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BOOK OF ABSTRACTS



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ANESTHESIOLOGY AND INTENSIVE CARE MEDICINE

ATTITