATIONS BETWEEN CORONARY CALCIUM SCORE AND LEFT VENTRICULAR EJECTION FRACTION

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Background: Multislice Computed Tomography angiography is an imaging derived tool used in assessment of atheromatous plaques calcification degree based on Coronary Calcium Score (CCS), a biomarker of atheromatous systemic burden. **Objective:** The aim of our study was to identify the correlation between the severity of coronary lesions, expressed by CCS and the left ventricular ejection fraction (LVEF). **Material and methods:** Ninety patients with angina pectoris were retrospectively included in this study. Each patient underwent 64-Multislice CT and 2-D echocardiography imaging acquisition in order to assess the CCS and LVEF. The patients were divided into 2 groups according to CCS: Group 1- patients with CCS< 400 (n=65, 72.2%), Group 2 □ patients with CCS≥400 (n=25, 27.7%). **Results:** Mean age of patients was 55.95±10.22 years old in Group-1 versus 65.32±5.67 in Group-2 (p<0.0001). Furthermore, patients with age above 65 years old had a significantly higher CCS than those from second group (16% in group 1 vs 52% in group 2, p<0.0001). Female gender was present in 40% of cases in group □□ and 20% in group-2. (p=0.0032) Regarding risk factors there were no significantly differences between the two groups: diabetes mellitus (15% gr1. Vs 20% gr2, p=0,4570), high blood pressure (93% gr1. vs 96% gr2, p=0.5371), dyslipidemia (63% gr.1 vs 56% gr2, p=0.3875). The mean LVEF was significantly lower in high CCS group compared with second group (51.38% gr1. Vs 47.72% gr2, p=0.0051). High CCS group presented significantly more values of LVEF lower than 45% compared with low CCS group (3% gr1. Vs 16% gr.2, p=0.0028). **Conclusions:** High CCS values are significantly correlated with a lower LVEF, therefore patients with high CCS present an increased probability of reduced left ventricular ejection fraction.

Keywords: Calcium Score, atheromatous burden, ejection fraction

MANAGEMENT OF A CHILD WITH FEBRILE CONVULSION

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Background: Febrile convulsions are the most common seizure disorder during childhood, usually occurring during an extracerebral febrile illness in children aged between 6 and 60 months, without previous neurological sings. Febrile convulsions are present in 2-4% of children younger than five years of age, in majority without having an identifiable cause. **Objective:** The purpose of this study was to evaluate the epidemiological characteristics of this disease and to underline the importance of prevention and correct management. **Material and methods:** In this retrospective study we included 25 children who were admitted with febrile seizure to the Paediatric Clinic of County Hospital Targu Mures, between January 2010 and December 2011. Data were collected through the archiving program of hospital. We studied the epidemiological data, comorbidities, laboratory test and the medication administered. **Results:** The children were aged between 12-48 months, with average age of 1 year and 8 months. 54.17% of the patients were boys and 45.83% girls. 66.67% of the patients live in the countryside, while the remaining of 33.33% live in urban environment. Majority had inflammatory disorders of the upper airways: 40% of the children was admitted with unspecified acute pharyngitis and 36% with rhino-pharyngitis. 4% had urinary infections, the rest showing other infections. 30% of children with febrile convulsions come from families with positive history for this diagnosis. **Conclusions:** Inflammatory processes, such as infections of the upper airways and urinary tract infections are the most important etiological factors of febrile convulsions in children. Prevention is a very important thing, so the children with positive familial history or previous febrile seizure should be monitored and the fever more aggressively prevented.

Keywords: convulsion, fever, children

ACROMEGALY – A RETROSPECTIVE EPIDEMIOLOGICAL STUDY

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Background: Acromegaly is a rare disease characterized by the hipersecretion of growth hormone (GH) which in over 95% by cases is caused by a pituitary adenoma with somatotroph cells. The estimated prevalence of the disease is 40 cases/1000000 population with 3-4 new cases/1000000 population per year. Both genders appear to be equally affected and the average age of presentation in the literature is 42 years. **Objective:** Our study aimed to assess the link between acromegaly (simple or mixed adenomas) and the year of diagnosis, age, gender and the background of the subjects. **Material and methods:** This was a retrospective observational study that included data from patients with a diagnosis of acromegaly registred at the Endocrinology Department of Mures County Hospital between 2006 and 2014. **Results:** A total number of 38 cases were found over a 9 years period. The yearly distribution was 2006 (15,79%), 2007 (13,16%), 2008 (10,53%), 2009 (10,53%), 2011 (13,16%), 2012 (7,89%), 2013 (5,26%), 2014 (23,68%). The average age of subjects was 54 years, ranging from 14 to 74. Out of a total number of 38 subjects, 30 (78,95%) were females and 8 (21,05%) males. A number of 22 (57,89%) subjects were coming from an urban environment and 16 (42,11%) from country side. Also, out of 38 GH-Secreting Pituitary Adenomas, 32 (84,21%) were simple (only GH-secreting) and 6 (14,79%) mixed. All 6 mixed adenomas had a co-secretion of prolactine(PRL). **Conclusions:** In our cohort there was a female predominance of acromegaly and slightly more patients came form urban environment. There is at least a decade delay in diagnosis of acromegaly in our cohort of patients comparing to the literature data.

Keywords: acromegaly, GH-Secreting pituitary tumor, epidemiological study

COEXISTENCE OF RISK FACTORS IS ASSOCIATED WITH MODIFICATION OF SOME CLINICAL AND BIOCHEMICAL PARAMETERS RELATED TO PATIENTS SUFFERING FROM CARDIOVASCULAR DISEASES.

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Background: The majority of cardiovascular complications are caused by risk factors that can be controlled, treated or modified. Unhealthy behaviours lead to metabolic changes and unfortunately these methabolic risk factors coexist in the same person and act sinergistically to increase the individual total risk of developing cardiovascular events. **Objective:** Our objective was to find a link between unhealthy behaviours of some patients suffering from cardiovascular diseases and abnormal values of some biochemical parameters. **Material and methods:** This is a retrospective study that included a number of 20 patients hospitalized in the Cardiology Department of Emergency County Hospital Mureș, in 2017. **Results:** During the research period, 20 patients (12 males and 8 females) were interviewed. 11 patients presented high cholesterol levels. The mean cholesterol level for this group is 223 with a standard deviation of 26. The same patients had increased levels of glycemia, with a mean glycemia level of 143, and standard deviation of 22. Underlying conditions for all these patients were: cardiovascular events such as IMA and stent placements. 9 patients undiagnosed as diabetics had slightly increased blood glucose and cholesterol levels. Most of them confirmed a history of cardiovascular disease and various procedures (by pass, stent). 7 subjects are smokers (the quantity varied from 3 cigarettes/day and two pockets/day) and 13 non-smokers. At these 2 categories, cholesterol and glucose values were very close, probably influenced by age and genetic history. **Conclusions:** Behavioural habits can modify some biochemical parameters whose abnormal values represent a cluster of risks in developing cardiovascular diseases. Unfortunately, all ages can be at risk of developing a cardiovascular disease if they not respect the medical advice.

Keywords: cardiovascular, cholesterol, glycemia, smokers

EDS-NBI BIOPSY REQUIREMENT IN DIAGNOSIS OF INTESTINAL METAPLASIA

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Background: Nowadays, the early detection of premalignant lesions plays a significant role in the diagnosis and treatment of Early Gastric Cancer, an important health problem with a high risk of mortality. Intestinal Metaplasia (IM) of gastric mucosa is defined as the replacement of normal glandular epithelium found in the stomach with a small-intestinal phenotype which leads to the atrophy of goblet cells and chronic inflammation. Gastric IM is an intermediate precancerous lesion in the gastric chronic gastritis, atrophic gastritis, dysplasia and adenocarcinoma. **Objective:** The aim of this study is to demonstrate the high sensibility and specificity of EDS-NBI with magnification in order to diagnose IM in comparison with bioptic sample collection. **Material and methods:** We undertook a prospective study on 40 patients who underwent this procedure in Gastroenterology Clinic of Targu Mures County Clinical Emergency Hospital between 2015-2016. GraphPadPrism 5.0 (the Spearman correlation and the Anova Test) were used to assess the statistical data. **Results:** The conventional digestive endoscopy did not reveal any area affected by Intestinal Metaplasia. The diagnosis was established by the histologic examination of the biopsy samples. We detected 65 modified areas. The pit pattern typical for intestinal metaplasia is characterized by the presence of glands of a tubular-villous type and by blue ridges. With the Narrow Band Imaging examination, we detected 49 modified areas. By comparing this data, we obtained a statistical significant difference in the detection of intestinal metaplasia ($p=0,003$), using both types of investigation, resulting in a sensitivity and specificity of 85%, respectively 76% for Intestinal Metaplasia. **Conclusions:** Despite the fact that EDS-NBI is a new technique with high specificity and sensibility, bioptic sampling still remains one of the important methods to diagnose this premalignant lesions.

Keywords: Intestinal Metaplasia, Narrow Banding Imaging, Biopsy

THE IMPORTANCE OF NARROW-BAND IMAGING ENDOSCOPY IN THE CLASSIFICATION OF GASTRIC POLYPS

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Background: The visualization of blood vessels in gastric polyps with narrow-band imaging allows the physician to evaluate the vascular pattern of the gastric tissue in real time thus allowing the early detection of neoplastic lesions, this pattern being modified in accordance with the tissue abnormality. The normal gastric mucosa displays either a coil-shaped pattern of a subepithelial capillary network without collecting venules or small round pits surrounded by honeycomb-like subepithelial capillary network with capillary venules. Fundic gland polyps have a honeycomb pattern with *dense vascularity*, this pattern being noticed also in hyperplastic polyps thus complicating the diagnosis. Gastric adenomas display *a regular microsurface and microvasculature*, changes in this respect showing a carcinoma transformation. Intestinal metaplasia is described as *blue whitish raised areas*. **Objective:** The hypothesis is that narrow-band imaging enhances the early classification of gastric polyps and the diagnosis of their premalignant or malignant status. **Material and methods:** Patients with gastric polyps from Mureș County Hospital, Romania from year 2015, were included in this prospective study. The endoscopic findings were noted and analyzed. **Results:** Both men and women are equally affected, the mean age for polyp development being 58 years. In more than 80% of the patients the polyps were hyperplastic, 8% of the polyps were adenomas and 6% fundic. Inflammation was present in all the hyperplastic polyp cases. One third of the aforementioned polyps displayed intestinal metaplasia. Atrophy is a factor that favors the development of gastric adenomas. **Conclusions:** The use of narrow-band imaging technology in endoscopy greatly enhances the early diagnosis of dysplastic transformations in gastric mucous tissue and the classification of the gastric polyps.

Keywords: gastric, polyp, narrow-band imaging, endoscopy

PSYCHIATRIC AND NEUROLOGICAL SYMPTOMS IN CHILDREN AND TEENAGERS WITH NEUROCUTANEOUS DISORDERS

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Background: Neurocutaneous syndromes are a heterogeneous group of disorders that involve the neurologic, dermatologic and ophthalmologic systems. Neurofibromatosis, tuberous sclerosis, Sturge-Weber syndrome, Von Hippel Lindau disease are the most common examples. These pathologies are characterized by neurological symptoms such as seizures, mental retardation, learning disabilities in addition to cutaneous manifestations and lastly the propensity to develop tumors, both benign and malignant. **Objective:** The aim of this study is to identify clinical, imaging and neurophysiological profiles of neurocutaneous disorders. **Material and methods:** In a retrospective study we investigated data from 12 patients hospitalized between 2013 and 2016 in Pediatric Neuropsychiatry Clinic of Mureş County Hospital, diagnosed with a neurocutaneous syndrome. We used the clinical history, the clinical examination, the neurological and psychiatric evaluation, the cerebral CT scan or MRI, the electroencephalography and other parameters. **Results:** NF1 was detected in 9 patients (75%). The children □ girls (41,6%) and 7 boys (58,3%) □ were aged between 1 and 16 years, and 10 of them (83,3%) were diagnosed until the age of 3 years. 66,6% were living in rural areas. The main complaints were epilepsy □ 5 cases (41,6%), skin pigmentation disorders □ 10 cases (83,3%), psychomotor development delay □ 9 cases (75%). 50% of patients had modifications on the CT scan or on the MRI of the brain. Abnormal EEG findings were detected in 7 cases (58,3%). 10 children (83,3%) also had other pathologies associated, such as cerebral palsy, autism, ADHD etc. **Conclusions:** The most frequent clinical manifestations were the skin pigmentation disorders (83,3%) and the psychomotor development delay (75%). CT scan or MRI of the brain abnormalities were found in 50% of patients. Neurocutaneous syndromes have multiple clinical presentations and require a team approach, including various specialties in their evaluation and management.

Keywords: neurocutaneous syndromes, children, symptoms

NEUROPSYCHIATRIC COMORBIDITIES IN DYSTONIC-DYSKINETIC CEREBRAL PALSY

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Background: Cerebral palsy (CP) is the most common cause of chronic motor disability in children. Extrapyramidal CP is generated by a non-progressive damage that occurred in the developing fetal or infant brain. The condition has multifactorial etiology and it is characterized by the presence of involuntary movements, abnormal motor patterns, postural instability and defective coordination, but it's often accompanied by neuropsychiatric comorbidities and secondary mioarthrokinetic problems. **Objective:** The aim of the study was to investigate and reveal the neuropsychiatric pathologies commonly associated with dystonic-dyskinetic cerebral palsy. **Material and methods:** This study is a retrospective one aimed only at pediatric patients hospitalised in the Pediatric Neurology and Psychiatry Clinic of Tîrgu Mureş, between 01.01.2015-31.12.2016. We investigated 28 children (18 boys and 10 girls) diagnosed with dystonic-dyskinetic cerebral palsy using: anamnestic information, clinical examination, including physical, neurological, psychiatric and psychological evaluations, neuroimaging, electroencephalography (EEG) and other specific investigations. **Results:** In the present study, concerning the gender repartition, we found a M/F ratio 1:0,55. The mean age of children was 7,87 years. Demographic distribution shows an urban-rural ratio 1:3,76. Among the neurological and psychiatric comorbidities, we encountered: severe neuromotor retardation (82,14%) wich accompanied the majority of the cases, delayed or deficient language skills (78,57%), severe psychic retardation (71,42%), epilepsy (53,57%), sphincterian incontinence (39,28%) and sleep dysfunction (17,85%). **Conclusions:** The incidence of extrapyramidal cerebral palsy was higher for boys than for girls, and also for patients coming from rural area. Children with a diagnosis of dystonic-dyskinetic CP often have multiple neuropsychiatric associated disorders, that are best addressed by an interdisciplinary medical team directed to ensure a proper management of those comorbidities.

Keywords: cerebral palsy, comorbidities, dystonia

18F-FMISO PET IN IMAGING HYPOXIA IN PATIENTS WITH HEAD-AND-NECK CANCER

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Background: Hypoxia is a pathological condition that occurs in living cells when oxygen supply do not cover tissue demands anymore. More relevant is this phenomenon when it occurs in malignant tumor cells, having implications in the outcome of the anti-cancer therapy. The more hypoxic a tumor is, the lower is the probability to respond to a curative radiochemotherapy. Positron emission tomography (PET) is an imaging tool that delivers metabolic information about tissues. 18F-FMISO is the most commonly used agent for PET hypoxia imaging, having a high specificity in binding to the hypoxic cells. The greatest experiences were gained in head-and-neck squamous cell carcinomas (HNSCC) and non-small cell lung cancers (NSCLC). **Objective:** This exploratory work provides an overview of the usefulness of 18F-FMISO PET in imaging hypoxia in patients with HNSCC, presenting its potential value, advantages and pitfalls for clinical use. **Material and methods:** Articles containing information within the implications of 18F-FMISO PET in HNSCC were evaluated. The most edifying results were presented. **Results:** In two studies that enrolled 17, respectively 26 patients who performed 18F-FMISO PET prior to therapy, a median value for SUVmax of 2.3, resp. 2.0 and for tumor-to-muscle ratios (TMR) of 1.3, resp. 1.6 were positive predictive for the overall survival of the patients. In one study that included 10 subjects, the intensity-modulated radiotherapy (IMRT) planning technique permitted the dose escalation safely for critical structures by all of them. A significant 17% improvement in tumor control probability (TCP) was predicted when additional boost dose to the hypoxic sub-volume was included. An increase of TCP from 55.9% to 70.2% was observed in another study which enrolled 13 patients. **Conclusions:** For head-and-neck squamous cell carcinoma 18F-FMISO PET has a positive predictable value in assessing patients outcome after curative radiochemotherapy and it also has a great potential for assisting in dose-painting with IMRT.

Keywords: tumor hypoxia,, head and neck squamous cell carcinoma,, 18F-FMISO PET,, IMRT

THE INFLUENCE OF ABDOMINAL HYPERTENSION ON RENAL FUNCTION

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Background: Evidence suggests that intraabdominal hypertension reduces cardiac output and decreases renal perfusion leading to impaired renal function. **Objective:** The aim of the study was to analyze and observe how renal markers change their value according to increased intraabdominal pressure. **Material and methods:** A study was conducted involving thirty patients admitted in the Intensive Care Unit of Emergency Clinical County Hospital of Tîrgu Mureș, starting from November 2015 and ending in August 2016. The following criteria used for enrolling patients: admittance in the intensive critical care unit, invasive monitoring using Pulse Control Cardiac Output (PICCO) device (PULSION Medical Systems, Feldkirchen, Germany), Central Venous Pressure (CVP) monitoring and abdominal pressure measured with the AbViser (ConvaTec, Salt Lake City, USA). A value of > 12mmHg was considered high intraabdominal pressure. Recorded variables were: Serum NGAL (neutrophil gelatinase-associated lipocalin, normal between 40-100 ng/ml), creatinine serum value, creatinine clearance, glomerular filtration ratio, urea serum value, and 24-hour diuresis. Patients were divided in two cohorts: 9 patients with increased intraabdominal pressure (35 recordings) and 21 patients with normal intraabdominal pressure (52 values). **Results:** Statistically processing the data it has been brought to our attention, that between the two cohorts of patients, the values of NGAL (p=0.02) and GFR (p=0.02) are significantly different. Furthermore, the study highlights the fact that an association exists between NGAL value and 24-hour diuresis (p=0.005). The results did also show statistically significant correlation between CVP and creatinine clearance (p=0.005). No other significant correlations were observed between the studied items. **Conclusions:** The present study demonstrated the effectiveness of using NGAL serum measuring in patients with high intraabdominal pressure, therefore can be used for diagnosis of early renal failure. Elevated CVP and decreased GFR in patients with high intraabdominal pressure may be considered criteria for worsening the renal function.

Keywords: neutrophil gelatinase-associated lipocalin, intraabdominal pressure, renal dysfunction

ENDOVASCULAR TREATMENT OF ACUTE ISCHEMIC STROKE

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Background: Acute ischemic stroke(AIS) is the leading cause of neurologic morbidity and mortality worldwide with a tremendous socio-economic impact. It is caused by the occlusion of an intracranial artery, which may lead to brain damages in that vascular territory followed by physical permanent handicaps. **Objective:** To prove that mechanical /aspiration thrombectomy is an efficient technique for recanalization of recently occluded intracranial vessels. **Material and methods:** The data was collected from the Neurology and Radiology Departments in Emergency County Hospital from Tîrgu-Mures, Romania. We performed a retrospective study of 24 months duration. We included 23 consecutive patients with AIS that fulfilled our including criteria for acute treatment with aspiration or mechanical thrombectomy: ASPECTS score (7 to 10) and NIHSS score over 6. We have taken into account the following parameters: patient's age, patient's gender, occlusion localization. Time to recanalization, rate of intra-procedural complications, mTICI score and NIHSS score were indicators of efficient treatment technique. **Results:** The mean age was $67,43 \pm 6,9$ years, ranging from 59 to 80 years. The mean of time to revascularization was $104,80 \pm 57$ min per intervention. Out of 23 cases, 17 (73,91%) had a mTICI score 2b/3 and one patient (4,34%) had an intra-procedural complication. The mean of initial NIHSS was 15,05 followed by a decrease at 24 hours (11,35) and at 7 days (6,64) after thrombectomy. Primary occlusion site was found in the proximal part of Middle Cerebral Artery (11 cases), followed by Internal Carotid Artery (10 cases) and Vertebral-Basilar System (2 cases). Average of time to recanalization was 101,11 minutes per intervention in Internal Carotid Artery and 107,4 minutes in Middle Cerebral Artery. **Conclusions:** Aspiration/mechanical thrombectomy is an efficient and safe procedure in well sorted patients ; trombectomy of the Internal Carotid Artery is the quickest acute endovascular therapy leading to better outcome.

Keywords: stroke, thrombectomy, endovascular treatment

THE IMPORTANCE OF TRADITIONAL PAP SMEAR SCREENING TO DETECT PRECANCEROUS LESIONS – SURVEY IN MURES COUNTY

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Background: Persistent and common infections of the female genital tract with HPVs have been involved in nearly all cervical cancers worldwide. Romania ranks first in Europe in terms of cervical cancer mortality (10.77%), over 6 times more than the average of European Union countries. **Objective:** The aim of this study was to analyse the strategy to improve early detection of cervical intraepithelial lesions and assess the importance of monitoring these cases. **Material and methods:** We selected a group of 198 women with positive Pap smear tests from the total number tested during 2016, from Mures county (Tg-Mures, Ludus, Reghin), by the screening programme organised at the ECCH Tg-Mures. We performed a retrospective study on data collected from FS1 screening forms belonging to the UATMR. The study group included asymptomatic women aged between 25-64. **Results:** Demographic data showed that 53% of the tested women were from urban and 47% from rural environment. In the study group, 67% of the women had regular menstrual cycle and 24% had reached the menopause. Furthermore a percentage of 44% have not presented macroscopic cervical lesions and only 1% had a history of spontaneous bleeding. Most cases were present at 41-45 year old and the least of them at 61-65. Based on the data obtained using the Bethesda 2001 system, ASC-US class comprised the majority of patients selected (46.76%), followed by ASC-H (29.35%). The predominance of cytodiagnostic LSIL class (43 cases) against HSIL (4 cases) suggests that progression to high □□□□□ squamos intraepithelial lesions is rare. Coinfections are considered factors to favoring the amplification of severity of HPV and in our study group we found 32.33% infections: Gardnerella vaginalis in 65.63% cases, Candida in 10.94%, Trichomonas in 9.38% and others in 14.04% of cases. **Conclusions:** Our study found a low prevalence of atypical epithelial cell change but we need to determine the best monitoring algorithms for Pap-positive women. An insufficient knowledge about HPV infection and a high prevalence of genital infections could be challenging for cervical cancer screening in the future.

Keywords: screening, cervical cancer, cytodiagnostic

PLURIMALFORMATIVE SYNDROME WITH AN UNPREDICTED GENETIC DIAGNOSIS: DIPLOID/TETRAPLOID MOSAICISM-CASE REPORT

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Background: Diploid/tetraploid mosaicism defines the existence of two genetically distinct cell populations in one human being. This chromosomal abnormality frequently leads to death before birth or in the immediate postnatal period. The few survivors present with multiple anomalies (atrial and ventricular septal defects, renal tumors, hydronephrosis) which mimic other genetic syndromes. **Objective:** Our case report refers to an extremely rare presentation of genetic mosaicism in which phenotype is not specific for the underlying condition. We intent to highlight the difficulties in correlating karyotype with maze-like clinical findings. **Material and methods:** A 15-month-old toddler presents with high grade fever for the last 24 hours. Clinical examination revealed abnormal facial features (asymmetry, low implanted ears, macroglossia, mongoloid folds), localised hyperpigmentation on limbs and thorax, umbilical hernia (7 cm), systolic cardiac murmur (grade III/VI) and impaired neurological development. The patient was previously diagnosed with recurrent urinary tract infections and left hydronephrosis with ureterostomy (2015). Laboratory investigations included: leukocyturia, bacteriuria and positive urine culture for extended-spectrum beta-lactamase producing *Escherichia Coli*. Treatment with Meropenem was initiated and the urinary tract infection ceased after 4 days. Abdominal ultrasound showed a mass (43/27 mm) in the right kidney and grade IV left hydronephrosis. Cardiac ultrasound disclosed several malformations: atrial and ventricular septal defects and pulmonary artery stenosis. A surgical consultation and further imagistic investigations (contrast CT-scan) were performed. **Results:** The CT-scan indicated a nephroblastoma and the histopathological examination confirmed the diagnosis. As such, a new diagnosis was hypothesized: Beckwith-Wiedemann syndrome. A cytogenetic investigation performed on peripheral blood lymphocytes showed a cell lineage with 92 chromosomes (4%) and one with 46 chromosomes (96%) (karyotype: mos 92,XXXX[2]/46,XX[50]). **Conclusions:** Genetic testing is the mainstay for a positive diagnosis in plurimalformative disorders. In this case of mosaicism which highlights a great variability of clinical, imagistic and histological features, karyotyping is undoubtedly necessary for a specific diagnosis.

Keywords: tetraploidy, mosaicism, chromosomal abnormality, fever

A CHALLENGING INCURSION INTO PLURIMALFORMATIVE SYNDROMES - CASE REPORT

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Background: Malformative syndromes are very rare and problematic pathologies, consisting of patterns of congenital anomalies. Such is the case of Cornelia de Lange syndrome (CdLS), an underdiagnosed genetic disorder with a prevalence of 1: 50.000, marked by characteristic facial dysmorphism, upper limb abnormalities, intellectual deficit and severe growth retardation. **Objective:** We report the case of a pediatric patient with multiple past admissions for various acute diseases and suspicion of Holt-Oram syndrome (HOS). After thorough clinical and genetic examination a revelatory diagnosis with CdLS is made. **Material and methods:** A 2-year-old male presumably with HOS is transferred from a regional orphanage for clinical and paraclinical evaluation. The medical history: premature birth (28 weeks), Apgar score 6, birth weight 2810 gr, green amniotic fluid. The clinical examination reveals facial dysmorphism (synophrys, micrognathism, low-set ears), microcephaly, long philtrum, "carp" mouth, anteverted nares, rare teeth, left forearm agenesis (deficient ulnar formation, short and curved radius) and oligodactyly (fingers 3, 4, 5), malpositioned thumb, single palmar crease, bilateral syndactyly (toes 2, 3), bilateral cryptorchidism, micropenis, total weight 6000 gr. Systolic murmur in every auscultatory area is perceived. Cardiac echography indicates atrial (ASD) and ventricular septum defect. Abdominal echography shows hypoplastic right kidney and undescended testicles. Neurological findings present a delay in overall maturation. **Results:** The suspicion of HOS, also a plurimalformative syndrome, typically described with upper limb anomaly and ASD, is doubtedly positive as lower limb, renal and craniofacial abnormalities rule it out. Genetic consultation (through the Diagnostic Criteria Checklist of World CdLS Federation) establishes the clinical diagnosis of CdLS. **Conclusions:** Having to deal with genetic plurimalformative syndromes is always challenging, especially when pathologies have a great range of clinical variabilities, like CdLS and HOS. This emphasizes the crucial importance

of an exhaustive clinical examination which may suggest essential aspects for a correct diagnosis.

Keywords: Plurimalformative syndrome, facial dysmorphism, skeletal abnormalities

ENDOSCOPIC APPROACH AND “NARROW BAND IMAGING” IN THE DIAGNOSIS OF BARRETT’S OESOPHAGUS

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Background: Barrett's oesophagus (BO) is a premalignant condition associated with the development of oesophageal adenocarcinoma (OAC). The squamous epithelium, which normally covers the distal esophagus, is replaced with a columnar epithelium. This lesion heals through a process of incomplete intestinal metaplasia, which predisposes the development of adenocarcinoma. High definition endoscopy in association with narrow band imaging has shown potential for differentiation of lesions and possible biopsy, allowing early diagnosis and treatment. This technique also allows taking targeted biopsies. **Objective:** This study shows the importance of endoscopy and Narrow Band Imaging (NBI) in the diagnosis and treatment of the patients with Barrett's Oesophagus. **Material and methods:** This is a prospective study, started in December 2016, in the Gastroenterology Clinic in Targu-Mures, on a lot of patients that complain mainly, of gastrooesophageal reflux symptoms. The patients are divided into two groups: one group is examined by conventional methods, and the other group by the NBI. Histopathological result is used as the outcome measure. **Results:** The NBI examination leads to a characterization of the mucosal and vascular pattern, and also the differentiation between the types of BO. Mucosal pattern can be: regular (villous, circular), or irregular and vascular pattern (normal or abnormal). **Conclusions:** The NBI examination shows its usefulness due to the possibility of collecting targeted biopsies and thus increases the sensitivity and specificity of the technique, leading to a more accurate diagnosis. As mentioned, this is a prospective study and so it leads to further examination.

Keywords: Barrett's Oesophagus, Narrow Band Imaging, Endoscopy

THE IMPACT OF IRRITABLE BOWEL SYNDROME ON THE QUALITY OF LIFE – A COMPARISON BETWEEN FEMALE AND MALE PATIENTS

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Background: Irritable bowel syndrome (IBS) is a chronic functional gastrointestinal disorder characterized by abdominal pain or discomfort associated with altered bowel habits in the absence of structural abnormalities. IBS is one of the most commonly encountered gastrointestinal disorders; the severity of symptoms varies and can considerably reduce the quality of life. **Objective:** The aim of this study is to find out if there is any gender-related difference in the quality of life of patients with IBS. **Material and methods:** Data were obtained only from patients diagnosed by a gastroenterologist with IBS by completing a self-administered questionnaire that takes an average of 10 minutes to respond. It consists of 32 items, each with a five-point response scale that measures seven domains found to be relevant to patients with IBS: emotional health, interference with activity, body image, health concerns, food avoidance, social life and sexual relations. **Results:** A total number of 176 IBS patients including 118 (67%) females and 58 (33%) males with ages between 18-75 with the mean age of 40.5 years, were assessed. The mean age of the patients was not significantly different between females and males (40.33 years vs. 40.84 years, $p=0.78$). Although total symptom score was greater for females than for males (88.12 ± 25.01 vs. 81.67 ± 23.40), there is not a statistically significant difference ($p=0.095$). **Conclusions:** IBS patients experience significant impairment in quality of life. In this study, we report that gender is important in IBS and the quality of life in both women and men are equally affected. These data offer further insight into the impact of IBS on patient's well-being.

Keywords: Irritable bowel syndrome, Gender identity, Quality of Life

THE NEUTROPHIL-TO-LYMPHOCYTE RATIO IN CRITICALLY ILL PATIENTS WITH TUMORS OF THE GUT AND THE LARGE BOWEL

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Background: The neutrophil-to-lymphocyte ratio (NLR) is an indicator of systemic inflammatory response. It was recently shown that high NLR values were correlated with mortality in critically ill patients in the critical care unit. **Objective:** We aim to evaluate the association between NLR, the length of stay (LOS) in hospital in critical care unit, severity scores such as APACHE II (Acute Physiology and Chronic Health Evaluation), SOFA (Sequential Organ Failure Assessment) and SAPS (Simplified Acute Physiology Score). **Material and methods:** The study was carried out on 37 patients admitted to the intensive care unit, with tumor pathology after intestinal resection. We determined for each patient: the lymphocytes count, the neutrophils count, the arterial lactate and severity scores, on the preoperative, the first day and third day postoperatively. **Results:** The average values of NLR between the two groups (deceased n=12, survivors n=25) on the preoperative period were $13,78 \pm 3,59$ vs. $5,94 \pm 2,19$, on the first post-operative day $11,1 \pm 2,66$ vs. $6,81 \pm 3,24$, respectively on the third post-operative day $12,75 \pm 3,51$ vs. $6,72 \pm 3,13$. There is a positive correlation between NLR and severity scores SAPS ($r=0,82$, $p<0,01$), APACHE II ($r=0,73$, $p<0,001$), SOFA ($r=0,73$, $p<0,01$) on the post-operative period. **Conclusions:** For the critically ill patients with intestinal tumors, the NLR is higher and correlated with severity scores and unfavorable outcome.

Keywords: NLR, APACHE II, SOFA, SAPS

USE AND ABUSE OF BENZODIAZEPINES BEFORE THE PSYCHIATRIC CONSULTATION

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Background: Benzodiazepines are one of the most prescribed class of agents that work on the central nervous system, especially by the primary care doctors. Their main actions are hypnotic, anxiolytic, anticonvulsant and myorelaxant. It is well known that in long term use, benzodiazepines can create addiction, so when people take them for their sedative effects without a prescription, use turns into abuse. **Objective:** The aim of this study is to evaluate the use of benzodiazepines before the psychiatric consultation and to highlight their risk of addiction. **Material and methods:** We evaluated a sample of 124 patients who were taken in evidence in a Psychiatric Ambulatory in Tîrgu Mureş according to their access to medication, dosage and duration of illness before the psychiatric consultation. They were followed up for one year after the psychiatric treatment was initiated. **Results:** Benzodiazepines are frequently used for anxiety and insomnia without a psychiatric recommendation. They are often prescribed by primary care doctors, but can also be obtained without a prescription. The necessity of long term treatment is according to the severity of the disease, the presence of somatic disorders and the patient's vulnerability and it is also more frequent in those who have already taken benzodiazepines for a long time before seeing a psychiatric doctor. **Conclusions:** Benzodiazepines are effective in reducing anxiety and inducing sleep. Knowing their risk of tolerance and addiction, they must not be used in long term treatment. Patient's treatment must be individualised. It is compulsorily to know and follow the benzodiazepines' posology and limit the access to them.

Keywords: benzodiazepines, abuse, anxiety, insomnia

GENERAL CHARACTERISTIC OF CLOSTRIDIUM DIFFICILE INFECTION IN AN CLINICAL EMERGENCY HOSPITAL SINCE 2014 UNTIL 2016.

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Background: Clostridium difficile is a gram-positive bacillus and leading cause of antibiotic-associated nosocomial diarrhea and colitis in the industrialized world. C. difficile infection, once thought to be an easy to treat bacterial infection, has evolved into an epidemic that is associated with a high rate of mortality, causing disease in patients

thought to be low-risk. **Objective:** The study in hand proposes to unveil the infection with *C. Difficile* implications in diarrheic illness at minimum 48 hours after internment (nosocomial infection) on a surgical or medical hospital. **Material and methods:** A systematic review type of study has been conducted in the period between 01.01.2014 and 31.12.2016 in an clinical county hospital .Data has been gathered according to the surveillance methodology of *Clostridium Difficile* infections , by the following criteria:the patients age,sex, the date of internment and discharge,antibiotic treatment administered to the patient in the past 3 months ,if there were any complications and the health status. **Results:** After analysing all the gathered data ,it was revealed that the average diagnostic age is 69 , being rarely found in the young adult .In women the incidence is slightly higher at 54.3 % percent to men where the percent is 45,7.The illness state was significantly influenced by the antibiotic treatment administered in the 3 months previous to internment , so that 90.1 % received antibiotherapy and only 6.2 % didn't.The evolution was variable so that by discharge only 20.4 % of the patients healed , 67.9 % had improved status and 13% deceased. **Conclusions:** Few studies have examined the risk of CDI associated with age, total dose, duration, or number of antibiotics while taking into account the complex changes in exposures over time.

Keywords: *Clostridium difficile*, Antibiotic-Associated Diarrhea, Nosocomial infection, age

EPIDEMIOLOGY OF SEPSIS IN TARGU MURES OUTSIDE THE INTENSIVE CARE UNIT

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Background: Sepsis is a severe and common clinical syndrome associated with high morbidity and mortality rates, being a leading cause of death in the United States. However, its epidemiology outside the intensive care unit(ICU) is not well known in the European countries. **Objective:** Our research aims to assess the epidemiological characteristics and common etiologies of sepsis outside the ICU. **Material and methods:** We retrospectively analyzed the medical records of 73 patients admitted to the Infectious Diseases Clinic II of Targu Mures County Clinic Hospital between 1st January 2015 and 31st December 2016 under the diagnosis of sepsis. Demographic characteristics, etiology and mortality were evaluated. **Results:** Out of 73 patients, 38 (52,1%) were male; the median age was 67 years and the median length of hospital stay for survivors was 11 days. 40 (54,8%) patients were rural residents and 37 (50,7%) patients were classified as health care-associated by being hospitalized in the 30 days prior to admission. Most patients, 64 (87,67%), had at least one associated comorbidity; 36 (49,3%) patients had cardiovascular disease, 22(30,1%) patients had a metabolic disorder and 17 (23,3%) were immunosuppressed. During the hospital stay, 4 (5,5%) patients were diagnosed with septic shock, while the mortality rate was 32,9%(24). The most common site of infection was the respiratory tract, mainly pneumonia (19,2%), followed by the genitourinary tract (13,7%) and skin (13,7%), while in 29 (39,7%) cases the site of infection was unspecified. In culture-positive infected patients, 44 (60,27%), the predominant organisms were gram-negative bacterias, 26 (59%), mainly *E. coli* infections, 6(13,63%). Gram-positive organisms were involved in 16 (36%) cases, the most common agents being the coagulase-negative staphylococci, 8 (18,18%). **Conclusions:** Our findings confirm the previous reports on high mortality associated with sepsis and septic shock. Gram-negative bacterias seem to be more frequently involved in sepsis outside the ICU.

Keywords: Sepsis, Epidemiology, Etiology

CT CHARACTERISTICS OF CORONARY PLAQUES AND INTRACORONARY SHEAR STRESS

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Background: Vulnerable coronary plaques are associated with a significant risk of rupture, and the ability to detect their characteristic features is of extreme importance, as timely detection of rupture-prone plaques could lead to the appropriate initiation of adequate therapeutic measures and prevent the evolution to an acute coronary event. The features of vulnerability in coronary plaques are represented by the presence of low density atheroma, thin fibrous cap, spotty calcifications and positive remodelling. However, little is known about the role of local forces, represented by the shear stress, on the plaque vulnerability. **Objective:** The aim of the study was to correlate cardiac CT angiographic features of coronary plaques with the shear stress parameters in the coronary lesions of the patients. **Material and methods:** The vulnerable and non-vulnerable coronary plaques of thirty patients were

analysed using CT angiography, and, among others, the following parameters were assessed: the volume of low density (below 30 HU) atheroma, plaque burden, the presence of spotty calcifications and remodelling index. With the help of computational fluid dynamics, the shear stress was also assessed along the coronary plaques. **Results:** Vulnerable coronary plaques were associated with a significantly higher shear stress compared to non-vulnerable lesions. Plaque burden, necrotic core and remodelling index were also significantly higher in the group with high shear stress. The presence of low density (below 30 HU) atheroma was also recorded in a much higher percentage of coronary plaques with high shear stress than in coronary plaques with low shear stress. **Conclusions:** Shear stress significantly correlates with the CT features of vulnerable plaques, and as such, it can represent a new non-invasive way of discovering rupture-prone coronary plaques.

Keywords: cardiac CT angiography, vulnerability markers of coronary lesions, shear stress

CLINICAL AND EPIDEMIOLOGICAL FEATURES OF ACUTE VIRAL HEPATITIS

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Background: Viral hepatitis is a globally health issue and it is frequently seen in our casuistry. The most common etiological forms found in our country are infections caused by Hepatitis A Virus (HAV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV). **Objective:** The aim of this study is to identify the clinical and epidemiological aspects of the three types of viral hepatitis in our geographical area. **Material and methods:** The study performed was retrospective and it was based on a comparison between the three groups of patients diagnosed with HAV, HBV and HCV who were hospitalized in the Infectious Diseases Clinic II, Tîrgu-Mureș, between January 1st, 2015-December 31st, 2016. The diagnosis was established using epidemiological, clinical and biochemical data. Serological markers of hepatitis infection were identified using ELISA technique. **Results:** 320 cases of patients studied with viral hepatitis were divided as follows: 120 patients (37.5%) with HAV, 112 patients (35%) with HBV, 88 patients (27.5%) with HCV. HAV was more frequent under the age of 20 years (70.8%), HBV and HCV between 50-59 years (25,9% vs. 29,5%). Male gender was commonly associated with HAV (51.7%), HBV (63.4%) while HCV infection predominated in female gender (67%), statistically significant difference ($p < 0.01$). HAV and HBV were most frequent in patients from rural area (76.7% - HAV and 55.4% - HBV) and HCV predominated in urban area (53.4%), significant correlation ($p < 0.01$). Most of the HAV (91.7%) and HBV (61.9%) infections were mild clinical forms. A frequent route of transmission was represented by invasive procedures, which in case of HBV were 39,3 % and regarding HCV- 51,1%. Surgery interventions predominated in patients with HCV (46.6%) compared to HBV (36.6%). A lower incidence of HAV and HBV was observed in 2016 (7.98%) compared to 2015 (17.6%). **Conclusions:** The incidence of acute viral hepatitis remains high due to non-compliance with preventive measures.

Keywords: acute hepatitis, viral hepatitis, infection

EVALUATION OF SERUM LEVELS OF MATRIX METALLOPROTEINASE-9 IN MULTIPLE SCLEROSIS PATIENTS TREATED WITH DISEASE MODIFYING THERAPY

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Background: Matrix metalloproteinase-9 (MMP-9) is an endopeptidase that plays a key role in the pathology of multiple sclerosis (MS) by promoting migration of T-lymphocytes into the central nervous system, which leads to blood brain barrier disruption. **Objective:** The aim of the study was to determine the serum levels of MMP-9 before and after the treatment with Natalizumab. **Material and methods:** This prospective study over a period of 8 months, included 30 patients with MS (mean age 37,72 \pm 6,09; mean duration of the disease 11,2 \pm 4,5 years), of which 10 naive patients and 15 healthy controls, age and sex match. For both groups blood samples were collected and we determined the serum levels of MMP-9 quantified by multiplex method at the beginning and at the end of the study. **Results:** We observed a significant decrease in MMP-9 serum levels in naive patients after 8 months treatment with Natalizumab ($p < 0,01$). MMP-9 serum levels negatively correlated with treatment duration, highest values were noticed in naive patients (mean: 61906 pg/ml) and the lowest after a 3 years treatment period (27819,8 pg/ml). Initial MMP-9 values (50052,6 pg/ml) positively correlated with the number of the relapses in the last year, before study (mean value of MMP-9 at patients with 3 relapses: 91914,9 pg/ml). We noticed a significant

decrease in MMP-9 serum levels after treatment at patients without relapses during the study and with a decrease in the EDSS score. **Conclusions:** The treatment with Natalizumab reduces the MMP-9 serum levels in MS patients, the progression of disability and the occurrence of clinical relapses, which may provide an additional mechanism of action.

Keywords: Multiple Sclerosis, MMP-9, Natalizumab

THE INFLUENCE OF PHYSICAL ACTIVITY ON CHILDREN'S CORPOREAL CONFORMATION

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Background: It is worldwide known that obesity in children represents a serious issue, especially when sedentary lifestyle brought by the modern existence is one of the most important causal factors. **Objective:** The aim of this study is to discover if there is an association between physical activity energy expenditure (PAEE) and ponderal status of children from Tîrgu Mureş. **Material and methods:** The study was performed on a randomized sample of 108 children aged between 6 and 17 years, their participation being possible only after the parents gave their consent. Therefore, the data collection had taken place since November 2016 until February 2017. The following measurements were recorded, in two phases: first - height, weight, abdominal circumference, triceps skinfold, bio-impedance analyses and second - a children's physical activity questionnaire (C-PAQ). **Results:** The outcome came with the division of the sample into two groups: 65 children (35 girls and 30 boys) with normal ponderability (60.18%) and 43 children (22 girls and 21 boys) with obesity (39.81%). Accordingly to the results, the obesity does not have predilection for a certain gender. In view of these facts, the statistical correlation between the averages of the standard deviation of BMI and PAEE, on both groups, are highly significant, with a confidence interval about 99.9% (normal ponderability group $p < 0.0001$ and obesity group $p = 0.0018$), resulting that the children from the obesity group have a major energy expenditure beside those from the normal ponderability group. **Conclusions:** In conclusion, there is a strongly association between PAEE and ponderal status in children from Tîrgu Mureş. It is worrying that the percentage in children who suffer because of obesity is high, and correlation between low physical activity, their physical aspect (weight correlated with abdominal circumference and triceps skinfold) and corporeal composition resulted in bio-impedance measurements augments this fact.

Keywords: corporeal conformation, physical activity, corporeal composition, obesity in children

ST-SEGMENT DEPRESSION AND ANGIOGRAPHIC MODIFICATIONS IN NON-ST SEGMENT ELEVATION MYOCARDIAL INFARCTION

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Background: Although patients presenting with non-ST segment elevation myocardial infarction (non-STEMI) are an increasing population, less importance was given to their ECG abnormalities. **Objective:** The aim of this study was to analyze the correlation between the ECG abnormalities at admission, angiographic aspects, mortality and diabetes in patients with non-ST segment elevation myocardial infarction. **Material and methods:** We analyzed the admission ECG of 51 patients with non-STEMI, who underwent coronary revascularization in Cardiology Clinic from Clinical County Emergency Hospital in Tîrgu Mureş, between 2014 - 2015. Patients with ST segment elevation and those who received only conservatory treatment were excluded. They were divided into two groups based on quantitative measurements of ST-T segment deviations on the ECG: 1) ST-segment depression < 2 mm and 2) ST-segment depression > 2 mm. **Results:** There were 11,76 % patients with TIMI flux 0, 23,52% presented with TIMI flux 1, 62,74 % had TIMI flux 2, and the rest of them had TIMI flux 3. There was no significant statistical correlation between the ST-segment depression and TIMI flux ($p=0,65$). We found a similar result between ST-segment depression and 1 year mortality ($p=0,48$). A highly significant statistical correlation ($p=0,002$) was found between patients suffering from diabetes and 1 year mortality, but the correlation between ST-segment depression and diabetes was not statistically significant ($p=0,23$). **Conclusions:** This study has demonstrated that there is no statistically significant correlation between ST-segment depression and TIMI flux before revascularization at the population with non-ST segment elevation myocardial infarction, but it should be extended to a larger population.

Keywords: electrocardiogram, TIMI flux, ST- segment depression

PERINATAL INTERVENTIONS AND RESPIRATORY OUTCOME DURING HOSPITAL STAY AMONG PRETERM INFANTS ADMITTED IN A TERTIARY LEVEL NEONATAL INTENSIVE CARE UNIT

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Background: Perinatal interventions in neonatal intensive care are vital for improving respiratory outcomes for the preterm infants. Newborn infants with extreme prematurity (28 weeks of gestation or less) or extremely low birth weight (1000 g or less) or who have severe and/or complex illness are in the highest risk group and have the most specialized needs. **Objective:** This study evaluated the impact of changes in perinatal interventions on respiratory outcome at preterm infants born before 37 of gestational weeks admitted in a tertiary level Neonatal Intensive Care Unit. **Material and methods:** All newborns born before 37 gestational weeks consecutively admitted in Neonatal Intensive Care Unit over a 1 year period (N= 249) were included in our study. Charts were abstracted for all preterm neonate with respiratory compromise admitted: Respiratory distress syndrome (RDS), tachypnea of newborn (TTN), pneumonia. **Results:** Records of 249 mothers and 249 newborn infants were evaluated. 20.48% of pregnant women preterm birth threatened received antenatal steroids, for 54.6% of preterm infants the mode of delivery was cesarean delivery, and more than half need respiratory support during hospital stay. Overall 1595 days Neonatal Intensive Care Unit hospitalizations were offered. **Conclusions:** Perinatal interventions were associated with reduced risk for respiratory distress syndrome and other respiratory morbidity.

Keywords: perinatal interventions, respiratory outcome, preterm infants

CAN MUSCULOSKELETAL ULTRASOUND BE A RELIABLE TOOL TO BE USED BY THE STUDENTS IN CLINICAL RESEARCH?

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Background: Ultrasound is considered as a mandatory tool in performing a complete clinical examination. More and more clinical researches are aiming for the importance of ultrasound in monitoring activity of the diseases and it's correlation with lab tests. **Objective:** The study aimed for the reliability of a trained to be future physician □ the student, to be able to learn and interpret musculoskeletal ultrasound lesions. **Material and methods:** In order to study the correlation in ankylosing spondylitis (AS) of inflammation determined from blood and imagistic inflammatory lesions, an intra-reliability and inter-reliability study was conducted on fifty-patients diagnosed with AS. The elbow, the shoulder, the knee and the ankle were observed by ultrasound. Two students were involved in the study, coordinated by a trained in musculoskeletal ultrasound's physician. After a week of training and gathering the images, the students interpreted them once at the moment and again after one month. The inter-reliability was performed between the students and the senior performer. The Inter-reliability and intra-reliability test was performed using ReCal1.0. **Results:** 6664 pictures were analyzed by 3 MSK ultrasound performers (2 juniors and one senior). The most difficult lesion to interpret was the enthesitis with an intra-reliability percentage agreement of 51.07% and a Krippendorff of -0.0430 and an inter-reliability of 61.22% percentage agreement (Krippendorff: -0.0319) followed by echogenicity with a percentage agreement inter and intra of 71.42%. Bursitis (intra-reliability of 100% and inter-reliability of 91.83%), the presence of Doppler signal (intra-reliability of 100% and inter-reliability of 92.00%), the step-down lesions □ erosions (intra-reliability of 93.87% and inter-reliability of 97.95%) were the best achieved by the junior US's performers. **Conclusions:** Musculoskeletal ultrasound can be a tool to be managed by junior practitioners (eg. students) in clinical research with an extended practice under guidance when to establish the presence of enthesitis and echogenicity.

Keywords: Musculoskeletal, Ultrasound, Ankylosing Spondylitis

CAN WE PREDICT A PATTERN OF OSTEOARTHRITIS IN YOUNG PEOPLE BY USING ULTRASOUND?

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Background: Osteoarthritis is the most common musculoskeletal affection characterized initially by pain and then followed by impairment. Osteoarthritis was considered to be an elderly disease, but new mechanism of action has been discovered and new cases of osteoarthritis affecting young people were described. **Objective:** The study planned to outline a pattern of early osteoarthritis in young people and such to start a preemptive rehabilitation program. **Material and methods:** A prospective, transversal study was started six months ago. The subjects enrolled in the study were scanned by ultrasound at the level of the knee and ankle joint. The following lesions were scan: "step-up" lesions, "step-down" lesions, bursitis, the alteration of echogenity of hyaline cartilage and the width of hyaline cartilage. A linear transducer with frequency between 10-15 MHZ was used to see the modifications in two sections: transversal and longitudinal. The data were analyzed using ReCal1.0 and GraphPadPrism7.0. **Results:** The mean age of the patients included in the study was 41.00+/-18.76 years old with a average time of clinical symptoms of 3.75 +/- 6.24 years. "Step-up" lesions (osteophytes) of the ankle were associated with similar lesions at the level of the knee (same limb) and early modification of echogenity of the tibial hyaline cartilage (p: 0.010, p: 0.008). Medial compartment degenerative changes were correlated with contralateral knee involvement (p:0.023). Suprapatellar bursitis was associated with lateral compartment presence of step-up lesions (p: 0.026). "Step-up" knee lesions were correlated with early changes of hyaline cartilage of the tibio-talar joint. **Conclusions:** Osteoarthritis can affect young people. It is advisable to monitor by ultrasound the knee and the ankle if one of those are presenting ecography alteration. The physical rehabilitation program should focus on both joints.

Keywords: Osteoarthritis, Young People, Ultrasound

IS THERE A CERTAIN DISTINCT ULTRASOUND PATTERN OF ANKYLOSING SPONDYLITIS AND PSORIATIC ARTHRITIS?

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Background: Ankylosing spondylitis (AS) and psoriatic arthritis (PsA) are part of the same group of inflammatory diseases □ the spondylarthropaties. There are several ultrasound and clinical disease activity scores that are performed in both diseases, due to certain similarities. **Objective:** The main objective of this sub-study was to see if there are different ultrasound patterns in ankylosing spondylitis and psoriatic arthritis. **Material and methods:** The design of the study was a prospective, transversal. Patients diagnosed with AS and PsA were investigated by using ultrasound. The main target joints were: the shoulder, the hip □ both being part of the major clinical disease activity scores. The "step-up" lesions, the "step-down" lesions, the muscular partial tears, the calcifications, the enthesitis, the presence of Doppler signal were monitored. A linear and a curve-linear transducer were used to visualize the joints. The data was collected on paper and electronic source files. ReCal1.0 and GraphPadPrism 7.0 were the software used to statistically analyze the data. **Results:** Eighty-five patients (60 with AS, 25 with PsA) were enrolled in our sub-study. The demographic data (age, sex and disease onset) of the patients diagnosed with AS was similar with those diagnosed with PsA. The "step-up" lesions (38 out of 60 vs 8 out of 25) and the enthesophytes (35 out of 60 vs 5 out of 25) were the main modifications seen in both groups. The statistically differences were observed when bursitis was marked (p: 0.0071) in the PsA group with no case in AS group. "Step-up" lesions were a characteristic of AS group (p: 0.0188). **Conclusions:** An imagistic score with no step-up lesions involvement or bursitis should be applied as a common one in AS and PsA.

Keywords: Ultrasound, Ankylosing Spondylitis, Psoriatic Arthritis

CORRELATIONS BETWEEN EPICARDIAL FAT THICKNESS AND CLINICAL AND LABORATORY CHARACTERISTICS IN PATIENTS WITH ACUTE CORONARY SYNDROMES

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Background: Epicardial adipose tissue has been linked to the severity of coronary artery lesions, to the overall cardiovascular risk, as well as with other enhanced systemic inflammatory states, including metabolic syndrome. **Objective:** We aimed to determine correlations between epicardial fat thickness (EFT) and clinical and laboratory features in patients with acute coronary syndromes (ACS). **Material and methods:** The study enrolled 77 patients with ACS, that underwent percutaneous coronary intervention. All patients underwent EFT assessment at the level of the right ventricular free wall, with the use of 2-D transthoracic echocardiography, as well as clinical, laboratory and angiographic data analysis. The statistical analysis was calculated with Graph Pad Prism 7 software, and the level of significance was set at $\alpha=0.05$. The study population was divided into 2 groups: gr.1- EFT >7 mm, gr.2- EFT \leq 7mm. **Results:** From the 77 patients, 64.94% (n=50) had an EFT >7mm (gr.1) and 35.06% (n=27) with EFT \leq 7 mm (gr.2). Patients in gr.1 were significantly older (63.98 ± 12.21 vs. 56.81 ± 11.32 years old, $p=0.012$) and had a higher body-mass index (29.33 ± 4.77 vs. 24.68 ± 2.44 kg/m²). There were no differences between the 2 groups regarding gender ($p=0.138$), the type of ACS ($p=0.209$), the presence of diabetes ($p=0.7907$), hypertension ($p=0.262$), previous MI ($p=1.000$), peripheral artery disease ($p=1.000$). Patients with higher EFT had a significantly higher creatinine ($p=0.009$), and higher uric acid levels (5.94 ± 2.08 vs. 4.89 ± 1.66 , $p=0.018$). There was a lower number of smokers in group 1 (30% vs. 62.96%, $p=0.010$), and a higher rate of dyslipidemia (gr.1-68% vs. gr.2-33.33%, $p=0.007$, OR - 4.25, 95% CI:1.5-11.52). **Conclusions:** ACS patients with higher EFT were significantly older, less likely to have been active smokers and more dyslipidemic compared to controls. Subjects with EFT >7mm showed a higher body-mass index, higher serum uric acid and creatinine levels.

Keywords: acute coronary syndrome, epicardial fat thickness, 2-D echocardiography

FACTORS ASSOCIATED WITH COMPLEX CORONARY LESIONS IN PATIENTS WITH ACUTE ST ELEVATION MYOCARDIAL INFARCTION

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Background: ST elevation myocardial infarction (STEMI) remains the main cause of mortality and morbidity worldwide. Three-vessel coronary artery disease (CAD) affects more than half of patients with STEMI. **Objective:** We aimed to evaluate the clinical and laboratory characteristics associated with the presence of three-vessel CAD in STEMI patients. **Material and methods:** We retrospectively analyzed 100 patients with STEMI that underwent primary percutaneous coronary intervention. The patients were divided into 2 groups according to the presence or absence of three-vessel CAD (group 1 - three vessel CAD, n=34; group 2 - non-three vessel CAD, n=66). Clinical, laboratory as well as angiographical data acquired upon admission were analyzed and compared between the 2 groups. The statistical analysis was performed using Graph Pad Prism 7, with an α significance level of 0.05. **Results:** From the total number of patients, 34% presented three-vessel CAD. There were no statistically significant differences between the 2 groups regarding gender, body mass index, the presence of diabetes, smoking, hypertension or obesity. Patients with three-vessel CAD were older (gr.1 - 64.26 ± 10.94 vs. gr.2 - 58.74 ± 12.38 years old, $p=0.025$), showed a significantly higher creatinine ($p=0.002$), higher urea levels ($p=0.014$) and lower hemoglobin ($p=0.040$) and hematocrite levels ($p=0.013$) on admission compared to the other group. Also, there was a significantly higher rate of patients with hypercholesterolemia ($p=0.001$) and patients with previous myocardial infarction (gr.1 -11.76% vs. gr.2 - 1.52%, $p=0.044$) among patients in group 1. **Conclusions:** The presence of three-vessel coronary artery disease in STEMI patients was associated with higher levels of creatinine and urea and lower hemoglobin. Also, patients with complex coronary lesions were older, more likely to have suffered from previous myocardial infarction, and with a higher rate of hypercholesterolemia.

Keywords: STEMI, three-vessel coronary artery disease, percutaneous coronary intervention

CAN MUSCULOSKELETAL ULTRASOUND BE USED BY STUDENTS IN EVALUATING SYNOVITIS, TENOSYNOVITIS AND STEP-UP LESIONS IN REAL LIFE?

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Background: Musculoskeletal (MSK) ultrasound (US) is considered the "second" stethoscope in the clinical evaluation and monitoring of patients with systemic inflammatory autoimmune diseases. **Objective:** The study's main objective was to evaluate the capacity of students to achieve US skills and further to apply them in the evaluation of patients with autoimmune inflammatory systemic diseases. **Material and methods:** Two students were involved in the study. A qualified MSK US physician trained them during a week. The lesions to be studied were: achillean bursitis, achillean enthesophytes, tenosynovitis of the peroneus brevis, longus and tibialis posterioris, synovitis of the second MCP's and PIP's and step-up lesions. All images were interpreted at the initial evaluation and after one month. The inter/intrarater reliability was measured using ReCal 2 software. **Results:** 3096 images were stored and analysed. The percentage agreement for all lesions when looking at the interrater reliability was above 90%. The intrarater reliability was lower concerning grading the synovitis at the PIP's. The results were for grade 0 a percentage agreement of 60.46% with a Cohen's Kappa of 0.27, grade 1 a percentage agreement of 83.72% with a Cohen's Kappa of 0.13 and a grade 3 with a 72.09% agreement and 0.01% Cohen's Kappa. All the other lesions percentage agreement was above 90% with a Cohen's Kappa of 0.80. **Conclusions:** MSK US can be used by students to monitor the presence of bursitis, tenosynovitis and step up lesions. Future training in grading synovitis is mandatory for a correct real-life evaluation

Keywords: Musculoskeletal Ultrasound, autoimmune inflammatory systemic diseases, synovitis, step-up lesions

IS RHEUMATOID ARTHRITIS'S PATIENTS AT RISK OF DEVELOPING DIABETOPOROSIS?

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Background: Inflammation is an important part of the pathogenesis of diabetes, osteoporosis and rheumatoid arthritis. In the last years the term diabetoporosis emerged as a new disease to be considered. RA might be a risk factor for the development of diabetoporosis due to its pathogenesis as well as treatment. **Objective:** The study is aiming to seek if RA is a prone condition for diabetoporosis. **Material and methods:** The study is a prospective one, is focusing on three groups: patients with diabetes and RA, patients with diabetes mellitus and without RA and patients with autoimmune diabetes and without RA. 31 patients diagnosed with diabetes and RA were included in the study. 4 were excluded due to the development of diabetes before the onset of the RA. We monitored the following variables: bone densitometry at the lumbar and both femoral neck site, the onset of the RA, the onset of the diabetes mellitus, the treatment (eg. corticotherapy, classical DMARD's, antiosteoporotic drugs) and the subclinical activity of the disease (ultrasound evaluation of the small joints at the wrist, the MCP's and the PIP's). **Results:** 18 out of 27 patients diagnosed with RA and diabetes were diagnosed with osteopenia and 12 out of 27 with osteoporosis. Only 7 patients with RA were spared from receiving corticotherapy and 5 from classical DMARD's. The diabetes was diagnosed approximately a year apart (1.13 +/- 4.18 years old) from the onset of RA. The RA disease duration was 11.17 +/- 10.80 years. Patients with classical DMARD's developed less osteoporosis ($p < 0.05$), but not in a predictable, linear way ($r: -0.417$) versus patients on corticotherapy ($p: 0.049$, $r: 0.135$). No statistically correlation was found with the subclinical activity. **Conclusions:** Due to their mechanism of action, classical DMARD's might protect patients with RA and diabetes from osteoporosis. When using corticotherapy is mandatory to start an anti-osteoporotic treatment.

Keywords: Diabetoporosis, Rheumatoid arthritis, Corticosteroids, DMARD

TYPE 2 DIABETES MELLITUS DIAGNOSED AFTER A RAYNAUD PHENOMENON

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Background: Diabetes mellitus is a clinical syndrome characterized by hyperglycemia. The clinical picture includes polydipsia, polyuria, polyphagia, weight loss. The diagnosis is suggested by clinical context and confirmed by these tests: fasting plasma glucose more than 126 mg/dl or two- hours plasma glucose during an OGTT more than 200 mg/dl or HbA1c more than 6.5%. The treatment consists in : insulin therapy, oral antidiabetics and lifestyle intervention. **Objective:** A female patient, aged 50 years, smoker, hypertensive, with type 2 diabetes in hereditary antecedents, was admitted to the emergency room of Dr I.Cantacuzino Clinical Hospital Bucharest for pain, paresthesia and cyanosis of all the left hand's fingers. The clinical examination showed good general condition, no significant weight loss, acrocyanotic left hand, a condition that started four days ago with pale fingers and cold teguments, peripheral pulse present. Capillaroscopy was performed to differentiate an acute ischemia by a Raynaud phenomenon; the result was normal so the diagnosis was Raynaud syndrome. Due to family history and suggestive symptoms reported later (polydipsia, polyphagia, polyuria), the presence of diabetes was suspected. **Material and methods:** The laboratory tests revealed dyslipidemia, hyperglycemia (338,42mg/dl), HbA1c 13%, no diabetes specific antibodies, glycosuria without ketonuria. **Results:** The high level of glycemia without ketonuria, weight loss and antibodies (specific signs for the type 1 diabetes) associated with high value of HbA1c put the diagnosis of type 2 diabetes. The therapy with insulin was initiated and the evolution was favorable. **Conclusions:** The presented case notices the importance of correlating anamnesis, clinical and paraclinical exam for detection of the severe type 2 diabetes mellitus presenting high hyperglycemia and high level of triglycerides that required insulin treatment in a patient admitted for a first episode of Raynaud syndrome .

Keywords: Raynaud syndrome, hyperglycemia, diabetes mellitus, insulin therapy.

IS PSORIATIC ARTHRITIS A RISK FACTOR FOR CARDIOVASCULAR MANIFESTATIONS ?

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Background: The autoimmune inflammatory systemic diseases are known to be risk factors for cardiovascular events. Psoriasis is considered to be an autoimmune disease but not psoriatic arthritis that is regarded only as an inflammatory disease. Inflammation is considered to be an important part of the pathogenesis of cardiovascular diseases. **Objective:** The study's main objective was to outline a pattern for cardiovascular risk in patients diagnosed with psoriatic arthritis. **Material and methods:** Patients diagnosed with psoriatic arthritis (PsA) with cardiovascular risk as well as patients with no risk factors for cardiovascular events and PsA were included in a prospective study. The patients were evaluated for the age, the onset of the skin disease, the onset of the PsA, the intima - media thickness (IMT), the treatment of PsA and the values of cholesterol and triglycerides. **Results:** Sixty-six patients were included in the study; thirty-seven patients with PsA and no cardiovascular events and 29 pts, with cardiovascular events and PsA. The demographic data were similar in both groups concerning the age - a mean value of 58 years old, the onset of the skin disease □ 19.8 years and musculoskeletal involvement □ 8.01 years. A statistical difference was found at when measured the IMT in cardiovascular risk group vs. non-cardiovascular risk group (p: 0.0267), even though the values in both groups were in normal range for the age of the patients and despite the cardiovascular risk. (0.84±0.06mm vs. 0.80±0.07mm). We can speculate this last result by the differences in body mass index (BMI). Methotrexate statistically was a protector for the onset of heart failure (p:0. 039). **Conclusions:** The PsA treatment is to be considered a protective factor for the onset of cardiovascular events. The IMT might be linked to BMI.

Keywords: intima - media thickness, psoriatic arthritis, Methotrexate, cardiovascular risk

ALCOHOL ADDICTION THROUGHOUT THE PATIENTS SUFFERING OF A PSYCHIATRIC PATHOLOGY

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Background: In our country consumption of alcohol it's in a continuously rise, which determining an increase in the risk of addiction, even with ingestion of small amounts of ethanol. We are now aiming to organize the alcoholic patients and potential consumers into categories having as an end result the prevention of secondary effects of alcohol consumption this including physical and psychological deterioration and also it's effect a socio-economic status. **Objective:** The purpose of this study is to classify the risk of developing an addiction, based on an AUDIT study on patients admitted in Targu Mures on the Psychiatry Clinic I ward. **Material and methods:** Data were gathered from well organized questionnaires completed by patients admitted with the diagnosis of ethanol abuse in the Psychiatry Clinic I Tg. Mures, starting in January 2016 ending in December 2016. The questionnaire is composed of data regarding: age, sex ,origin, educational status, civil status, occupation and a ten question test regarding alcohol consumption particularities. Throughout this interval of time we managed to interrogate 269 patients that were able to cooperate and complete the test. **Results:** Out of the total number of patients that have completed the test 59,48% are already exposed to a high risk of addiction and 40,52% being exposed to low or no risk at all of alcoholic addiction. **Conclusions:** Socio-economic status, intrafamilial relationships and the environment have a very important role in the rise of frequency and dose of alcohol consumption.

Keywords: alcohol, addiction, psychiatric

THE USE OF SMART DRUGS AMONG MEDICAL STUDENTS

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Background: Smart drugs are consumed to improve users` ability to learn, memorize, reason and to concentrate. Medical students` assumptions over the indications, the use and the effects of the most frequently used substances are highly important. Particularly, the nootropics are feared smart drugs, officially prescribed for Attention Deficit Hyperactivity Disorder (ADHD), Attention Deficit Disorder (ADD) or sleeping troubles (as narcolepsy). **Objective:** The main purpose of this study is the utmost importance to investigate the use of smart drugs among a representative sample of medical students. **Material and methods:** A questionnaire, consisting of 18 questions, which is anonymous and confidential, is used to collect data and to analyze students` experience and knowledge. 202 students from the 1st(A) and the 2nd (A), the 5th(B) and the 6th (B) year of study in General Medicine, in Targu Mures, have been questioned. **Results:** The results show that 89% of A knows what smart drugs are, meanwhile 98% of B do. 67% of A knows smart drugs from online or mass-media sources, compared to 71% of B which are influenced by the pharmacology lectures. Only 12% of students from A know the indications of nootropics, similarly to 17% of B. Regarding the side effects of nootropics` use, 45% of the students from A are aware and 81% of B know them. Improvements of memory and attention are even, noted by 49% of A and by 43% of B. **Conclusions:** To sum up, nowadays medical students use more and more different smart drugs to potentiate their cognitive function, nevertheless having negative effects. Nootropics are still a controversy when increasingly taken these days for off-label purposes.

Keywords: smart drugs, supplements, nootropics

CLINICAL - SURGICAL

DIFFERENT VERSIONS OF ENDOSCOPY TECHNIQUE

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Background: The appearance of minimally invasive techniques brought significant changes in almost every interested medical specialty. The invention of the cystoscope opened the wonderful trip of endoscopes in microsurgery. The evaluation of specificities in different professions, could lead to a progress in the development of this technique. **Objective:** We aimed to compare the ENT Messerklinger technique and laparoscopy, searching for novelties. **Material and methods:** FESS (Functional Endoscopic Sinus Surgery) technique essentially involves the examination of the rigid nasal cavities with different angled endoscopes, designed for children and adults. CT scan dominates the pre-examination. Instead of this, laparoscopy requires artificial spaces, obtained by insufflations into the abdomen after an ultrasound and MRI investigation. **Results:** Considering that FESS and laparoscopy are different variations of the nearly same technique, they have almost comparable advantages: less painful healing process, smaller scars or no scars at all, reduced postoperative infections, shorter hospitalization, patients can return to their everyday lives more quickly. The common disadvantages are: organ injuries, expensive equipment and special training are needed. Because the FESS procedure must be accomplished in a much narrow space, it requires greater accuracy than in the case of laparoscopy where the space is relatively big. Both physicians need an intensive educational course. **Conclusions:** The FESS procedure requires more fine movements than laparoscopy, because of the valuable neighboring organs. In FESS 30° and 70° angles are the most useful, while in laparoscopy most of the time straight endoscopes are used, however all minimal access surgeons should gain facility also with the use of a variety of angled endoscopes. Ultimately all the young general surgeons should learn and practice the endoscopic procedures, so they will be able to make more secure movements and in their future career they will perform the endoscopic interventions in the best possible way.

Keywords: FESS, laparoscopy, comparison, technique

RECIDIVE OR ANOTHER LOCALIZATION IN CASE OF TREATMENT BY FOCAL CRYOTHERAPY FOR UNILATERAL LOW-RISK PROSTATE CANCER

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Background: A focal cryotherapy could be an alternative treatment for unilateral low-risk prostate cancer. **Objective:** □ To assess oncological and functional outcomes in patients with unilateral low-risk prostate cancer treated with focal cryoablation(FC). □ To determine in case of recurrence or another localization a salvage or a de novo therapy. □ To verify the predictive role of PSA in case of recurrence/another localization. □ To verify the predictive role of the control IRM in case of recurrence/another localization. **Material and methods:** □ Retrospective study, from 1 May 2012 to 07 July 2014, 15 patients with localized prostate cancer who refused active surveillance were assigned to a FC protocol. □ Inclusion criteria: unilateral, clinical stage T1c-T2a, PSA<10 ng/mL, low volume index lesion and Gleason score ≤6 (3+3). □ Oncological (PSA values) and functional (IPSS and IIEF5) outcomes were analysed at 3-, 6- and 12-month follow-up. □ The recurrence was defined as a positive control biopsy at 12 months. **Results:** □ A total of 15 patients with a mean age of 68 years were included. □ Follow-up prostate biopsies were negative in 80%. The mean PSA dropped significantly at 3 months (45%). □ The urinary symptoms were unchanged with a slight deterioration of the erectile function. □ 20% positive biopsies: 13.33% de novo treatment with FC for contralateral cancer, 6.66% under active surveillance in case of an ipsilateral recurrence. □ The PSA did not correlate well with positive biopsy. □ Importance of the control MRI in the prediction of the lesion, but the possibility of non-observance. **Conclusions:** □ FC is a low-morbidity option in selected patients with a low-risk PCa. □ PSA concentration is an unreliable marker for monitoring the FC. □ The importance of the control MRI in predicting a recurrence/new lesion. □ The possibility of a de novo or salvage therapy in case of a recurrence/new localization by FC.

Keywords: focal cryotherapy, localised prostate cancer, low risk

THE DIFFICULTY OF OPHTHALMIC SURGICAL TREATMENT IN A POLYALLERGIC PATIENT

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Background: The most common causes of developing traumatic cataracts are eyes penetrating trauma with damage to the lens capsule. A fair treatment ensures a satisfactory result. The problem becomes complicated for ophthalmologist surgeon if unexpected situations as the patient's allergic ground occur. **Objective:** The aim of the study is to present the right attitude in the management of patients with comorbidities in order to avoid intra and post-operative complications. **Material and methods:** A 41 year old patient with a history of pathological allergies is hospitalized for penetrating trauma of the right eye lens with a metal object. The patient is directed to 1st Ophthalmology clinic for therapeutic conduct Iasi and is diagnosed with: penetrating corneal wound that is coaptated spontaneously and traumatic cataract with torn anterior capsule in the right eye; multiple hypersensitivity reaction. The difficulty of treatment for ophthalmologist surgeon is related to anaphylactic shock recently shown by patient to cephalosporins. Cataract surgery at the right eye is decided after allergological evaluation on specific substances for surgical cure. The results of the skin tests are positive for Gentamicin, Vancomycin and Tobramycin. It requires rapid surgery based on risk of phacoantigenic uveitis. **Results:** Postoperatively, after 1 minute, the patient has a severe allergic reaction with impaired general condition. The following emergency therapeutic conduct with allergological visa is applied: hemi succinate hydrocortisone, Levocetirizine. Receives the following recommendations at discharge: Local treatment with Vigamox and Indocollire, ocular bandage for seven days; regular monitoring. Evolution is good under treatment. In the systemic disease plan requires tracking in allergological department and expert advices. **Conclusions:** This case shows the ophthalmologist ability to act in unpredictable and difficult situations on the management of polyallergic patients.

Keywords: polyallergic patient, cataract surgery, phacoantigenic uveitis

THREE-DIMENSIONAL VIDEO ASSISTED THORACOSCOPIC ESOPHAGECTOMY THROUGH MODIFIED MCKEOWN TRIPLE APPROACH WITH ESOPHAGEAL RECONSTRUCTION AND GASTRIC PULL-UP FOR ESOPHAGEAL CARCINOMA-CASE REPORT

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Background: The election treatment for esophageal cancer remains surgical to this day. Using minimally invasive esophagectomy(MIE), the patient is exposed to fewer complications, decreased blood loss and spends less time in the hospital. Nonetheless, there are shortcomings to this method, such as restricted operating field and poor hand-eye coordination that can be overcome using the 3D-technique. **Objective:** Our aim is to present the case of a 53 year old patient with esophageal carcinoma, treated using the 3D-VATE technique and the advantages of this approach. **Material and methods:** 53 year-old male patient presented to our clinic acusing dyspepsia in the last 3 months. Imagistic investigations showed an elevated tumoral lesion, 35 cm far from dentar arcade. Consequently, the diagnosis established was scumous esophageal carcinoma. We decided that the best approach for this patient would be a 3D- video assisted thoracoscopic esophagectomy (3D-VATE), using the modified McKeown technique which implies thoracoscopic, laporoscopic abdominal and cervical approach along with Nakayama gastric pull-up method and cervical eso-gastric anastomosis. In the end, a jejunostomy tube was placed for feeding. The reason behind our choice of 3D-VATE is the extensive lymphadenectomy that this technique allows. Given the location of the carcinoma, the Nakayama technique was considered, in order to use the whole stomach as a substitute and resect the cardia. **Results:** The patient was discharged in the 15th postoperative day after 24 days hospital stay with recommendation for adjuvant treatment. **Conclusions:** In comparison to the 2D-VATE, this approach provides less hospitalisation time, reduces the impairment of the pulmonary function, is less invasive and can also provide better visualisation for lymphadenectomy. Moreover, technical difficulties are prone to occur in both open or minimally invasive approach, but the 3D-VATE is certainly a step forward, considering the benefits on extensive lymphadenectomy-major prognostic factor in carcinomas.

Keywords: minimally invasive surgery, 3D-VATE, modified McKeown technique, gastric pull-up

HOW TO CORRECTLY TREAT FROSTBITES

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Background: The human body has always been exposed to climatic changes. When the temperature drops several degrees above 0 °C the body parts exposed to the cold are losing heat, causing structural and functional modifications known as frostbites. Tissue changes due to exposure to cold are initially reversible, but if the stress factor continues they become permanent, causing damages to the skin and underlying structures. **Objective:** Identifying the gravity of the frostbites and treating them accordingly. Frostbites have four degrees, the cornerstone is always the ice crystal formation within the cells or the extracellular space. **Material and methods:** This paper is dealing only with third and fourth degree frostbites. Systemic treatment consists of the administration of anticoagulants, rheological medication, NSAID and analgesics. Local treatment requires early re-warming (immersion in 40 °C warm water), puncture or excision of blisters, daily dressings with different ointments and creams (Aloe Vera, SSD, TT, local antibiotics). If amputation is required, this procedure is never early performed (following the old principle of Larrey: "frostbite in January, amputation in July"); excision of mummified tissues is done only when the "demarcation trough" is completely developed. **Results:** Our study presents several cases suffering different degrees of frostbites located on both upper and lower extremities. Third degree frostbites usually healed with minimal or no tissue loss but developing different sequelae such as painful scars, dermal thickness and contracture and increased susceptibility to cold exposure. Fourth degree frostbites always required amputation of different anatomical parts of the extremities, tissue healing occurring by spontaneous marginal epithelialization. All patients underwent a long term follow-up (six months to one year) receiving daily doses of Pentoxifylline. **Conclusions:** Frostbites are still commonly found during winter, mostly in homeless people, heavy drinkers, diabetics. There's a reason why such cases are treated for a very long time, only as in-patients requiring special care and endeavor.

Keywords: frostbite, ice crystal, demarcation trough, amputation

D'HOORE PROCEDURE WITH PROGRIP MESH

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Background: Ventral rectopexy with mobilization of the rectum only in the anterior plane was described from D'Hoore in 2004. The abdominal approach in rectal prolapse nowadays needs a circumferential wrap performed with a mesh. **Objective:** This study shows a new perspective in the indications of progrid meshes, rectosacropexy by an anterior abdominal approach. **Material and methods:** Ventral rectosigmoidopexy using mesh designed for inguinal hernias were modified and placed in 5 cases of rectal prolapse. All the patients were admitted in First Surgical Clinic from Emergency County Hospital Clinic of Targu Mures in the past years. **Results:** Early post-operated results were favorable without local and general complications **Conclusions:** Rectopexy with progrid mesh maybe an alternative for rectal prolapse and this seems to change the indications for "Inguinal designed mesh"

Keywords: Ventral Rectopexy, Progrid Mesh, Rectal prolapse

GIANT THYROGLOSSAL DUCT CYST- CASE REPORT

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Background: The most frequent congenital anomalies in the cervical region are cysts, sinuses and fistulae arising from a persistent thyroglossal duct. **Objective:** The aim of this study is to present clinical features and surgical management in a giant thyroglossal duct cyst extended to the thyroid lobe **Material and methods:** We present the

clinical case of a 65 years old female, with a swelling on the left side of the neck which progressively increased for the last two years. She refused fine needle aspiration and preoperatively has accepted only ultrasonography, which suggested the possibility of a thyroglossal cyst. **Results:** We performed a modified Sistrunk's procedure (without hyoid resection) with a right hemi thyroidectomy. Postoperative evolution was favourable and histopathological exams exclude malignancies in both specimens (thyroglossal cyst and thyroid lobe). **Conclusions:** Giant thyroglossal cysts with thyroid involvement may be a challenge for the surgeons.

Keywords: TCYD, thyroid lobe, Sistrunk's procedure

MORPHOLOGICAL PREDICTORS OF LONG-TERM GRAFT DYSFUNCTION IN CORONARY ARTERY BYPASS GRAFTING

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Background: Studies unanimously conclude that long-term prognosis of coronary artery bypass grafting (CABG) depends on graft patency. Various surgical techniques and grafting architectures have been used with variable outcomes but no study to date has analysed the effect of morphological factors upon graft patency. **Objective:** The purpose of the present research is to identify foremost morphological parameters associated with long-term graft dysfunction in CABG. **Material and methods:** The authors compared long-term outcome of arterial and venous grafting based on morphological parameters in a group of 127 patients that underwent CABG in one medical centre between 2000-2006 and presented for long-term coronary computed tomography angiography (CCTA) evaluation between 2013-2016, at an average of 129,78 months after CABG. **Results:** The patients benefited of 399 distal anastomoses: 179 venous grafts (SVG), 122 with left internal thoracic artery (LITA), 53 with radial artery (RAG), and 45 with right internal thoracic artery (RITA). Overall patency rate was higher for arterial grafts (90.16% LIMA, 75.55% RIMA, 73.58% RAG) compared to SVG (74.3%). For right coronary territory, the highest patency rate was registered for RAG (80.65%), for diagonal arteries RITA (92.86%), and for left circumflex territory SVG (82.54%). Arterial grafts proved more sensitive to the degree of stenosis (competitive flow) and anastomosis angle. Higher occlusion rate was noted for both arterial (30.77%) and venous grafts (43.33%) anastomosed to vessels <1.5 mm diameter. The presence of Y anastomosis (49 cases) does not influence LIMA patency but a wider anastomosis angle is associated with higher occlusion rate of free arterial graft with a mean angle of 56° for occluded versus 47.21° for patent grafts. In sequential grafting, arteries were more prone to occlusion compared with SVG. **Conclusions:** Graft patency depends on vessel type, grafted territory, native vessel status and surgical technique with an ideal profile for each territory in terms of optimal long-term patency rate.

Keywords: surgical technique, native vessel, arterial graft, venous graft

NOSOCOMIAL INFECTIONS IN THE OBSTETRICS AND GYNECOLOGY CLINIC I OF THE EMERGENCY CLINICAL COUNTY HOSPITAL IN TARGU MURES

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Background: The nosocomial infections are those infections which are acquired during hospitalization, the symptoms appear after minimum 48 hours from admission. With the development of the invasive procedures came an increased number of hospital-acquired infections. **Objective:** The aim of the study is to establish the clinical end epidemiological aspects of these infections in the Obstetrics and Gynecology Clinic. **Material and methods:** We studied retrospectively the observation charts and registers of the patients who developed hospital-acquired infections in the Obstetrics and Gynecology Clinic I of the Emergency Clinical County Hospital in Targu Mures from 01.01.2008 to 01.09.2016. Data were collected with Microsoft Excel program and statistically processed. **Results:** During the studied period we identified 27 cases from which 55,55% were obstetric cases and 44,44% were gynecological cases. 33,33% appeared after cesarean sections, 25,93% after hysterectomies, 22,22% after natural births, 14,81% after vulvectomy and 3,7% after cytoreductive surgeries. Most obstetric cases were registered in the 20-29 age group and the gynecological cases in the 50-59 age group. Clostridium difficile was the most

frequently identified pathogen , in 18,51% of the cases. The infections appeared more frequently in the first week after the interventions, 12 cases from the 27. Fever was the most frequent symptom occurring in 85.9% of the cases . The gynecological cases needed the longest hospitalization an average of 16-17 days , also 25,93% of the cases needed secondary surgical interventions. **Conclusions:** Our study shows the negative impact of the nosocomial infections on the patients by the increase of hospitalization period and sometimes the need for secondary interventions . Because of these aspects the costs are increased too so it represents an important financial problem. The hospital-acquired infections are more frequent in those cases where complex procedures were needed which put to the test the organism's defense.

Keywords: nosocomial infections, obstetrics, gynecology

EARLY POST-OPERATIVE RESULTS IN THE INTERSPHINCTERIC RESECTION (ISR) FOR LOW RECTAL CANCER TREATMENT

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Background: The surgical treatment for low rectal cancer has been changed significantly over the years. It has evolved from the radical operation of Miles to a number of surgical sphincter saving options and novel techniques. In recent times intersphincteric resection (ISR) has become an increasingly popular surgical option for the treatment of very low rectal cancer. **Objective:** The aim of the study was to compare the short-term results of intersphincteric resection for low rectal cancer with other sphincter saving procedures (SSP). **Material and methods:** The retrospective conducted study enrolled 355 patients operated for rectal cancer from January 2012 to January 2017 in Surgery I Department of the Clinical Emergency country Hospital of Tîrgu-Mureş. The post-operative outcomes between ISR and other SSP were analyzed and compared. **Results:** From the total number of patients , only 132 underwent SPP for low rectal cancer. From those , 22 of the patients have benefited from ISR. 86 had an anterior rectal resection (Dixon operation) and 24 a low rectal resection followed by a peranal or transanal coloanal anastomosis (Maunsell-Weir technique or Park-Percy procedure). For all 22 cases of ISR the post-operative mortality rate was 4,54 % . Only 1 of the patients with ISR developed post-operative fistula. **Conclusions:** Along other surgical techniques which preserve the sphincter function , the ISR gives the patient with low rectal cancer not only an improved chance of survival , but also a better quality of life.

Keywords: low rectal cancer, intersphincteric resection, sphincter saving technique

TASTE ALTERATIONS AND QUALITY OF LIFE ASSESSMENT IN LARYNGEAL CANCER PATIENTS

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Background: Taste alteration is a relatively common complication of head and neck radiotherapy with a major impact on the patient's quality of life. 85-95% prevalence of this radiotherapy induced disorder is reported by the literature. **Objective:** The aim of this study is to assess taste alterations during radiotherapy at patients with larynx cancer and its impact on quality of life. **Material and methods:** In this prospective study, a cohort of 24 patients with larynx cancer in Emergency County Hospital Tîrgu Mureş, ENT Department were included. They signed an informed consent and the study got the approval of Ethics Committee of University of Medicine and Pharmacy Tîrgu Mureş, Romania. The patients were interviewed and examined during seven weeks (S1-S7) of radiotherapy. They answer to two EORTC (European Organisation for Research and Treatment of Cancer) core questionnaires, the QLQ 30 version 3.0 and the head and neck cancer module QLQ-H&N 35. Then, they were given concentrations of sugar, salt, citric acid and caffeine solutions to evaluate their taste sensations by Whole Mouth Technique. **Results:** Significant changes were observed in perceived tastes during radiotherapy. All patients had taste alteration and 70,83% had total taste loss (sweet $p < 0,05$, salt $p < 0,05$, bitter $p < 0,05$, sour $p < 0,05$). Impairment was observed mainly in salt (S2), followed by sour and bitter (S4) and sweet (S6). Furthermore, this study found that patients have a lower quality of life in particular domains like (results presented as means) : role (29,39), emotional (44,10), social (46,53), pain (47,22), senses (8,33), speech (26,39), nausea-vomiting (22,22), felt ill (50,00), coughing (26,39), dry mounth (30,56), appetite loss (47,22). **Conclusions:** Radiotherapy causes impairments in taste perception and life quality. The two QOL questionnaires are adequate tools in evaluating the

problems. New therapeutic perspectives are needed in order to provide cancer patients an improved quality of life.

Keywords: taste alterations, quality of life, radiotherapy

THE OUTCOME OF THE FINGERTIP RECONSTRUCTIVE TECHNIQUES IN PEDIATRIC HAND TRAUMA

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Background: Fingertip injuries involving subtotal or total loss of the digital pulp are common in the pediatric hand trauma. The goal in fingertip injuries is the reconstruction of a sensate and viable digital tip with satisfactory cosmetic results. The plane of the amputation and the condition of the tissue at the injury site help to determine the best repair technique. **Objective:** The aim of this study is to compare the results of the reconstructive techniques used in our Clinics. **Material and methods:** V-Y advancement flap and cross finger pulp flap techniques were used in 35 pediatric patients for reconstruction of the fingertip at the Pediatric Surgery Department in Târgu Mureș between 2015 and 2017. The technique used was chosen according to the size and condition of the defect, the affected fingertip, the plane and zone of the traumatism. During the follow up visit the two point discrimination test was determined. The parents compared the cosmetic results with the controlateral fingertip and they rated it on a 1-10 scale. **Results:** The quicker hospital presentation showed the better cosmetic outcomes at the 0.01 significance level. Cross finger flap was used in 16 cases and V-Y advancement flap in 19 cases. We corrected with cross finger flap technique 14 volar and 2 dorsal fingertip injuries. The operation average time was 92.3 minutes. The cosmetic outcome in this group was 8.02. Mostly dorsal (n=11) and transverse (n=8) injuries were corrected by V-Y advancement flap. The surgery to cover the deficiency took 36 minutes. A better cosmetic result was found in the V-Y group group, the average rate was 9.43 **Conclusions:** The V-Y advancement flap can be used with a high liability in dorsal and transverse injuries. Cross finger flap is used more often in volar traumatism. We cannot apply an algorithm for the elective approach.

Keywords: V-Y advancement flap, cross finger flap, hand trauma

NECROTIZING FASCIITIS : DIAGNOSTIC AND TREATMENT DIFFICULTIES

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Background: Ethiopatogenic clinical and therapeutic aspects allow the distinction of the two main types of severe soft tissue infections: cellulitis and necrotizing fasciitis with anaerobic germs, with different degrees of mortality. **Objective:** The aim of this study is to determine the diagnostic and therapeutic difficulties and to establish the aggravating factors of prognosis. **Material and methods:** In the period of 2013-2016 , the second surgery clinical department of the Emergency County Hospital of Craiova conducted a survey during which surgeons examined 379 cases of perianal and rectal suppurations , 1147 cases of soft tissue infections and 145 cases of lower limb amputation and we registered a total of 8 cases of necrotizing fasciitis .Most of the patients were males suffering from perianal and rectal abscesses , perianal phlegmons and perianal fistulas . The peak of incidence was registered in the third and sixth decade of life . **Results:** Regarding necrotizing fasciitis , the postoperative early complications included three cases of accute urinary retention , four cases of bleeding from the wound edge . Unfortunately , we registered three deaths caused by septic shock and MODS . As for patients suffering from Fournier gangrene , the mortality level reached 60%. **Conclusions:** Necrotizing fasciitis remain one of the most devastating soft tissue infection in modern medicine .Many diagnostic adjuvant methods were described in order to establish the early disease recognition . The outcome strongly relates to an early diagnostic ,proper surgical treatment including extensive incisions , removal of the necrotic tissues and antibiotherapy .

Keywords: necrotizing fasciitis, surgical treatment, septic shock, severe infections

MAGNETIC RESONANCE IMAGING VERSUS ARTHROSCOPY IN KNEE INJURIES

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Background: Soft tissue knee injuries are a very common occurrence, especially in physically active people. In recent years, the MRI has become the most widely used non invasive diagnostic tool for internal derangements of the knee (IDK), due to its high accuracy in detecting lesions. However, despite evolution of technology, it has not yet reached the precision of arthroscopy, which is the gold standard in diagnosing IDK. **Objective:** The aim of the study is to correlate MRI results with the arthroscopic diagnosis in knee injuries, by calculating the sensitivity, specificity, and the positive and negative predictive values (PPV, NPV) of the MRI, using arthroscopy as reference. **Material and methods:** We collected data from 149 patients, who underwent MRI scans and subsequent knee arthroscopies between January 2014 and December 2015 in the Orthopedics and Traumatology Department, Tîrgu Mureş Clinical County Hospital. Patients were aged between 13 and 71, with the mean 32.3. We evaluated lesions of the internal meniscus (IM), external meniscus (EM) and anterior cruciate ligament (ACL) separately, using the MRI results and the intraoperative diagnosis. **Results:** For the IM, the results are as follows: sensitivity 94%, specificity 55%, PPV 76% and NPV 86%. The MRI for EM showed a sensitivity of 70%, specificity 82%, PPV 65%, NPV 85%. For the ACL, the result was a sensitivity of 94%, specificity 82%, PPV 91% and NPV 89%. There was higher incidence of IM injuries (n=91) over EM injuries (n=48). **Conclusions:** The study revealed various results in the three analyzed lesions, proving that the efficacy of the MRI varies among different anatomical structures. MRI seems to be most accurate for ACL injuries, having the highest sensitivity, specificity and predictive values, while meniscal tears were subject to false positive and false negative results. The results may also be influenced by the experience of the radiologists and the available equipment.

Keywords: knee injury, mri, arthroscopy

A RADIOLOGIC ASSESSMENT OF THE TOTAL KNEE ARTHROPLASTY FOR VALGUS KNEE ARTHRITIS

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Background: Valgus knee arthritis represents 10-15% of cases of knee arthritis, with the Total Knee Arthroplasty (TKA) being considered the gold standard treatment. However, TKA for valgus knee remains a controversial topic, because there is no consensus on how to achieve the desired alignment of knee. The main reason for debate is the sequence of release of the lateral structures that become contracted over the course of this disease: the lateral collateral ligament (LCL), popliteus tendon (PT), the postero-lateral articular capsule (PLC) and the iliotibial band (ITB). **Objective:** The aim of this study is to assess the post-operative results of TKA for valgus knee arthritis using the Knee Society total knee arthroplasty roentgenographic evaluation and scoring system. **Material and methods:** We reviewed 24 knees that underwent TKA for valgus knee arthritis from January 2011 to January 2017; 21 (87.5%) were in female patients and 3 (12.5%), in male patients. The mean age at the time of the procedure was 62.2 years (range fifty-four to seventy-six years old). We assessed the radiological outcomes, immediately postoperatively and after 3 months, using the Knee Society Total Knee Arthroplasty Roentgenographic Evaluation and Scoring System. **Results:** The pre-operative valgus angle was $11.87 \pm 5.28^\circ$, ranged between 7° and 30° . The α angle was $95.97 \pm 1.95^\circ$, the β angle was $88.72 \pm 2.09^\circ$, the γ angle was $7.41 \pm 3.42^\circ$ and the δ angle was $91.47 \pm 3.03^\circ$. The mean Insall-Salvati Ratio was 1.15 ± 0.14 while the joint space height was 2.79 ± 0.43 . **Conclusions:** The technique used by us to release contracted soft tissue in order to achieve the desired alignment produced excellent radiographic results regardless of preoperative alignment.

Keywords: valgus, knee, arthroplasty

SURVIVAL IN COLORECTAL CANCER CONSIDERING VASCULAR, NEURAL AND LYMPH NODE INVASION – A 9 YEAR RETROSPECTIVE STUDY

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Background: Colorectal cancer is a major worldwide health issue given the morbidity and mortality, and the economic burden. Regarding prevalence, it ranks third in men and second in women globally. Although there are discrepancies in survival rates between regions of the world, the overall results show improvement in patient survival in the last decades. Vascular, neural and lymphatic invasion are poor predicting factors for colorectal cancer. **Objective:** The aim of this study is to assess the survival rates in patients who underwent surgical treatment for colorectal cancer, analyzing predictive factors such as vascular, neural and lymph node invasion. **Material and methods:** A 9-year retrospective study was conducted between January 2005 and December 2013 in First Surgical Department, Mureş County Clinical Hospital. All participants underwent surgical treatment for colorectal cancer. Data on vascular, neural and lymph node invasion were extracted from pathology reports. Overall survival was estimated from the day of the surgery and plotted using Kaplan-Meier curves, while Log-rank(Mantel-Cox) test was used to compare the differences of the survival curves. **Results:** In 133 patients with vascular invasion, 121 patients with neural invasion and 92 patients with lymphatic invasion, survival rates were significantly lower than those in patients without invasion ($p < 0.05$, CI=95%) . **Conclusions:** Vascular, neural and lymphatic invasion greatly influence the survival rates in colorectal cancer. Examination of patients for the presence of these factors may provide useful in determining the medical approach and prognosis.

Keywords: colorectal cancer, survival, vascular invasion

SUPERIOR POLAR GASTRECTOMY IN THE SURGICAL TREATMENT OF PROXIMAL GASTRIC CANCER

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Background: It is well accepted that the prognosis of patients with proximal gastric cancer is more unfavorable than those with distal gastric cancer. Superior polar gastrectomy was introduced for early discovered gastric cancer located in the esogastric junction or upper third of the stomach. The use of this therapeutic method for advanced neoplasia was not fully accepted in terms of dissection of lymph nodes in the lesser curvature. **Objective:** The aim of this study was to compare the results of superior polar gastrectomy with other gastrectomy procedures (such as total gastrectomy) in gastric cancer. **Material and methods:** The retrospective study included 282 patients who suffered from gastric cancer from January 2012 to January 2017. Clinical and pathological findings discovered in 21 patients who underwent superior polar gastric resection surgery were compared with those patients who had undergone total gastrectomy. **Results:** From the total of 282 patients only in 21 cases a superior polar gastrectomy was performed. The perioperative mortality rate was 28.57%. Postoperative complications occurred in 47.62% of cases. **Conclusions:** Superior polar gastrectomy can be applied as a treatment of gastric cancer only if the depth of the tumor invasion is limited to the muscularis propria (tumor stage T2).

Keywords: superior polar gastrectomy, gastric cancer, total gastrectomy

SHORT AND MID-TERM OUTCOME OF SURGICAL PALLIATION IN UNIVENTRICULAR HEART.

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Background: Univentricular heart (UVH) includes all congenital cardiac malformations (CCM) in which there is only one ventricle available to support the systemic circulation. UVH management is necessary when a

biventricular repair is not possible and includes: neonatal stage procedures- Damus-Kaye-Stansel (DKS), Norwood, modified Blalock-Taussig shunt (MBTS), second stage-bidirectional Glenn anastomosis (BGA) and third stage-Fontan procedure(TCPC). **Objective:** Evaluation of the surgical approach's efficiency expressed by short and mid-term fatality rates and the improvement of oxygen saturation(SaO₂), as well as the influence of preoperative risk factors upon the surgery's outcome. **Material and methods:** We retrospectively analyzed 58 patients diagnosed with UVH associated with transposition of great arteries(24), ductus dependent pulmonary circulation(35), ductus dependent systemic circulation(8), with tricuspid atresia(12) and mitral atresia(4) amongst determining factors. They underwent different palliative surgeries during January 2010-October 2016 with a mean follow-up of 39.9±27.7 months. Demographic data, preoperative risk factors (age, CCM's complexity, prenatal diagnosis and SaO₂), as well as the palliative stage, were evaluated. **Results:** The number of surgeries based on previously mentioned palliative procedures was:DKS(5), Norwood(4), MBTS(35), BGA(10), Fontan(5). Mean age prior to neonatal palliation was 10.4 weeks, for BGA, it was 5.2 years and for Fontan 6.1 years. The overall fatality rate was 34.48% and occurred after the first stage palliation, of which only two patients were prenatally diagnosed. Survival rates for Glenn and Fontan procedures were 100%. An improvement in SaO₂ after each palliative stage was noted:After neonatal stage(77.17% vs. 69.25%), after BGA(83.50% vs. 81.0%) and after Fontan(90.0% vs. 82.75%). **Conclusions:** This study outlines luBCvT's experience in medical and surgical management of UVH, with good short and mid-term survival outcome. Correct pregnancy monitoring, an early prenatal diagnosis, as well as a maximal interdisciplinary management, especially amongst critical infants between the first and second palliation, a period well-known for having a high mortality risk, might contribute towards a higher survival rate.

Keywords: Univentricular heart, Norwood procedure, Bidirectional Glenn anastomosis, Fontan procedure

CLINICAL DENTAL MEDICINE

STUDY OF DIFFERENT ARCHWIRE PROPERTIES USED IN THE ALIGNMENT AND LEVELING STAGE DURING AN ORTHODONTIC TREATMENT

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Background: Alignment and leveling represents the first stage of an orthodontic treatment. Alongside a rigorous treatment plan it is essential to choose the right type of archwires in order to accomplish the objectives.

Objective: Testing the effectiveness and properties of alignment and leveling of different alloys used in orthodontics in order to obtain a right alignment of the teeth. **Material and methods:** In order to reach our objectives we realized an in-vitro study in which we used five types of archwires from different alloys: stainless steel (SS), super elastic nitinol (NiTi SE), heat-activated nitinol (HANT), cobalt-chromium (Elgiloy) and beta-titanium (TMA). In order to reproduce the conditions from the oral cavity we used a typodont simulating a mild crowding. Every archwire was left into position for 24 hours and afterwards we compared the final crowding with the initial one, evaluating the degrees of rotation. **Results:** All types of archwires acted well for the pre-established 24 hours. Of course, NiTi SE and HA proved their superior properties in the alignment stage. The stainless steel and the cobalt-chromium alloy had poorer properties in comparison with NiTi in the alignment stage but during leveling the results were vice-versa. **Conclusions:** Our results are similar to those from the literature and from clinical experience. Every type of archwire has precise indications and it has to be used according to them in order to obtain the best results and to satisfy the patient's wishes.

Keywords: archwire, alloys, alignment, leveling

COMPARATIVE STUDY BETWEEN TWO MATERIALS USED IN THE INTERPROXIMAL SEPARATION DURING MOLAR BANDING

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Background: During the orthodontic treatment the practitioner has to realize an inter-proximal separation of the posterior teeth necessary for molar banding. He has to choose between two materials: separating springs made of 0.2 mm steel wire and elastomeric separators ('doughnuts'). **Objective:** Was to compare the effectiveness and properties of two materials used during separation: separating springs and elastomeric separators. **Material and methods:** We realized a clinical study on twenty patients and we used both methods. The including criteria was that the patients should have needed banding on both the right and the left arch. So, on the left arch we realized the separation using springs and on the right one we used elastomeric separators. The materials were left in place for 5 days and the patients were evaluated daily. **Results:** Applying the steel wire is much easier than applying the elastomeric modules. We noticed that the elastomeric module realizes the separation faster than the other method, approximately 2 days versus 5. The patient tolerates better the spring separators, the elastic ones sometimes causing discomfort and even pain. If the 'doughnuts' are left in place more than 3 days it could penetrate the inter-proximal space being difficult to remove. **Conclusions:** Both materials are effective, having advantages and disadvantages. The decision on which method to be used is being taken by the orthodontist, who knows what type of separation he wants: faster or slower.

Keywords: separation, banding, steel, elastomeric

A RETROSPECTIVE STUDY ANALYZING THE DIFFERENCES IN ORTHODONTIC MEASUREMENTS BETWEEN ACTIVE ORTHODONTIC TREATMENTS WITH TRANSPALATAL ARCHES, AND THOSE WITH MOLAR ANCHORAGES

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Background: Transpalatal arches are frequently used in treating different types of malocclusion in association with extractions, or even with orthognathic surgery. The chances of obtaining an occlusion close to the ideal are higher if the molars are rotated and tipped correctly. The TPA does that, as well as reinforcing anchorage.

Objective:

The purpose of this study is to compare mesial movement of the upper first molars after orthodontic extraction with two types of anchorage methods; namely, the transpalatal arch, and molar anchorage. **Material and methods:** A selection of casts, and cephalograms, were chosen retrospectively from a cohort of subjects requiring extraction of both of the first upper premolars. A total of 22 were selected to receive two different forms of anchorage. One group received a transpalatal arch, and the other one was treated using molar anchorage. There were measurements taken for each patient before, and after the treatment. On the study casts the measurements were taken as follows: the first inter-molar distance; the anterior dental arch length; the distance between the first molars (left and right) in the sagittal plane; the angle between the mesiobuccal cusp of the upper first molars, and the median. The first molar's position was also determined on the patients' cephalograms using Ricketts analysis (the distance between the distal surface of the first upper molar, and a vertical line that passes through Pt- Pterygo-maxillary fissure). **Results:** Our results show no significant differences between the parameters of the two groups, except in the angles between the mesiobuccal cusps of the upper first molars, and the medians ($p=0.038$). Ricketts analysis did not reveal a significant difference between the anterior movements of the first molars. **Conclusions:** Within the limitations of our study we could not demonstrate any important differences between the two types of anchorages.

Keywords: anchorage loss, transpalatal arch, orthodontics

IN VITRO EVALUATION OF DIFFERENT SCALING TECHNIQUES: A SCANNING ELECTRON MICROSCOPE (SEM) STUDY

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Background: Scaling and root planing is a non surgical, conventional, periodontal therapy. Despite the different scaling techniques, over time it is still a challenge to remove bacterial plaque and calculus without causing root surface damage. **Objective:** The purpose of this in vitro study was to comparatively evaluate using a SEM the morphological changes of the root surfaces after scaling performed with: ultrasonic, sonic, manual and laser scaling devices. **Material and methods:** 20 periodontally involved human extracted teeth were divided randomly in 4 groups: group A teeth were cleaned with an ultrasonic device, for group B a sonic device was used, group C teeth were scaled with a universal hand curette and group D teeth were cleaned with a laser device. The surfaces were examined using a SEM before and after scaling. The following morphological aspects were analyzed: root surface roughness, fissures in the cementum, remaining calculus, micro-cavities. Data was statistically analyzed at 5% significance level ($p < 0,05$). **Results:** Images of group A present a remarkable amount of calculus residues besides minimal changes of calculus level in cementum. Group B indicated rich calculus residues remained but important changes of level as cavities and fissures. On images of group C a smooth remaining layer of calculus. Group D offered similar results in calculus removal but the laser scaled surfaces present a characteristic aspect of micro-roughness. **Conclusions:** None of the evaluated scaling methods offered statistically significant differences in regards to calculus removal, but such differences were observed in the morphological aspect of the scaled root surfaces.

Keywords: scaling,, SEM,, ultrasonic,, laser

IN VITRO COMPARATIVE EVALUATION OF MARGINAL LEAKAGE FOR DIFFERENT TYPES OF COMPOSITE RESINS

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Background: Microleakage is an important clinical aspect that has been used in the evaluation of long-term success rate of direct resin composite restorations. Despite the improvements of these dental materials over time, polymerization shrinkage continues to be one of their main deficiency. **Objective:** To evaluate and compare, based on a specific scoring system and dye penetration technique, the microleakage measured in Class I and V dental lesions restored with different types of composite resins. **Material and methods:** In 30 freshly extracted teeth, Class I and V had been prepared and included in three study groups, restored using different resin composites. All teeth were immersed for 24 hours in 1% methylene blue, then longitudinally sectioned and examined under magnification in order to give the appropriate score for the extent of dye penetration. Data were

statistically analyzed by Wilcoxon test, in order to compare the scores recorded and the significance level was set at a value of $p < 0.05$. **Results:** The analysis showed that the group restored using a total etch protocol associated with Tetric Evoceram resin composite had the least amount of leakage at occlusal and gingival level, with a statistically significant difference ($p < 0.05$). **Conclusions:** Within the limitation of our study, we can conclude that none of the dental materials used were free from leakage. The best results were obtained when total etch protocol was associated with Tetric Evoceram resin composite. In vivo studies are required to confirm these observations.

Keywords: marginal leakage, total etch, resin composite

THE SUCCESS RATE OF ORTHODONTIC FIXED RETAINERS

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Background: The stability of the results yielded from an orthodontic treatment is always an imperative issue. In order to maintain the stability and avoid relapses, retention is needed. Fixed orthodontic retainers are one of the most popular form of retention. **Objective:** The aim of this prospective clinical study was to compare the success rate of two types of orthodontic fixed retainers, flat and round multistranded wires. **Material and methods:** A number of 53 orthodontic patients aged between 11 and 53 years old were included in this study. The patients were sequentially assigned to receive multistranded round or flat retainers. If in the first year after insertion, the retainer doesn't debond is considered a success. Retainer failures were monitored and the data was centralized in Excel. Statistical test was used to evaluate the success rate by comparing the two types of retainers according to: age, sex and location (superior or inferior). **Results:** Flat multistranded retainers showed higher failure rates in comparison with round multistranded retainers. The most frequent type of failure was retainer detachment in the upper as well as in the lower jaw. Statistically significant difference was observed between the success rate of the retainers among male and female patients. **Conclusions:** Within the limitation of our study, we can state the round multistranded orthodontic wires have a better success rate than the flat ones.

Keywords: orthodontics, retention, alignment, retainer

NEW TRENDS OF RESTORATION IN PEDIATRIC DENTISTRY

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Background: Preformed metal crowns were since the beginning the most used method of restoring extensive or multisurface carious lesions in the primary dentition. Stainless steel crowns have been proven to be the superior method of restoring primary teeth outclassing composite restorations, however, stainless steel crowns have poor aesthetic and because of that reason zirconia aesthetic crowns appeared on the market. **Objective:** The purpose of this study was to find out the applicability of zirconia crowns on primary teeth and to determine the therapeutically way of treating extensive lesions on primary teeth by doctors in their practices and students in the 5th and final year. **Material and methods:** For the material and method of the study I used a series of forms specially conceived and delivered to doctors in cities such as Târgu Mureş and Timișoara and students from 5th and final year from different universities such as Târgu Mureş, Timișoara and Iași. **Results:** After analyzing 311 answers that I received, I emphasize that 82% of practisions restore extensive and multi-surface carious lesions in the primary dentition with composite materials, also 2,7% of them prefer extracting the primary tooth and 75% of practisions prefer using stainless steel crowns. **Conclusions:** I can safely conclude based on the study the fact that most doctors and students use composite materials as their method of choice in treating extensive and multi-surface carious lesions and when needed they prefer using stainless steel crowns despite their in-aesthetic look and do not use zirconia crowns even though they are highly superior.

Keywords: pediatric dentistry, restorative materials, pediatric crowns

THE ROLE OF DYSFUNCTIONS AND PARAFUNCTION HABITS IN THE DEVELOPMENT OF MALOCCLUSIONS

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Background: The role of dysfunctions and parafunction habits in the development of malocclusions is an important subject to increase society's interest for children's oral health. This study reminds the importance of regular dental check and informing parents about consequences of practicing harmful oral habits. **Objective:** To investigate the association of mouth breathing, finger and pacifier-sucking habits, bottle feeding, and swallowing pattern with the development of malocclusion in mixed dentition. To analyze the link between parents knowledge and children's vicious habits. **Material and methods:** This prospective study was performed on 50 children-pupils of "George Cosbuc" school (27 girls, 23 boys) aged 5(2%), 6(40%), 7(6%), 8(52%) years with mixed dentition. Information about nutritive and nonnutritive sucking habits, mouth breathing and swallowing pattern was collected from parents through questionnaires. A group of students from the Faculty of Dentistry performed the clinical assessments by noting the presence or absence of malocclusions of every child. Multiple logistic regression analyses were performed. **Results:** Among those children included in the study: 12% with an overjet (2mm<) had a digit sucking habit more than 3 years; 18% what have an overbite (1/3<) were bottle fed more than 12 months; 8% what have a Class 2 molar and canine relationship had a digit sucking habit more than 3 years; 12% what have crowding and spacing were bottle fed more than 12 months. Statistically about their parents, even if 84% know about harmful consequences of practicing vicious oral habits: : 32% used a pacifier and 26% used a bottle. **Conclusions:** Malocclusions in the mixed dentition are present and can be related to dysfunctions and parafunctional habits. Creation of information programs for parents about this subject is substantial and regretfully doesn't guarantee the avoidance.

Keywords: malocclusion, habits, dysfunction

CEMENTATION OF CERAMIC VENEERS: ANY CEMENT?

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Background: Ceramic veneers can represent a way to solve the esthetics of the frontal area if certain principles are respected. Cementation is an important aspect of the treatment. **Objective:** The aim of the study was to examine the esthetic influence of the resin cements on ceramic veneers. We studied the factors that can affect the quality of the cementation and the adhesive strength of the cement in order to obtain predictable biomechanics and esthetic results. **Material and methods:** We studied 3 veneer luting cements and a composite resin cement which can be used for veneers but without specific indication for the veneer cementation. We accomplished rectangular fragments of ceramics which enabled us to study certain cement properties in different conditions. As we simulated the condition of the oral cavity, we tested the factors and the correlation between those elements who can influence the viscosity, color, thickness and adhesion of cement.. **Results:** The following factors can influence the quality of the treatment: thickness of the ceramic veneer, type of the ceramic used, temperature, quality of light-curing, concentration of light to the veneer, power of the lamp, time, force applied, quantity of the cement, compliance of the work time. Even if the cements behave chemical identically, biomechanics is not the same. There is a linear correlation between viscosity and temperature of the cement: the viscosity of the cement decreased in cool conditions with an influence on the thickness of the cement coating. **Conclusions:** In order to obtain a distinguished esthetics and a good strength in time for the veneers, we need to know the factors who can influence the proprieties of the cements. The outcome should ensure a durable adhesion between all involved structures and to have some extra qualities like: optimal biomechanics proprieties, increased duration of work, suitable viscosity and distinct esthetic.

Keywords: veneers, cementation, esthetic, biomechanics

THE PSYCHOGENIC ETIOLOGY OF BRUXISM VERSUS THE CAUSALITY RELATIONSHIP WITH TEMPORO-MANDIBULAR DISORDERS

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Background: Bruxism is considered the most severe parafunctional disorder of the stomatognathic system. The etiology of bruxism is unclear, but the condition has been associated with stress, anxiety and other psychological factors. **Objective:** This double case study aims to determine the psychogenic cause of bruxism as well as establishing a causality relationship with TMD. For this quasi-experiment we chose two patients with bruxism, one of them also presenting moderate TMD. **Material and methods:** We applied a Perceived Stress Questionnaire (PSQ), Leahy Anxiety Scale (LAS), and a TMD questionnaire on two patients with self-reported bruxism, and a clinical (psychological) interview. We examined the stages of the tooth wear and tooth mobility, while for TMD we requested an OPG X-ray (orthopantomogram) and a palpatory exam to determine the arthrogenic/myogenic cause of TMD. **Results:** The OPGs showed no significant differences within the two patients' TMJ. However, the clinical examination showed signs of moderate myogenic TMD in one of the patients. The PSQ results showed an increased value in the patient with myogenic TMD than in the patient with bruxism only. The clinical interview showed that both patients had at least one trigger event earlier in life which may have caused the anxiety in their adult life, leading to parafunctional masticatory activity. Our TMD patient confirmed that the symptoms of TMD appeared earlier than the grinding episodes, and they occur more often when being in physical pain. **Conclusions:** PSQ results suggest that distress is not only a causative factor of bruxism, but also a maintaining and aggravating one. However, the main cause of bruxism remains anxiety, fact being proven by the Leahy scale we applied for both patients. From the patient's anamnesis we concluded that TMD can also be an etiological factor of bruxism, appearing as a coping mechanism to pain.

Keywords: bruxism, tmd, psychogenic etiology, somatoform disorder

EVALUATION OF THE CONSEQUENCES OF EARLY LOSS OF DECIDUOUS TEETH IN 6-8 YEARS OLD SCHOOL CHILDREN

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Background: It is generally accepted that the premature loss of deciduous teeth is associated with the malocclusion of permanent dentition. The premature loss of primary teeth may reduce the arch length required for the succeeding tooth, hence predisposes crowding, rotation, and impaction of the permanent teeth. **Objective:** The purpose of this study was to evaluate the dimensional changes in the dental arches after the premature loss of deciduous molars. It was also aimed to determine which deciduous teeth is lost most frequently. **Material and methods:** The patient group consisted of 50 children between 6 and 8 years. The following variables were studied: space conditions, dental stage for groups of teeth, rotations and malpositions of the permanent first molar. Space conditions were evaluated by measuring the distance between the mesial side of canine and the distal side of the second molar or mesial side of the first permanent molar, for each of arch, both on the right and the left side. The collected data was centralized in Excel tables. Student t test and f were used to analyse data. **Results:** No statistically significant correlation was found between the arch length, age and gender of the patient. Following the early loss of temporary teeth, the first permanent molar has undergone several changes. However, loss of the first maxillary primary molars had a greater prevalence compared with the first primary mandibular molars, followed by, the second primary maxillary molars and the second primary mandibular molars. **Conclusions:** On the basis of these findings and within the limitations of the study it could be concluded that the premature loss of the deciduous molars has effect on position of the first permanent molar, although no significant dimensional alterations of the lower and upper arch was observed.

Keywords: early loss, deciduous tooth, prevalence, orthodontics

THE COMPLETE DENTURES, SYNCHRONOUS BETWEEN FUNCTIONAL AND AESTHETIC

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Background: The prosthetic restoration of a bimaxillary edentulous patient is an extremely difficult task for the prosthodontist and the dental technician, as many times the patient's requests and grievances are driven by the youth's nostalgia. **Objective:** The aim of this research is to show whether the aesthetic restoration of a total edentulous patient can be achieved both functionally and aesthetically even though the clinical factors vary so much from patient to patient. The usage of the rules and standard treatment methods does not lead to the same results for all the total edentulous patients. **Material and methods:** The research was carried out on a group of 6 total edentulous patients. Bimaxilar complete dentures were made, taking into account the biological, functional and individual factors. All the clinical and technical stages were strictly followed, as well as the patient's relevant requests. The patients were advised to cut down on their requests, and there was an attempt to improve the voluntary control over the dentures. It's not the patient's pressures which are decisive, but the quality of the clinical and technical execution of the prostheses. **Results:** The complete dentures offered a proper restoration from a morpho-functional point of view: mastication, phonation, physiognomy. The patients were previously informed with regard to potential deficiencies and issues. Thus, they accepted more easily the dentures so that the aesthetics of the prosthetic restoration complied with its functionality. The percentage of patients who claim they cannot put up with the prosthesis or have accommodation issues increases with age. **Conclusions:** Our research shows that the aesthetic and functional restoration of a total edentulous patient by means of total prostheses can be more effectively carried out if the patient is given enough time to expose his problems and we consider that the total edentation is associated to a pluripathology.

Keywords: Total edentulous, Aesthetics, Complete dentures

RETROSPECTIVE STUDY REGARDING THE INCIDENCE, ETIOLOGY AND TREATMENT OF MANDIBULAR FRACTURES IN TÂRGU MUREŞ, IN THE LAST FIVE YEARS

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Background: The modern rhythm of life, stirred, with fast means of transport, and with a society that is more and more violent and intolerant, made facial trauma a social disease to which no one is immune. **Objective:** The aim of this study was to evaluate the frequency, etiology, incidence and treatment of mandibular fractures among patients who presented to the Oro-maxillofacial Surgery Clinic in Târgu Mureş, in the past five years. **Material and methods:** We collected and analyzed the data from observational cards regarding the age, sex, incidence, etiology and treatment of mandibular fractures, in the last five years. The statistics analysis of the data was done with Epi Info program. **Results:** Out of the total of 303 patients, 86%(262) were males. The most frequent cause of fracture was aggression (57%), followed by accidental falls (14%) and car accidents (8%). The most exposed age interval was 20-30 years(33%), followed by 31-45 years (25%). The most frequent localization was lateral surface of mandible (27%), followed by subcondylar region (24%) and angular fractures (22%). As treatment method, elastic intermaxillary fixation was the most used method (55%), followed by internal fixation (17%) and rigid intermaxillary fixation (13%). **Conclusions:** The mandibular fractures is a common pathology in the maxillofacial field, with a higher incidence in males, especially younger ones, with the main cause being aggression.

Keywords: mandibular fractures, maxillofacial, aggression

THE WHITENING EFFICIENCY ON COLOURED TEETH

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Background: In our daily lives our teeth come in contact with pigments from various types of food. The way they

manage to change their shade depends on numerous factors. Dental whitening represents the dental solution through which the patient tries to return to its original shade or an even better one. **Objective:** Verifying the changes in colour following the action of various extrinsic substances and the ability to return to their initial colour after bleaching. **Material and methods:** To reach our purpose we realised in vitro study in which we used 34 teeth of various shades, which were identified with the Vita Shade Key and immersed in 6 different substances for 24h: Decasept. coffee, black tea, Coke, red wine, blueberry jam. After the coloration we reevaluated the colour and then we applied the most frequently used whitening agent, consequently obtaining a third colour. In the end we compared the three resulted colours to establish which substance had the strongest impact and how efficient was the whitening. **Results:** The blueberry jam, red wine and Coke ended up having the strongest effect on teeth, meanwhile the coffee, black tea and Decasept being on second place. The bleaching agent was capable to ameliorate the teeth's aspect but in most cases the final colour did not match with the initial shade. **Conclusions:** Some substances to which we do not offer so much importance even though they are part of our daily meals have a strong colouring effect on our teeth. The solution is represented by the bleaching agent which in some cases is not always the most efficient method.

Keywords: coloration, pigments, whitening, substances

PROFESSIONAL RISKS PRESENT IN DENTAL OFFICE

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Background: The dental office may be considered an environment in which the entire medical team and the patients may be affected by temperature, noise, vibrations, electromagnetic fields, light and radiations, chromatic and also some chemical and microbiological pollutants. **Objective:** The purpose of this study was to identify and quantify the main physical and chemical injuries that may be found in dental offices. We have also tried to identify the main interactions between those injuries and finally to evaluate in which way this can affect the human body. **Material and methods:** We have compared the parameter values from a dental office with their maximum equivalents in terms of exposure. Such parameters were substances, biological products and contaminated agents which through a wrong usage could produce unwanted effects to the human body. Using an electric scale we have measured and evaluated the quantity of some powders formed in different dental treatments. We have also tested the thermal levels, noise levels and the percent of toxic substances in the working environment. **Results:** Often, even if the maximum quantity accepted for a substance in the working environment is not exceeded, neither that of the substance's metabolites nor the quantity of some biological indication perturbed by that substance, the health condition of the person who is exposed can be altered. This occurs due to repetitive exposure in different concentrations. Among the results that have exceeded the admissible threshold, it is worth mentioning the inhalable powders (between 2-5%cm) resulted from removing dental fillings or prosthetic treatments. **Conclusions:** In the dental office there are some parameters that need to be monitored by using modern air conditioning plants and protective equipment - this leads to a smaller risk of exposure to environmental factors and it also prevents the emergence of discomfort states or disease.

Keywords: dental office,, maximum threshold,, powders,, control.

THE EFFECT OF DISINFECTANT SOLUTIONS UPON DENTAL IMPRESSION STABILITY

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Background: Two factors are utterly essential for ensuring the successful prosthetic restauration after impression disinfection through chemical immersion: the preservation of physical dimensionality and the prevention of accuracy alteration due to the imbibition process. **Objective:** The aim of this study is to assess the dimensional stability of putty, light bodied silicones and alginates after the immersion in disinfectant solutions for 15 minutes, 25 minutes and 1 hour. **Material and methods:** The disinfectant solutions used were 1% sodium hypochlorite and 2% glutaraldehyde. The impressions were made on rectangular plastic trays of 5 mm thicknesses. For silicones we used the one time impression. All impressions were removed from the trays after 3-5 minutes for alginates, and after 8 minutes for silicones in order to have a complete curing, and, after that, they were immersed in disinfectant solutions. The control group consisted in impressions that were not immersed in disinfectant solutions but in

distilled water. By the means of a 0.001 mm graded optic microscope, we calculated three-dimensional measurements. All the impressions were measured immediately after the curing time subsequently after 15 minutes of sinking, 25 minutes and 1 hour. The post-factum alginates measurements were conducted sequentially after 5 minutes, 15 minutes, 30 minutes and 1 hour and we studied samples of simple geometry. **Results:** In the case of silicones, no differences were indicated for any of the combinations. The outcome indicated that the silicones can be disinfected without any remarkable dimensional distortions. In the case of the alginates, even after 5 minutes important dimensional modifications started to take shape due to the immersion process. **Conclusions:** The silicones impressions for future prosthetics will be able to be used in perfect conditions after these disinfection-through-immersion times but the alginates impressions will not be able to be used if they are sunk more than 5 minutes.

Keywords: stability, disinfection, silicone, alginate

NUTRITION AND DIETETICS

THE TREND OF THE TUBERCULOSIS CASES IN ROMANIA IN THE LAST TEN YEARS

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Background: In 2010, 8.8 million new cases of Tuberculosis appeared in the world, and 1.5 million death cases were associated with this disease, most of them in the countries that were undergoing a developing process. The cases of multidrug-resistant tuberculosis were increasing, and the resistance to this disease is more and more extended, making this type of tuberculosis a deadly threat. **Objective:** The purpose of this study is to estimate the evolution of the frequency of the Tuberculosis cases in the last ten years, in Romania. **Material and methods:** We've based our study on the statistics data which was recorded at the National Institute of Statistics and at the National Institute of Public Health, compared according to the counties, residence, adults and children variables. **Results:** The national incidence of Tuberculosis in 2014 was of 76.6 for every 100.000 people, the most frequent was in the counties situated in the south of the country (Ilfov, Bucharest, Calarasi, Valcea, Arges). Maramures was the county with the biggest global incidence of the disease in 2014, at children. The number of new cases and the ones that have reappeared has decreased in the last ten years, from 29,403 to 14,854 cases. The incidence, the prevalence and the death rate due to Tuberculosis were dropping during 2004-2014, but the cases which are resistant to the treatment have slightly been increased in number in the last few years. **Conclusions:** In order to decrease the incidence and the prevalence of the Tuberculosis in our country, we have to elaborate and apply new management strategies and programs which have to be more efficient, and have a strong impact on the lifestyle and educational level of the patient.

Keywords: tuberculosis, incidence, Romania, risk factors

HOW MUCH WILL TRAINING PERIODIZATION INFLUENCE THE FLUID LOSS DURING SPECIFIC SWIMMING TRAINING

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Background: Training periodization can influence the hydration status of swimmers according to the learning process of the four swimming styles (freestyle, backstroke, breaststroke, and butterfly), action which will influence the adaptation capacity and the recovery process of athletes between workouts. **Objective:** Fluid losses related to swimming sessions, characterized through intensity and effort volume, can help us to impose a general fluid profile for the specific age group. **Material and methods:** An epidemiological observational study was conducted from October 2016 - February 2017 in Targu Mures, Romania, on a group of 71 young swimmers with an average age of 7.79 ± 1.92 years old. The analyzed parameters were body weight (kg), skin folds (mm), heart rate (bpm) in association with the training seasons. The body weight was determined before and after the effort using an electronic weighing scale while for the skin folds we used Cosmed Body Fat Caliper. **Results:** There were established specific statistic relationships between the body weights in successive days. The age seems to influence the body weight loss after the effort ($p=0.0001$, $r=0.606$, $CI95\%=0.417$ to 0.744). Also, the total intensity imposed over the training season (65%) was directly proportional with the swimmers' fluid losses ($p=0.0028$, $r=0.367$, $CI95\%=0.126$ to 0.567). Moreover, a rise in effort intensity, above 65% of VO_{2max} , imposed a 3% body weight loss during a 50 minutes session ($p=0.0287$, $r=0.316$, $CI95\%=0.026$ to 0.556). Thereby, fluid losses seems to influence the pre effort body weight of the second effort, marked through a low recovery capacity ($p=0.0001$, $r=0.995$, $CI95\%=0.992$ la 0.997). **Conclusions:** Total fluid loss reported to effort volume/ intensity, in specific children groups, will enhance the adaptation and the development of the body during effort through body homeostasis. As the results confirmed, we estimated an accurate fluid loss report along with the age groups adaptation in the mentioned terms.

Keywords: Swimming, Body Weight, Fluid Losses, Hydration

LIFESTYLE IN COLORECTAL CANCER

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Background: Colorectal cancer was declared the third type of cancer worldwide for males. And second worldwide for females. Colorectal cancer can show specific signs. Amongst these signs we have alternative diarrhea with constipation, the presence of blood in stool, flatulence, loss of weight without reason continues fatigue and anemia. Because signs are painful and are often inconstant, it is often mistaken with other disease and is only discovered only in advanced forms. Amongst the protective factors of colorectal cancer are: eating fish, lots fruits and vegetables. Because they are all rich in fibres. Fibres are important in colorectal cancer because they produce fat acids with short chain, this thing being beneficial to colorectal cancer. Other important factors in colorectal cancer are Vitamin D, mineral Ca. Some risk factors of colorectal cancer are alcohol, smoking, food additives, red and processed meat, sedentariness. Food additives are used to improve the organoleptic characteristics of meat and conservability. However nitrites and nitrates are able to act as alkylating agents, thus causing DNA damage. According to some studies it can be said that a high consumption of red increases the risk of colorectal cancer. Carcinogenic compounds coming from red meat or processed are produced by the metabolism of those microbiota plays an important role. **Objective:** This study was conceived to establish what is the correlation between cancer and the lifestyle of people diagnosed with this illness, with emphasis on the lifestyle before of the diagnostic. Also monitored was how the subjects changed their lifestyle after the diagnostic and what exactly where these changes. **Material and methods:** Method of study that we have chosen is an analytical study, based on application questionnaire. Using a questionnaire made by me I interviewed a number of patient and a control-group. **Results:** Still under study. **Conclusions:** Still under study.

Keywords: lifestyle, colorectal, cancer

ANALYSIS OF UNHEALTHY FOOD HABITS TO HYPERTENSIVE PATIENTS

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Background: Hypertension, is a long term medical condition, also known as high blood pressure in which the blood pressure in the arteries is persistently elevated. The biggest part of questioned patients are not aware that their unhealthy food habits has a key role in their disease. **Objective:** The main objective is to make the patients which already suffer of this disease to realise the impact of their unhealthy diet. **Material and methods:** For this analyse we used a questionnaire on a group of hypertensive patients which included a certain amount of questions about their daily menu. Mainly, we were focused on the quality of the food, however the quantity was also very important. The quantity of caffeine was also a very important criterion because the high levels of caffeine can raise their blood sugar and blood pressure. The method that they used to cook and the fats they used to prepare the meals were another landmarks to used. The quantity of sodium was another step because we know is directed correlate to diastolic and systolic blood pressure. **Results:** Generally, the patients have different preferences regarding the taste, and their food habits depends of a lot of factors like: income, time, tradition, age, sex. We were surprised to know that the fact they even know they sufferers of this disease, hypertension, wasn't enough to make them focus a little bit more to what they eat. Unfortunately, before they being diagnosed most of them had an haotic diet, an unbalanced one. In the same time with the reduction of sodium the blood pressure diastolic and systolic lowered significantly. **Conclusions:** Is better to prevent and not to treat the diseases and this thing can be possible only if the people all over the world nomether their age, sex, income, time and tradition realise the impact of unhealthy food habits. They need to pay more attention to their diet and lifestyle and automatic the things are going to change in a good way.

Keywords: hypertension, unhealthy, blood pressure, diet

CONSUMPTION OF PROCESSED FOODS BY SCHOOL CHILDREN

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Background: Processed foods are defined as any foods other than raw agricultural commodities and can be categorized by the extent of changes occurring in foods as a result of processing. Nutrient excess and nutrient deficiency in children menus can lead to permanent modification of metabolic pathways and can increase the risk of chronic diet-dependent diseases in adults. **Objective:** We investigated children's consumption of processed foods, the level of health education, eating habits, the diet of school children and risk factors associated with excessive weight, obesity and the metabolic syndrome. **Material and methods:** Our study was based on questioning a group of 120 children between the ages of 11 and 15, from Targu Mures schools, using a lifestyle and frequency questionnaire, since November 2016, until February 2017. **Results:** The main products consumed were bread, snacks, cookies, candy and other sweets in all age groups. A percentage of 73% children consumed processed foods. Consumption of fruits, vegetables and dietary fiber was low among these children. The remaining of 27% consumed fruits, vegetables and foods rich in fiber. More than 60% have confirmed that they have not read the labels of the products that have consumed. There was an increasing reliance on processed foods. **Conclusions:** Children are most susceptible to the adverse consequences of bad eating habits, that is why we need to improve our community intervention for preventive measures, both for children and their parents.

Keywords: processed, food, health, children

THE IMPACT OF NUTRITIONAL STATUS ON LIPID PROFILE – A COMPARATIVE STUDY BETWEEN EATING HABITS AND LIPID FRACTION (PERSONS FROM TÂRGU-MUREȘ COMPARED TO PERSONS FROM ONEȘTI)

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Background: It is known that bad dietary habits can cause high blood cholesterol and high triglycerides. Lipid disorders increase the risk of developing heart disease, heart attack and stroke. Avoiding certain foods and drinks and being screened for a lipid disorder can prevent or lessen the effects of this disorder. **Objective:** comparison of the lipid profile and assessment of nutritional habits between different geographical areas, in order to highlight the possible causes of high cholesterol and triglycerides levels based on eating habits. **Material and methods:** a prospective study was undertaken between December 2016 to February 2017 including 40 patients who visited Târgu-Mureș - Emergency County Hospital and 40 patients who visited Onești Municipal Hospital for periodical blood test analyses. The test results and the eating habits data were collected using a questionnaire with 25 questions that targeted the consumption of different foods that can affect cholesterol and triglycerides blood level. **Results:** Average cholesterol level in Târgu-Mureș was 222,13mg/dl versus 209,36mg/dl in Onești, with no significant differences between this groups ($p=0.2144$). Average triglycerides level in Targu-Mures was 143,79mg/dl versus 120,87mg/dl in Onesti with no significant differences between this groups ($p=0.1530$). We observed that patients with high lipid levels eat one egg/day 10%, fried foods daily 14%, whole milk 67%, fat-free dairy products 18%, remove excess fat from meat 31% and use butter and lard for cooking 40%. Patients with normal lipid levels eat whole milk 41%, fat-free dairy products 24%, remove excess fat from meat 54%, use butter and lard for cooking 31% and none of them eat eggs and fried foods daily. **Conclusions:** there are more patients with high lipid levels from geographical area where the traditional food contains large amounts of fats than from geographical area where traditional food contains less fat.

Keywords: nutritional status, lipids, food habits

NUTRITION ADAPTION AMONG AMATEUR BODYBUILDERS DURING MUSCLE GROWTH PERIOD

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Background: Nutrition represents an essential element in bodybuilding. Important factors are represented by an appropriate adaptation of food intake reported to the imposed effort objective. Thus, muscle mass growth will be associated with significant increase of food intake. **Objective:** Creating an alimentation and training profile, with general applicability for bodybuilders during muscle growth period. **Material and methods:** An epidemiological transversal study was conducted during January 2016 in Targu Mures, Romania. A group of 96 amateur bodybuilders with a mean age of 24.62±5.26 years, and a median period of practice equivalent to 36 months were surveyed through a questionnaire with 35 items. The questionnaire aimed to identify food and training patterns during muscle mass growth period. **Results:** Five training days were recorded in one training micro cycle, reported to a period of 7 months with an objective of muscle growth. Age reduction was associated with increased number of training sessions/ week ($p=0.0001$, $r=0.422$, $CI95\%=0.234-0.579$). Thus, an increase in body weight (78 kg median) was associated with improved overall number of reps on both upper and lower trend ($p=0.0001$, $r=0.628$, $CI95\%=0.483-0.739$) during a training effort. The association of increased food consumption ($p=0.0001$, $r=0.556$, $CI95\%=0.393-0.685$) and muscle recovery process stimulation, through post effort exercise ingestion (35 g of protein) imposed an increase in body weight. At the same time, increasing the total intake of protein from white meat sources, dairy products and oleaginous fruits, while limiting refined grains, has increased the muscle mass ($p=0.0001$, $r=-0.543$, $CI95\%=-0.675$ to -0.377). **Conclusions:** Over the objective imposed, increased food intake through both main meals and supplements consumption, post effort, has imposed an increase in body weight during muscle mass period, report related directly through a relationship with the structure of the training, imposed over 7 months, divided in 20 sessions of training during 1 month.

Keywords: Bodybuilding, Muscle Mass, Energy Intake, Standardization

APITHERAPY - HOW TO REDUCE RISK OF VIRAL RESPIRATORY INFECTIONS BY STRENGTHENING THE IMMUNE SYSTEM IN PRESCHOOL CHILDREN

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Background: During cold season, children which don't have a good immunity status can easily get sick by laryngitis or flu. Parents are looking to improve children's immunity by taking drugs or supplements, which may increase drug resistance. For this reason, we considered a complementary honey products treatment proposal that have the same effect of increasing immunity without adverse effects, except for those who have allergies to bee products. **Objective:** Assessment of a nutritional intervention on a sample of Mures county children by developing the body's ability to fight against viruses under daily consumption of an apiary cocktail. **Material and methods:** The methods used in this research were: the questionnaire-based survey and experimental method, with the permission of the Ethics Commission of our university. **Results:** The experimental study started on a group of 19 children since December 2016, is currently underway and will continue until the end of June 2017. We initially applied a lifestyle questionnaire at the beginning and after 3 months an intermediate questionnaire. By analyzing the results we found that all the children investigated have an omnivorous diet, but do not eat enough fresh fruits and vegetables or bee products. 84.21% of children took the bee cocktail, and 15.79% refused because they have allergy to one of the compounds. The frequency of the respiratory diseases decreased from 47.36% to 10.52% to the ones with 3 diseases, and from 31.57% to 26.31% at the frequency of 1 disease per season and increased morbidity in patients with 2 diseases from 15.78% to 36.84%, and those who do not have any disease from 5.29% to 26.33%. **Conclusions:** In order to help our body to be strong and fight properly against environmental biological risk factors we recommend a proper diet, exercise and natural food supplements like bee products, and to avoid excessive drugs treatment.

Keywords: immunity, children, apiary cocktail, community intervention

THE INFLUENCE OF DAILY FOOD INGESTION AMONG ATHLETES EVOLUTION DURING SPECIFIC PHYSICAL ASSESSMENTS

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Background: Food intake individualization is essential to impose early adaptation during specific or nonspecific effort. Thus, athletes will meet their energy needs in order to achieve adequate functional adaptation during efforts which involves speed, coordination and endurance. **Objective:** To identify correlations between food intake and athlete's performance during three specific effort tests. **Material and methods:** A cross-sectional study was conducted in February 2017 on 35 young football players. They performed three different physical tests: Yoyo, Illinois and Illinois with the ball. The nutrition status and food ingestion was assessed through a food diary filled over 14 days with food items, ingestion time and total food quantity. The food diary helped us to identify macronutrients consumption over one day while the effort performed has indicated specific functional analysis. **Results:** Following the specific tests, we imposed several statistical relationships between food intake and functional adaptation. Thus, weight gain has not imposed a change in the total test time ($p=0.7656$, $r=0.055$, $CI95\%=-0314-0411$). However, obtaining a positive energy balance ($\geq 95\%$ of energy requirements) imposed an increase in Yoyo testing time (300.9 seconds). The performance obtained during Illinois test related an increase in total exercise time (19-22 seconds) limiting performance as a result of an increased carbohydrates consumption (≥ 230 g carbohydrate). Still, achieving energy requirements, through food consumption, imposed a positive action over the effort ($p=0.0005$, $r=-0.583$, $CI95\%=-0779-0285$) while meeting the protein needs set an overall time reduction during effort ($p=0.413$, $r=-0.362$, $CI95\%=-0638-0005$). **Conclusions:** Meeting energy requirements will represent an important form of influence during submaximal and maximal effort test. Thus, the specificity in speed and strength tests will be dependent on ensuring anabolic muscle status. Therefore, improving the effort time during football specific tests will be related directly to food ingestion adapted to explosive physical actions through increasing protein and limiting fat intake, along with a median proportion of carbohydrates.

Keywords: Football, Specific, Testing, Protein

PHYSIOTHERAPY

POSTPARTUM SYMPHYSIOLYSIS: GLOBAL POSTURAL RE-EDUCATION?

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Background: Postpartum symphysiolysis is a rare obstetrical complication which may occur during labour, that affects the general health of women through failure of passive stability of the pelvic gridle. In therapy, the conservative treatment for pain relief and interpubic separation is used, but only a few studies have analyzed the effects of this approach in the management of postpartum symphysiolysis. **Objective:** The overall aim of this study is the analysis of the effects of the physical therapy method "Global Postural Re-education" (RPG), in the treatment of postpartum symphysiolysis. Because of the similar characteristics of the symptoms as well as the divergent perception of pain associated with the physical disability experienced by women affected by postpartum symphysiolysis, it is necessary to individualize the physical therapy intervention, this representing one of the key elements of the method used in this survey. **Material and methods:** The study group included 5 cases with confirmed diagnosis of postpartum symphysiolysis. The tests that were used at the initial, periodic and final evaluation were: Active Straight Leg Raising (ASLR), Modified Trendelenburg Test and Patrick-Faber Sign. the physical therapy intervention was accomplished with GPR. **Results:** A number of minimal 3 sessions per week of GPR, carried on for approximately 3 months, leads to relevant improvement of postpartum symphysiolysis. Due to the rarity of this condition, the statistical analysis is currently lacking scientific value, but we intend the extension of the number of cases. **Conclusions:** GPR had good results in all cases of postpartum symphysiolysis. Postpartum symphysiolysis represents a nosologic entity that crosses 3 medical specializations: Obstetrics, Orthopedics and Rheumatology with physical therapy treatment. No additional procedures are suggested, in the hope that the number of postpartum symphysiolysis cases will decrease with the help of GPR.

Keywords: postpartum, symphysiolysis, GPR

PHYSIOTHERAPIST POSTOPERATIVE RECOVERY OF HDL4

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Background: Disc herniation is a neurological disorder characterized by prolapsing nucleus pulposus outside, pushing the anatomical elements from the spinal canal. This disorder into the spinal canal can cause pain, numbness and weakness on that which affects nerve root and may radiate along the lower limbs. Most hernias are found in the L4-L5 and L5-S1 intervertebral spaces, because supports most of the body weight. **Objective:** Purpose: the resumption of activities of daily life as early as possible, improving lifestyles, consulting a nutritionist for loosing weight and avoiding abnormal physical exertion. Post-surgical physical therapy in HDL targets after a specialist, are to reduce pain, improve breathing, position of sitting, getting orthostatism and movements. **Material and methods:** In our study, we wanted to present a patient of 24 years, female, grade II obesity (weight: 120 kg and height: 174 cm), operated in 2011 by HDL4. In 02/16/2017 it took second intervention in the same place, because between the first and second operation, the subject had a messy lifestyle, making constant physical effort. It followed a kinetic recovery after 48 hours since operation. **Results:** We made an assessment of the evolution of this patient rehabilitation program after the first few weeks since surgery. The evolution has been favorable, responding very well at this exercise recovery. By the application Wong-Baker scale we evaluated movements on 02/18/2017, the patient was at six pain scale after about 1 min of walking and after 12 days the pain has decreased, this being on 1st place on scale Wong. **Conclusions:** Means, methods and exerted physical therapy performed after 48 hours of surgery helped for a beneficial recovery of our subject and will allow to return faster at a normal and healthy lifestyle.

Keywords: HDL, obesity, recovery

IMPROVING POST-NATAL RECOVERY PERIOD APPLYING KINETOPROFILACTIC METHOD

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Background: Our study was composed of five mothers with their babies in the carrier, and the method applied was dancing. The implementation of the dance was thus: every mum had the baby tied around the pelvis with a baby carrier. **Objective:** The aim of this activity through dance was to be relaxing, to regain the desired physical form and to provide a good feeling in a pleasant, beneficial mode. At the same time the child being wrapped around the mother's abdomen, has a safety and comfortable feeling. **Material and methods:** The study took place over a period of 6 weeks, 2 weeks in December, 3 weeks in January and 2 weeks in February. The duration of each activity was 60 minutes. The location of the activities took place at the AMA Learning Centre in Targu Mures. For the monitoring of the evolution of moms, we used the evaluation method to show us the flexibility of lumbar spine, called index-ground, which we applied to every mom: the initial evaluation, the measurement of the distance between index-ground in centimeters, at the beginning and at the end of the dancing course. Profilactic activities of dance have continued for three weeks. At the end of this period we conducted the final evaluation following the initial evaluation steps. **Results:** The results demonstrated a slow evolution due to the short period of the monitory. **Conclusions:** By carrying out the activities we have obtained a recovery of the flexibility of the lumbar spine, and we could see that the dance offered a well being state for both mothers and their babies. Besides this, it was a pleasant way for the moms to socialize and exchange impressions between each others regarding this new period in their lives.

Keywords: Moms, Rehabilitation, Dance

POSTOPERATIVE REHABILITATION AFTER CLOSED LEG FRACTURE-CASE STUDIES

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Background: Fractures represents the interruption in the continuity of one or both bone which is produced as a result of a great intensity trauma. Surgical tratament is elective and always followed by strict program of recovery, initiated from day one after surgery. **Objective:** The purpose of the study is to demonstrate the effieience of kinetotherapy in recovery from a broken bone and to encourage the patients to accept and follow physiotherapy starting from the day after surgery. **Material and methods:** In the study we included 8 patients divided into two groups. All the patients in the study benefited from the recovery initiated in the first postsurgery day. Patients in the control group practiced sporadically therapeutic exercises, without notable effects. In each case, after surgery, the affected segment was immobilized in gypsum splint for 4 weeks, and wheight bearing of the affected member was permitted after 8 weeks. During immobilization stage, the aim of the exercises was to prevent muscle atrophy and vascular-trophic changes. After the immobilization, the main objectives were restoring joint mobility and muscle tonus surrounding the affected member, with the resumption of normal walking as soon as possible. Evaluation of patients was carried out sequentially: first day after the surgery, 10 days, 6 weeks and three months. The mobility was evaluated goniometrical on the knee and ankle, and we measured the circumference of the leg and thigh involved. With VAS scale we appreciate the intensity of pain and with EQ-5D questionnaire we evaluated the quality of the patient's life. In each reevaluation was efectuated an X-ray of the leg. **Results:** For patients in the study group, all issues involved showed a favorable evolution, recovery and strengthen of bone healing and was faster than patients in the control group. **Conclusions:** Postsurgery, early initiated rehabilitation, assures a faster recovery in terms of all the issues involved.

Keywords: bone, fracture, rehabilitation, evaluation

INFERTILITY: GO "AVIVA"

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Background: Infertility is a nosological condition defined by pathological changes that leads to decreased ability to procreate. There are multiple factors involved in the etiology of infertility: age of the women, hormonal disorders, stress etc. Aviva is a non-invasive method for birth control, which is based on exercise that involves the pelvic floor muscles. The method has a wide applicability in cases related to infertility, promoting a physiological, mental and emotional hygiene. **Objective:** The overall aim of this survey is to evidence the efficacy of Aviva Method in cases of (male or female) sterility, by cooperating with a specialized association, the only clinic that performs this method **Material and methods:** Aviva method was applied to a group study of 30 patients, male or female, who are dealing infertility. Patients were evaluated with sterility level self-assessment questionnaires, with a number of items, completed voluntarily by the study group. **Results:** At 24 out of 30 cases included in this study the fertility level has increased considerably with the appearance of pregnancy. The other 6 cases presented improvement in hormonal balance, but did not succeed in procreating. In 80% of the cases Aviva Method was effective in achieving the goal and 20% of the cases presented changes in the reproductive system, without succeeding pregnancy. Solving the problem of infertility showed a statistically significant correlation with Aviva Method who increased fertility control at our patients ($p < 0.005$). The results were statistically analyzed with SPSS Statistics which helped formulate the conclusions. **Conclusions:** Aviva specific exercises had a great contribution in controlling and increasing fertility. Aviva may be introduced in the future as a complementary method of treatment in infertility along with other medical means. Aviva could become "Pro-viva"!

Keywords: Infertility, Aviva, pregnancy

THE EFFICIENCY OF THE "LOVE YOUR BELLY" (LYB) METHOD AFTER VAGINAL DELIVERY

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Background: Postpartum, especially after the vaginal delivery is possible that some women remain with certain stigmas highly visible and sometimes unsightly after pregnancy. Most commonly one of these situations is the major modification on the abdominal musculature, which is called diastasis of rectus abdominis muscle (DRAM). **Objective:** The aim of this study is to present that the LYB method is effective over the abdominal muscles. It is targeted especially for postpartum mothers who stayed with DRAM after childbirth. By exercising this method, the distanced space, from the xiphoid process to umbilicus, is reduced, resulting toning the abdominal muscles and ameliorating back pain. **Material and methods:** In the study, that took place during of June to October 2016, the lot included six patients postpartum, diagnosed with DRAM aged between 25 - 37 years. The patients completed the Rolland-Morris questionnaire, for low back pain, associated with Visual Analogue Scale (VAS), and voluntarily abdominal diastasis was measured using the calipers' method. By completing the questionnaire LYB-DRAM, was investigated the efficiency of the LYB method. The scores were compared before and after the procedure, and the lot being reduced, statistical expression is not valuable. **Results:** The initial values of the questionnaire Rolland-Morris, [] comprised between 15-22 items, and the final interval was reduced at 11 - 15 items. The initial mean of VAS was 8, but the final average was reduced at 4. From the questionnaire LYB-DRAM, result that the LYB method is efficient after 4-5 weeks with a frequency of 2-3 times per week, after participation at the LYB exercises. **Conclusions:** LYB is a current and effective method in DRAM postpartum recovery. LYB could be applied in other situations of diastase or antegestational. LYB is effective just for those with "Love Your Body".

Keywords: Childbirth, LYB, Method

CAN PHYSIOTHERAPY IMPROVE THE OUTCOME OF PATIENTS HOSPITALIZED ON INTENSIVE CARE UNIT – A PILOT STUDY

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Background: Patients (pts.) hospitalized on intensive care units (ICU) are having a worst outcome that is supposed to be improved by physical medicine. **Objective:** Our study main objective was to see if physiotherapy (PT) can improve the outcome of ICU's patients. **Material and methods:** Twenty patients were included in a prospective study. Half of the patients were on an intensive physiotherapy program (e.g. stretching, endurance exercises). The following variables were monitored: the SAPS, the APACHE and the SOFA scores, the number of days spent on ICU, the total number of hospitalization days, the number of sessions of physiotherapy, the average minutes spent on a physiotherapy session and the Coma Glasgow Score (GCS). **Results:** At the beginning of the study the mortality and the morbidity scores were similar on both groups of pts. (receiving physiotherapy and non receiving physiotherapy) such as: SAPS - 56.50 +/- 20.83 (KT pts.) vs 57.70 +/- 21.95 (non-KT pts.), APACHE 19.80 +/- 8.70 (KT pts.) vs 21.90 +/- 8.29(non-KT pts.), SOFA □ 7.80 +/- 2.4 (KT pts.) vs 7.90 +/- 1.96 (non-KT pts.), CGS □ 6.70 +/- 3.59 (KT pts.) vs. 6.10 +/- 2.18 (non-KT pts.). After receiving an average of 20 minutes twice daily of physiotherapy the SOFA score improved in the KT pts. group (p: 0.042). Five out of ten pts., from the KT group survived vs only 2 from the controlled group. The average hospitalization days in ICU of the KT pts. group were of 19.50+/- 16.69 days vs 9.10+/- 6.59 days. **Conclusions:** Physiotherapy is a choice treatment to be considered in improving the outcome of patients admitted in ICU.

Keywords: physiotherapy, ICU, mortality

THE POST CESAREAN CHILDBIRTH: THE "IDEAL" PHYSICAL THERAPY PROGRAM?

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Background: The post cesarean childbirth represents the period experienced by women after giving birth. The general and local changes along with the tardive recovery of the morphophysiological state that was before the pregnancy are characteristic for this condition. The prevention treatment is essential in cesarean cases, considering the post partum complications. **Objective:** The overall aim of this study is creating the "ideal" physical therapy program that includes maintaining a good posture in the daily life activities, as well as preventing and/or treating edemas, mainly in the lower extremities. After the assesment of the post cesarean cases, the physical therapy program was strictly individualized. The physician and the physiotherapist monitorized the efficacy of the physical therapy procedures. **Material and methods:** The study group consisted in 20 post cesarean cases, from which only 3 cases accepted the individualized programs. The physical therapy intervention started right after surgery. After 3 weeks post cesarean the physical therapy treatment took place ambulatory. **Results:** The number of sessions varied depending on the patients condition and begun 3 months before the birth and continued 3 months after the childbirth with 3 weeks of physical exercise break in between. The decreased number of cases (3/20) demonstrates the low compliance of post cesarean childbirth cases, because of poor medical education and lack of information. The "ideal" physical therapy program aimed to inform and educate patients about the several types of breathing and physical exercises recomanded. **Conclusions:** The "ideal" physical therapy program for post cesarean childbirth cases does not exist, individualizing the program for each case shows the benefit of the study. All women after giving birth should follow "ideal" physical therapy program after surgery. It would be "ideal" if the department of Obstetrics and Gynecology would employ physiotherapists in the future.

Keywords: Cesarean, Childbirth, Physical therapy

ACROMIOCLAVICULAR JOINT INJURY

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Background: Acromioclavicular joint injury is a major form of joint ligament injuries. Is diagnosed after the ascension of the external extremity of the clavicle accompanied by instability in mild cases; or a deformation characteristic of a "stair step" accompanied by functional impotence in severe cases. It occurs after directly or indirectly trauma. Most often, this condition can be treated conservatively with kinetotherapy, treatment that fits between 7 and 21 days. **Objective:** It is intended to restore the joint stability in a conservatively way, trough kinetotherapy. **Material and methods:** The research was conducted in the county hospital Saint George, Covasna, between february 2017 and march 2017. The study comprised a total of 6 patients with acromioclavicular joint injury. Patients were grouped as three in two lots, case group and control group. Patients in case group were implemented a kinetotherapy program performed in regular sessions, while the patients from the control group were making low frequency. **Results:** Both groups of patients had an initial and final assessment. They wanted to be traked into the evolution of joint stability, muscular strength at both shoulders, symmetry and the level of pain tolerance. The end of the program demonstrates that patients from case group were evolving much faster than others in order to resume normal function of the shoulder, including symmetric physical appearance. **Conclusions:** In conclusion, kinetotherapeutic methods and means gives patients who have suffered trauma to the acromion joint a greater chance to recover work capacity and resume normal function of the shoulder.

Keywords: kinetotherapy, clavicle, joint

HIDROKINETOTHERAPY FOR AFTER DELIVERY WOMEN

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Background: Hidrokinetotherapy (HKT) is a large methodology used in practical medicine, prophylactic aim, therapeutic-recovery and rehabilitation in special case. Programs have short period objective and walking exercises like come and go or for improving the musculo-skeletal force and resistance. **Objective:** The reason of this theme is that to aknowledge the pregnant women's the importance of HKT and the objective of HKT are: resumption of normal breathing, restoring floor muscles pelviperineal and wellness component. **Material and methods:** Study group comprises 5 after delivery women who participate at the recovery activities of HKT in period 9.01.2017-25.02.2017 at a recovery center from Targu Mures. Based on a developed score this parameters were applied: before and after procedure. Questionnaires on which scoring was done was done voluntarily by subjects. **Results:** Collected date were statistically and after intial evaluation I scored a 3 from 5 points maximum and after final evaluation after HKT I scored maximum points.The decreased results of cases does not have statistical value,for this reason to increase the scientific value of the survery we intend to rise the number of cases. **Conclusions:** HKT was a efficient method for studied lot.HKT is not enough known by after delivery women. HKT represent "professional misa" worth exploited.

Keywords: Hidrokinetotherapy, after delivery women, study

INVESTIGATION OF PROPRIOCEPTIVE CONTROL LEVEL IN FEMALE VOLLEY-BALL PLAYERS.

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Background: Kinesthetic sense completes the individual psychomotor profile in relation to motor actions. Regarding the upper limb, we may say that the movement is not a simple mobilization, but an action performed with a well-defined purpose, the segments being moved, managed and coordinated under proprioceptive control. **Objective:** Our study investigates, through a specific test, assisted by a device, conducted in the Human

Movement Sciences Department of University of Medicine and Pharmacy of TîrguMureş, several individual profiles based on age, level of training (cadets, juniors and seniors) and hand dominance. The aim of test is to emphasize the proprioceptive coordination, kinesthesia, laterality and body schema representation, elements that play an important role in the further development of athlete's operant thinking. **Material and methods:** The test was applied on 31 subjects, aged 14-33, volley-ball female players from USC TîrguMures. Moreover, the subjects were divided in 3 subgroups. The test was conducted only under proprioceptive control, in the absence of any visual guidance or other disruptive ambient factors. **Results:** Subjects were tested individually. The first performed task was for the handwriting preference. The handwriting preference pretest consisted in writing their name, having the purpose of noticing the preferred hand. The correlations between registered parameters in left or right hand dominance of the subjects and the differences occurred by level of training and age, in relation to the movement of abduction and adduction, were analyzed. **Conclusions:** The first general conclusion which emerges from our investigation, such as an interpretation and analysis of recorded results, consists in: no significant differences occurred regarding the proprioceptive kinesthetic control between cadets □ juniors □ seniors, the proprioceptive kinesthetic control is better developed in the dominant upper limb.

Keywords: kinesthesia, proprioception, laterality, level of training

PROPHYLAXIS AND KINETOTHERAPEUTICAL TECHNIQUES AND METHODS WITH APPLICATION IN WOMEN VOLLEYBALL

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Background: Kinesiotherapy can be defined like a interface between doctor and socio-professional reintegration for a patient, by using different scientific principles and different types of therapies through movement, which have well-established objectives, to improve the proprioception in different articulation points, help to increase joint stability, flexibility, power and rezistence of muscles, even physical parameters, and finally the improving of coordonation in all these aspects, such as processes of daily physical activities to become a normality again, even with improved physical condition./ **Objective:** This study has the mission to prove the impact of carefully selected and adapted set of movements from differents categories of sports, in the way to prove the concept: "Forever young" in a perfect balance with: "Mens sana in corpora sano"./ **Material and methods:** The study designed by, follow the impact of traumatic injury problems in the 2015 and 2016 seasons, on a sample of 31 subjects, players legitimated at CSU Tîrgu Mureş, inside the National Center of Excellence in Volleyball. From the 31 subject, 10 players are cadets, 10 are juniors and 11 are players from the first division team. The prophylaxis program, used to prevent injuries, is one with the role in improving the major muscles groups, especially in case of volleyball players who perform a demanding physical effort./ **Results:** As results, we can see how many players from the whole team, cadets, juniors and the first division team, had injuries in this period, how many have not had any injuries, as well as the importance of the prophylaxis program./ **Conclusions:** In Planning, adapting and combining a set of specific movements from different sports categories, with global or segmental character, we can develop the optimization processes of the body parameters, increasing and maintaining the cardiovascular fitness and muscular facilitation techniques./

Keywords: kinetotherapy, effort capacity, volleyball, sport

NURSES AND MIDWIVES

MANAGEMENT OF A CHILD WITH TONSILLITIS

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Background: Pharyngo-tonsillitis is an inflammation of the lymphoid tissue of the Waldeyer ring. It is one of the most common diseases of children and has a number of causative agents and a wide spectrum of severity. **Objective:** Purpose of this study is to evaluate the epidemiological and clinical characteristics of this disease and to underline the importance of the correct management and prevention of the complications. **Material and methods:** We conducted a retrospective, descriptive study on a total of 54 children admitted with the diagnosis of tonsillitis to the Pediatric Clinic of County Hospital Targu Mures, between 01/01/2016 to 08/24/2016. **Results:** The children included in this study were aged between 7 months and 16 years old, with an average of 4.60+/-3.78 years old. 28 (51.9%) of patients are girls and 26 (48.1%) boys. 54.7% of the cases was admitted in the cold season. The main clinical signs and symptoms were: fever in 81.5%, dysphagia in 31.5%, cough in 44.4%, headache in 11.1%, rhinorrhea in 31.5% and lack of appetite in 35.2%. 7.4% had chronic, hypertrophic tonsillitis with airway obstruction. Many of them presented local or systemic complications: 22.4% of the children satellite lymphadenitis, mild or moderate exsiccosis at one from two patients, secondary dyspepsia 7-41%(at general population). There were no cases of suppurative complications, glomerulonephritis and acute rheumatic fever. Positive throat culture for group A Streptococcus was obtained in 2 cases, AST being positive in 5 cases. Antibiotic was necessary in almost all the cases from the total number of patients which was 54 children. **Conclusions:** Pharyngo-tonsillitis is a common diseases in childhood, with a peak incidence in cold season. Group A Streptococcus is the most common cause of bacterial pharyngitis in children and adolescents, with possible severe complications. The spread of this disease and the complications may be prevented with correct hygiene and management.

Keywords: tonsillitis, child, group A streptococcus

MANAGEMENT OF A CHILD WITH LARYNGITIS

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Background: Laryngitis is an inflammatory process of the larynx that causes your voice to become hoarse or raspy. In a some cases, the larynx can swell and cause breathing difficulties. **Objective:** The aim of this study is to evaluate the epidemiological, clinical and paraclinic characteristics of this disease and to underline the importance of prevention and correct management. **Material and methods:** We have done a retrospective study on a group of 105 children hospitalized in the Paediatrics Clinic of County Hospital Targu-Mures, between January 2014 and August 2016. **Results:** After the data has been processed we found: The mean age of the patients was 2.33 years, the sex ratio was 1.88 in favour to boys (65.38% boys and 34.62% girls). 54.81% were from the rural area while 45.19% from urban area. All patients were diagnosed with different form of laryngitis and a series of associated other diseases and disorders, like: pharyngitis, tonsillitis, rhino-pharyngitis, respiratory failure and iron deficiency, malnutrition. As medication was used in 55.42% of cases corticotherapy, nebulization with adrenaline and only in a few cases was used an antibiotic. **Conclusions:** Laryngitis is a very common disease that appears in childhood, affecting mostly boys. It is very important to prevent, early detection and initiation of correct management to prevent complications, like superinfections and respiratory failure.

Keywords: Laryngitis, child, epidemiology

SPHINCTER SAVING TECHNIQUES IN RECTAL CANCER SURGERY – MANUAL VERSUS MECHANICAL ANASTOMOSIS

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Background: The modern approach in rectal cancer considers as very important achieving a good quality of life for the patient. Therefore performing a sphincter saving procedure along with being oncological radical represents

now the standard in rectal cancer surgery. The modern mechanical suture devices try to offer a faster and supposed safer alternative to the hand sewn anastomosis, especially in low rectal resections. **Objective:** The aim is to analyze the postoperative results after different sphincter saving techniques used in rectal cancer surgery, comparing manual versus mechanical anastomosis. **Material and methods:** A retrospective study was conducted on a consecutive series of 217 patients, to whom a sphincter saving procedure was practiced for rectal cancer, in Surgery 1 Department of the Tirgu Mureş Emergency Clinical County Hospital, between January 2012 and December 2016. The postoperative results after different types of sphincter saving procedures were clinically and statistically analyzed. **Results:** From the 217 patients operated for rectal cancer using a sphincter saving technique, an anterior rectal resection was performed to 164 of them. That was followed by mechanical anastomosis in 89 cases and by a hand sewn anastomosis for 75 patients. We found no significant statistical difference in terms of postoperative outcome among the analyzed procedures, using a manual or a mechanical suturing technique. **Conclusions:** A sphincter saving technique has to represent one of the first options in rectal cancer surgery. The superiority of a mechanical over a hand sewn anastomosis remains still a subject of debate. Choosing the surgical technique depends mainly on the level and the local extent of the lesion and also on the preference of the surgeon and on the materials availability.

Keywords: rectal cancer, sphincter saving technique, manual anastomosis, mechanical anastomosis

PHARMACY

CLINICALLY RELEVANT INTERACTIONS BETWEEN ANTIDEPRESSANTS AND OTHER DRUGS

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Background: Antidepressants are used primarily to treat depression but also anxiety disorders and neuropathic pain. They are frequently used along with other medications but due to their pharmacokinetic and pharmacodynamical profile drug interactions may occur. **Objective:** The aim of the study was to assess which are the antidepressants that could influence the effectiveness of other drugs. **Material and methods:** We carried out an internet search regarding relevant interactions between different classes of antidepressants and other medications. **Results:** After reviewing the literature, we found various pharmacokinetic and pharmacodynamic interactions that could greatly affect pharmacotherapy. SSRIs, the most commonly used antidepressants, may interact with other classes of antidepressants and increase the risk of developing cardiac tachyarrhythmia (administered with tricycles or tetracyclic antidepressants), serotonin syndrome (with monoamine oxidase inhibitors) or increase the levels of other drugs leading to an increased effect, side effect or a possible overdose. **Conclusions:** Drug therapy should be individualized for each patient taking into account the physiological, pathological and drug therapy simultaneously administered, especially when it involves a chronic treatment.

Keywords: antidepressants, drug interactions, drug therapy, side effects

A PRELIMINARY STUDY OF SIMULTANEOUS CHIRAL SEPARATION OF AMLODIPINE AND INDAPAMIDE ENANTIOMERS USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

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Background: Fixed combination like amlodipine and indapamide existing on the pharmaceutical market have a high compliance among patients with high blood pressure due to the existing synergy between amlodipine, a calcium channel blocker of dihydropyridine type and indapamide, a thiazide-like diuretic. The development of new, rapid and efficient enantioseparation methods represents a permanent challenge in modern pharmaceutical analysis, taking in consideration the large number of active substances that presents at least one asymmetric carbon in their molecular structure. **Objective:** Our aim was to develop a single method for simultaneous separation of the two analytes: amlodipine and indapamide by high performance liquid chromatography using ovomucoid as chiral selector. **Material and methods:** The effects of the organic modifier under its elution properties, the buffer pHs, the column temperature and the injection volume were investigated. Analyses were performed on a chromatographic system Agilent HPLC 1100 series, equipped with quaternary pump and UV-VIS detector. We used a chiral column, Ultron ES OVM, 150x4.6mm (Shinwa Chemical Industries LTD, Agilent Technologies) with a particle size of 5 µm. Detection was accomplished at 240 nm using a mobile phase consisting of phosphate buffer, 20 mM KH₂PO₄ and an organic modifier (methanol, acetonitrile or ethanol) in various proportions. **Results:** Between the two molecules investigated and the chiral selector, ovomucoid, there is stereospecific interactions. The analytical results of the proposed method showed that optimal experimental conditions were established: a mobile phase consisting of 90% KH₂PO₄ 20 mM pH 5 and 10 % acetonitrile, 1 ml/min flow with an injection volume of 5 µl and an elution temperature of 20° C. **Conclusions:** The developed HPLC method can be used for our purpose, to separate the chiral mixture analyzed, in a single analysis, using ovomucoid as chiral selector, with a high resolution and selectivity ($R > 1.5$, $\alpha > 1.2$) in a less than 15 minutes analysis time.

Keywords: Amlodipine, Indapamide, HPLC, Ovomucoid

DANGEROUS INTERACTIONS COMBINING FOOD SUPPLEMENTS (DS) FOR WEIGHT LOSS WITH HYPOCALORIC DIETS

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Background: Dietary supplement is a product that is intended to supplement the diet which bears or contains one or more of the following ingredients: a vitamin, a mineral, an herb, an amino acid, a dietary substance. **Objective:** This work propose is to evaluate some possible biochemical interactions between restrictive diets-food supplements for loss weight. Risks for health refer to the following aspects DS from pharmacy or herbal pharmacy are under strict control of ministry of agriculture, forests and rural development and also to Ministry of health. On the other hand that ones from the internet could have a questionable quality and being 'natural' predispose to abuse and overdose. **Material and methods:** As methods and materials, Studies on specialty literature about main diets used, and also about the content in active ingredients of food supplements from Tg. Mures pharmaceutical market (pharmacy, herbal pharmacy, hypermarkets) **Results:** Restrictive diets in glucidic intake, moreover than that combined with active substances from DS such as caffeine, hydroxycitric acid, green tea extracts, L-carnitine, linoleic conjugated acid. A A negative effect is growing ketosis risks and also Ketoacidosis because of great lypolysis (activation of tissue lipase, fostering mithochondrial transport of Acyl CoA and fostering β -oxidation of fatty acids) and synthesis of ketones (based first of all on the deficiency of OxalAcetate in mitochondria. **Conclusions:** In association DS- hypocaloric diets it's very important to carry about the composition, the source of herbal plants, the administration method and in the end, every diet should start with the pharmacist advice.

Keywords: DS, food supplements, glucidic, intake

GENERAL ASPECTS OF COMMUNICATION WITH PATIENT EFFECTIVENESS IN ROMANIAN PHARMACIES

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Background: In pharmacy the process of communication between pharmacist and patient is an essential stage in the success of treatment. **Objective:** This study aims mainly to assess the efficiency of the communication process between the pharmacist and the patient from the patient point of view. **Material and methods:** Our study was carried by using the questionnaire method during the period of April □ May 2016. 689 patients were randomly selected after they received pharmaceutical counseling at their exit from the pharmacy. The statistical analysis was performed on GraphPad InStat 3.1. program. **Results:** The questionnaire consisted of identification details and 20 specific questions series focused on the efficiency of the communication process between pharmacist and patient. The majority of the patients were positioned in the 20-29 age category (25%) and women represent 61.83% of the total. The main reason of their visit to pharmacy was for medicines (83.17% of the answers) but 38.61% had no medical prescription (self-medication). 18.87% of the patients were not asked anything by pharmacy personnel, and 29.03% of the respondents were asked only 1-2 questions. Also, 25.14% of them had no information about medicine administration method, and 25.31% did not receive information regarding the dose/maximum dose for 24 hours. Many patients did not receive any notice of contraindications (54.63%), any information about common adverse reactions (63%), and concerning the proper food diets in connection to their drug regime/healthy lifestyle (75.4%). A lack of a professional relationship with the patient can be noticed: 50.94% of patients were not advised to return to the pharmacy. **Conclusions:** On base of our analysis we estimated that the general level of efficacy of communication with patient in Romanian pharmacy's reach only 63.85%. The pharmacy personnel current challenge should be focused towards counseling and transition to a personalized patient practice in accordance with his individual needs.

Keywords: communication, pharmacy, pharmacist, patient

HEMP (CANNABIS SATIVA L.) SHIVES LIKE AMENDMENTS IN SALINE SOILS

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Background: In order to ensure the protection of soil, as a mean of increasing soil resources and environmental protection, different methods and technologies of remediation were designed to neutralize or block the flow of pollutants and to obtain an efficient and proper protection for a desired quality of soil. **Objective:** The aim of this research was assessing the influence of hemp shives, like amendments, in saline soils planted with rape (*Brassica rapa* L.). **Material and methods:** The growth and development assessing of rape plants in saline soils was achieved through biometric measurements for elongation and gravimetric measurements for the amount of biomass synthesized. Also, it was followed determination of the concentration of assimilating pigment (chlorophyll a, b, total carotenoid pigments) by spectrophotometric techniques. **Results:** It was found that adding hemp shives in soils with low salinity stimulated elongation and germination processes for rape. In soil with high salinity adding hemp shives determine an increase of biomass accumulation in all vegetative organs, comparative with the same salt concentration where we added the amendments. **Conclusions:** Hemp shives can be recommended like natural amendments for soils with high salt concentration.

Keywords: rape, saline soils, bioremediation

COMPARISON OF TWO CHIRAL STATIONARY PHASES FOR THE ENANTIOSEPARATION OF AMLODIPINE AND PERINDOPRIL USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

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Background: Fixed combinations of drugs are designed to simplify the medication panel and improve the compliance to hypertension treatment. A well known combination is the one between a calcium channel blocker and an inhibitor of angiotensin enzyme converter. These molecules contain at least one chiral center in their structure and therefore developing new analytical methods for simultaneous detection of enantiomers would be beneficial. **Objective:** The aim of the present study was to show the results of several tests in order to determine which type of chiral selector is suitable for better separation. **Material and methods:** Separation was conducted on HPLC Agilent Series 1100 (Agilent Technologies, SUA) with UV detector. We used two types of chiral stationary phases: Ultron ES OVM 150x4.6mm, 5 μ m (Shinwa Industries, Agilent Technologies) and Phenomenex LUX Amylose-2, 150mmx4, 6mm, particule 5 μ m. The mobile phase consisted of n-hexane with or without diethylamine for LUX Amylose-2 and of phosphate buffer KH₂PO₄ and organic modifier for Ultron ES OVM. **Results:** Amlodipine and perindopril are substances with different structures, physical characters, therefore different chromatographic behavior; is difficult to achieve the chiral separation in a single analysis. The effects of organic modifier, the buffer pHs, the column temperature and the injection volume have been investigated considering separation resolution and selectivity. Stereoselectively results were observed by using a solution of phosphate buffer as aqueous phase, meanwhile ACN was the organic modifier. The optimum chromatographic conditions has been established: Ultron ES OVM as stationary phases, 90 % phosphate buffer KH₂PO₄ 20mM, 10% ACN, detection UV at 210 nm, 1 ml/min flow and analyte concentration 20 μ g/ml. **Conclusions:** Chiral selectors like ovomucoid and amylose have the ability to interact with different xenobiotics, like amlodipine and perindopril. In conclusion, due to this characteristics, ovomucoid assures retention of chemical compounds inside column, leading to separation.

Keywords: Amlodipine, Perindopril, Ovomuroid, Amylose

THE IMPORTANCE OF FORCED DEGRADATION STUDIES FOR DRUG IMPURITIES PROFILING BY HPLC. STUDY CASE

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Background: The forced degradation studies are designed as a powerful methodology to understand the chemical behaviour of drug in extreme conditions (pH, light, temperature, oxidative stress), in order to develop an HPLC method able to determine a full profile of drug impurities. **Objective:** The aim of the present study was to perform an up to date literature research regarding the importance of forced degradation studies in drugs control, considering two molecules with low stability, captopril and simvastatin. **Material and methods:** Literature research by using Web of Science, Pubmed and Google academic platforms, EMEA and FDA guides on stability testing and impurities profiling. **Results:** The protocol of forced degradation studies is slightly different from an analyte to another and it has to be conducted not understressing or overstressing conditions to avoid aberrant conclusions or experimental data which cannot be representative. The following criteria has to be taken into consideration for experimental protocol design: not more 10% degradation of the active pharmaceutical ingredients and the worst-case situation has to be designed. Simvastatin and captopril are under continuously investigation, including impurity profiling under forced degradation due to their chemical lability. It was proved that statins stability is strongly dependent upon pH, sun and UV light degradation. At least 10 new simvastatin impurities were found in the recent years under forced degradation conditions and captopril main degradation product is now possible to be directly measured in the final products. **Conclusions:** Model molecules such as simvastatin and captopril continue to be subjected to various study in order to find the best general protocol in forced degradation studies. **Acknowledgement:** the study was partially supported by the National Grant 107BG □ 2016, Profilarea cromatografică a impurităților înrudite chimic □ "soluții analitice" de tip spin-off, project code PN-III-P2-2.1-BG-2016-0115.

Keywords: simvastatin, captopril, forced degradation studies, HPLC

THE INFLUENCE OF AROMATASE INHIBITORS ON ANDROGEN DOPING

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Background: Aromatase inhibitors are indicated for the treatment of estrogen-dependent cancers in women without any formal indication in male pathology. As off-label drugs, they are used in some cases of male infertility, including the one resulting after using anabolic steroids. **Objective:** Evaluation of the reproduction function and behavior secondary to testosterone, letrozole and their combination. **Material and methods:** Naive adult male rats received saline solution, testosterone, letrozole or testosterone+letrozole and subjected gradually to physical effort (forced swimming). In-vitro (sperm analysis), in-vivo fertility (the number of offsprings born alive / treated male) and sexual behaviour was evaluated at the end of the experiment. **Results:** Testosterone administration induced oligospermia, asthenospermia, aggressive behavior, decreased libido (decreased interest for sexual responsive females) and decreased fertility (number of offspring). These side effects were attenuated by letrozole. **Conclusions:** Although letrozole has a toxic action on Leydig cells it also increases the level of LH and FSH, the overall effect being the sum of these, as reported by the literature. In combination with testosterone, letrozole mitigates its reproductive side effects (both androgenic and estrogenic).

Keywords: Testosterone, letrozole, male fertility

SUPPLEMENTS WITH ANTIOXIDANTS. DO THEY REALLY HAVE AN EFFECT?

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Background: Many dietary supplements contain substances that don't have a scientific proven antioxidant effect. **Objective:**

Evaluation of the efficacy, based on literature data, of several dietary supplements claiming an antioxidant effect. **Material and methods:** We conducted a study on 50 such products, in order to see if their efficacy can be proved. Our purpose was to check if the effect of the substances used in these products is scientifically proved and if the quantity of these substances is sufficient. Articles were searched in PubMed, MEDLINE and there were reviewed and analyzed. **Results:** We noticed that there are approximately 60 substances used as antioxidants, but not all of them have a scientifically proved effect. There are some tests that are used in order to prove that a substance has antioxidant effects, such as tests in vitro (ORAC, Photochem), ex-vivo, in-vivo, tests on animals or even humans. To start with, we organized the substances in classes, according to the tests that have been used to prove the antioxidant effect. The substances that have a guaranteed effect are the ones for which there is clinical data, substances as vitamin C, A, tocopherols, green tea, zinc, selenium. In the list of the antioxidants contained in the products tested, there are also manganese and copper, which have not been proved yet to have an antioxidant effect on humans during the in vivo tests. Substances that are in between these classes are also discussed. **Conclusions:** Even if many substances are proposed as antioxidants in dietary supplements, the efficacy has not been proved, therefore the use of such products is without beneficial effects or even associated with negative outcome.

Keywords: Antioxidant, tests on human, dietary supplements, scientific proven

IS ALKANE REVERSED PHASE SUITABLE FOR SIMULTANEOUS HPLC-UV/VIS SEPARATION OF HIGH HYDROPHILIC AND HIGH HYDROPHOBIC ANALYTES?

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Background: Reversed phase is the most common separation mechanism involved in HPLC-UV/VIS pharmaceutical analysis due to its well-known advantages. However, there are practical situations when its versatility is challenged such as simultaneous separation of analytes with very different polar character. **Objective:** The aim of the study was primarily to propose a background of the practical solutions published in the scientific literature on this topic taking in discussion two molecule models, glycolic acid and adapalene, two substances which could be found in topical preparations together or not with antibiotics for acne treatment. A preliminary study by applying a classical strategy for HPLC method development was performed. **Material and methods:** Different alkane-type reversed phases were tested, RP8, RP18, with different sizes for columns and particles of the stationary phase. The mobile phases consisted of acetonitrile and phosphate mixtures and the analytes were detected at 210 nm. Tetrabutylammonium hydroxide was used for ion pair separation. **Results:** The main scientific literature resources did not reveal any reversed HPLC method for simultaneous determination of the two analytes, only individual determinations were communicated. None of our attempts allowed glycolic acid separation far from dead retention time in the same run with adapalene which is strongly retained on column. Promising results were obtained with ion pair agent only for individual separation of glycolic acid. **Conclusions:** Simultaneous separation of the two analytes in the same run by using alkane stationary phases seems not being possible. **Acknowledgement:** the authors are kindly thanks to PhD student Stela Al Hussein for providing the reference substances.

Keywords: RP-HPLC, glycolic acid, adapalene

NEW DESIGN OF OLD ANTIBIOTICS FOCUSED ON DRUG-RESISTANT MYCOBACTERIUM TUBERCULOSIS

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Background: Tuberculosis has become resistant to the usual treatment (MDR-TB) and represents a huge threat for the current society. Nowadays MDR-TB pathology requires synthesis of new molecules in the fight against the resistant bacteria. **Objective:** The purpose of this study is to highlight new anti-tuberculosis molecules based on the structure of classical antibiotics as an alternative to the treatment of MDR-TB. **Material and methods:** The main tuberculostatic drugs (streptomycin, rifampicin) are sometimes inefficient in the treatment of Mycobacterium tuberculosis-resistant species modern therapy requiring the synthesis of new structurally related chemical compounds or obtaining new molecules by biosynthesis. **Results:** The discovery of new antibiotics such as rifalazil, rifametan, sutezolid, spectinomides, griselimycin, capuramycin, and pyridomycine, and the study of the

relationship between the chemical structure and biological activity, including mechanisms of action may lead to finding new effective MDR-TB treatment. **Conclusions:** Thus study emphasizes the effectiveness of new molecules against antibiotic resistant species in MDR-TB treatment which might become valuable therapeutic alternatives in the near future.

Keywords: antibiotic, antituberculosis, MDR-TB, drug discovery

OLANZAPINE INFLUENCE ON SEXUAL BEHAVIOR IN RATS

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Background: Antipsychotic drugs cause sexual dysfunction that can be explained in many ways. Hyperprolactinemia is the major cause of sexual dysfunction consecutive antipsychotic treatment, but olanzapine being a prolactin-sparing drug is expected not to influence libido and fertility. **Objective:** The study aims to assess how olanzapine affects the sexual behavior by using an animal model of white Wistar rats. **Material and methods:** Sexually naïve animals were divided into four groups: male control group, female control group, males that received olanzapine (4 mg/bw), females that received olanzapine (4 mg/bw). After 21 days of treatment, each male rat was relocated and allowed to copulate with two females for 24 h. Copulative and prospective behavior was pursued for 24 hours using an infrared camera. **Results:** Animals that received olanzapine showed little interest for opposite sex animals (in male rats lack of interest for females was noted and the number of observed lordosis in female rats was reduced). In addition, animals receiving olanzapine experienced an increased aggressiveness when they were allowed to copulate with control animals. **Conclusions:** Olanzapine administration induce sexual dysfunctions in rats counted as the number of mating attempts for male rats and the number of noted lordosis for female rats.

Keywords: olanzapine, rats, sexual behavior

POSTER

MANAGEMENT OF ASSOCIATED BACTERIAL INFECTIONS IN PATIENTS WITH CLOSTRIDIUM DIFFICILE COLITIS – CASE REPORT

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Background: Clostridium difficile colitis is currently one of the most common nosocomial infections, observed to persons who has been recently hospitalized and has received antibiotics (especially cephalosporines, fluoroquinolones, ampicillin/amoxicillin) within the previous 3 months. Treatment consists in administration of appropriate antibiotics (Metronidazole, Vancomycin, Fidaxomicin) and interruption/avoidance of other unnecessary antimicrobial therapy. **Objective:** The aim of this study is to evaluate the management of a concomitant bacterial infection in a patient with diabetes mellitus hospitalized for Clostridium difficile colitis. **Material and methods:** We present the case of a 76-year old female patient, with diabetes mellitus type 2 (with oral antidiabetic therapy) , rheumatoid arthritis (in chronic treatment with cortisone) , heart insufficiency, arterial hypertension, chronic ischemic heart disease, left leg amputation, with repeated episodes of urinary tract infections (UTI) and one of Clostridium difficile colitis in recent history , hospitalized in Clinical Infectious Diseases Hospital for fever, diarrhea, abdominal pains, vomiting, malaise, burning on urination. Laboratory tests highlights Clostridium difficile toxins A and B positive in stool, bacterial inflammatory syndrome, anemia, mild hyperglycemia, pronounced hypoproteinemia, urine culture positive with Klebsiella pneumonia. **Results:** Based on clinical and laboratory data are established the diagnoses: Clostridium difficile colitis □ relapse, urinary tract infection with Klebsiella. Treatment consisted in administration of oral Vancomycin 14 days for colitis, intravenous Colistin 7 days for UTI, transfusion for anemia, hydric and electrolytic rebalancing, antidiarrheal drugs. Evolution was slowly favorable, with gradual remission of fever, diarrhea, urinary symptoms and improving the general condition. **Conclusions:** Associated bacterial infections in a patient with Clostridium difficile colitis require concomitant treatment, with antibiotic chosen not to aggravate colitis, under rigorous medical supervision, taking into consideration all the patient's diseases.

Keywords: Clostridium difficile colitis, infections, management

THE INFLUENCE OF HYGIENE AND DIETARY FACTORS IN THE OCCURRENCE OF COMMUNICABLE DISEASES OF THE DIGESTIVE TRACK

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Background: Transmission is defined as the migration of the causative agent of disease, from source to the receiver. In digestive diseases, the transmission is done indirectly, by exogenous elements like water, food or dirty hands. **Objective:** The purpose of this study, was to follow if there is an association between hygienic, respectively dietary factors and the appearance of digestive diseases. **Material and methods:** We evaluated a total of 200 subjects, presenting symptoms of diarrhea, using a questionnaire , which included a series of questions related to socio-economic status and personal lifestyle. The data collected were than statistically evaluated. **Results:** From the total of 200 evaluated subjects, 51.5% are women and 48.5% men. 80.5% of them are from rural areas. Only 18.5% have higher education , 31% have inadequate diet and personal hygiene, and 22% do not have the necessary condition for a proper hygiene. **Conclusions:** The socio-economic, dietary and hygienic factors play an important role in causing digestive diseases. Both, male and female are equally affected, but the presence of precarious conditions and low level of education , represent major risk factors in communicable diseases of digestive track.

Keywords: Communicable diseases, Diarrhea, Epidemiological process

EFFECTS OF IMMERSIVE 3D VIRTUAL REALITY AND SMART DEVICES ON THE APPEARANCE OF SYNAESTHESIA, NEURO- PSYCHOLOGICAL DEVELOPMENT AND BEHAVIOR OF "I"GENERATION

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Background: Digital natives or Z-Generation are children and adolescents born after Millennials. Their world is "iEverything" with a lowercase "i". Most members of iGeneration do not remember a time before social media. Synaesthesia is an unusual experience, an involuntary sensation of a sensory modality in response to another. These neural correlations can be evoked by different stimuli (grapheme-color, sound-form, lexical-gustatory synaesthesia). For example: the frog croaked pink, "8" is sweet, sound C sharp is yellow- spicy. Members of iGeneration are affected by digital world and appearance of natural synaesthesia can be switched to an artificial one. **Objective:** The aim of this study is determining the incidence of synaesthesia types and the impact of smart devices and VR(virtual reality) on children. **Material and methods:** I realized a prospective study using 3 types of questionnaires and conversation with a target group (7-15 years old students). I also used a 3D VR headset, 3D simulation programs (SoundSelf, TrinusVR) and a test for checking synaesthesia based on Dr.David Eagleman's SynesthesiaBattery. The statistical analysis was executed with the android application "SPSS" and WPSExcel. **Results:** 37 (9%) of the 415 tested students are color-grapheme synesthete. 98% of them uses smart devices and social media every day, 68% of them does not meet their social media friends in real life. Appearance of artificial synaesthesia is highly affected by using VR-stimulation. **Conclusions:** iGeneration is involved into a digital evolution. Children's psychological neuro-cognitive development depends on using high-tech gadgets too- further study based on wireless registration of brainwave activity and synaesthesia in real-time. Incidence of synaesthesia can be increased by using VR and computer-based environment and the behavior of children will be also changed in different manners as well as their social relations. It is not known yet how children involved in this study will distinguish and estimate virtual reality and reality in the future.

Keywords: immersive VirtualReality,, grapheme-colour synaesthesia,, iGeneration,, child behavior

A RARE CASE OF RECURRENT URINARY TRACT INFECTIONS DUE TO COLOVESICAL FISTULA - THE ROLE OF ULTRASOUND

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Background: The presence of air in the urinary tract can be the consequence of a urinary fistula, which is an abnormal connection between the urinary tract and a nearby organ such as the vagina, the colon or the rectum. **Objective:** To describe the case of a patient in whom we found multiple hyperechogenic punctiform images in the urinary tract at the ultrasound (US) examination and to analyze the possible causes that could have lead to this situation in order to evaluate the therapeutic options. **Material and methods:** We examined a 62-year-old male patient with a long history of recurrent urinary tract infections admitted to the Internal Medicine Department. We performed abdominal US using a Philips HD11 with a 3.5 MHz abdominal transducer and we noticed the diffuse presence of hyperechogenic images with comet-tail artifact suggesting the presence of air in the urinary tract. **Results:** There were two possibilities that could explain the presence of the air in the urinary tract: either infections with anaerobic bacteria or the presence of a urinary fistula. As our patient had a history of colon tumor and fecaluria without severe symptoms such as high fever and shivering that could have raised the suspicion of an emphysematous pyelonephritis, we concluded that the cause of the air was a colorectal fistula after surgery. We sent our patient to the surgery department where colostomy was performed in an initial phase then a single stage bowel resection with primary anastomosis in the second phase. **Conclusions:** The US examination was effective in determining this rare cause of the multiple urinary tract infections in men. We propose the routine use of US in the examination of recurrent urinary tract infections as it is cost-effective, repetitive and noninvasive.

Keywords: ultrasound examination, urinary fistula, urinary tract infections

A COMPLEX CASE OF SPINA BIFIDA WITH MYELOMENINGOCELE: WHAT SHOULD WE DO?

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Background: Spina bifida is a treatable spinal cord malformation. It consists in a defect of the neural tube and vertebral column that needs an adapted therapeutic approach, which is always surgical. Depending on the importance of this defect and the associated lesions, we distinguish more types of spina bifida, from which the myelomeningocele is the most complex malformation, located especially in the lumbosacral region. **Objective:** Our aim was to describe the case of a newborn boy with spina bifida with cystic myelomeningocele in whom we found evidence of an open neural tube defect at the antenatal ultrasound (US) examination, to analyze the possible causes that could have lead to this situation and to evaluate the possible complications. **Material and methods:** We examined a 29-year-old pregnant woman referred to our Obstetrics and Gynecology Department when she was in the third trimester of pregnancy. She never took folic acid containing supplements. **Results:** We noticed the presence of a malformation (sac) localized at the lumbosacral region of the vertebral column of the fetus in the posterior longitudinal and posterior transaxial planes. The US examination of the fetus was highly suggestive for the diagnostic of spina bifida with myelomeningocele. Considering these, we performed caesarean section with an enlarged Pfannenstiel incision in the 40th pregnancy week and we referred the newborn to the Neurosurgery Department where he was subjected to the surgical closure of the spinal cord defect. **Conclusions:** The US examination was effective in diagnosing the spina bifida with myelomeningocele in this case. Moreover, the enlarged Pfannenstiel incision performed during the caesarean section prevented the dilaceration of the sac with neonatal sepsis and the immediate neurosurgical intervention improved the newborn's quality of life, improving the prognostic.

Keywords: spina bifida, myelomeningocele, antenatal ultrasound, Pfannenstiel incision

CAUSES OF INFANTILE MORTALITY IN TIRGU MURES EMERGENCY COUNTY HOSPITAL

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Background: Romania occupies the first place among European countries with the biggest infantile mortality (IM). **Objective:** Our purpose was to evaluate the rate of (IM) in Tîrgu Mures Emergency County Hospital and to evaluate the tanatogen mechanism. **Material and methods:** We evaluated all the registries and autopsies records from Targu Mures Emergency County Hospital Pathology Laboratory dated between 01.01.2012 □ 12.31.2016. Children under 6 years old were included and alive new borns. **Results:** After applying the exclusion criteria, 136 cases were included in our study. The average age was 7 months, sex distribution revealed that most of the cases were among boys (56%). The most frequent causes of death were malformations (63%) the rest of the cases had non-malformative causes. 63% of the malformations were multiple (plurimalformations) and the majority had a cardiac origin, especially atrial septal defect (ASD), ventricular septal defect (VSD) and persistent arterial duct (PAD). **Conclusions:** The number of deaths in this age category are increasing each year, with a maximum value in 2016, and in boys. Although prenatal screening is performed and new surgical techniques in cardiac malformations are discovered each year, IM, especially caused by cardiac malformations is still the main cause of death in this age category.

Keywords: infantile, mortality, malformation, autopsy

PROVIDING DAILY REQUIREMENTS IN DIFFERENT TYPES OF RESTRICTIVE DIETS AND INTERMITTENTLY FASTING

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Background: Adopting a restrictive diet in today's society can be determined by several factors: on the one hand

dietary restrictions imposed by various chronic diseases (hypertension, diabetes, hypercholesterolemia, obesity, etc.), but also for personal reasons (aesthetic clichés imposed by media or matters of faith). **Objective:** Highlighting the compensatory mechanisms of the body on energy demand, keeping a normal glycemic level in conditions of hypoglycemic intake and sustaining muscle effort of different intensities. **Material and methods:** Analysis of data from the literature on different types of restrictive diets (hypoglycemic associated with high dietary intake of proteins or high-fat diet, fasting intermittently or black fasting). **Results:** A number 36 of articles were selected and analyzed using search keywords: "low carb diet weight loss" and 63 articles by using "fasting intermittently". **Conclusions:** Disruptive metabolic factors (fasting intermittently, hypoglycemic diet) decrease basal metabolic rate so nutritional counseling is extremely important especially in periods between fasting cycle when restricted trophines are reintroduced.

Keywords: diet, fasting, hypoglycemic

THE EVALUATION OF ALVARADO SCORE (AS) IN ACUTE APPENDICITIS

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Background: Various scoring systems have been developed to help improving the diagnosis of acute appendicitis (AP) in order to eliminate unnecessary appendicectomies. Along with imaging methods (eco,CT) there are clinical and laboratory ones, one of them being AS which is based on three symptoms, three signs, and two laboratory findings. **Objective:** The purpose of this study is to evaluate the correlation of AS with intraoperative diagnosis, imaging and histopathology, appreciating the efficiency of the score in diagnosis of AP. **Material and methods:** We performed a retrospective study on 159 patients hospitalized in the 1st Surgical Department of Emergency County Hospital Tîrgu Mureş between 2015-2016. Data were taken from the hospital records from observation sheets. We analyzed the tests: imaging (eco,CT), signs, laboratory and histopathological results. Data obtained were then analyzed statistically with Spearman Rank Correlation test. **Results:** From a total of 159 appendectomies, distribution of forms of appendicitis in pathological terms was approximated as: Catarrhal appendicitis: 45 patients (28,30%); Phlegmonous appendicitis: 51 patients (32,07%); Gangrenosum appendicitis: 60 patients (37,73%) resulting thus a higher number in gangrenosum appendicitis. AS value was obtained between 3-10 points to an average value of 6,88 points. Histopathology was quantified on a scale from 1-8 (1- normal appendix; 8-gangrenous appendix with perforation). Using this quantification I manage to identify a not so strong correlation but statistically significant between AS and histopathology results ($S_r = 0,25$; confidence interval: 0,1-0,4(95%); $p=0,0011$). **Conclusions:** AS is a clinical-paraclinical score in medical practice that helps us to be able to detect those forms of AP requiring surgery.

Keywords: Acute appendicitis, Alvarado score, Histopathology

HETEROAGGRESSION IN THE CASUISTRY OF THE INSTITUTE OF FORENSIC MEDICINE OF TÂRGU MUREŞ

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Background: Violence is an established part of human existence, ranging from verbal to passive to active physical acts of inflicting harm. Violence is a cause for social insecurity and disability especially among the working group ages. Victims require time spent under medical care and away from work, which may impact economic growth. **Objective:** The purpose of this study is to analyze the data provided by the forensic certificates in the Institute of Forensic Medicine of Târgu Mureş and obtain a statistical view of the effects of heteroaggression. **Material and methods:** This is a retrospective study that includes data about victims of heteroaggression that have been examined at the Institute of Forensic Medicine of Târgu Mureş between July 2015-June 2016. All the data was acquired from 890 forensic certificates. **Results:** More than twice as many men have been victims of heteroaggression when comparing to women. Female victims are about equally rural and urban residents. Most male victims are rural residents. The average age for male victims is 36. Female victims average age is 41.48, 5% of female victims have been attacked by a relative, urban residents (54,19%) making for more of this percentage than the rural female victims. 76% of victims had been under medical care between 1 and 10 days. 13,59% of victims have suffered some form of fracture, 85% of these male and 15% female. 93,37% of injuries were a result of

blunt force trauma. 6,29% of victims have been hospitalized, 53,57% being male rural residents. None of the hospitalized victims have been given medical care for more than 90 days. **Conclusions:** Males are more likely to be victims of heteroaggression than women. A high percentage of victims are of working age. Most injuries have been committed by blunt force trauma. No victim had been under medical care for more than 90 days. Almost half of the female victims have been attacked by someone related to them.

Keywords: heteroaggression, trauma, violence, attack

OCCURRENCE AND ANTIBIOTIC RESISTANCE OF STAPHYLOCOCCUS AUREUS STRAINS IN MURES COUNTY EMERGENCY CLINICAL HOSPITAL

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Background: Staphylococcus aureus is an important human pathogen with ability to cause a wide range of illnesses. There is a constant need to monitor their resistance patterns. **Objective:** The purpose of this study was to analyze the frequency of occurrence of Staphylococcus aureus and its resistance to various antibiotics during a six month period. **Material and methods:** Data recorded in the electronic database of the microbiology laboratory were used. One isolate per patient was included in the analysis. Repeat isolates were considered only when they had a different resistance phenotype. Colonizers were excluded from the study. Susceptibility results to various antibiotics were also analyzed. **Results:** During the period between 1st of June and 30th of November 2016 a total of 399 S. aureus isolates were recovered. After excluding duplicates and colonizers, 208 strains remained for further analyses. The strains were cultured from purulent specimens (n=123, 59%), lower respiratory tract secretions (n=41, 19%), blood (n=29, 13%) and other specimens. The samples from which S. aureus was detected were collected at surgical departments (n=72, 34%), medical wards (n=54, 25%) ICU (n=47, 22%) and at various other departments. Out of 208 strains 112 (54%, 49-60%, 95% CI) were MRSA (methicillin-resistant S. aureus). Regarding non-beta-lactam antibiotics, the highest resistance rate was detected against tetracyclines (64%), erythromycin (61%) and clindamycin (58%). No resistance has been detected against linezolid and vancomycin. Low rate of resistance was found against trimethoprim-sulfamethoxazol (4%). **Conclusions:** There was a high rate of methicillin-resistance among S. aureus strains. Most active antibiotics against S. aureus were trimethoprim-sulfamethoxazol, linezolid and vancomycin.

Keywords: antibiotic treatment, methicillin-resistance, healthcare associated infections

DIFFICULTIES IN DIAGNOSING ATAXIA IN A PEDIATRIC CASE

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Background: Ataxia is a partial loss in muscle control during voluntary movements, like walking, running, writing or picking up objects. **Objective:** Our paper presents the diagnostic challenges in a case of ataxia in toddler. **Material and methods:** We studied the case of 1 year and 2 months old female patient that was admitted at Pediatric Department for gait abnormality. **Results:** Our patient was born by caesarean section (for breech presentation), due date, after monitored physiological pregnancy, with normal physical development (9.2 kg), with a mild psychomotor retardation (she only started walking at 1 year and 2 months old). Medical history: low-grade fever interpreted as an acute upper respiratory tract infection, treated for 6 days with antibiotics (3rd generation cephalosporins as a suspension); 2 weeks previously the patient was seen by a pediatrician for diarrheic, greenish stools, abdominal pain and flatulence, labeled as dysbiosis after enteroviral infection and antibiotherapy and treated only symptomatically. Meanwhile, she became more irritable, with abdominal distension, inability to walk, weakness and drowsiness. At presentation, she was pale, afebrile, cardiorespiratory stable, with prominent forehead, abdominal distention and no meningeal irritation signs. The neurological consult suspected flaccid paralysis and infectious encephalitis; this is why the patient was hospitalized in Infectious Diseases Department, where the encephalitis was ruled out, as well as the Rotavirus infection, so the patient was transferred back to Pediatric Department. The blood test showed very high levels (more than 20 fold normal) of anti-transglutaminase antibodies, so the certain diagnosis was celiac crisis. **Conclusions:** The diagnosis of celiac disease was delayed because of recent antibiotherapy in a case of a toddler with normal physical development, without anemia or any other known diseases. The celiac crisis was credibly precipitated by the high gluten intake from antidiarrheal foods

like biscuits or bread.

Keywords: ataxia, toddler, celiac disease

ENDOVASCULAR TREATMENT IN A CASE OF STANFORD TYPE B AORTIC DISSECTION

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Background: Aortic dissection is a rare, life threatening disorder characterized by an intimal tear which causes blood entering the intima-media space and separate the layers of aortic wall. The Stanford system classifies the aortic dissection in 2 types: type A which involves the ascending aorta with the possibility to extend the arch and descending aorta, and type B which involves only the descending aorta. **Objective:** The purpose of this paper is to present an endovascular repairing method of a Stanford type B aortic dissection. **Material and methods:** We studied a case of a 60 years old patient without any medical history, who went to emergency department of Ludus Hospital acusing severe chest pain and dyspnoea. He had very high blood pressure 250/130mmHg and bradycardia 35b/min, also his ECG showed ST elevation. The physicians suspected acute myocardial infarction and the patient was sent to our department. After we analysed his CT scan, we discovered an intimal flap and double lumen of descendent thoracic aorta which continued with a double lumen of abdominal aorta, right common iliac artery and right extern iliac artery, the certain diagnosis was aortic dissection. We stabilized his blood pressure and planned him on to an endovascular repairing procedure of thoracic and abdominal aorta. **Results:** After a minimally invasive procedure the endovascular protesis was correctly placed in descending thoracic aorta and abdominal aorta with mention that a part of the emergence of the left subclavicular artery was covered by the protesis □ because of the position of dissection, so the patient must pay attention on his left arm all his life. The patient is healthy nowadays, without any complaints. **Conclusions:** The endovascular therapy in acute aortic dissection is a life-saving method and it can be the best way to repair the aortic wall.

Keywords: chest pain, aortic dissection, endovascular treatment

STIGMATIZATION ENCOUNTERED IN MOTHERS OF CHILDREN WITH NEURODEVELOPMENTAL DISORDERS AND THE ETHICS OF DOCTOR-PARENT RELATIONSHIP

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Background: Numerous studies show that stigma associated with various diseases and disadvantages of stigmatization represents a major source of stress in life. Learning the disability diagnosis of children has long been considered a crisis for parents, their first experience in taking care of these children contributing to reduce stigma. **Objective:** This paper represents a qualitative study, the main objective is to analyse the phenomenon of stigma experienced by mothers of children that are diagnosed with neurodevelopmental disorders. Also the ethical aspects of doctor □ parent relationship were followed, diagnostics and informing the parents about the child's disability, with possible impact on the occurrence of the feeling of stigma **Material and methods:** There have been studied 56 mothers of children that were diagnosed with a neurodevelopmental disorder (autism spectrum disorder, intellectual disability, etc.) and participated in recovery therapies in a neuropsychomotric rehabilitation centre in Timisoara between October and November 2016. All mothers completed a questionnaire designed to identify some issues about the feelings of stigma felt by mothers in relation to the child's disability: child acceptance by family and group of friends; difficulty in establishing social relationships and social integration of mothers; child access to education, health care; personal feelings of stigma felt by the mother (inferiority, shame, isolation) in relation to the child's disability. **Results:** Mothers have reported numerous instances where they felt the phenomenon of stigma, some situations being related to social isolation, most of them (50%) being in relation to child's integration in school and community. **Conclusions:** The doctor - parent relationship and the attitude of medical staff working in the field of children with disabilities has a paramount importance in long-term supporting of the child and family to help reducing the feelings of stigma felt by them.

Keywords: stigma, parents, child, neurodevelopmental disabilities

SURGICAL TREATMENT OF ACUTE OBSTRUCTIVE LEFT COLON CANCER

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Background: Colorectal cancer(CRC) is the most common malignant tumore of the gastrointestinal tract presenting itself as bowel obstruction in 40% of patients . But there is a controversy regarding surgical treatment in emergency cases of obstructive cancer of the colon and rectum , including operation Hartmann 1, resection with primary anastomosis and colostomy . **Objective:** The aim of this retrospective study is to compare the surgical procedures performed in emergency (operation Hartmann 1, resection with primary anastomosis ,colostomy) used in cases of acute mechanical obstruction on colorectal cancer , as well as to track the complication (anastomotic leakage , wound infection) and mortality occurred when performing this procedures . **Material and methods:** I performed a study on a grup of 79 patients with an emergency surgical procedure for obstructive left colon cancer between 2009-2014. The study analyzed factors as: gender, duration of surgical procedure , tumor's location ,tumor's diameter ,postoperative complication (anastomotic leakage and wound infection) , death rate . All data were obtained from observation sheets of the patients . **Results:** Of the 79 patients , resection with primary anastomosis was performed in 32 patients (41,7%), surgical operation Hartmann 1 was performed in 38 patients (48,1%) and colostomy in 3 patients (3,7%).Mortality occurred in 2 patients(5,2%) interms of Hartmann 1 operation , 8 patients(25%) in case of resection with primary anastomosis and as for colostomy mortality rate was 0 . Regarding postoperative complication 5 patients(15,6%) experienced anastomotic leakage and 6(18,7%) wound infection after surgical resection with primary anastomosis , while after Hartmann 1 procedure wound infection occurred in 4 patients(10,5%). **Conclusions:** Resection with primary anastomosis is a safe procedure for obstructive colorectal cancer in emergency in selected cases .

Keywords: Obstructive colorectal cancer, Surgical treatment, Postoperative complication

PLATELET MORPHOLOGY ALTERATIONS VERSUS DECREASED IN VITRO PLATELET AGGREGATION IN DIABETIC RATS: THE POSSIBLE INHIBITORY EFFECT OF DIABETIC PLASMA

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Background: Vascular alterations represent the leading cause of morbidity and mortality in patients with diabetes mellitus (DM). Recent studies suggested that platelet dysfunction may be related to this matter. However, data regarding platelet morphology and function are contentious. **Objective:** We aimed to evaluate platelet morphology (PM) and in vitro platelet aggregation (PA) in diabetic rats. **Material and methods:** Twenty-five 11-week-old Wistar rats were assigned to four groups: young controls (YC; n=6), young diabetics (YD; n=8), old controls (OC; n=6), and old diabetics (OD; n=5). For YC and YD, blood samples were collected at 15 weeks of age and platelet parameters (PP) were determined. For OC and OD, PP and PA tests in response to ADP (9.7 µM), arachidonic acid (AA; 60 µM), and protease-activated receptor-4 (442 µM) were evaluated at 38 weeks of age. **Results:** Plateletcrit (PCT) was significantly lower in both YD and OD compared to age-matched controls (both p≤ 0.02). Platelet count (PLT) was also lower in YD compared to YC (p=0.01); a similar trend was observed in OD (p=0.06). Mean platelet volume, platelet distribution width, and platelet-large cell ratio were numerically, although not statistically significant, higher in YD and OD than in non-diabetic controls. Interestingly, ADP- and AA-induced PA were lower in OD compared to OC rats (both p≤ 0.03). **Conclusions:** Consistent with previous data, diabetic rats displayed lower PLT and PCT and a trend towards increased morphological PP, suggesting a high platelet turnover rate and hyperreactive platelets in this setting. However, when tested in whole blood samples, diabetic platelets displayed lower aggregability than the non-diabetic platelets. Taken together, these results suggest that antiplatelet factors may be present in the diabetic plasma, counterbalancing the intrinsic platelet hyperreactivity. **Acknowledgements:** This work was supported by the University of Medicine and Pharmacy of Tîrgu Mureş Research Grant number 16/11.12.2013 and Boehringer Ingelheim GmbH.v

Keywords: diabetes mellitus, streptozotocin-rat, platelets

ASSESSMENT OF WORK-RELATED MUSCLE-SKELETAL DISORDERS CHARACTERISTICS IN ROMANIA, 2015

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Background: Muscle-skeletal disorders (MSD) represents a major health problem among working population, impacting their work ability and well-being, regardless of age. The main symptoms are represented by pain, paresthesia, sensation of heaviness and fatigue. Occupational health and hygiene specialist are involved in the management of these diseases. **Objective:** This study aimed to assess the MSD profile, from different workplaces, in Romania 2015. **Material and methods:** Statistics were based on a questionnaire focused on the exposure to different risk factors at work completed by managers, also data collected by County Public Health Departments in hospitals and clinics all over the country. **Results:** The number of MSD cases registered in 2015 was 339 and most injuries were reported in Hunedoara, Olt and Mures. Top three activity fields with most cases reported were: energy, transport and telecommunications and construction. Regarding the occupations involved, the prevalence rate of MSD was the highest among locksmith workers, miners and drivers. From all MSD's, disc hernias and discopathies were the most frequent reported, in 89% of total MSD cases, followed by arthrosis with 63%. Work activities that led directly to MSD were lifting of heavy loads (275 cases, 68.92%), tiring/vicious positions (142 cases, 35.58%) and prolonged standing (76 cases, 19.04%). **Conclusions:** Our results showed that in 2015, MSD accounted for an important share in the context of work-related disorders. We emphasize the fact that promoting the appropriate protection measures, along with a proper management of activities at the workplaces and the education of employers, are of great importance and essential in order to reduce the frequency and gravity of work-related disorders.

Keywords: work-related diseases, muscle-skeletal disorders, Romania, hygiene specialist

INTRAMURAL HEMATOMA FOLLOWING ACUTE MYOCARDIAL INFARCTION – CASE REPORT

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Background: Intramural hematoma of the left ventricle following an acute myocardial infarction is an extremely rare complication, on which very few cases have been reported so far. **Objective:** We aim to present the case of a 55 year old female, with known arterial hypertension, type II diabetes and chronic kidney disease. The patient had suffered an acute postero-inferior myocardial infarction (MI) 3 months prior to presentation, when she had received conservative treatment due to the delayed presentation (over 12 h from onset of symptoms). **Material and methods:** The patient was admitted in the Cardiology Clinic of the Emergency Clinical County Hospital for residual angina pectoris following the MI. The computed tomography coronary angiography (CCTA) revealed a left ventricular aneurysm, a disruption at the inferior level of the left ventricular wall and the presence of an intramural diverticulum of 43/46 mm. Furthermore, the patient presented an abnormal origin of the coronary arteries: the left anterior descendant (LAD) and the circumflex artery (CxA) were branching off from the right coronary artery (RCA), in a benign conformation. **Results:** Due to the results of the CCTA examination, with the presence of the intramural hematoma, the patient should undergo cardiovascular surgical repair. While hospitalized, the patient suffers an ischemic stroke; therefore she was transferred to the neurology ward for proper treatment. The surgical treatment was delayed until the neurological status and the chronic kidney disease will be improved. **Conclusions:** Intramural hematoma of the left ventricle is a very rare complication following acute myocardial infarction and it requires emergency cardiovascular surgery. Due to several comorbidities, the surgery implies a higher risk, which led to delaying the intervention.

Keywords: Myocardial infarction, Intramural hematoma, CT coronary angiography

CURIOUS CASE OF ATYPIC ALAGILLE SYNDROME – CASE REPORT

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Background: Alagille syndrome is an autosomal dominant disorder associated with biliary duct hypoplasia, skeletal, cardiac and ocular malformations as well as characteristic facial features. It is determined by JAG1 mutation in chromosome 20 and it affects 1 in 100.000 newborns. **Objective:** Our aim is to report a case of suspicion of Alagille syndrome with atypic presentation treated with success in a conservative manner. **Material and methods:** A 17-year old female patient first presented in our clinic accusing intense itchiness and dark urine emission. She was known with chronic HBV and HDV infection, pulmonary artery stenosis and systolic murmur for 10 years. Clinical examination revealed poor linear growth, dysmorphic facial features, dry and thickened skin with scratching lesions and hepatomegaly. Investigations showed intense cholestatic syndrome with moderate hepatic necrosis and diffuse hepatic steatosis. Due to her family denying the biopsy, we established a pathogenic and symptomatic treatment which consisted of Ursafalk and vitamins K,D,E. Consequently, she presented in our clinic accusing blurred vision and nose bleeding. She was diagnosed with keratoconus in both eyes, and needed a keratoplasty intervention for the right eye due to a corneal ulcer. ORL consult revealed anterior septal perforation and Emofix was recommended for the bleeding. **Results:** The evolution of the patient under conservative treatment for the cholestatic syndrome is favourable. The ocular pathology requires changing of the therapeutic contact lenses every 4 weeks as well as local treatment. **Conclusions:** The presence of hepatic symptoms, cardiac abnormalities and specific facial characteristics cannot confirm the diagnosis of Alagille syndrome without a liver biopsy that shows biliary duct hypoplasia or a genetic test that shows JAG1 mutation. Nonetheless, it is worth mentioning the fact that ocular pathology in Alagille syndrome is rarely associated and nasal pathology is yet to be described.

Keywords: Alagille syndrome, corneal ulcer, anterior septal perforation, biliary duct hypoplasia

CT FINDINGS IN A 9-YEAR-OLD BOY WITH DEEP VENOUS THROMBOSIS OF LOWER EXTREMITY

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Background: A congenitally absent Inferior Vena Cava (IVC) is a rare anomaly that is recognized to be associated with idiopathic Deep Venous Thrombosis (DVT), particularly in the young. It may not be apparent until later in life due to symptoms such as: edema, leg pain, warmth or erythema. **Objective:** To describe a case about a 9-year-old boy with deep venous thrombosis of lower extremity but reduced symptomatology, which was surprisingly caused by a congenital absence of IVC, found on CT-scan. **Material and methods:** A 9-year-old male patient was transferred in the Pediatric Department after a laparoscopic cholecystectomy, because of a persistent pain in the right lumbar region, inguinal area, irradiating in the right thigh. During clinical examination we found bilateral palpable peripheral pulse and asymmetric lower limbs with a 2 cm difference (right leg had 75 cm, left leg had 73 cm). Kidney pathology and deep venous thrombosis were suspected, so we further performed an abdominal ultrasound, venous Doppler ultrasound exam, blood tests targeting thrombophilia and an angiography CT-scan for abdomen and pelvis. The examination has included the non enhanced phase, followed by intravenous contrast administration with bolus tracking technique, with arterial and venous phase. **Results:** CT-scan revealed agenesis and thrombosis of IVC (only the suprahepatic segment were visible with absent lower segments), enlarged azygos vein, collateral veins draining in lumbar veins, thrombosis of portal vein and right renal vein, asymmetric nephrography due to edema and lower enhancement of the right kidney, thrombosis of common iliac veins. Proximal right femoral vein thrombosis was found on Doppler ultrasound. Abdominal ultrasound showed hyperechoic structure of right kidney due to thrombotic vein. **Conclusions:** An important cause of idiopathic DVT with restricted symptomatology as in this case, is the congenital absence of IVC that can be easily diagnosed using angiography CT-scan, venous Doppler ultrasound and abdominal ultrasound.

Keywords: agenesis of IVC, deep venous thrombosis, hyperechoic kidney, angiography CT-scan

CHRONIC KIDNEY DISEASE AND PRIMARY HYPERPARATHYROIDISM - AN UNUSUAL ASSOCIATION?

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Background: In Chronic Kidney Disease (CKD) stages IV-V, a secondary hyperparathyroidism (SHPT) usually occurs, due to phospho-calcic disturbances. However, in some cases of early CKD stages primary hyperparathyroidism (PHPT) can be detected. **Objective:** To describe a case of parathyroid adenoma, in which renal disturbances have been discovered first, and to establish the steps for a final diagnosis. **Material and methods:** A 55-years-old male has been examined in the Nephrology Department for recently discovered, elevated levels of serum creatinine and urea. e-GFR calculated with CKD-EPI formula was 44 ml/min/1,73 mp. Patient history reveals hypertension, hyperkalemia and no other personal or familial renal pathology. On clinical examination no relevant findings have been noticed. We further performed laboratory tests for kidney function and parathyroid hormone level, ultrasound examination of the kidneys and parathyroid glands, plain reno-vesical X-ray, endocrinology investigation: 24-hour urine specimen for calcium and phosphate. **Results:** Relevant serum levels were: Creatinine 1.82 mg/dl, Urea 74 mg/dl, Potassium 6.14 mmol/L, Calcium 9.7 mg/dl, Phosphate 2.5 mg/dl, PTH 150.6 pg/ml. Kidney ultrasound revealed bilateral hyperechoic punctiform lesions in the parenchyma suggesting calcifications, cortical cysts (largest with a length of 3 cm, in the left kidney), hyperechoic medulla. Cervical region ultrasound revealed a focal lesion posterior to the right thyroid lobe. The lesion was homogenous, had a diameter of 2 cm, suggestive for a parathyroid adenoma. Final diagnosis was: Parathyroid adenoma. Primary HPT. Nephrocalcinosis. CKD stage 3. Hypertension grade 2. Patient was further monitored in the nephrology and endocrinology department. **Conclusions:** An important association of renal and endocrine pathologies was found in an asymptomatic patient and a diagnostic and therapeutic plan has been established.

Keywords: kidney, hyperparathyroidism, nephrocalcinosis, adenoma

BRIDGE TO TRANSPLANTATION: THE BENEFITS OF LVAD FOR HEART FAILURE

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Background: The left ventricle assist devices(LVADs) are miniaturized implantable pumps that offer circulatory support. The first LVAD was implanted by Dr. Liotta and Dr. Crawford in 1963, nowadays the technological advancement in the field of implantable circulatory support systems allows our patients to go home with an LVAD. **Objective:** Our main goal is to emphasize the fact that LVADs should be used as a bridge to transplantation(BTT) or destination therapy for patients with heart failure(HF) which is unresponsive to maximal medical therapy. **Material and methods:** We present the case of a 45 years old patient, who was diagnosed in his teens with obstructive hypertrophic cardiomyopathy that progressed to dilated cardiomyopathy. Therefore, the left chambers of the heart were dilated and a severely diminished global ejection fraction of only 20-25% was present. Hence our patient's quality of life was extremely affected as he was a class 4 NYHA HF. In January 2015 the patient was the first person who underwent a LVAD implantation procedure in Romania. In this case the device assisted therapy was used as a BTT, the patient being ineligible for a heart transplant due to high pulmonary vascular resistance. The patient remained on the device for 393 days prior to transplantation. **Results:** During this time frame the patient's hemodynamics have improved, but he also suffered significant complications, such as infections and neurological events. Even so, the team managed to bridge him to transplantation. **Conclusions:** It must be taken into account that the number of patients with end-stage HF outnumbers by far the number of available donor hearts, so the LVADs have been continuously developed to offer a viable option for these patients and for those who are ineligible for transplant. With these devices we can increase the life expectancy for these patients by bridging them over a variable period of time to heart transplantation.

Keywords: Left ventricle assist device, circulatory support, bridge to transplantation, luBCvT

MUSCULOSKELETAL INVOLVEMENT IN MARFAN SYNDROME AND REHABILITATION – A CASE REPORT

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Background: Marfan Syndrome is a genetic, inherited, connective, single gene malformation (FBN1 mutation) characterized mainly by cardiovascular involvement, ocular and skeleton symptoms. It has no race or geographical predilection. **Objective:** We followed the musculoskeletal rehabilitation of a diagnosed case as Marfan Syndrome in order to look at the improvement of quality of life. **Material and methods:** A women aged 48, diagnosed six years ago with Marfan Syndrome is followed twice a year in the Rheumatology Clinic of Emergency County Hospital, in order to improve her quality of life. The main symptoms, not as expected, are the musculoskeletal (scoliosis and kyphosis) and ocular ones (ectopia lentis, myopia), not the cardiovascular involvement (dilatation or/and dissection of descending aorta, dilatation of the pulmonary artery, mitral valve prolaps). The patient is on anti-high blood pressure treatment and physical therapy. At every admission she was complaining about low back pain with mixed involvement (mechanical and inflammatory) with no results on medication. **Results:** One year ago she presented with positive thumb sign, scoliosis > 200, kyphosis, diminished extension elbows (<1700), mid-systolic click and no compliance with physiotherapy. Due to the clinical presentation, the Boston corset was prescribed. After 6 months she presented for her biannual evaluation with more than 5 points less on her pain numbered analogue scale (from 10 to 5). **Conclusions:** Adequate application of physical rehabilitation improved the quality of life of a patient diagnosed with Marfan Syndrome.

Keywords: Marfan syndrom, musculoskeletal, physiotherapy

INGUINAL TYPE 1 AMYAND HERNIA CASE-PRESENTATION

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Background: Since 1735 when Claudius Amyand successfully performed an inguinal hernia repair with the vermiform appendix in hernia sack this particular form of hernias has been classified by Losanoff and Basson in 4 types. **Objective:** We present a clinical case of Amyand hernia which is not included in this classification: a sliding inguinal hernia with caecum and vermiform appendix in the sack. In our opinion this type may extend Losanoff and Basson classification. **Material and methods:** We present a 52 years old male admitted in the First Surgical Clinic of Tîrgu-Mureş Emergency County Hospital with a right external oblique inguinal hernia. Intraoperatively an Amyand hernia was discovered that benefited from a Lichtenstein abdominoplasty following herniolaparotomy and appendectomy. **Results:** Post-operated evolution was favorable without complication **Conclusions:** This type of Amyand hernia change both aspects: the classical classification and the surgical approach.

Keywords: Amyand hernia, Sliding Hernia, Type 5

WRONG PATH IN ACUTE SURGICAL ABDOMEN

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Background: Acute surgical abdomen represents a pluriethiological syndrome with common clinical features. Frequently the tardive diagnosis leads to severe complications. **Objective:** In this study we give a special attention to the situation when patients "benefit" from a treatment before physical examination. **Material and methods:** We present data from the literature which confirm our hypothesis enhancing the drugs which must be stopped or avoided in acute surgical abdomen suspicions. **Results:** Clinical examination is the first choice in this affection and it is to be mandatory done prior to the administration of drugs. **Conclusions:** Patients with abdominal symptoms must first be examined and only after a surgical acute abdomen has been excluded are they to be given symptomatic drugs.

Keywords: acute surgical abdomen, symptomatic medication, clinical examination

DIFFICULTIES IN DIAGNOSIS OF NOCTURNAL DYSPNEA IN A HEMODYALISED PATIENT

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Background: In chronic hemodialysed patients, dyspnea can be a common feature. Its causes can be multiple and the final diagnosis can be difficult. Many clinical investigations must be performed in order to rule out other causes of dyspnea. **Objective:** To emphasize the importance of clinical examination and investigations in order to obtain the right diagnosis in a patient with multiple comorbidities due to chronic kidney failure. **Material and methods:** We present a case of a 50 year old man hemodialysed since 2 years. The patient was also known with coronary artery disease (Right Coronary stenosis 30%, intermediary artery stenosis 50%, Left Coronary stenosis 50%), COPD stage II/III, hypertension grade 2, pulmonary fibrosis, cardiomyopathy with heart failure NYHA class II and secondary anemia treated with stimulating agents. Patient presented a sudden onset of nocturnal dyspnea after a respiratory tract infection which was diagnosed as pneumonia and treated with antibiotics. Because of delayed resolution of the dyspnea, more than a respiratory infection was suspected. Clinical examination revealed only few pulmonary crackles and more investigation were performed. The most important were echocardiography and thoracic ultrasonography (THUS). **Results:** Echocardiography revealed the same cardiac changes known before. THUS revealed more than three B-lines in each pulmonary area examined, consisted with over-hydration of the lung as an imbalance between air and fluids. After that, intensive diuretic treatment was prescribed in the days between dialytic sessions and the symptoms improved rapidly. **Conclusions:** Performing easy and accessible ultrasound examinations, we could establish the right diagnosis in a patient with multiple comorbidities.

Keywords: dyspnea, hemodialysis, ultrasound

AN UNIQUE APPROACH OF CORALIFORM RADIOLUCENT KIDNEY STONE

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Background: Kidney stones requires the presence of calculi in the renal parenchyma, with an incidence of 5% in women and 12% in men, most commonly between 30 and 60 years. The etiopathogenesis of urolithiasis stands for the following theories: the theory of crystallization, the matrix theory, the nuclear precipitation theory and the urinary crystallization inhibition theory. The most common are calcium oxalate calculi but it also depends on the metabolic disturbances of the patient, the presence or absence of associated urinary tract infection. Radiopaque calculi incidence is significantly higher than the radiolucent calculi, which requires a distinct diagnosis approach. **Objective:** We report one rare case of coraliform radiolucent kidney stone of uric acid of 4.6 cm diameter, which was remarkably treated with an endoscopic procedure instead of the classical open approach usually used in such cases. **Material and methods:** A 48 years old male, known with high blood pressure and ischemic cardiomyopathy was hospitalized for specialized urological treatment of a kidney stone in the right renal parenchyma. Positive diagnosis was supported by renal ultrasound and CT examination, which described a coraliform stone of 4.6 cm with an associated posterior shadow. An endoscopic procedure -NLP- was performed instead of the classical open surgery -nephrolithotomy -that would have involved higher intraoperative risks and more difficult postoperative recovery. **Results:** The patient underwent only one session of percutaneous nephrolithotomy of 50 minutes with a successful removal of the stone. The day after surgery, the percutaneous nephrostomy was also removed, with a favorable evolution and a diuresis of 1300 ml per day. The patient was discharged with a total remission of the symptoms. **Conclusions:** The particularity of the case is the unique success of endoscopic surgery for a very large stone, with a minimalization of postoperative recovery time. It has also opened a new urological perspective for such cases.

Keywords: radiolucent urolithiasis, percutaneous nephrolithotomy, coraliform

PRINCIPLES OF PHYSIOTHERAPY REHABILITATION OF BURN SCARS OF THE HAND

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Background: All thermal injuries eventually develop post-burn scars with different degrees of invalidity. The fibrotic proliferation of the scar tissue requires early treatment and rehabilitation by several therapeutical procedures. **Objective:** Scar physical treatment means the use of specific agents (silicone gels and foils, compression garments, elastic bandages, splinting and elevation, adequate controlled ROM and especially long term massage). **Material and methods:** The most part of burn scars develop usually after DPT and FT requiring grafting; the scar tissue transforms into scar bands,contracture or hypertrophic scars that compromise the normal function of the limbs. From all the procedures listed above deep massage and assisted ROM are more reliable and easy to follow up. Patients presented in this paper suffered flame burns and a combination between scald and chemical burn of forearm and hand. Deep massage and assisted exercises (passive-active movements) began soon after skin grafting when all lesions are completely healed, lasting for at least six to eight months, even one year. **Results:** In our protocol, deep massage precedes controlled exercises because this method contributes to the re-orientation of the new collagen fibres developing in the scar process. Deep massage is always performed along with the scar bands and contractures and is always followed by other movements perpendicularly to the skin tension lines (Langer-Kreisl), all these allowing a normal distribution of the new collagen.This deep massage is performed for at least 30-40 minutes, followed by passive-active exercises for 1 hour. The skin surface must be very well lubricated with fat ointment (usually petrolatum ointment). **Conclusions:** Prevention of burn scar contractures with different degrees of invalidity is of paramount importance and has to be performed to every burn patient.

Keywords: Burn scar, Burn contracture, Deep massage, Assisted ROM

REBIRTH OF A CHILD IN THE CARDIOVASCULAR SURGERY OPERATING ROOM

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Background: Heart transplant represents the ultimate therapy for patients with end-stage heart failure. Heart transplant is also a feasible choice for pediatric patients diagnosed with cardiomyopathies or congenital heart defects. In Romania the first pediatric heart transplant was performed in November 1999, in Targu Mures. **Objective:** We propose to present a case of pediatric heart transplant in an 11 years old girl with a spectacular evolution. **Material and methods:** We report a heart transplant in a child known with dilatative cardiomyopathy and atrial septal defect since 2011. Despite her regular admissions in the Pediatric Cardiology department and her multi-drug daily therapy, her condition worsened gradually. 5 years later the patient presents end-stage heart failure, NYHA IV functional classification congestive heart failure, 1st degree atrio-ventricular block, reversed atrial septal defect shunt, mitral regurgitation, secondary pulmonary hypertension and respiratory failure, conditions which determined admission to the ICU,necessitating oro-tracheal intubation and assisted mechanical ventilation. With time her general status degraded gradually, presenting 2 resuscitated cardiac arrests, necessitating advanced and continuous care. A heart appeared available, in August 2nd and using an orthotopic bicaval technique the transplant procedure was performed during a 5 hours long surgery. **Results:** The transplant surgery was a success, with a brisk recovery and no major complications. The patient's clinical state improved, the child being discharged, the NYHA IV cutting back to NYHA II.The patient evolution is the expected one at 6 months after the surgical procedure, with adequate social integration and satisfactory life quality. **Conclusions:** Our case underlines the importance of organ transplant as a therapeutic option. Heart transplant in children represents a suitable therapy, in this case the patient's only chance.

Keywords: heart, transplant, pediatric, surgery

PREGNANCY ASSOCIATED BREAST CANCER – CASE REPORT

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Background: Pregnancy associated breast cancers (PABCs) are the second most pregnancy related malignancy, with cervical cancer being first. PABCs are cancers diagnosed during pregnancy or within one year of delivery. Their incidence has been increasing over the years and the prevalence is expected to continue to rise due to delayed age of the mother. The management of the patient is challenging because we have to give optimal treatment to the mother to maximize the chances of survival, while minimising the risks of harm to the fetus. These cancers are associated with poor prognosis and advanced stage, likely secondary to a late diagnosis. **Objective:** To underline the importance of early diagnosis, the role of a good therapeutical strategy and the impact over the mother and the fetus. **Material and methods:** We present a case of a 33-year-old woman (gravid 1, para 1) at 9 weeks of pregnancy who presented with left bloody nipple discharge for about 2 weeks without pain or other associated symptoms. She had no family history of breast or ovarian cancer. She went through a 10 years treatment with birth control pills and during the pregnancy she followed a hormonal therapy for the pregnancy. Ultrasound, color Doppler examination and Strain elastography showed up multiple hyperechogenic foci, which represent intraductal calcifications in the left upper-outer quadrant associated with moderat vascularity and rigid areas. Mamography and breast MRI was not performed due to gestation's age (first trimester). **Results:** The ultrasound guided biopsy was performed and the result was: ductal carcinoma in situ. The therapeutic strategy was surgery - left mastectomy, due to the wide extension of the breast lesion and had favorable maternal and fetal outcomes. **Conclusions:** Knowledge of PABCs is essential to select the appropriate imaging workup and intervention in order to avoid any delays in diagnosis and therapeutic management.

Keywords: Pregnancy associated breast cancer, Ultrasound, Strain elastography, Doppler examination

UTILITY OF THE OMENTUM IN THE RECONSTRUCTION OF A COMPLEX LOWER LIMB WOUND: A CASE REPORT

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Background: Omental free tissue transfer is a versatile reconstructive option. Since the beginning of the last century, studies have proven that the omentum is a unique, physiologically dynamic tissue with immense therapeutic potential and exceptional versatility. **Objective:** Our aim is to present a case of a complex lower limb wound, treated using the omental free tissue transfer technique and the advantages of this approach. **Material and methods:** A 40 year old woman presented with pain, swelling and erythema of the lower right limb. Ultrasonography revealed permeable veins and inguinal adenopathy. The patient was known and kept under surgical treatment and observation for almost a year, with the diagnosis of posttraumatic wound of the posterior compartment of the lower right limb acquired in 2000 after a carbon monoxide intoxication having associated lymphedema and a hematoma. She went through 3 surgeries and vacuum therapy during this year, all unsuccessful, with recurrent infections and with poor long-term prognosis regarding the future viability of the limb. That is because the surgeries led to a large defect, following the extensive debridement of the necrotized tissue. Besides, the bacteriological examination of the wound was positive for MRSA. Due to all this, we decided for an omental free-tissue transfer. Omentum was transferred and revascularised on the right internal saphenous vein and the right superficial femoral artery lateralized with the left internal saphenous vein. After a month we performed a skin grafting on the top of the omentum. **Results:** The surgery was successful, with expected recovery and no complications. A post reconstruction angiotomography was performed, showing good results. **Conclusions:** This is a useful procedure, especially when it comes to young patients, in which case the possible amputation of the limb in the future can interfere with the quality of life.

Keywords: limb, omentum, reconstruction, wound

ENZYMATIC DEBRIDEMENT OF BURNS AND SCALDS - CASE SERIES

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Background: Early removal of all unviable is the first important step of any adequate local care of burns and scalds, in order to promote and enhance the best wound healing process. This procedure usually known as wound debridement, can be performed by sharp excision, by different mechanical methods or enzymatically (by proteolytic enzymes extracted from different bacteria or plants). **Objective:** Nexobrid is a bromelain based proteolytic enzyme mixture extracted from the stem of the pineapple plant. In contrast to traditional conservative methods of debridement which require a long period of application (days, weeks) to achieve their effect, enzymatic debridement can remove the eschar after a mere 4 hours of application, without harming viable tissue. **Material and methods:** We had the opportunity to receive 40 doses of 5g Nexobrid (on behalf of Mediound as free medical samples) which we have used for the enzymatic debridement of several burns and scalds in 14 patients admitted in The Burn Centre of Targu Mures between April and October 2016. Nexobrid has been applied following the Mediound protocol . TBSA of the burn wounds ranged between 2% and 25% and the time of application of Nexobrid extended between 24 hours to 3-4 days from the moment of injury (with a maximum of 7 days for one of the cases). Patients also benefitted from PUR foam dressings, which enhance natural burn eschar removal, granulation and early epithelialization, as is the local protocol of the clinic. **Results:** All patients treated by this method presented no need for skin grafting after debridement, every case healing by spontaneous epithelialization. Two cases have been unfortunately lost due to other previous diseases such as cardiac or renal failure. **Conclusions:** Compared to sharp debridement, enzymatic debridement is faster, less aggressive and requires no blood transfusion, no special surgical equipment and no special surgical skills.

Keywords: enzymatic debridement, burn, scald, epithelialization

ANGIOMATOID FIBROUS HISTIOCYTOMA – CASE REPORT

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Background: Angiomatoid fibrous histiocytoma (AFH), is a rare soft tissue neoplasm, occurring mostly in the superficial extremities of children and young adults. It was first described in 1979 by Enzinger as angiomatoid malignant fibrous histiocytoma; than renamed as angiomatoid fibrous histiocytoma due to its slow evolution, low metastasis potential (less 1%) and general good prognosis. Histologically, it is characterized by the multinodular spindle fibrohistiocytic cells proliferation, pseudo-angiomatoid spaces, thickened fibrous pseudo-capsule and pericapsular lymphoplasmacytic infiltrate. Clinically and radiologically the tumor is often mistaken for hematoma or hemangioma. **Objective:** The aim of this study is to present a new case and provide a general management overview of the Angiomatoid fibrous histiocytoma. **Material and methods:** This is a case of a 10 years old male patient, admitted to Pediatric and Orthopedic Surgery Clinic of the Tîrgu Mureş Emergency Clinical County Hospital, presenting a painful and hyperchromatic tumor formation of dimensions 7/12 cm, adherent to the deep planes of the left inferior groin area accompanied by left inguinal lymphadenopathy. The laboratory results relieved anemia, leukocytosis and thrombocytosis. The intervention consisted in a complete tumor excision. **Results:** The postoperative short term evolution was complication-free and the histopathological examination revealed angiomatoid fibrous histiocytoma. **Conclusions:** Due to the difficult pre-operative diagnosis, surgeons must take into consideration the possibility of AFH in case of cystic hemorrhagic-like mass of soft tissue in young patients, conferring the adequate approach necessary for this tumor, and continuing with periodically accurate follow-up of the patient due to the local recurrence rate of 2-11%. According to its features conservative surgical treatment is primarily indicated, associated with chemotherapy or radiotherapy as second intention.

Keywords: Angiomatoid fibrous histiocytoma, Soft tissue neoplasm, Histopathological examination

THE RISK PROFILE FOR METHEMOGLOBINEMIA ON ROMANIAN INFANTS

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Background: Infant methemoglobinemia is a common disease in some rural areas in Romania. Exposure of infants to nitrates from water together with the absence of breastfeeding can lead to severe cases, including death. **Objective:** This study aimed to assess the risk profile for acute infantile methemoglobinemia induced by high levels of nitrates in the fountain water of romanian rural areas, in the absence of breastfeeding. **Material and methods:** Data was based on a descriptive epidemiological investigation led by the National Institute of Public Health, starting from cases of infants hospitalized with the diagnosis of Acute Intoxication with nitrates, in Romania. **Results:** The incidence of this disease for the age group 0-1 years old was 33.45 % □□□□ which highlights an increased number of cases of poisoning with nitrates from water. Age distribution demonstrated the highest rate of intoxication in infants under one month, the mean age of children with methemoglobinemia being 3.47 ± 3.15 months. Gender distribution showed no significant differences ($p=0.27$). 62.1 % of females presented mild forms ($p=0.12$), while 65% of males presented severe clinical forms. 70% of children with severe clinical forms were younger than 6 months ($p=0.09$) and 4 cases were fatal. The sources of intoxication were individual underground water, as the main source of water. **Conclusions:** In Romania, there is a decreasing trend in the number of cases of methemoglobinemia in the last years, however the incidence was high in 2015, more than 60 cases. Health education, public information campaigns and prompt intervention are the means of preventing this disease.

Keywords: methemoglobinemia, nitrates, infants, water

WEIGHT CHALLENGE: AORTIC COARCTATION IN LOW WEIGHT NEWBORN

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Background: Coarctation of the aorta is a relatively common defect that accounts for 5-8% of the congenital heart defects. CoA may be defined as a constricted aortic segment localised in the thoracic aorta, distal to the origin of the left subclavian artery. Therefore, the left ventricle is significantly afterloaded, which will determine an increased wall stress and compulsory ventricular hypertrophy. Among preterm infants with congenital heart defects, aortic coarctation has an incidence of 20%. **Objective:** We relate the challenges of the surgical repair for a preterm low-weight newborn with coarctation of the aorta. **Material and methods:** We present the case of a premature baby, born at the gestational age of 29 weeks, with a weight at birth of 1100g, diagnosed with coarctation of aorta and having a ductal dependent systemic circulation, maintained with PGE2, who underwent surgery at the weight of 1690g. **Results:** The area of coarctation was removed and termino-terminal anastomosis was performed under heparin protection, with a clampage time of 22 minutes, without ulterior neurological and metabolic disorders. The postoperative evolution was favorable, the infant was extubated on the 8th postoperative day and he will be discharged home after reaching a weight greater than 2,5 kg with followup in pediatric cardiology clinic. The ecography taken brought out a gradient less than 15 mmHg. **Conclusions:** The preterm newborn is a special clinical entity, due to the multiorganic immaturity. The quality of the medical activity must be in concordance with the good coordination and cohesion between the medical and surgical specialities involved: neonatology, anaesthesia and intensive care, cardiac surgery.

Keywords: Coarctation of the aorta, preterm infant, low-birth weight, congenital heart defect

CHALLENGES AND DIFFICULTIES IN THE MANAGEMENT OF A CROHN'S DISEASE COMPLICATED CASE

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Background: Management of Crohn's disease (CD) is challenging, especially in countries where previously it was

uncommon. In children, disease presentation and course are more severe than in adults. Deep remission (with mucosal and transmural healing) represents the major therapeutic goal. **Objective:** We diagnosed a 15 year 5 month old male with severe Crohn's pancolitis and malnutrition (Z score: - 4.2). He had been misdiagnosed with ulcerative colitis, 14 months before, in another hospital and treated with only low dose of Mesalazine. **Material and methods:** We used exclusive enteral nutrition (EEN), antibiotics and intravenous Prednisolone, with no improvement. He developed a perianal fistula and Infiximab (IFX) was started. Clinical and biological remissions were obtained after 1 week, mucosal healing after 6 weeks and transmural healing after 8 weeks. However, fistula persisted, complicated with trans-sphincterian (horseshoe) abscess, requiring repeated antibiotics, surgeries and seton placements. After 1 year of deep remission, weight loss and terminal ileitis were detected. Loss of response to IFX was considered, but checking blood levels was not available at that time. EEN was started for 8 weeks, with marked improvement. The course was later complicated by a Clostridium difficile infection, cured with Metronidazole. Four months later, escalation therapy was approved (IFX every 6 weeks). Despite clinical remission, ileocolonic inflammation progressed. IFX trough level was undetectable, with high anti-IFX antibodies. **Results:** He was switched to Adalimumab (ADA) and transferred to an Adult Gastroenterology Clinic. His condition worsened (severe clinical relapse and marked malnutrition), despite 6 months of ADA. Escalation of ADA therapy is currently proposed. **Conclusions:** Possibly associated with the long delay in diagnosis, the management of this patient was very difficult, requiring complex medical and surgical approaches, while his quality of life was severely affected. Absence of sustained response to the only two biologics approved for CD puts into question his prognosis.

Keywords: Crohn disease, children, infliximab, loss of response

EARLY DIAGNOSIS OF A CAVERNOUS TRANSFORMATION OF THE PORTAL VEIN

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Background: Cavernous transformation of the portal vein develops after thrombosis of the portal vein and subsequent formation of collateral vessels that bypass the obstacle. Intra-abdominal infection and neonatal sepsis needing umbilical veins catheterization are the most common causes of the portal vein thrombosis. The collateral vessels are not able to handle the blood flow leading to portal hypertension. **Objective:** We present the case of a three month old boy, born at 31 weeks with an Apgar score of 4/6/7 and weighing 990 g. He presented important perinatal pathology including severe acute respiratory failure due to surfactant deficiency, important anemia which required erythrocyte mass transfusion and umbilical catheterization until day 6. He was discharged on day 53 and readmitted after suffering a severe case of apnea. **Material and methods:** During his stay in the Intensive Care Unit, he was diagnosed with sepsis with E. Coli due to a urinary infection, pancytopenia, apnea episodes, severe anemia, ascites and upper gastrointestinal hemorrhage. He was treated with Meropenem, Targocid, Octagam, Albumin, diuretics, PPIs and transfusions with prothrombin complex concentrates and erythrocyte mass transfusion. **Results:** The patient was transferred to the pediatric unit presenting increased transaminases, hyperbilirubinemia, hepatosplenomegaly, but being stable. Portal vein thrombosis and collateral venous circulation at the hepatic hilum was found during the abdominal ultrasound. On discharge, the jaundice persisted without signs of respiratory failure and a good levels of the liver enzymes. The ultrasound was repeated and showed a cavernous transformation of the portal vein, with portal vein hypertension (splenomegaly, thrombocytopenia) which will need further monitoring. **Conclusions:** Portal cavernoma is a complication that could worsen the prognostic of premature babies so ultrasound monitoring is needed during the next months. Proper diagnosis and prevention of the portal hypertension complications (thrombocytopenia, variceal bleeding) is essential in the treatment of these patients. If the complications appear, surgery will be needed.

Keywords: portal cavernoma, ultrasound monitoring, sepsis, children

SUPRACONDYLAR PSEUDARTHROSIS AFTER SUPRA-INTRACONDYLAR FEMORAL FRACTURE-CASE REPORT

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Background: Fractures involving the distal extremity of the femur, located in the distal femoral epiphysis, metaphysis and the lower portion of the femoral diaphysis are often comminuted and represent a challenge for the orthopedic surgeon. They occur mostly at young people who have suffered high energy injuries or at old people with poor bone quality, after a direct impact or most frequently due to an indirect mechanism. If distal femur fractures also affect the knee joint, it can easily lead to limb shortening, misalignment, joint stiffness and pseudarthrosis.

Objective: To present a rare case of right supracondylar-intracondylar femoral comminuted fracture, associated with a right escoriaged calf plague at an 65 years old female, complicated with supracondylar pseudarthrosis-

Material and methods: The patient admitted to emergency 8 months ago was diagnosed based on radiological investigations and clinical aspects with comminuted supracondylar-intracondylar right femoral fracture, associated with an escoriated right calf plague. Three days after admission, open reduction and osteosynthesis with DCS system were performed under radiological control. Postoperative evolution was favorable, the patient was discharged 10 days after surgery under thrombolytic treatment. Eight months after this first surgery, the patient returns with painful symptoms, limping, unstable walking. Rx investigations in two incidences revealed supracondylar pseudarthrosis and rupture of the osteosynthesis plate. A second surgery was performed, two clips and blocked plate with screws based osteosynthesis have stabilised the fracture and resolved the pseudarthrosis.

Results: Postoperative radiographic control confirm the anatomical reduction of the fracture and the stability of osteosynthesis. The anterior cortical bone defect was filled with bone graft and thrombolytic medication was also administered, with an optimal postoperative evolution. **Conclusions:** Although distal femoral fractures appear ten times less frequent than proximal femoral fractures, an optimal therapeutic attitude ensure a proper life quality.

Keywords: distal femoral fracture, pseudarthrosis, supracondylar

ACUTE PANCREATITIS WITH PARTICULAR EVOLUTION IN AN ELDERLY PATIENT – CASE REPORT

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Background: Acute pancreatitis is a disease which involves local evolutive tissue destruction with systemic inflammatory response. It is characterised by a very unpredictable clinical course. **Objective:** We present a patient with a particular clinical course of acute pancreatitis. **Material and methods:** We report a 77 years old male patient with multiple comorbidities (hypertension with secondary cardiomyopathy, multiple drug allergies, hypoacusis) who has developed signs of acute surgical abdomen (nausea, intense abdominal pain, upper abdomen muscular contracture, lack of transit). Laboratory and imaging examinations (blood amylase levels of 26000 U/l) and CT scan (important pancreatic edema) supported the diagnosis of acute pancreatitis. The ultrasound examination showed the presence of biliary sludge and small stones. The patient presented also an important leukocytosis (28000/mm³) without other obvious signs of infection. Treatment consisted in reequilibration, antibiotics, antispasmodics, antisecretory, analgetics and LMWH. After clinical improvement and normalization of the blood amylase levels, a laparoscopic cholecystectomy was performed to avoid the recurrence of the disease (after 1 month). **Results:** The evolution was characterised by a slow decrease of the blood amylase and leukocytes levels and development of hepatic and renal dysfunction, but eventually favourable. The CT scan performed at 1 month after the onset of the acute pancreatitis showed a persistent necrosis in the pancreatic head with no indication for surgery. **Conclusions:** Acute pancreatitis has a very unpredictable clinical evolution. There is no strict correlation between the clinical signs, laboratory values and imaging evaluation of the pancreas.

Keywords: pancreatitis, necrosis, small stones, unpredictable

THE RELATIONSHIP BETWEEN THE LEVEL OF GLYCATED HEMOGLOBIN AND MICROVASCULAR COMPLICATIONS IN ELDERS WITH DIABETES MELLITUS TYPE II

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Background: Hyperglycemia, hypercholesterolemia and high blood pressure are linked with increased prevalence of cardiovascular complications in elders. In the STENO-2 study that included 160 patients with diabetes mellitus type 2 and microalbuminuria, was established that patients with HbA1C \leq 6,5% and blood pressure under 130/80 mmHg had reduced the death risk with 20 % and cardiovascular mortality with 12,5%. **Objective:** We aimed to establish the level of correlation between glycated hemoglobin (HbA1c) and cardiovascular complications (diabetic retinopathy, diabetic nephropathy and cerebral vascular disease). **Material and methods:** We did a retrospective study on 110 patients with diabetes mellitus type 2 admitted in the Hospital of the Ministry of Health from August 2015 to April 2016. All the data were collected from medical documentation. One of the inclusion criteria was the level of HbA1C \geq 6,5%. **Results:** We found a nonparametric distribution. The level of biserial correlation between the HbA1c and the prevalence of diabetic nephropathy was low ($r=0.2$, p **Conclusions:** We confirm the existence of the correlation between the microvascular complications and the level of HbA1c. That's why is important to monitor lipid and glycemic profiles and pay attention on informing the patients about diagnosis, dose adjustment and glycemic control.

Keywords: glycated hemoglobin (HbA1c), retinopathy, nephropathy, cardiovascular complications

ALCAPA SYNDROME. SURGICAL CORRECTION AT THE AGE OF 6 MONTHS - CASE REPORT

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Background: Anomalous Left Coronary Artery arising from the Pulmonary Artery (ALCAPA syndrome or White-Garland syndrome) is a rare congenital anomaly (0,25-0,5% of all congenital heart disease) in which the left coronary artery branches off the pulmonary artery instead of the aortic sinus. In terms of pathophysiology, the territory under the left coronary, which emerges from the pulmonary artery with a low oxygen saturation, is continuously supposed to infarction. **Objective:** An early discovery of the ALCAPA syndrome is absolutely bound with greater chances of reducing myocardial damaging through surgical correction. **Material and methods:** A six months old boy, being known from the age of 5 months with ALCAPA syndrome, severe mitral insufficiency and coronary artery fistula with an ejection fraction of 30% which is quite unlikely to be enough for a growing child. Through a cardiac catheterization he was diagnosed with the ALCAPA syndrome three weeks before he got into our hospital. The patient was not gaining weight as he was supposed to, considering his age and his physical abilities were strongly affected by the illness as well as his growth. **Results:** The 6 months old boy benefits of a surgical correction: re-implantation of the left coronary branch into the aorta with a COR-Matrix flap and ligation of the PDA in extracorporeal circulation. The postsurgical evolution was a long one, due to the severe left ventricle dysfunction, necessitating different inotropic therapy, with a slight improvement regarding the global contractility. His weight curve has slightly improved and we are looking forward for a favorable evolution. **Conclusions:** It seems like in the medical literature there are few cases being reported with an ALCAPA syndrome and a global ejection fraction of 30%, living without a surgical correction until the age of 6 months. A surgical team from our hospital offered him the chance to live further by performing this surgery.

Keywords: ALCAPA, surgical, catheterization, coronary

GIGANTIC FOCAL LESION OF THE LIVER ASSOCIATED WITH COMORBIDITIES: WHAT CAN WE DO?

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Background: Liver focal lesions are often an incidental ultrasound (US) discovery, the patient being asymptomatic. Focal nodular hyperplasia (FNH) is a benign liver tumor that is frequent and has no malignant potential, but in some cases can have an unusual appearance. **Objective:** Our aim was to describe a voluminous hepatic tumor that had a rapid growth rate and to evaluate its approach, as the patient also presented a number of significant comorbidities. **Material and methods:** We examined a 67-year-old female patient admitted to the Nephrology Department in October 2016 for recently discovered azotemia, dyspnea, generalized edema, increased fatigue and weakness. The history of the patient consisted in diabetes mellitus, hypertension and an 8 cm focal liver lesion with a central avascular area, discovered in 2013 and investigated with US and magnetic resonance imaging, which were suggestive for FNH. **Results:** At the US examination of the abdomen, performed in order to evaluate the kidneys, we observed the focal liver lesion that appeared larger, with a diameter of 12.5 cm, located in the right hepatic lobe, with a central hypoechoic mass that had no vascular signal. The right kidney had a normal appearance and the left kidney presented a cortical cyst. Due to the rapid growth of the hepatic tumor and the central anechoic area, we wanted to exclude a possible malignancy, and therefore a contrast enhanced ultrasound (CEUS) was performed. After the bolus injection of 2.4ml Sonovue, in the arterial phase, a centrifugal enhancement characteristic for FNH appeared. Both portal phase and late phase presented a persistence of the enhancement. **Conclusions:** CEUS is a useful method of diagnosis in patients with focal lesions that also have a renal disease, in which other contrast agents are contraindicated. US is a noninvasive investigation that can be used for monitoring the patient.

Keywords: liver, focal nodular hyperplasia, ultrasound

PRESERVING FUNCTION IN PENILE CANCER SURGICAL TREATMENT - A CASE REPORT

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Background: Penile cancer is a malignant growth found on the skin or in the tissues of the penis. Studies have demonstrated that human papillomavirus (HPV) is an etiologic factor in the development of penile cancer, with the prevalence of 40%-45% of HPV DNA in these cases. **Objective:** The aim of this case report is to show that penile cancer is psychologically devastating to the patient and that it often presents a challenge to the urologist in treating the condition without losing the function and cosmetical appearance. **Material and methods:** A 46-year-old man is presented to the urology department with a penile lesion covering the entire glans and dysuria. The patient noticed the lesion approximately 10 years ago. Since then, six electrocauterizations have been performed, but with recurrent relapses. The patient didn't have any past sexual history. The physical examination showed multiple ulcerated hard lesions covering the entire glans. The lab results indicated an Escherichia coli UTI. The tumoral formation had the classic aspect of condyloma acuminatum. No HPV DNA test is approved by the FDA for use in men. A partial penectomy was performed detaching the glans from the corpora cavernosa, cutting the affected distal part of the penile urethra and reattaching it to the remaining penis. **Results:** The histological findings based on the biopsy indicated warty carcinoma with moderate differentiation, invasive in the spongiosus body. A CT is due to be performed. The surgery was successful, with efficient urination and satisfactory penile sensitivity. **Conclusions:** This case shows a complex procedure of glans penile cancer removal with the aim of preserving as much as possible of the sensitivity and appearance of the organ. Despite having no sexual history, the patient is diagnosed with HPV infection which is linked to penile cancer. Further studies in identifying people at risk and performing HPV vaccine among them should be considered.

Keywords: penile cancer, partial penectomy, human papillomavirus, condyloma acuminatum

HISTOPATHOLOGICAL CHARACTERIZATION OF PULMONARY CHONDROMATOUS HAMARTOMA: AN INCIDENTAL FINDING IN A SUDDEN DEATH OF A 57-YEAR-OLD MAN.

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Background: Hamartomas are composed of tissues normally found at that site, but with disorganized features. Pulmonary hamartoma represents around 8% of all pulmonary neoplasms and consists of hyaline cartilage, fibrous tissue, smooth muscle, fat and entrapped clefts of respiratory epithelium. These tumors occur usually in adults and are more common in males. **Objective:** Our aim was to present an interesting case of sudden death in which the autopsy revealed a pulmonary chondromatous hamartoma and to highlight some specific histopathological criteria useful in positive and differential diagnosis. **Material and methods:** A 57-year-old male without any prior known medical history was found dead at home. A full autopsy was performed at Institute of Forensic Medicine of Tîrgu Mureş. **Results:** Autopsy examination identified left ventricular hypertrophy, massive acute pulmonary edema and a peripheral, well-circumscribed right pulmonary nodule. At microscopic examinations, the pulmonary lesion was entirely consisted of islands of mature cartilage. Few cleft-like structures could be seen only at the periphery of the lesion. No mature adipose tissue, muscle or myxoid-spindle cells were seen. **Conclusions:** Pulmonary chondromatous hamartoma shows some overlapping features with pulmonary chondroma. But the hamartoma is more common in men, a single tumor with entrapped respiratory epithelium. The term-chondroma is reserved for these rare tumors entirely made up of cartilage and some bone but with no fat, muscle or any other mesenchymal component.

Keywords: pulmonary hamartoma,, chondromatous,, sudden death,, histopathological criteria.

ACTIVE ASPIRATING SYSTEM - A SOLUTION IN THE CASE OF SUPRA-APONEUROSIS MESH INFECTION

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Background: Even with the successful ingress of polypropylene meshes in post-surgical eventrations treatment, it should not be overseen the complications linked with their presence, where mesh infection is among them. **Objective:** In this paper, we are showcasing a patient with a suppuration of a mounted supra-aponeurosis mesh which has been solved with the help of Vivano active aspirating system- abdominal kit. **Material and methods:** The patient CH, 57 years old, presented at the surgical service for a post-surgical eventration one year ago for which it proceeded with plastering the abdominal wall with a polypropylene mesh in onlay position. The progression was unfavourable for the emerging of a cutaneous fistula through which a sero-purulent secretion occurred therefore it was scheduled another surgical intervention 10 months later to extract the mesh. Taking into account the emerging of free evisceration, it was pronounced the control of the post-surgical wound with the aid of the Vivano system by using the abdominal kit. **Results:** With a 105 mmHg preset pressure, the progression is favourable together with changing the film dressing every 3-4 days and by obtaining a granulation tissue over the visceral plan. The patient was discharged after 5 days since her last surgical intervention and with all her wounds completely healed. **Conclusions:** Wound therapy using negative pressure represents a feasible solution in mesh infections after the post-surgical eventrations resulting a full recovery of the wounds.

Keywords: mesh infection, wound aspiration therapy, post-surgical eventration

STENOSIS OF COLORECTAL ANASTOMOSIS FOLLOWING CIRCULAR STAPLER USE

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Background: In recent years there has been an ascending trend in the use of circular staplers in rectal surgery. Their usefulness is especially recognised in lower rectal resections, where manual suture is impossible or difficult. **Objective:** Pointing out risk factors that lead to the emergence of colorectal anastomotic stenoses after using

circular staplers and the methods for resolving said complications. **Material and methods:** An analysis was performed on the database of The First Surgical Clinic, Mureş County Clinical Hospital, for the 2008-2016 period. The study included 102 patients operated for rectal neoplasm, where colorectal anastomosis by circular stapler was employed at less than 8 cm from the anal orifice. A telephone questionnaire was administered, and the lower gastrointestinal endoscopy results performed on all patients in the postoperative phase was analysed. **Results:** Out of 102 patients, 3 (2.94%) showed varying grades of stenosis clinically and endoscopically. Fifty-five cases underwent perioperative radiation therapy. Two of the stenotic patients had protective ileostomy ($p=0.0118$). Of the 3 cases of stenosis, only 2 patients underwent perioperative radiation therapy ($p=1$). One of the patients completed 3 sessions of pneumatic balloon dilatation at 2-month intervals, and in the case of the other two patients, following clinical confirmation and digital dilatation, the symptoms abated, and no further procedures were deemed necessary. **Conclusions:** Perioperative radiation therapy was not identified as a major risk factor in the appearance of rectal anastomotic stenoses. In our sample, colorectal anastomotic stenoses were not preceded by fistulae. Protective ileostomy can be taken into consideration as a factor which favours stenosis. Primary care for stenoses includes performing pneumatic or digital dilatation. Surgical treatment is reserved for cases that are resistant to the previously mentioned procedures.

Keywords: colorectal, stenosis, stapler, ileostomy

UNKNOWN HEPATITIS C REVEALED BY CHRONIC ADMINISTRATION OF ACETAMINOPHEN

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Background: Hepatitis C is a liver disease, which determines progressive damage, caused by ARN HCV virus. It can be asymptomatic for a long time and it's estimated that 3% of world population are leaving with chronic hepatitis. **Objective:** Is to assess the correlation between hepatic virus C infection and the chronic administration of Acetaminophen. **Material and methods:** This is a case of a 70 years old female known with hypertension and cholecystectomy, admitted in the 2nd Department of Internal Medicine for abdominal pain for two years, with specific characteristics for pancreatitis, with exacerbation in the last two months, nausea, anorexia, fatigue, vertigo, dark urine and intense jaundice. Because of dorsal spine pain, she underwent Acetaminophen one or two/ day for one year. **Results:** On the admission the lab test revealed a BT of 9,84 mg/dL, GOT of 1210 U/L, GPT of 990 U/L, AntiHCV was positive. We suspected a pancreas tumor or a primary biliary cirrhosis, reasons for which we performed an abdominal ultrasound and a Computed Tomography that revealed a chronic pancreatitis. We initiated the treatment with hepatoprotective and gastroprotective drugs and after 11 days BT was 2,2 mg/dL, GOT 79 U/L and GPT 177 U/L. **Conclusions:** We concluded that it was a case of acute iatrogenic hepatitis in a chronic hepatitis C, in an elder patient suspect of a cholestasis at the time of admittance in the hospital.

Keywords: Hepatitis C, Acetaminophen, jaundice

PULMONARY THROMBOEMBOLISM IN A 40-YEAR-OLD MALE - CASE REPORT

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Background: Almost all large pulmonary artery thrombi are embolic in origin, usually arising from the deep veins of the lower leg. After traveling to the lung, large thrombi can lodge at the bifurcation of the main pulmonary artery or the lobar branches and cause hemodynamic compromise. **Objective:** We present a case of a 40-year-old male with pulmonary embolism, chronic pulmonary heart disease, chronic heart failure NYHA III/IV, chronic obstructive pulmonary disease GOLD III, bilateral bronchopneumonia, acute renal failure, chronic venous insufficiency CEAP 6, morbid obesity. We propose the case for the importance of close follow-up of such patients. **Material and methods:** A 40 years patient with venous insufficiency and trophic ulcer for 2 weeks, right supraclavicular adenopathy, smoker for 28 years (5x20 cigarettes/day), intake of alcohol (2 l of pure ethyl alcohol once a week), weight 180 kg; presented in UPU SMURD with dyspnea that appeared 3 weeks ago with worsening in last 3 days, anasarca, retrosternal pain, cough with mucopurulent sputum, sweating. Treatment consisted in immediate anticoagulation therapy (Enoxaparin 2x140mg/ml/day), hydric restriction, diuretics (Furosemid), antibiotics. **Results:** The angio-CT showed PTE, the Echocardiography pointed out a thrombus 16/24 mm in right ventricle

and ejection fraction 30%. NTProBNP was 12417 pg/ml, D-dimer >5.00 µg/ml; EKG: S1Q3T3; bacteriological testing: Klebsiella (BLSE, CPE) and negative for Mycobacterium tuberculosis. **Conclusions:** The ventricular thrombus disappeared in two weeks. A high dose of Clexane was administered to an obese, adult patient with renal insufficiency, who didn't present bleeding. He has lost 20 liters of anasarca. The patient has to start a dietary regimen to lose weight. Due to heart critical condition, physical exercises and gastroplasty cannot be performed.

Keywords: pulmonary thromboembolism (PTE), morbid obesity, big smoker

REFRACTORY CELIAC DISEASE TYPE 2 – A CHALLENGING DIAGNOSIS FOR THE MODERN GASTROENTEROLOGIST

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Background: Celiac disease is an autoimmune disorder caused by the ingestion of gluten in genetically predisposed people. The gluten-free diet remains the only treatment available. However, a small number of CD patients develop persistent or recurrent malabsorptive symptoms and villous atrophy in spite of a strict gluten-free diet adherence, known as refractory celiac disease (RCD). The rarity of RCD is sustained by the scant number of cases reported in literature. RCD is classified in type 1 and type 2 which is associated with poor prognosis.

Objective: The purpose of this paper is to present a complex case of RCD. **Material and methods:** We studied the case of a 67 years old female known with celiac disease Marsh-Oberhuber 3b/3c stage. The patient was brought to the emergency department with persistent severe diarrhea, abnormal weight loss and critical dyselektrolytemia for which a central venous catheter (CVC) was placed. The laboratory test revealed : anemia leukocytosis, elevated PCR and procalcitonin levels, stool culture negative for Clostridium difficile, cholestasis, hypoproteinemia, hypoalbuminemia. The blood culture indicated Enterobacter Cloacae. The bacterial culture from the CVC revealed an infection with multiple bacteria. We suspected a RCD, therefore, the initial diagnosis was confirmed by duodenal biopsies and immunohistochemistry. The anti-endomysium and anti-transglutaminase antibodies were negative, confirming the strict gluten-free diet. An intestinal lymphoma or adenocarcinoma was invalidated by an abdominal CT and a capsule endoscopy. **Results:** The final diagnosis was RCD type 2. Therapeutic management consisted in: antibiotherapy, glucocorticoid therapy, treatment of hydroelectrolyte imbalance with partially improved evolution. However, after 2 months, the patient suffered from bowel obstruction caused by intussusception. **Conclusions:** The differential diagnosis between RCD type 2 and lymphoma represented a challenge for the gastroenterologist. The complexity of the case consisted in the difficulty of the clinical issues, whereas no consensus treatment plans have been yet developed.

Keywords: Refractory celiac disease, Duodenal biopsy, Immunohistochemistry, Gluten-free diet

AH1N1 INFLUENZAE VIRUS WITH FATAL PROGNOSTIC IN PATIENT WITH COMORBITIES

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Background: Infection with Influenzae viruses, especially AH1N1 is a diagnostic challenge even nowadays, 7 years after the pandemy. AH1N1 Virus in patients with comorbidity can evolve quickly to severe complications.

Objective: The purpose of this paper is to present the case of Influenzae A virus subtype H1pdm09 in a patient with pre-existing diseases, that presents itself belated in a Medical Care Unit with signs of acute respiratory insufficiency. **Material and methods:** At admission, the patient, 45 y/o male (unvaccinated for flu) was in an altered general condition, sweaty skin, with functional respiratory syndrome, whitout meningeal irritation syndrome. The thoracic X-Ray distinguishes an opacity on the right median line, basal bilaterally liquid collection and the EKG shows atrial flutter. After an intensive care consultation, the patient being hemodynamically and respiratory unstable, he was intubated (drug induced GCS 3 coma). Antibiotic and cardiotoxic drugs were instituted. **Results:** 12 hours after the admission we harvested nasopharyngeal exudate to determinate flu viruses and started antiviral treatment with Oseltamivir. The evolution was unfavorable towards alteration of the general status, with trombocitopenia, hidroelectrolitic and acid-base balance perturbation, hyperglycemia, cytolysis syndrome and

alteration of the renal function leading to anuria. 48 hours after the admission, the patient passes away. The anatomopathological examination confirms acute pulmonary congestion, acute catarrhal tracheitis and the virologic examination establishes the type AH1N1 Virus. **Conclusions:** Patients with acute respiratory insufficiency phenomenon have to be investigated for Influenzae virus too, especially for the AH1N1 type. Therapy with Oseltamivir has to be introduced in within the first 48 hours in order to have an anticipated effect.

Keywords: AH1N1, Influenzae virus, SARI

GALLSTONE ILEUS CAUSED BY A CHOLECYSTO-DUODENO-COLIC FISTULA. CASE REPORT.

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Background: Gallstone ileus is a mechanical intestinal obstruction due to gallstone impaction within the gastrointestinal tract with less than 1% of cases of intestinal obstruction being derived from this etiology.

Objective: The purpose of this paper is to present an extremely rare complication of gallstones. Usually, gallstone ileus appears in patients with cholelithiasis that also present bilio-digestive fistula. The cholecysto-duodeno-colic fistula represents an extremely rare complication of cholelithiasis, only 7 cases are documented in the medical literature until now. **Material and methods:** We present the case of a 62 y/o male, admitted at the emergency room with the diagnosis of bowel occlusion. For this reason we performed an explorative laparotomy and discovered the existence of a gallstone ileus due to the migration of a large bilestone, determining the appearance of a cholecysto-duodeno-colic fistula. **Results:** We practiced classic anterograde cholecystectomy, closing the fistulous trajectory, suturing the duodenum and intestines. The postoperative evolution was favorable, the patient being discharged 8 days after the operation. **Conclusions:** Cholelithiasis is a quite frequent pathology that in some cases can determine the appearance of life threatening complications

Keywords: cholecysto-duodeno-colic fistula, gallstone ileus, cholelithiasis

UNUSUAL CASE OF RECURRENT LARINGITIS IN A PEDIATRIC PATIENT

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Background: Juvenile Laryngeal Papillomatosis is a rare disorder caused by infection with HPV (6, 11). It's characterized by the development of small, benign tumors in the larynx and vocal chords, in patients under 12. Juvenile cases are usually aggressive and tend to be recurring. Without treatment, the lumen of the larynx narrows, leading to obstructive respiratory failure. Selective IgA Deficiency is the most common primary immunodeficiency, defined by IgA seric levels under 7 mg/dL and normal IgM, IgG seric levels, in patients older than 4. IgA is important in mucosal immune development and a deficiency leads to increased sensitivity to infections, allergic reactions and autoimmune diseases. **Objective:** Presenting the unusual pediatric case of a patient repeatedly admitted with laryngitis that did not respond to medication. **Material and methods:** A 6 year-old patient was admitted into Pediatrics I, SCJ Tg. Mureş, with signs and symptoms indicating obstructive acute respiratory failure: hoarseness, dysphonia, dyspnea, coughing, inspiratory stridor, suffocating episodes, SpO₂ 85%, compensated respiratory acidosis. Respiratory symptoms started a few months prior to this event, the patient had been admitted and diagnosed multiple times with acute laryngitis, recurring wheezing and interstitial pneumonia, with temporary improved condition under treatment. Paraclinical tests revealed IgA deficit (0 mg/dL) and MRSA present in nasal exudate. Due to the progressive worsening of the patient's status and no radiological evidence surfacing, the patient was sent to the ENT clinic for a consult. **Results:** Fibroscopy results showed tumoral growths corresponding with laryngeal papillomatosis and narrowing of the glottic space. Emergency tracheostomy and laryngeal biopsy were performed, followed by corticotherapy and antibiotherapy. The patient's status is stabilized, with no signs of respiratory failure. The final line of treatment will be established after receiving the histopathological results. **Conclusions:** This patient's case, initially thought of as recurring laryngitis, proved to be laryngeal papillomatosis in a child with selective IgA deficit.

Keywords: Pediatric, Recurrent Laryngitis, Laryngeal Papillomatosis, Selective IgA Deficiency

THE UNUSUAL PRESENTATION OF A NEOPLASIC PATIENT WITH CHRONIC HEMODIALYSIS: PERIRENAL HEMATOMA

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Background: Total hysterectomy, radiation therapy and chemotherapy for uterine neoplasia can affect urine drainage and in some patients it declines the kidney function, leading to renal replacement therapy. Raising patient's compliance to medical treatment can improve the survival and the quality of life. **Objective:** To present a rare case of multiple comorbidities in a young patient with genital neoplasia. **Material and methods:** A 44 years old woman, diagnosed in 2008 with uterine neoplasia for which total hysterectomy with ovariectomy was performed, presented to the nephrology Department for renal replacement therapy due to massive left ureter-hydronephrosis and a sclerotic right kidney. A series of comorbidities and a low compliance to medical treatment in the last year, combined with an accidental hematoma after nephrostomy displacement, led to initiation of hemodialysis. We analyzed the laboratory tests and the imaging methods: ultrasound (US) and CT-scan that conducted to the final diagnosis and the follow-up of the patient. **Results:** After a local recurrence six years after surgery, a vesical-vaginal fistula appeared and in May 2016 a percutaneous left nephrostomy (NP) was done. In September 2016, the NP was accidentally dislocated with a large perirenal hematoma that needed first a percutaneous drainage and after that an open surgery with drainage of the hematoma. Those events accelerated the initiation of the renal replacement therapy. CT scan revealed no local recurrence, multiple pleural, peritoneal effusions, vesical-vaginal fistula and a massive perirenal hematoma. US examination could define the evolution of the hematoma until its near disappearance with multiple noninvasive examinations. Patient was successfully treated, perirenal hematoma resorbed almost completely, anemia improved as it was the patient's general status. **Conclusions:** A thorough medical follow-up of a patient with many comorbidities combined with imaging technics as CT scan or ultrasonography can improve the final diagnosis and the long term outcome.

Keywords: percutaneous nephrostomy, perirenal hematoma, hemodialysis

THE DIFFICULTIES OF DIAGNOSIS THE INTERNAL CAROTID ARTERY DISSECTION IN A POLYTRAUMATIZED PATIENT

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Background: Traumatic carotid artery dissection, according to statistics, is the main cause of ischemic stroke in young adults. The intimal tear caused by blunt injury or an extreme extension and rotation of the neck is asymptomatic and remains undetected until signs of cerebrovascular ischemia appear. **Objective:** 1. Determine the cause of left brachial monoparesis in a polytraumatized patient 2. Analyse neuroimaging findings for an accurate and complete neurological diagnosis 3. Confirm that an accessible, non-invasive treatment with anticoagulant medication can result in a full recovery in this potentially life-threatening condition. **Material and methods:** A 31-year-old patient suffered a car accident, which led to basicervical left femoral fracture and transversal right patella fracture. He received orthopaedic and surgical treatment. After 3 days, a neurological consultation was asked following the onset of left brachial monoparesis. The patient had no history of underlying cardiovascular risk factors or diseases. Neurological clinical examination also revealed left central facial paresis. In order to establish the etiological diagnosis, the following investigations were performed: cranial computed tomography (CT), head magnetic resonance imaging (MRI), computed tomography angiography (CTA), carotidian and vertebro-bazilar Doppler ultrasound (US). **Results:** Cranial CT revealed an ischemic lesion in right middle cerebral artery (MCA) vascular territory and thrombosis of the 2nd segment of right MCA. Head MRI revealed lesions in hypersignal in T2, flair and diffusion in insular and precentral areas of MCA vascular territory. CTA and Doppler US revealed right internal carotid dissection. The patient was treated with low molecular weight heparin and then with oral anticoagulants. A significant regression of the motor deficit and the facial asymmetry was achieved. **Conclusions:** The early and correct diagnosis of post-traumatic ischemic stroke in young patients allows an effective treatment and a good clinical result.

Keywords: carotid artery dissection, polytraumatized patient, ischemic stroke

INTERDISCIPLINARY APPROACH OF A CASE OF OSTEOMYELITIS COMPLICATED WITH SEPSIS

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Background: Osteomyelitis is an inflammatory state of the bone caused by pyogenic bacteria along with certain strains of mycobacteria or fungi. The most common site of infection is represented by the medullar cavity, afterwards the infection spreads through the haversian system and extends to periosteal area. Osteomyelitis can result from events such as trauma, surgery, incorporation of prosthetic joint, hematogenous spread after bacteremia, or secondary to a vascular insufficiency. The main difference between the acute and chronic form is represented by the bone necrosis, a typical feature of the chronic osteomyelitis. **Objective:** The purpose of this paper is to assess the multidisciplinary approach in a complex case of Chronic Osteomyelitis. **Material and methods:** We present the case of a 34 years old patient with a traumatic history at the right calf, admitted to the Orthopedic and Traumatology department from Tîrgu Mures County Clinical Hospital with severe health state. During the physical examination we noticed the presence of two active fistulas with purulent secretions located at the proximal third of the calf. Moreover, pain along with functional impotence that limits the daily activity of the patient was also reported. The pain was described as dull, continuous, gradually increasing in intensity. It is aggravated by prolonged standing and walking. To have the best results, doctors decided to do a surgery with thorough debridement of the necrotic tissue and bone with antibiotic therapy (gentamicin beads) and then to reoperate in a multidisciplinary team with the doctors from the Plastic Compartment. **Results:** Improvement of health status with laboratory results return to normal ranges, the disappearance of pain and toxic symptoms. Imagistic tests show improvement, complete closure of the fistula. **Conclusions:** A successful therapy method in the treatment of chronic osteomyelitis located at the proximal third of the calf is Gastrocnemian muscle flap transposition combined with long-term antibiotherapy.

Keywords: osteomyelitis, orthopedic, traumatology

CLINICAL & THERAPEUTIC ASPECTS IN CASES OF OPEN FRACTURE

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Background: Open fracture is considered a special one, in which soft tissue, suffer injuries around the fractured area, facilitating a direct communication between the injury and the external environment. In this situation, the prognostic depends on the level of contamination and the extent of the damage. Osteomyelitis, pseudarthrosis, and septic shock are among the complications most commonly occurred in fractures. **Objective:** Multidisciplinary management of operated and septic complicated open fracture. **Material and methods:** Patient, aged 49, comes in the emergency room with a patella open fracture, as a result of a trauma caused by animal aggression. After a proper pre-operative preparation, the patient undergoes emergency surgery, in which the wound is chemically and mechanically cleaned and the fracture is reduced through osteosynthesis. The general evolution of the patient is positive, with the wound in "per primam" healing process. The patient is released from the hospital, with the condition to follow doctor's recommendation. One month later, the patient returns with fever, hemodynamic instability, although the surgical wound is healed. Approximately 12 hours after the patient was admitted into the hospital, the left inferior member presents cyanosis, with no peripheral pulse and an early stage of skin necrosis. Biological analysis indicate an acinetobacter infection, therefore the doctor decides to proceed with the amputation of the affected member. 6 days after the procedure, the amputation stump presents signs of ischemia and skin necrosis, therefore, 4 days later the medical team decides on a new surgical intervention on a necrotising fasciitis diagnostic. During the surgery, the medical team proceeds with an decompressive fasciotomy and readjusts the amputation stump. **Results:** Post-operative the evolution is favourable, with the patient being hemodynamic and pulmonary stable. **Conclusions:** Open fractures are a major emergency, as they can suffer immediate complications. Patient compliance towards recovery is a key factor in order to have a successful outcome.

Keywords: open fracture, complications, septic shock

UNEXPECTED PONTOCEREBELLAR HYPOPLASIA TYPE 2 – CASE REPORT

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Background: Pontocerebellar hypoplasia type 2 (PCH2) represents a rare autosomal recessive neurodegenerative disease, with a prevalence of 1:200.000 (81 families reported so far). PCH2 is characterized by abnormal small cerebellum and brainstem, combined with progressive microcephaly from birth and profound psychomotor retardation. Prognosis is poor, the mean age of death being less than 7 years. **Objective:** We report the case of a pediatric patient with cerebellar and cisterna magna imagistic anomalies supported by suggestive clinical findings, who is diagnosed with PCH2. **Material and methods:** A 3-weeks-old female patient known with neonatal adaptative difficulties (neonatal respiratory distress syndrome, muscular hypotonia) comes in for medical reevaluation. The medical history unfolds premature birth (36 weeks, Apgar Score 9, birthweight 2530 gr), cranial perimeter 31 cm (<1 percentile) with documented pregnancy and normal evolution. Clinical examination reveals generalized muscular hypertonia, impaired breastfeeding and a cranial perimeter of 31.5 cm (<1 percentile). Transfontanelar echography (TFE) shows hyperechogenic cerebellum and slightly dilated cisterna magna (6mm). 5 weeks later, the follow-up examination shows dystonia, dyskinesia and TFE □ hypoplastic cerebellum, dilated cisterna magna (14mm). The suspicion of Dandy-Walker syndrome (DWS) is raised, through clinical phenotype and echographic findings; a cerebral MRI is suggested. **Results:** MRI exposes pontocerebellar hypoplasia, however due to the rarity and heterogeneity of the disease, genetic karyotyping (inconclusive) and molecular testing is required. The homozygous mutation in the TSEN54 gene sustains the diagnosis of PCH2. No specific treatment exists, the evolution is marked by severe intellectual and motor deficit, extrapyramidal symptoms and seizures. Nevertheless, daily kinetotherapy, muscle relaxants and anticonvulsants are recommended. **Conclusions:** The scarcity of such a pathology with this kind of clinical impact is overwhelming for a clinician, as no real data is available regarding the prognosis and the prenatal diagnosis is improbable, particularly in our case with both healthy parents caring the recessive gene.

Keywords: Pontocerebellar hypoplasia, autosomal recessive, microcephaly, psychomotor retardation

THE LEVEL OF TRUST IN POPULATION REGARDING INFORMATION ABOUT VACCINES AND THEIR EFFECTS –THE IMPORTANCE OF FAMILY PHYSICIAN

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Background: Trust is a fundamental element of a social capital. Vaccines are for some a myth but for others a necessity. In this paper we describe a research about parents experiences in their family physician clinics and the information the doctors are giving them about vaccines and their effects, the sufficiency of the knowledge they have when they leave the cabinet and if this knowledge is trustworthy. **Objective:** The aim of our study was to assess the level of vaccine-related information given by the family physician and to conclude if it is enough for parents to understand the importance of vaccination. **Material and methods:** The data were extracted from questionnaires applied online with open and closed question, these having about two hundred respondents. **Results:** From the questioned parents 99% of them are recorded to a family physician, but only 29% of them inquired information about vaccines from their doctor, most of them preferring speciality literature(40%) and the rest 31% receiving data from media, internet and family friends. For 27% of them the family physician offered no information about vaccines and the rest 73% are considering the data insufficient and unconvincing to vaccinate their children without questioning the utility of vaccination. Almost 100% of parents consider beneficial a monthly update on vaccination for family physicians considering the ever-changing nature of the subject. **Conclusions:** Parents are becoming more and more uncertain about the effectiveness of vaccination with all the negative propaganda catching roots nowadays. In order to prevent diseases that should be long time eradicated , like poliomyelitis, to reappear in the 21st century we have to initialize more public information campaigns to promote vaccination, especially focusing on family physician cabinets ,the place where all the people have access.

Keywords: trust, vaccination, family physician, information

SATISFACTION OF PATIENTS ADMITTED IN STATE HOSPITALS COMPARED WITH THOSE TREATED IN PRIVATE CLINICS. THE ATTENTION GIVEN TO THE PATIENTS' RIGHTS.

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Background: Improving the quality of hospital care experienced by patients represent a challenge worldwide. Patients' satisfaction represents the main standard in health care, and the most eligible criterion for assessing the effectiveness of it. The patients' experience of the quality of hospital care can provide insightful feedback to enable clinical teams to direct quality improvement efforts in areas where they are most needed. **Objective:** The aim of this study was to determine patients' experience of hospital care and the level of satisfaction among patients hospitalized in state hospitals versus private clinics in Romania. **Material and methods:** The data were extracted from the questionnaires applied online with open and closed questions, these having about two hundred respondents. **Results:** 90% of people surveyed were admitted in a state hospital and 40,7% were admitted in a private hospital. In public hospitals 42,5% of patients came there through the emergency service or on a recommendation from the GP (47,7%). In private hospitals 36,2% were hospitalized through appointment. Some of the most common complains in the state hospitals are: prolonged waiting time (>1h; 34,8%), overcrowded rooms (>2 patients; 59,4%), poor facilities of the hospital (>33%), bribery and gift-giving tradition to both nurses(38,5%), and doctors (45,7%). Compared to state hospitals, in private clinics only 2,3% of patients experienced long wait times (>1h) and 2,3% of patients weren't satisfied with the hospital care. **Conclusions:** Private hospitals are becoming more and more popular due to proper conditions and healthcare management. The adverse conditions of the accommodation and the poor quality services provided for patients accessing the state health system is an issue of current interest that must be taken seriously.

Keywords: healthcare, patients' satisfaction, state hospital, private clinics

THE SEVERITY OF CROHN'S DISEASE IN PEDIATRICS – A CASE REPORT AND A REVIEW OF THE LITERATURE

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Background: Inflammatory bowel diseases comprises mainly of Crohn's disease and ulcerative colitis. Crohn's disease represents a chronic inflammation that can be present along the entire gastrointestinal tract. The incidence of CD in Europe is approximately 5.2-8.6 in 100.000 individuals. **Objective:** We present the case of a 16-year-old male teenager, admitted in the Pediatrics Clinic 1 of Tg. Mures with the diagnosis of Crohn's disease with the aim of highlighting the severe complications that can be associated with this condition. **Material and methods:** The onset was approximately 5 months before the admission with diarrhea, epigastric pain, nausea for which he received symptomatic treatment, but without any improvement, also associating fever and weight loss. We mention also that the patient underwent a psychological stress. The clinical exam revealed influenced general status, intense fatigability, pallor, and abdominal tenderness at palpation. **Results:** The laboratory tests showed leukocytosis, thrombocytosis and elevated C reactive protein. The colonoscopy pointed out hyperemia of the colonic mucosa with the presence of ulcers at the level of the descending colon. The histopathological exam established the diagnosis of Crohn's disease. The patient's evolution was unfavorable, also associating intestinal TBC, and afterwards multiple perianal abscesses. Due to all these facts, we initiated biological therapy with a slowly favorable evolution. **Conclusions:** Crohn's disease remains a chronic disorder which carries an unpredictable prognosis due to the multiple complications associated with its evolution. The adequate management of Crohn's disease is essential in order to prevent the complications. Nevertheless, the prognosis is also influenced by the patient's particularities.

Keywords: Crohn's disease, child, severity

PNEUMONIA LEADS TO THE DIAGNOSIS OF ACUTE LEUKEMIA IN A CHILD – A CASE REPORT AND A REVIEW OF THE LITERATURE

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Background: Pneumonia represents the inflammation of the lung parenchyma. This disorder can be very severe in children, leading to approximately 1.2 million deaths every year in children under the age of five. The incidence of this disorder is 10 times higher in developing countries. **Objective:** We present the case of a 3-year-old male patient admitted in the Pediatrics Clinic 1 with the diagnosis of pneumonia. Our aim is to underline the importance of the physician's awareness regarding the adequate management of any disorder. **Material and methods:** The child was admitted into the pediatric clinic, presenting fever associated with productive cough for approximately 2 weeks. He received antibiotic and symptomatic treatment, but without any improvement. The clinical exam revealed influenced general status, ailing face, palpebral edemas, perianal abscess, hyperemic pharynx and tonsils, respiratory distress, diminished vesicular murmur on the right side, productive cough and hepatomegaly. The laboratory tests showed anemia and elevated acute phase biomarkers. The thoracic radiography pointed out a massive opacity on the right lung. We excluded lung tuberculosis, pulmonary tumor, cystic fibrosis, pulmonary abscess and pleural effusion. **Results:** The final diagnoses were sepsis and massive right pneumonia. The evolution was slowly favorable after wide-spectrum antibiotics, the patient being discharged after 21 days. Two weeks after the discharge, the laboratory tests revealed severe leukocytosis and blasts in the bone marrow exam. Therefore, the patient was diagnosed with acute lymphoblastic leukemia. **Conclusions:** The adequate management of any type of infectious or non-infectious disease is mandatory due to the possible unpredictable evolution in certain patients. Every physician must be aware that even the simplest cases can become a real burden.

Keywords: pneumonia, acute lymphoblastic leukemia, child

INFANT WITH RARE VASCULAR ABNORMALITIES CASE REPORT

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Background: Cardiosplenic syndrome is defined by a spectrum of abnormalities involving the abdominal viscera and the cardiovascular system. It occurs from an embryological developmental disturbance occurring between the 28-35 days of gestation with a sporadic appearance. Familial occurrence has also been described, suggesting autosomal recessive inheritance with reduced penetrance. One subtype of the syndrome called left isomerism, also known as polysplenia, is most commonly seen in adult females and it has a prevalence rate of 1 in 20,000 cases. Cardio-vascular defects occur in 90% to 95% of cases of polysplenia, but the most specific marker associated appears to be the absence of the intrahepatic inferior vena cava with collateral drainage through the azygous or hemiazygos vein. **Objective:** Our paper presents a rare congenital syndrome discovered in a 6 months old female patient admitted with upper respiratory tract infection. Upon clinical examination a congenital skin hemangioma with 1/1.5 cm diameter is discovered. **Material and methods:** Patient is referred to abdominal ultrasonography which revealed polysplenia (one main spleen and other 7 accessory spleens) with no other vascular abnormalities on the liver or spleens. Each spleen had its own capsule and vascularization. She proceeded to further cardio-vascular investigations which revealed drainage of inferior vena cava through the azygous vein, with no congenital heart malformation associated. **Results:** Patient is diagnosed with interrupted inferior vena cava syndrome and polysplenia. **Conclusions:** Further in life these patients are at increased risk of deep vein thrombosis and pulmonary embolism, therefore prophylactic measures should be taken during high risk situations. Also, alternative sites should be used in case of cardiac catheterization, other than the femoral vein. The particularity of this case is given by the fact that the patient did not associate heart abnormalities, thus she is in the 5-10% of the cases with left isomerism of cardiosplenic syndrome without cardiac malformations.

Keywords: polysplenia,, vascular abnormality,, congenital syndrome

LEFT VENTRICULAR NON-COMPACTION CARDIOMYOPATHY CAUSING STROKE IN A 35-YEAR-OLD MALE : CASE REPORT

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Background: Non-compaction cardiomyopathy is considered a rare pathology characterized by prominent trabeculation that offers the myocardium a spongiform aspect. **Objective:** We propose to present a case of non-compaction cardiomyopathy that caused a stroke and to emphasize the importance of close follow-up of such patients because of the complications. **Material and methods:** We present a case of a 35-year-old male who was admitted to the hospital with the following symptoms: Sudden face weakness, left arm drift, reduced muscle tone on the left side of the body. At the physical examination, the patient had symmetric responsive pupils and asymmetry of the nasolabial folds. The Cranial MRI showed thrombosis of the proximal branches of the medium cerebral artery. Based on the physical examination and the diagnostic tests, the diagnosis was cerebrovascular accident. For determining its cause, there have been made a series of investigations. The echocardiography showed trabeculations of the lateral wall and the apical region of the left ventricle, the ratio of noncompacted to compacted myocardium was >3. The echocardiography also revealed the deficiency of the systolic and diastolic function of the heart: ejection fraction was 35%, E/A ratio = 4.04. The right heart systolic function and cavities were normal. **Results:** A Holter device was implanted that revealed arrhythmias and due to a higher risk of sudden cardiac death an implantable cardioverter-defibrillator was implanted. **Conclusions:** Once the diagnosis has been made, the next step is to define management goals. Early diagnosis and treatment is required as these patients can have fatal outcomes: anticoagulation is the only medication that can be administered as primary prevention and if the patient meets the criteria of CRT, then it is reasonable to take it into consideration.

Keywords: cardiomyopathy, complications, diagnosis

SPORT TRIBUTE: AORTIC ENDOCARDITIS IN 16 YEARS OLD PATIENT - CASE REPORT

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Background: Aortic endocarditis is a bacterial infection of the endothelial surface of the heart with varying signs and symptoms. It may include one or several heart valves, the mural endocardium, or a septal defect. Severe valvular insufficiency can possibly lead to unyielding congestive heart failure and myocardial abscesses. **Objective:** Our aim is to inform about aortic insufficiency with aortic valvular replacement indication post endocarditis in a young athlete. **Material and methods:** The 16-year-old male, former performance athlete, with a right hip concussion, a right calcaneal deep wound (approximately 2 months old) and a nasal swab positive for Pseudomonas (4 years ago) in medical history, presented the actual onset of the disease 3 weeks before with up to 40°C fever (3-4 days), shiver, dyspnea, cough. Following investigations, the diagnosis was acute respiratory failure, pneumonia, pleurisy, anemia. The evolution was not favorable under antibiotic treatment associated with antifungal and anti-inflammatory drugs. Aortic endocarditis, aortic severe insufficiency, paravalvular abscess and fistula aorta-pulmonary artery suspicions occurred following the cardiological examination. **Results:** The teenager benefited from surgical correction in extracorporeal circulation, by excision of the aortic valve and aortic annular abscess, closing the fistulous tract with heterologous pericardium patch and replacement of aortic valve with SORIN CARBOMEDICS SURPAANULAR No.23 prosthesis. Postsurgical evolution was dragged on by left ventricle systolic dysfunction and massive bilateral hemorrhagic pleural collection for which the patient required inotropic support, drainage of pleural cavities, with slow favourable evolution. **Conclusions:** Taking into consideration the fulminant evolution of the pathology, the multidisciplinary team succeeded in offering a new chance to life for the patient. Sometimes, certain aspects concerning life quality must be sacrificed in order to be looking forward.

Keywords: aortic, endocarditis, athlete

RARE CAUSE OF INTESTINAL OBSTRUCTION - CASE REPORT

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Background: The Bouveret Syndrome is a rare complication of biliary lithiasis. The symptomatology of the patients varies from upper abdominal pain to high intestinal obstruction: nausea, bilious eructation. **Objective:** Our aim is to inform about the importance of this rare pathology. **Material and methods:** Our case report is about a patient aged 72 who presented in emergency complaining of epigastric abdominal pain, nausea, bilious eructation and intestinal transit stop for gas and feces. The medical history of the patient indicates multiple lithiasic biliary colic. Following the paraclinical investigation of abdominal RX, multiple small bowel hidroaeric levels have been noticed and abdominal ultrasound confirms the presence of gallstones. **Results:** Surgery is performed for diagnosis of intestinal obstruction by jejunal gallstones (Bouveret Syndrome) as follows: median laparoscopy, enterectomy, calculus removal, enterorrhaphy, classical antegrade cholecystectomy, peritoneal cavity lavage and toiletteage, subhepatic and Douglas drainage. **Conclusions:** Early diagnosis is important because of high mortality. Evolution is favourable postsurgery. The patient was discharged from hospital 5 days after surgery.

Keywords: biliary, lithiasis, gallstones

THE INFLUENCE OF BMI AND HBA1C IN DEVELOPING TYPE 2 DIABETES MELLITUS

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Background: Diabetes mellitus type 2 is an affection with major impact on the life of patients, which if is not well treated, leads to severe macro □ and microangiopathy complications. **Objective:** The aim of this study was to establish if there are a correlation between weight status BMI, HbA1c as risk factors and the appearance of type 2 diabetes mellitus. **Material and methods:** We conducted a retrospective clinical study in 2013 in Clinical Hospital Targu Mures and evaluated a total of 644 subjects, presenting symptoms of type 2 diabetic adults. **Results:** From the total of 644 subjects, average age of diabetic patients was $45,8 \pm 9,9$ (mean and SD), 52,6% are female , 47,4% male and 53,4% of the subjects presented elevated HbA1c (>7%) and 37% have weight status BMI >30 and 59,44 % of them are from urban areas ($r= 0,5123$; $p < 0,0001$). **Conclusions:** We found positive correlation between BMI and HbA1c in developing type 2 diabetes mellitus, weight status play an important role in causing diabetes mellitus. Both, male and female are equally affected, most of them from urban areas but BMI represent major risk in appearance of diabetes, disease which could be the consequence of the inadequate training and monitoring of HbA1c.

Keywords: type 2 diabetes mellitus, BMI, HbA1c, major risk

EFFECTS OF ANEMIA IN AN ELDERLY MALE CO-MORBID PATIENT

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Background: Anemia can be defined as the decreased capacity of the blood to transport oxygen to tissues due to low levels of hemoglobin, RBC count, and hematocrite. It's a pathological condition in which the treatment depends on discovering underlying causes and it manifests through a copious quantity of misunderstandable symptoms. **Objective:** The aim of the study is to analyse the most common misunderstandable symptoms of anemia in elderly male patients. **Material and methods:** We report a case of a 84 years old man non smoker admitted to the Spitalul Clinic Judetean Mures TGM, complaining fatigue, asthenia, weight loss, gastritis, pain in the right iliac fossa, loss of appetite, bilateral lower extremity edema and nocturnal dyspnea. Past medical history: prostate adenoma and permanent atrial fibrillation with cardiac disfunction. Previous surgeries: none. Laboratory data reveal : WBC 4.94-RBC 3.38- Hgb 8.15 g/dl- Htc 34.66- MCV 102.4-MCH 33.2- MCHC 32.48-RDW 19.97-PLT 156.60-PDW 21.60-MPV 8.50-PCT 0.13-%N 50.81-%L 32.69-%M 8.66-%E 6.23-%B 1.60-NEU 2.51-LYM 1.62-

Direct Bilirubin 0.58-Total Bilirubin 1.46, PSA 1.054 ng/ml, B12 level <50-LDH 247 U/L, PT (sec) 13.50, PT 77.70, Negative AgHBs, Negative Anti-HCV antibodies. Previous treatments: Accupro 10mg, Leridip 10mg, Panangin, Aspenter, Furosemid once per week, Bisoprolol 5 mg, Omega 3. **Results:** Subsequently to the administration of a different and more suitable treatment, a positive reaction was obtained. A change in the diet habits was needed together with a follow up for several months. After the identification of the etiology of megaloblastosis a positive prognosis can be reached. Risks: Hypokalemia and anemia-related cardiac complications during therapy for cobalamin deficiency. **Conclusions:** Anemia together with other pathological conditions led to a worsening of the patient state. Generally the elderly people are more exposed to this kind of worsen. This case is underlining the importance of managing properly the signs and symptoms of the anaemic patients belonging to this age range.

Keywords: Anemia, Elderly, Internal Medicine, Haematology

CANDIDA AND BACTERIAL ASSOCIATION IN DEPARTMENTS WITH DIFFERENT RISK

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Background: Candida is a pathogen responsible for opportunistic infections in immune compromised patients. **Objective:** The purpose is to identify the association between Candida species and other pathogens in patients admitted in clinical wards with different infection risks. **Material and methods:** Various samples were collected from patients hospitalized in Intensive Care Unit (ICU), surgical and medical departments, during January-December 2016. The samples have been examined using routine microbiological methods (microscopy, culture, biochemical characters, and automatic tests). **Results:** Candida strains were present in 194 samples (56.1% Candida albicans; 37.1 Candida nonalbicans and 6.7% coinfection Candida albicans and nonalbicans). The patients who presented associations between Candida and other pathogens represented 43.2% (25% respectively 75% being associated with one respectively more pathogens). Most patients (38.1%) have been hospitalized in ICU, most frequently being involved the Gram-negative nonfermentative pathogens (32.7% Pseudomonas aeruginosa and Acinetobacter baumannii) followed by Enterobacteriaceae (26.2%) and Staphylococcus aureus (26.2%, from which 75% were MRSA). In Obstetrics-gynecology department, the main pathogens were Streptococcus agalactiae (53.8%) and the Enterobacteriaceae (23%). In surgical departments (general surgery, plastic surgery and urology), the most prevalent were the Enterobacteriaceae (58.3%) and Enterococcus spp. (16.6%); in Internal Medicine departments, Staphylococcus aureus and Enterobacteriaceae were the most prevalent (40% both). **Conclusions:** Candida associated with Gram-negative bacilli (nonfermentative and Enterobacteriaceae) had a higher prevalence in high-risk departments such as ICU and Surgery, while in low risk departments like Obstetrics-gynecology and Internal Medicine there was a higher association with Gram-positive cocci (Streptococcus, Staphylococcus), respectively Enterobacteriaceae.

Keywords: Candida, association, departments, Intensive Care Unit

EARLY MARKERS OF MICROVASCULOPATHY IN HYPERTENSIVE PATIENTS WITH MILD COGNITIVE DYSFUNCTION

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Background: Modern sedentary lifestyle is a global growing concern enhancing the development of chronic diseases such as hypertension. Long-term high blood pressure has been positively related to a variety of vascular diseases and cognitive impairments. **Objective:** The aim of the study was to draw relationships between laboratory findings and clinical outcomes such as cerebral, retinal and cardiovascular dysfunctions in hypertensive patients showing signs of cognitive impairment. Objects of interest were Hs-CRP (High sensitivity C-reactive Protein), fibrinogen, cystatin-C, microalbuminuria levels and diabetes. **Material and methods:** Starting from November 2016, all hypertensive patients of the cardiovascular rehabilitation clinic Tîrgu Mureș were selected. Patients with history of stroke and depression were ruled out and only those presenting abnormal mental status were included in the study, forming a sample of 16 hypertensive patients with mild cognitive impairment. Retinal photographs were taken with Carl-Zeiss-Visucam500 retinal camera, blood and urine analysis were performed as well as GTT (Glucose Tolerance Test). **Results:** The average age of the examined group was 74.57 years. A high percentage of patients displayed altered glucose metabolism (90.90%) as represented by 54.54% of people with

diabetes and 36.36% with IGT (Impaired Glucose Tolerance). Evidence shows elevated early markers of nephropathy such as cystatin-C in 91.67% of the patients and increased creatinine (18.18%) indicating progression of the disease. Furthermore high levels of fibrinogen in 55.55% of cases imply impaired kidney function. Retinopathy was detected in most patients: Arteriovenous-crossing sign in 75%, silver or copper-wire sign in 58.33%, retinal hemorrhage in 16.16% of cases. **Conclusions:** Cystatin-C as early marker of nephropathy, has increased values long before other parameters became pathological, such as creatinine and microalbuminuria. Hypertension in combination with diabetes increases the risk of retinal and brain microvascular pathologies. The studied inflammatory markers should alert the clinician to prevent advancement of these modifications.

Keywords: Hypertension, Nephropathy, Early marker

STUDY OF THE RISK FACTORS IN A GROUP OF VERY YOUNG PEDIATRIC PATIENTS WITH SEPSIS

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Background: Sepsis is defined as the presence of systemic inflammatory response syndrome plus suspected or proven infection. **Objective:** The aim was to analyze the importance of risk factors- such as age, nutritional status, life environment- in severe infections at young age. **Material and methods:** The group included 37 pediatric patients (from newborn up to 3 years old), hospitalized into Pediatrics I Tîrgu-Mureş, between February 2016-February 2017, with sepsis. Data were collected in an Excel spreadsheet, being statistically analyzed (GRAPH Pad Prisma). **Results:** The studied patients, 23 boys and 14 girls, 20 from rural and 17 from urban areas, distributed by age groups (8 newborns, 19 infants and 11 toddlers), had sepsis with respiratory (14), urinary (9), enteral (2) or undefined (7) starting point; meningitis (3) and mixed infections (2). There were 7 children with low birth-weight (below -2DS), all presenting sepsis with respiratory starting point; children with high birth-weight (over 2DS) had urinary starting point sepsis. Dystrophic children had mostly sepsis with respiratory starting point (8), followed by enteral starting point (3), the latter situation was not seen in eutrophic or overweight children. Analyzing breastfeeding as possible protective factor, we found that 75.7% of patients were breastfed at the moment of the disease (but without statistical significance and without differences between genders P=0.057, background P=0.50, type of infection P=0.35, nutritional status or etiologic agent P=0.98). The etiologic agent was identified in 16 of the patients. **Conclusions:** In the study group, sepsis was predominantly seen in infants, from rural areas, frequently the starting point of infection being respiratory; patients with low weight at birth and/or at the moment of hospital presentation, generally had sepsis with respiratory starting point; dystrophic patients had also enteric infections. Over three quarters of patients were breastfed, without this conferring differences compared to children differently fed.

Keywords: Sepsis, Risk factors, Infant, Toddler

RECTAL CANCER WITH CLINICAL ONSET THROUGH A MAXILLARY SINUS METASTASIS

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Background: Colo-rectal cancer presents usually with digestive complaints; in rare cases, the first clinical sign is related to the presence of secondary lesions. **Objective:** We report a patient with an atypical clinical onset of a rectal cancer. **Material and methods:** We report a 67 old male patient with a history of middle lobectomy for chronic lung abscess, coxartrosis, hypertension and coronary disease, who was diagnosed with a maxillary sinus tumor which was surgically removed. The pathological examination showed the presence of an adenocarcinoma, without being able to differentiate between a primary and secondary lesion. After the last local radiotherapy cycle, at 3 months after the removal of the maxillary sinus tumor, the patient was emergency admitted to the surgery department for an important inferior digestive bleeding. The CT scan showed the presence of multiple hepatic and adrenal masses, local recurrence in the maxillary sinus and raised the suspicion of a rectal cancer, which was confirmed by endoscopy. In order to control the bleeding, a palliative recto-sigmoidian resection with closure of the distal stump and colostomy was performed. **Results:** The postoperative course was difficult but eventually favourable. He patient was discharged at 12 days after surgery with no significant complaints, being referred for chemotherapy. The pathological examination confirmed the rectal adenocarcinoma as the primary malignant

lesion. **Conclusions:** Patients with a pathological examination suggesting the possibility of a metastasis should undergo a careful clinical, imaging and endoscopic evaluation in order to detect the primary tumor before the development of other complications.

Keywords: rectal cancer, metastasis to maxillary sinus, surgery

CLINICAL AND BIOLOGICAL CORRELATIONS IN CHILDREN WITH PATHOGENIC ESCHERICHIA COLI INFECTION

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Background: Diarrhea is a very common problem in childhood, characterized by frequent/loose stools (with/without blood or mucus), or bowel movements outside a child's normal pattern. Enteropathogenic Escherichia coli (EPEC) is an important cause of diarrhea among infants in developing countries. **Objective:** This study emphasizes the clinical and biological correlations in children infected with EPEC. **Material and methods:** We performed a retrospective study on a group of 56 children (0-2 years old) hospitalized with diarrhea in the Pediatrics Clinic of Clinical County Hospital Tîrgu-Mureș during 2016. EPEC was identified by culture and specific slide agglutination. Immuno-chromatographic tests were used for associated Adenovirus/Rotavirus detection. **Results:** During the study, 56 samples were found positive; the prevalence was slightly higher in females (51.8%). The most common cases occurred in summer (42.9%). Associated enteric viruses were found in 17.1%. The incidence was higher in rural areas (78.6%), most affected being the children under one year (67.9%). Clinically, 87.5% presented dehydration, 58.9% showed fever on admission, 73.2% presented other associated diseases, 19.6% had received antibiotics before admission, and 28.6% were social cases. The majority (89.3%) were breast fed (57.1% for more than 5 months), but almost half (46.4%) were fed with breast milk supplements in 48.2% the diversification was started before 5 months. Regarding the laboratory markers, 41% of patients presented AST > 40U/L, 16.1% ALT > 35U/L, 39.3% presented anemia, 25% thrombocytopenia, 21.4% neutrophilia and 50% lymphocytosis. **Conclusions:** Diarrhea caused by EPEC affects mostly the infants in the warm season. Artificial formula feeding, early diversification, poor socio-economic conditions, improper hygiene are most frequent predisposing factors. In the majority of the cases dehydration and other associated diseases lead to hospitalization.

Keywords: Enteropathogenic Escherichia coli, Diarrhea, Breastfeeding

DEMOGRAPHIC, CLINICAL AND EVOLUTIVE ASPECTS OF INFLUENZA VIRUS INFECTION IN HOSPITALIZED PATIENTS

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Background: Influenza is an acute infectious disease, characterized by high contagiousness, systemic manifestations represented by fever, asthenia, arthralgia, myalgia and respiratory symptoms - sneeze, rhinorrhea and cough. The range of illnesses caused by influenza viruses ranges from oligosymptomatic cases to severe ones, with potentially fatal outcome. **Objective:** To analyze demographic, clinical and laboratory aspects in hospitalized patients confirmed with influenza along with the complications and outcome. **Material and methods:** We analyzed clinical data from patients diagnosed with influenza virus infection, hospitalized in the Clinic of Infectious Diseases I, County Clinical Hospital Mureș (n=144), over a 10-year period (January 1st 2007 - December 31st 2016). The following variables were studied: demographic data, number of days of hospitalization, primary diagnosis, laboratory and imaging data, complications and outcome. **Results:** From demographic data we identified that 55.55% (n=80) patients were female, 44.44% (n=64) were male; 89.58% (n=129) were below 65 years; 56.25% (n=81) were from a rural environment. The average number of days of hospitalization was 6 with a minimum of 1 day and a maximum of 28 days. 74.65% (n=107) were hospitalized for less than 7 days. The most frequent complications in hospitalized patients were pneumonia (92.36%), hydro-electrolytic disorders (47.22%), upper respiratory tract disorders (41.66%), acute respiratory failure (33.33%), followed by the hematological secondary disorders and secondary infections. Death occurred in 2.77% (n=4) cases. **Conclusions:** Influenza can produce a wide variety of clinical forms of illness, from mild, oligosymptomatic forms to very severe forms accompanied by acute respiratory failure and even death. Severe forms of disease were reported both in young,

previously healthy patients, and in older subjects, with chronic comorbidities.

Keywords: influenza, complications, outcome

COMPLICATIONS AND REBALANCING A PATIENT WITH ECTOPIC CUSHING'S SYNDROME CAUSED BY A PANCREATIC NEUROENDOCRINE TUMOR

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Background: Cushing syndrome (CS) refers to a diverse symptom complex resulting from excess steroid hormone production by adrenal gland (endogenous) or from a sustained administration of glucocorticoids (exogenous). The endogenous CS comprises three distinct pathogenic disorders: pituitary, adrenal, and ectopic. Ectopic Cushing syndrome (ECS) accounts for 15% of cases of endogenous CS. Pancreatic neuroendocrine tumours (NET) are a rare cause of ectopic ACTH syndrome. Herein, we present a case of a metastatic pancreatic NET tumour with ectopic ACTH production refractory to medical management. **Objective:** Our objective is to present the role of preventing complications and rebalancing a patient with ectopic Cushing's syndrome and also to underline the importance of early detection of the ACTH-secreting tumour and its location. **Material and methods:** We report the case of a 52-year-old woman admitted to the Endocrinology Department of "Sf. Spiridon" Hospital, Iași, for weight gain, oedema of the inferior limbs, severe fatigue, and hypertension. Clinical appearance suggests Cushing syndrome and the biological profile confirms high levels of ACTH and serum cortisol. CT and MRI investigations revealed bilateral adrenal hyperplasia, but no sign of cellular adenoma. On a second investigation, the abdominopelvic ultrasonography revealed a hypoechoic nodule in the uncinate process of the pancreas and multiple hypoechoic lesions in the liver, highly indicative of potential metastases. The CT exam then confirmed the aforementioned results. **Results:** The patient was diagnosed with ectopic Cushing's syndrome caused by a preexisting pancreatic neuroendocrine tumour (T3N1M1) and underwent bilateral adrenalectomy as a consequence of the patient not being responsive to medical treatment. Postoperative evolution revealed the decrease of cortisol levels. **Conclusions:** Pancreatic neuroendocrine tumours can have variable, often aggressive endocrinologic manifestations. Tumour heterogeneity and a rapidly progressive course can pose significant management challenges and so early intervention and rebalancing are essential for the evolution of patients with pancreatic NETs leading to ectopic Cushing's syndrome.

Keywords: Ectopic Cushing's syndrome, ACTH-secreting tumor, adrenalectomy

ADRENAL CORTICAL ADENOMA: PREVALENCE AND DIAGNOSTIC CRITERIA

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Background: Adrenal cortical adenoma is a benign epithelial tumor of the adrenal cortex. The real incidence of these adenomas is unknown. If until the present only functional nodules were detected, currently, the widespread of imaging techniques allow detection of adrenal incidentalomas, with subclinical hormone secretion. **Objective:** The purpose of our study was to determine the prevalence of adrenal cortical adenoma in the Pathology Department of Tîrgu Mureș Emergency County Hospital, over a twelve year period, to present the histopathological diagnostic criteria and the differential diagnosis. **Material and methods:** We evaluated all the pathological data regarding patients who underwent surgery for an adrenal cortical lesion between 2005-2016 in our institution. For each patient age, gender, clinical and histopathological diagnosis were recorded. **Results:** From the total number of 79 cases of adrenal lesions examined, 15% (12 cases) were adrenal cortical adenomas. The average age of the subjects was 49 years, ranging from 3 to 72 years. There were no definitive differences in histology among the different clinically functional types of adenoma. They consisted of varying proportions of clear cells with abundant intracytoplasmic lipid droplets and compact cells with lipid sparse eosinophilic cytoplasm, with small nuclei and rare mitosis. **Conclusions:** The main issue in the diagnosis of adrenal cortical adenoma is the distinction from carcinoma. Furthermore, functional adrenal cortical adenomas must be recognized, considering that their prognosis is determined by the severity of clinical manifestations. For an accurate diagnosis, an interdisciplinary approach is mandatory.

Keywords: adrenal cortical adenoma, adrenal cortical lesion, adrenal cortex

SURGICAL TREATMENT OF ACUTE PANCREATITIS

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Background: Acute pancreatitis is a severe condition with an unpredictable evolution. Surgical treatment is indicated for the causes in which the etiology of gallstone is incriminated and for complicated forms of acute pancreatitis. **Objective:** Is the evaluation of clinical and biological parameters of operated patients with acute pancreatitis and establishing correlations between them and the postoperative evolution. **Material and methods:** We performed a retrospective study which enrolled all the patients surgically treated for acute pancreatitis in Surgical Clinic 1 of the Tîrgu Mureş Emergency Hospital between 2006-2012. Were evaluated clinical and biological parameters, prognostic scores were calculated and the results were analyzed in correlation with postoperative evolution of patients. The following parameters were followed: gender, age, days of hospitalization, operation, number of intervention, personal history, admission diagnosis, discharge diagnosis, associated diagnoses, body mass index, Ranson score, pulse, blood pressure, level of leucocytes, hematocrit, hemoglobin, trombocyte, glycaemia, serum creatinine, urea, total bilirubin, direct bilirubin, postoperative complications, postoperative resumption of transit, abdominal echocography, computed tomography, radiography. **Results:** Of the 60 patients operated for acute pancreatitis, 20 were women and 40 men, with a sex ratio 1:2. The average age in the study group was 52.3 years. Average length of hospitalization for these patients was 26.88 days. Mortality was represented by 12 cases (20%). Pancreatic fistulas were found as a postoperative complication in 5% of cases from the operated patients. **Conclusions:** Postoperative evolution of patients with severe pancreatitis remains unpredictable, surgical treatment, except lithiazic etiology, is addressed to effects of the disease and not to the causing mechanism. Prognosis in severe pancreatitis is often unfavorable, associating a high mortality rate despite medical and surgical treatment correctly performed.

Keywords: acute pancreatitis, prognosis, surgical treatment, severe pancreatitis

22Q11.2 DELETION SYNDROME : A CASE REPORT

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Background: The 22q11.2 deletion syndrome (DS) reunites different conditions, features and malformations, especially cardiac malformations. Also, this condition increases the risk for schizophrenia, attentive disorders and anxiety development. A better knowledge and management of this disease can significantly improve the patients life. Taking into consideration all mentioned above the early diagnosis of this patients is necessary. **Objective:** Our aim was to present the diagnosis management of this syndrome. **Material and methods:** A newborn had presented since birth cyanosis, dyspnea, difficulty feeding. Clinical investigation and echocardiography revealed Fallot tetralogy. The facial dismorphism and complex cardiac malformations raise the suspicion of a 22q11.2 deletion syndrome. For a positive diagnosis, the molecular (Multiplex ligation-dependent probe amplification: MLPA) test was performed. **Results:** The test revealed a partial deletion of the long arm of chromosome 22, mainly 22q11.2. **Conclusions:** For a positive diagnosis of 22q11.2 DS it is necessary to perform the molecular test mentioned above and early diagnosis will improve the quality of life of this patient.

Keywords: 22q11.2 deletion, syndrome, cardiac malformations

AORTA SECRETS: COMPLEX CASE OF JUVENILE POLYTRAUMA

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Background: Thoracic aortic aneurysm is a life-threatening condition defined as an aortic dilatation of greater than 4.5 cm that causes important short- and long-term mortality due to dissection and rupture. This pathologic condition is frequently caused by idiopathic cystic medial degeneration, genetic disorders (Marfan syndrome), atherosclerosis, and infections. Bacterial (mycotic) aneurysm could be caused very rarely by primary bacterial

infections or more often it can appear after an episode of endocarditis or systemic infection in a diseased, atherosclerotic or traumatized aortic wall. **Objective:** Diagnosis and treatment of the thoracic aortic aneurysm is a challenge in terms of health, especially in the context of multiple trauma. **Material and methods:** A 12 year-old overweight, and hypertensive patient, victim of a road crash, suffered polytraumatic injuries with thoracic and abdominal contusion, medio-diaphyseal comminuted displacement fracture of the left femur and intercondylar fracture of the right femur. CT scan examination showed evidence of a 3.5-4 cm aneurysm of the aortic isthmus. The multidisciplinary team chose to solve the orthopedic injuries first. The orthopedic surgeons fixed the fractures by intramedullary nailing and 3 cerclages. After several days, the cardiac team performed the aortic reconstruction with heterologous pericardial patch in peripheral extracorporeal circulation. **Results:** The massive intrathoracic bleeding at 6 hours after surgery was successfully solved. The neurological consultation in the first post-operative days revealed decrease of sensitivity and motricity absence in the lower limbs. **Conclusions:** Effective interdisciplinary collaboration and coordination are crucial in cases of polytraumatic injuries in order to establish an optimum therapeutic approach. Spinal cord protection is ensured through the choice of the surgical technique.

Keywords: aorta, trauma, aneurysm, infection

MINIMALLY INVASIVE COURSE OF THERAPY IN A PEDIATRIC PATIENT WITH RIGHT CALF OSTEOSARCOMA

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Background: The following case study reviews a patient presenting in June 2016 in the Emergency Clinical County Hospital Craiova, complaining of right knee pain. The clinical exam revealed a tumor below the right knee, extending towards the calf. After complete biochemical workup and imaging CT studies, the medical team concluded the tumor's nature was most certainly malignant. The treatment plan elaborated by the medical team was based on identifying the nature of the tumor with minimal hematological dissemination risk. **Objective:** The team established the best treatment course started with the embolization of the tumor in order to prevent any malignant cell migration. **Material and methods:** The embolization procedure has been conducted in a hybrid operating room, using the SIEMENS Axiom Artis dFA angiography system, using a right femoral anterograde arterial approach. A catheter has been advanced just above the tumor and its arterial feeders have been evaluated. Afterwards, the feeders were embolized one by one, using resorbable embolizing materials. Post-embolization, the patient's leg has been immobilized for approximately 8 hours. Shortly after the embolization procedure, the patient underwent a biopsy that confirmed the diagnosis, followed by amputation of the right leg, saving the upper 1/3 of the thigh. Later treatment was comprised by chemotherapy and regular biochemical and imaging investigations. **Results:** Angiographic control after embolization showed no blood flow inside the tumor. **Conclusions:** Embolization is a valid option in order to minimize blood loss during most types of surgical procedures, especially malignant tumors with well represented arterial systems. Moreover, in case of a biopsy or other types of invasive maneuver, embolizations ensures a supplementary barrier in the way of tumoral dissemination.

Keywords: osteosarcoma, arterial embolization, hematological dissemination, malignant tumors

PORTAL BRANCH LIGATION - A VIABLE SOLUTION FOR INITIALLY INOPERABLE HEPATIC METASTATIC TUMOR - CASE REPORT

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Background: Colorectal cancer is in a continuous rising due to modern diagnosis and screening programs. **Objective:** The present case wants to highlight the effects of portal branch ligation - tumor atrophy in the affected lobe and the hypertrophy of the other lobe. **Material and methods:** A 53 year old female was hospitalized in Surgery II Department from SCJU Tîrgu-Mureş with abdominal pain, nausea, anemia, fatigability, significant weight loss, moderate jaundice. The physical examination of the patient revealed: at palpation, hepatomegaly with inferior margin of the right lobe projecting with 5-6 cm under the costal arch. Contrast enhanced CT revealed multiple lesions, localised strictly in the right lobe of the liver. In order to investigate the origin of the primary tumor, a

colonoscopy performed on the patient revealed a hemorrhagic mass in the ascending colon. Due to the association of these two comorbidities, an open surgical procedure was performed consisting of right hemicolectomy and right portal branch ligation. After the surgical procedure the patient showed a favorable evolution and she was discharged on the seventh day after surgery. **Results:** At the 3 months periodic control the CT exam showed a moderate atrophy of the metastatic right lobe and hypertrophy of the left lobe. These results let the surgical team perform a right hepatectomy. After the surgical intervention the patient had a favorable evolution and now is under oncological and surgical supervision. **Conclusions:** The right portal branch ligation represents an alternative therapeutic procedure for patients with right lobe metastasis of the liver, when the left lobe does not have a volume big enough to sustain the hepatic function.

Keywords: liver metastasis, colorectal cancer, right portal branch ligation, arterial chemoembolisation

HAEMOPERITONEUM ASSOCIATING CHOLEPERITONEUM AFTER AN ABDOMINAL TRAUMA - CASE REPORT

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Background: Research in the medical literature reports a lot of anatomical differences regarding number, form and function of the gallbladder and a lot of anatomical variations in the development of the liver. **Objective:** Showing and knowing the gallbladder and liver anatomical variations reveals their importance in any abdominal surgery. **Material and methods:** Patient MV 42 years old arrived at the emergency ward after a thoracoabdominal trauma. The laboratory and imaging data raise the suspicion of a posttraumatic haemoperitoneum. A surgical approach was necessary starting with a median laparotomy and during the abdominal exploration, a medium quantity of haemoperitoneum and choleperitoneum had been observed. The sources of the bleeding were: the rupture of the pedunculated accessory hepatic lobe connected to the quadrate lobe accompanied by the rupture of the gallbladder, which was inserted exactly on the accessory lobe. The surgical team decided the resection of the accessory hepatic lobe and cholecystectomy. **Results:** The evolution of the patient was very favorable and he was discharged in the seventh day after the surgery. **Conclusions:** The anatomical variations of the gallbladder and the liver must be taken into consideration every time these territories are involved in surgical procedures. The adequate knowledge of these variations reduces significantly intraoperative complications.

Keywords: Gallbladder anatomical variations, Abdominal trauma, Choleperitoneum, Accessory hepatic lobe

DEFINITIVE DIAGNOSIS RESTS ON IMAGING – A TRUE PICTURE OF CONVEXITY SUBARACHNOID HAEMORRHAGE. A CLINICAL CASE AND LITERATURE OUTCOMES

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Background: Around 85% of subarachnoid haemorrhages emerge from a ruptured aneurysm at the base of the brain, while non-traumatic convexity subarachnoid haemorrhage (cSAH) is a rare and particular condition, specially when it is related to cerebral amyloid angiopathy (CAA). Being often revealed by transient focal neurological episodes (TFNEs), cSAH's cause could be CAA. It is essential to identify cSAH manifested by TFNEs due to high risk of recurrent intracerebral haemorrhage. **Objective:** As cSAH's serie cause is diverse, the main aim of this paper is to emphasize the importance of magnetic resonance imaging (MRI) evaluation in a patient with cSAH related to CAA as a clinical-radiological pattern. **Material and methods:** It was analysed a case of cSAH, admitted to the Neurology Unit at Purpan University Hospital, Toulouse, France. Recorded variables were demographics, clinical presentation, complementary investigations, etiology, and outcome. Boston criteria were used to classify the patient in a group of CAA. **Results:** A 78-year-old woman known with a history of lower limb obliterating arteriopathy, left subclavial arterial stenosis, hypothyroidism, was evaluated for six recurrent and transitory left brachial-facial paraesthesia episodes, noticed approximately a month prior to admission, the last three associating dysarthria. There was neither observation of exacerbating and alleviating factors, nor recognition of headache, thoracic pain and loss of consciousness. Cardiovascular risk factors include arterial hypertension and dyslipidaemia. The clinical exam finds left central facial paralysis associating a left brachial-facial hypoesthesia. Diagnostic work-up of cSAH has been made by using MRI. A right rolandic lesion was revealed with hypersignal

FLAIR and hypointense T2 echo-gradient, and a linear leptomeningeal contrast enhancement in T1 gadolinium, and also characteristic findings for superficial hemosiderosis corresponding to pre-central sulcus. **Conclusions:** It was highlighted the sensitivity of imaging investigations in cSAH's interpretation. MRI proved to be a key in building the diagnosis and underlying the etiology, sometimes as CAA.

Keywords: convexity subarachnoid haemorrhage, cerebral amyloid angiopathy, magnetic resonance imaging

GENETIC BACKGROUND IS AN IMPORTANT PLAYER IN DRIVING ONE DISEASE TO ANOTHER – A CLINICAL CASE

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Background: Reactive arthritis and ankylosing spondylitis are inflammatory diseases characterized by inflammatory back pain, sacroiliitis, tender and swollen small joints, being part of the same group of diseases □ the spondylarthropathies. **Objective:** The main objective of our clinical presentation was to show that genetic background with certain infection conditions can trigger the onset of ankylosing spondylitis. **Material and methods:** A young man aged of 27, was admitted in Rheumatology Clinic with tender and swollen joint of the second, third and fourth of the MCP's (metacarpophalangeal) of the right hand and a tender and swollen right knee with a VAS of 10. The patient was previously diagnosed with reactive arthritis (synovial fluid □ Neisseria gonorrhoea) and was on antibiotics for five weeks with mild improvement. At the admission, the patient associated balanitis and urethritis. HIV(human immunodeficiency virus), TB (tuberculosis) and syphilis were excluded. The presence of the phenotype HLAB27 was acknowledged. Imaging (ultrasound, MRI and X-ray) showed synovitis, tenosynovitis and sacroiliitis (bone edema). **Results:** Corroborating all the clinical and lab data, the patient was diagnosed with ankylosing spondylitis secondary to reactive arthritis. Corticosteroids and sulfasalazine were started with improvement on VAS (visual analogue scale) by 6 cm (from 10 cm to 4 cm). **Conclusions:** The genetic background (the phenotype HLAB27) played a role in the evolution of a reactive arthritis to ankylosing spondylitis.

Keywords: Genetic, Driving, Disease

DA VINCI SURGICAL SYSTEM, A NEW TECHNOLOGY INTO THE SURGICAL FIELD

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Background: Da Vinci surgical system is a new innovation introduced into the surgical field. The cost of the robot is ~ 2 million euros. The number of interventions using this technology is increasing every year. In 2014 in USA the number of interventions reached 500.000. Instead in Romania the number of intervention is 1700 in present and annually approximately 100-150 surgical procedures using this revolutionary robotic system are performed. **Objective:** Present the advantages and disadvantages of Da Vinci Robotic system and the costs of this kind of procedures. **Material and methods:** Published articles and studies in the English and Romanian language related to the period 2011-2016 were searched using electronic databases. **Results:** Based on reports and articles, Da Vinci Surgical System includes many advantages compared to laparoscopic and conventional surgery such as: 3-D visualization, improved dexterity, seven degrees of freedom, elimination of the fulcrum effect, elimination of physiologic tremors, ability to scale motions, micro-anastomoses possible, tele-surgery, ergonomic position. Plus there are other advantages related to the patient such as: shorter hospitalization, reduced pain and discomfort, faster recovery time and return to normal activities, smaller incisions and minimal scarring, reduced risk of infections and reduced blood loss and transfusions. The disadvantages are: absence of touch sensation, elongated learning curve and the price of this novel technology and the overall cost of a procedure that reach ~ 1000-4000\$ in USA and ~6.500 □ in Romania, depending on the intervention. **Conclusions:** The robotic surgery represent a big advantage for the surgeon who must perform 150 to 250 procedures to become adept in their use. The disadvantage is that the cost of purchase and upkeep can raise the price of the intervention. In the USA a patient can pay up to 4000\$ but in Romania the state can cover for some interventions with the help of the National Health Programs.

Keywords: Da Vinci, Advantages, Disadvantages, cost

RIGHT CORONARY TO RIGHT VENTRICLE FISTULA - CASE REPORT

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Background: Primary coronary-cameral fistula is a rare malformation presenting a communication between a coronary artery and a cardiac chamber with the bypass of myocardial capillary bed. It represents 0.4% of all cardiac malformations, being reported in 0.002% of the general population. A coronary-cameral fistula consists of a coronary artery steal phenomenon. Subsequently, the myocardial blood flow is reduced beyond the fistula's origin. In order to counteract the possible myocardial ischemia distal to the site of the coronary artery fistula connection, the ostia of the coronary vessel and feeding artery enlarge progressively. **Objective:** Our aim is to inform about the possibility of developing congestive cardiac failure as a result of a large and hemodynamically significant fistula with left-to-right shunt. **Material and methods:** An 8-month old female infant diagnosed with right coronary aneurysm, right coronary to right ventricle fistula, confirmed through cardiac catheterization and angiography, bicuspid aortic valve and patent foramen ovale underwent surgery associated with extracorporeal circulation for closure of the fistula and patent foramen ovale. The postoperative evolution was marked by a left-side hemothorax solved by thoracocentesis. **Results:** A year after surgery the infant had general good condition. Ecocardiography showed complete occlusion of the fistula without residual coronary shunt, with a normal value of the ejection fraction (70%). **Conclusions:** In most cases, a coronary artery to camera fistula is asymptomatic in the early years. The purpose of treatment is the occlusion of the fistula for prevention of a high-output congestive heart failure.

Keywords: coronary artery, fistula, shunt, catheterization

THE INVOLUNTARY ASSOCIATED RISKS OF EXPOSURE TO CLENBUTEROL THROUGH ALIMENTATION

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Background: Global overpopulation causes extreme measures for assuring the necessary food needs: decreasing the number of diseases and deaths and increasing the efficiency of the growth process for domesticated meat animals. For this purpose the illicit use of substances such as Clenbuterol (illegally used in E.U and Mexico) has an advantage in increasing the lean mass especially on big animals like cows, or increasing the sport performance in race horses. **Objective:** The data analysis regarding the effects of clenbuterol, originated from animal sources, on people. **Material and methods:** A literature review regarding the main risks associated with the consumption of meat which is not proper for human consumption (especially bovine liver or milk) on people but also simple and cheaper detection methods of clenbuterol. The detection methods described in literature include: enzyme-linked immunosorbent assay, gas chromatography coupled with mass spectrometry, high-performance liquid chromatography with UV detection, liquid chromatography coupled with tandem mass spectrometry. **Results:** Clenbuterol is a beta-2 agonist that could induce tachycardia, palpitations, tremor and anxiety if consumed in overdose. Chronic use especially combined with certain carbohydrates restrictive diets can increase the risk of ketosis and ketoacidosis. Codex Alimentarius Comission restricts the maximum admitted residue in beef liver at 0.6 ng/g and at 0.2 ng/g in beef meat. **Conclusions:** The presence of Clenbuterol in animal meat and milk can determine important side effects in humans, especially if we take into consideration the milk intake in the first years of children's life.

Keywords: clenbuterol, beef meat, infested meat, alimentation

ALLERGENIC POTENTIAL OF COMMERCIAL DETERGENTS WITH ENZYMATIC ACTIVITY

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Background: Starting from the hypothesis that the enzymes in the composition enzymatic detergents are obtained

by bacterial and fungal fermentation and from the increasingly presence of enzymes in commercial detergent composition. **Objective:** The paper aims a risk evaluation for health brought by these additional components. **Material and methods:** Data analysis from scientific literature on the allergenic risk of commercial detergents taking in to consideration the recognized potential of proteins (enzymes) to produce immunologic response to acut, subacut and chronic exposure. **Results:** Literature study shows that as with most, the substances to which an individual is exposed, the dose can determine toxic effects, in the case of enzymes these do not show acute toxicity, chronic or genotoxicity, but only in high concentrations. Other studies show that the enzymes are respiratory sensitizers, being able to lead to allergic asthma following an IgE-type reaction. The majority of the toxicity studies from the literature are performed on laboratory animals (guinea pigs, mouse) and the studies on humans are limited by ethical considerations □ which raises the problem of extrapolating the results at the human species in the case of consumers and employees in the production of enzymatic detergents exposed chronically (repeated content sensitivity) **Conclusions:** Taking into account that the enzymatic detergents were introduced on the market in the 60s, the use of a smaller amount of inorganic compounds compared to classical detergents and the replacement of those with organic compounds, the reduced amount of pollution it creates and the individual particularities (individuals with atopic background) the benefit - risk ratio in the case of enzymatic detergents shows us more advantages than disadvantages.

Keywords: detergents, enzymes, allergenic, immunologic

COMPLETE ATRIOVENTRICULAR CANAL RASTELLI TYPE B – UNIVENTRICULAR REPAIR WITH ECMO ASSISTANCE.

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Background: Complete atrioventricular canal (CAVC) is a rare congenital cardiac malformation (CCM) resulting from abnormally developed embryonic endocardial cushions. CAVC Rastelli type B is the rarest type (<1%) and almost never seen in the setting of balanced ventricles. It is characterized by an ostium primum atrial septal defect, an inlet ventricular septal defect and a common atrioventricular valve (AVV) with straddling chords extending from the valve's mitral component to an anomalous papillary muscle in the right ventricle. **Objective:** Evaluation of univentricular repair's efficiency in a case of complex CCM. **Material and methods:** A 4 moths female patient, full-term delivered, prenatally diagnosed with complex CCM, then one hour postnatally, confirming heterotaxy syndrome, total anomalous pulmonary venous connection, single atrium, CAVC Rastelli type B with balanced ventricles, mild AVV regurgitation and pulmonary valve stenosis. Readmitted at 4 months with heart failure and sepsis, she underwent a univentricular repair, consisting of an AVV replacement with a bioprosthesis, bilateral bidirectional Glenn anastomosis, main pulmonary artery ligation and atrial septectomy in cardiopulmonary bypass. We compared preoperative and postoperative oxygen saturation (SaO₂) and echocardiography evaluations to asses the surgical procedure's outcome. **Results:** Due to the mitral valve straddling, a routine valvuloplasty was not possible, therefore, the AVV replacement was necessary, becoming the youngest valve replacement patient in IuBCvT's history. During the postoperative period, the SaO₂ reached normal values and although the AV bioprosthesis and both Glenn anastomosis were normally functioning, a biventricular contractile dysfunction occurred, leading to decompensated cardiogenic shock, therefore ECMO was instituted. During the next week, due to multisystem organ failure, ECMO detachment was decided, while maintaining maximal pharmacological support. After few minutes of apparent success, a major hemodynamic degradation installed, unfortunately, leading to death. **Conclusions:** Sometimes the CCM's complexity directs the surgical act towards a univentricular repair. Early diagnosis and an efficient interdisciplinary management could significantly impact the patient's evolution.

Keywords: Complete atrioventricular canal, Univentricular repair, Valve replacement, ECMO

COMPARATIVE ANALYSIS OF ANTIBACTERIAL RESISTANCE IN E.COLI URINARY TRACT INFECTION IN DIABETES VERSUS NON-DIABETES PATIENTS.

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Background: Increase in resistance pattern of urinary tract pathogens to conventional antimicrobial agents

used for urinary tract infections (UTIs) is an important issue in medicine. Immunocompromised state and frequent antibiotic use are associated with antibiotic resistance of the bacterial pathogens. **Objective:** The aim of our study was to study antimicrobial resistance in diabetes patients with E coli urinary tract infections compared with patients without diabetes. **Material and methods:** Retrospective study on 667 patients admitted in the Department of Nephrology, County Clinical Hospital Mures. Urinary tract infection was defined as more than 100000 UCF/ml. Antibacterial resistance was studied with Fisher exact test for penicillins, quinolones, cephalosporins, aminoglycosides and nalidixic acid. **Results:** 175 patients had diabetes mellitus, from which 41 had E.coli urinary tract infection. In non-diabetic patients 81 had E coli UTIs. We found no differences in antimicrobial resistance for diabetes compared with non-diabetes patients. **Conclusions:** These data may aid health professionals in choosing the appropriate treatment for patients with UTI in the region in order to prevent the misuse of antibiotics.

Keywords: urinary tract infection, diabetes mellitus, Escherichia coli

FROM 3RD DEGREE “ESSENTIAL” HYPERTENSION TO CARDIAC ARREST IN ONE LONG TRIP

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Background: Ventricular fibrillation is a rare complication of primary hyperaldosteronism. This endocrinologic condition should be included in the diagnostic work-up of patients who associate hypertension and hypokalemia. **Objective:** The purpose of this case report is to emphasize the complex pathophysiological mechanisms behind common diagnoses like hypertension and prevent etiologic misdiagnoses that could lead to life-threatening events. **Material and methods:** We present the case of a 55 years old Caucasian woman, diagnosed with poorly-controlled essential hypertension 25 years earlier, who was admitted to the emergency room (ER) for chest pain. The electrocardiogram on admission showed signs of hypokalemia with prolonged PQ interval, wide QRS complexes and right branch block. The blood tests revealed hypokalemia of 1.47 mmol/l. The patient requires electric cardioversion three times, twice for ventricular fibrillation and the third time for hemodynamically unstable ventricular tachycardia. After defibrillation the patient was admitted in the cardiology department for further investigations. The persistent high blood pressure (up to 200/120 mmHg) with left ventricular hypertrophy, resistant hypokalemia and mild hypernatremia led to the hypothesis of primary hyperaldosteronism. The abdominal CT scan identified a tumor of 27/13/31 mm on the left adrenal gland. The patient was further referred to endocrinology where the final diagnosis of primary hyperaldosteronism was confirmed based on the increased aldosterone to renin ratio (>80). **Results:** The patient was scheduled for surgery and a laparoscopic left suprarenal resection was performed. The early post-surgery status was good, with slowly decreasing blood pressure values. **Conclusions:** Secondary hypertension should be considered in patients with resistant hypertension in order to establish an etiologic diagnosis, to provide the appropriate treatment, and avoid complications.

Keywords: hyperaldosteronism, Conn disease, hypokalemia

BETA ALANINE –DIETARY SUPPLEMENT FOR ATHLETES OR COSMETIC INGREDIENT?

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Background: Beta alanine is a non-proteinogen amino acid, which can be synthesized by organism, from Aspartic acid or Glutamic acid, or may be the result of pyrimidine bases catabolism. In combination with another amino acid, histidine, it forms carnosine and anserine (methyl derivate of carnosine) which are dipeptides. Beta alanine is used as dietary supplement by athletes to increase the muscle endurance, and as well as cosmetic ingredient - humectant for skin care. **Objective:** Evaluation of a correct administration pathway of beta alanine, as a medical cosmetician □ only external as cosmetic ingredient or combined with internal usage (it helps to maintain skin trophicity and elasticity especially of the face skin). **Material and methods:** Study of scientific literature for the administration pathway (internal to increase the endurance and exercise capacity and reduce neuromuscular fatigue) but also external usage (for increasing skin elasticity and anti - aging action) **Results:** Oral supplementing with beta alanine in doses of 2-4 g /day is increasing the level of carnosine from muscle and is acting like an intramuscular buffer, decrease the acid compounds concentration obtained from glycolysis (pyruvic and lactic acid)

or the acid pH caused by fatty acids used by muscles in rest. A possible side effect is paresthesia which can be attenuated with lower and more frequently doses. **Conclusions:** Supplementation with beta alanine is recommended in case of restrictive diets in animal proteins, and also considering that carnosine from food, is often metabolized, together with the other diet proteins, before is getting in muscle and in mean while supplementing beta alanine is preferential elevating the level of carnosine from muscle.

Keywords: beta alanine, carnosine,, dietary supplement,, humectant cosmetic

LETROZOLE USE AS RECOMMENDED BY SUMMARY OF PRODUCT CHARACTERISTICS OR OFF LABEL

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Background: According to the Summary of Product Characteristics letrozole has few indications, however it is used as off-label medication in various male diseases, but also as a substance of abuse. **Objective:** Establishing the main legal or illegal uses, outside marketing authorization, based on data from the literature. **Material and methods:** Scientific articles, published in the last 5 years, were consulted from the following databases: PubMed, Science Direct and Web of Science. **Results:** As off-label medication, letrozole is used in men to correct the side effects arising from the use of anabolic steroids as gynecomastia and azoospermia. In women it can stimulate ovarian function as an alternative to clomiphene because of the lower side effects and incidence of twin pregnancies. During the preclinical studies we could observe that the male offsprings of a female treated with letrozole had a preference for same sex individuals. Moreover, the substance can be used to obtain animal models with polycystic ovary syndrome. **Conclusions:** Although marketed since 1996, letrozole is indicated, according to the Summary of Product Characteristics, only for treatment of breast cancer estrogen-dependent but is frequently diverted and used for various other purposes.

Keywords: letrozole, breast cancer, off-label

THEORETICAL CONSIDERATIONS ON AMIODARONE AND DESETHYLAMIODARONE TOXICITY IN LIPOLYSIS CONDITIONS

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Background: Amiodarone is an antiarrhythmic drug, a potassium channel blocker which is used to treat ventricular tachyarrhythmias and fibrillation but due to the pharmacokinetic profile (long half-life, about 100 days) and pharmacotoxicological, it is recommended as an alternative medication. Among the notable side effects include pulmonary fibrosis, cardiac arrhythmias and thyroid dysfunction. **Objective:** If the toxic effects of amiodarone are known, the paper suggests theoretically assessment of toxicological changes in terms of mobilizing energy reserves from adipose tissue caused by low carbohydrate intake. **Material and methods:** Specialty literature study on the toxic effects of amiodarone, pharmacokinetic data, evaluation of the main restrictive diets in calories intake that can cause lipolysis and then to increase the circulating levels of desethylamiodarone and possibly the parent compound. **Results:** In terms of distribution, such as amiodarone and its active metabolite, desethylamiodarone, distributed predominantly in lungs, liver, thyroid, kidney, heart, fat tissue and less muscle and brain. Their accumulation in adipose tissue can be problematic in obese patients following chronic treatment. Sudden weight loss especially through lipolysis usually recommended in these patients case or if forced parenteral nutrition (after stroke, heart attack etc.) can increase the concentration of these two compounds that increase toxicity. One possibility would be to control lipolysis levels by measuring serum glycerol. **Conclusions:** Literature data are insufficient to demonstrate the toxic effects caused by massive release of amiodarone / desethylamiodarone caused by lipolysis hence the question in the first phase of study in lab animals eventually offer the possibility of extrapolating these data to the human species.

Keywords: Amiodarone, Desethylamiodarone, Adipose tissue

THE DISCREPANCY BETWEEN ULTRASOUND APPEARANCE AND HISTOPATHOLOGICAL RESULT IN LIVER CIRRHOSIS

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Background: Liver cirrhosis represents the final stage of chronic virus B infection. It is morphologically characterized by a destruction of liver lobules and vascular structures associated with inflammatory fibrosis and regenerative nodules. **Objective:** We present the case of a 62 year old female who was admitted to the Emergency Hospital Medias, with malaise, epigastric pain, bitter taste, anorexia, marked fatigue, jaundice, dark urine and the liver 3 cm below the costal margin, with hard consistency. **Material and methods:** The patient is known with essential hypertension (second stage), repeated acute infection of upper respiratory tract and allergic rhinitis in her medical history. Analyzing clinical data, and laboratory tests, the following diagnosis is outlined: jaundice, thrombosis of the portal vein trunk, erythematous antral gastritis, biliary reflux, liver steatosis, nephrolithiasis and right renal cyst. **Results:** The patient returns after two weeks, presenting sudden onset abdominal pain. Discharge diagnosis mentioned above was completed by hepatitis B-virus infection and thrombocytopenia. HBsAg-positive, recently discovered, with concomitant elevated levels of transaminases, so we cannot exclude acute hepatitis B. Liver ultrasound results raise the suspicion of hepatocellular carcinoma, so it is strongly recommended to assess alpha-fetoprotein and CA 19-9 antigen. Tumor markers were negative. An ultrasound was performed after another 4 months and it described multiple diffuse foci distributed throughout the liver. Thereby, the patient was directed to the Surgery department in order to perform a liver punch biopsy. Histopathological result outlines liver cirrhosis. **Conclusions:** Our case shows the possibility of a discrepancy between ultrasound appearance and histopathological result. In this case, there is a cirrhosis with a pseudotumoral appearance due to a chronic infection with hepatic B virus.

Keywords: cirrhosis, tumor markers, hepatitis

CARDIOGENIC SHOCK DUE TO LOSS OF LEFT VENTRICULAR CAPTURE AND RIGHT VENTRICULAR APICAL STIMULATION

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Background: Heart failure (HF) represents a major public health issue, with a prevalence estimated at 1-2% in the adult population. Cardiac resynchronization therapy (CRT) is a revolutionary therapy for patients in advanced HF with left ventricular (LV) systolic dysfunction and intraventricular conduction disturbances, who are still symptomatic on optimal medical treatment. Despite the remarkable results of CRT, some circumstances can limit the potential long-term benefits of this therapy. **Objective:** To report an uncommon case of cardiogenic shock admitted to the Cardiology Clinic of the IUBCVT of Tîrgu Mureş. **Material and methods:** A 56-year-old Caucasian male with a history of dilated cardiomyopathy and CRT defibrillator (CRT-D) is admitted to the emergency room in cardiogenic shock (unmeasurable blood pressure, 110bpm). Triple inotropic treatment was started. The ECG showed sinus rhythm and right ventricular (RV) stimulation with narrow QRS complexes (<120 ms). Telemetry revealed loss of LV capture, stimulation of the RV apex, without antitachycardia therapies delivered. Echocardiography showed dilated cardiomyopathy (LV 84/71mm), important systolic and diastolic dysfunction, mitral regurgitation grade 3, LVEF 20%, secondary pulmonary hypertension and mechanical cardiac asynchrony. **Results:** We interpreted the case as cardiogenic shock due to loss of LV capture and RV apical stimulation. Even though the patient had a narrow QRS complex (<120 ms), because he presented mechanical cardiac asynchrony, we decided to reposition the LV lead into a postero-lateral vein. Despite improvement of ventricular asynchrony parameters the patient died by sudden cardiac arrest two weeks after CRT-D was reestablished. **Conclusions:** The position of the LV pacing lead is an important predictor of successful CRT. In patients with depressed LV systolic function, RV apical stimulation can lead to cardiac decompensation, so in our case it was important to maintain CRT to prevent episodes of cardiac decompensation. The latest guidelines contraindicate CRT in patients with narrow QRS complex since it was proven to increase mortality.

Keywords: cardiogenic shock, CRT-D, left ventricular lead dislodgement, sudden cardiac arrest

PARTICULAR ASPECTS OF CARDIAC CONGENITAL DEFECTS IN DOWN SYNDROME

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Background: Langdon-Down syndrome is the most frequent chromosomal disease, with an incidence around 1:700 in live human births and a male to female ratio of 3:2. Different studies estimate that around 50% of patients suffer from at least one congenital heart defect. **Objective:** Our study depicts the special case of a Down syndrome child and the management of this particular patient. **Material and methods:** We present a clinical case of a 2 years old male patient with Down Syndrome, with frequent recurrent wheezing, known with perimembranous ventricular septal defect left-to-right shunt with septal interventricular aneurysm, restrictive muscular ventricular septal defect, ductus arteriosus and pulmonary hypertension (PH), hospitalized for cardiologic evaluation and medication management, in March 2016. **Results:** In June 2016, the echocardiographic exam shows a gradient on right ventricle outflow tract - large Infundibular Pulmonary Stenosis. In September 2016 the patient undergoes a surgical correction. On further imagistic investigations we mention that the perimembranous ventricular septal defect developed a septal interventricular aneurysm which partially covers the defect. The patient suffered a surgical closure of all cardiac defects. **Conclusions:** Overall, Down syndrome patients with multiple congenital cardiac defects need a surgical approach. This contributes significantly to a better prognosis of these patients and improves the respiratory parameters.

Keywords: Down syndrome, congenital cardiac defect, ecocardiography

THE TRADITIONAL MANUFACTURING OF THE DENTAL CROWN VS. THE MODERN TECHNIQUE (CAD/CAM)

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Background: The CAD/CAM systems were launched by the desire of excluding the errors made in the manufacturing process of the dental restorations and to improve dental aesthetics. Nowadays the dentist together with the patient can choose how the future restoration will be made. **Objective:** The purpose of the study was to expose the traditional manufacturing process of the dental restoration as well as the modern way (CAD/CAM). After describing the methods, the study also pointed out the advantages and disadvantages of the techniques. **Material and methods:** To fulfill the purpose of the study, there were made two restorations following not only two different techniques, but using different materials also. One of the restorations was made from Co-Cr alloy using the traditional technique, while the other was performed by the CAD/CAM process using zirconium. The working model was done using silicone impression made with double phase technique. In the traditional method, the infrastructure of the future restoration was modeled manually using wax, then it was casted in metal and processed with special mills. For the modern method, the model was scanned, the infrastructure of the restoration was designed on a computer that sent the data to a milling machine where the crown was manufactured from a zirconium block. **Results:** Using the CAD/CAM method you can obtain dental restorations with distinguished aesthetics, biocompatibility, with a superior marginal fit and minimum sacrifice of dental tissue. However the prices are higher than those of the traditional technique. **Conclusions:** No matter how many advantages the modern technique shows, there can never be an individualization of the dental restorations that only the dental technician can obtain it.

Keywords: dental crown, traditional manufacturing, modern technique

LONG TERM SURVIVAL PERIOD IN A CASE OF MYELOFIBROSIS COMPLICATED WITH ACUTE MYELOGENOUS LEUKEMIA AND POST TRANSFUSIONAL HEMOCHROMATOSIS- CASE REPORT

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Background: Myelofibrosis or osteomyelofibrosis is a relatively rare bone marrow cancer, which is an uncommon type of chronic leukemia. The survival rate of this pathology is 5-6 years from the time of diagnosis. **Objective:** Our aim was to present the case of a patient with a long term survival rate suffering from idiopathic myelofibrosis associated with multiple complications. **Material and methods:** We present the case of a 64 year-old-male patient, diagnosed with myelofibrosis over 12 years ago, with neoplastic severe anemia. The patient received many transfusions and developed post transfusional hemochromatosis. He complained of abdominal pain because he presented severely enlarged spleen with compressive phenomena and he also underwent splenic infarcts repeatedly. From diagnosis until December 2016 he was administered a substitution treatment, gentle cytoreduction with hydroxiuree and allopurinol. **Results:** The genetic tests revealed Jak2-V617F mutation negative and calreticulin (CALR) positive. The bone marrow biopsy revealed stage three fibrosis, reason why treatment with Ruxolitinib was initiated. During the last year the peripheral smear showed progressive growth of the peripheral blasts, 38% myeloblast. Histopathology revealed blasts with CD 117 and expression of CD34-positive. **Conclusions:** This interesting case of idiopathic myelofibrosis developed acute myelogenous leukemia more than one year ago and the patient is in life and undergoing treatment with tyrosine kinase inhibitor □ Ruxolitinib. The feature of this case is represented by the discrepancy between the high percentage of peripheral blood blasts compared to reduced bone marrow blasts. Phenomenon explained by the possible metamorphosis of blasts from the enlarged spleen.

Keywords: myelofibrosis, myelogenous leukemia, hemochromatosis, survival.

PHYSICAL EDUCATION AND SPORT

USE OF ANABOLIC STEROIDS AND PROTEIN SUPPLEMENTS IN LOCAL GYMS OF TARGU MURES

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Background: Anabolic steroids, better known as anabolic-androgenic steroids (AAS), include natural androgens like testosterone as well as synthetic substances that are structurally related and have similar effects to testosterone. AAS are frequently produced in pharmaceutical laboratories but they are also manufactured in underground laboratories with questionable quality. Due to increased use and side effects of AAS and other supplements used in bodybuilding, it is mandatory to know how these substances affect the general population.

Objective: To analyse the perception about steroids and supplements by people who regularly go to the gym.

Material and methods: Questionnaires shared online and through local gyms in Targu Mures between November 2016- February 2017 were analysed. **Results:** From a total of 127 participants, 64% work out between 60-90 minutes per session and 31% do exercises 4 days a week. 86% go to the gym as a hobby and 14% admitted to do bodybuilding. Among those who practice bodybuilding only 17% use steroids but 89% use instead protein supplements. The most commonly used substances are decadurabolin (21%), trenbolon (15%) and testosterone enanthate (14%) and the adverse effects associated are acne, decreased libido and aggressivity. Another interesting result is that 64% of the participants believe that using protein supplements is good for their health. Between the two groups only those who responded online admitted to use anabolic steroids. Twenty two percent of those who use steroids reported no adverse effects. **Conclusions:** These results show the importance of education regarding the risks of steroid usage and the benefits of healthy alternatives. A closer monitoring of the black market should also be implemented.

Keywords: anabolic steroids, protein supplements, bodybuilding

CORRELATIONS BETWEEN AGE AND CHILDREN'S ABILITY OF LEARNING SPECIFIC SWIMMING SKILLS

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Background: Swimming is a sport branch that easily adapts to the effort possibilities of people of different ages, being accessible from an early age. Besides the benefic effects upon the physic development and the state of health, swimming positively influences the child's character and the cognitive functions. **Objective:** Our purpose was to identify the correlations between the optimal age of initiating swimming and the ability of learning the specific technical skills. **Material and methods:** Evaluating, from a technical point of view, children's swimming lessons on age groups. The evaluation of the ability to learn swimming skills and the technical level of the kids after two, five, eight and ten lessons and comparing them with the initial status and the one from the end of every learning stage. **Results:** No matter at what age (two, three or four years old) children started the lessons, they practically learned to swim from the mean age of five years and a half. Swimming lessons for children between one and four years old are a good way to accommodate the child with the water, and start to feel safe in it, but also to teach parents the basic preventive rules around water. Children under three years old perceive swimming as a play, moving in it in an instinctive way, regardless of the instructor's pedagogical flair. In the group of children in which parents tried to learn them how to swim, some wrong skills were formed that were hard to correct.

Conclusions: Age four is considered to be the optimal age to start swimming lessons, the child being prepared both mentally and physically. Young children's swimming lessons do not prevent the total risk of drowning, so they should be supervised whether they know or not how to swim.

Keywords: swimming, children, lesson, skills

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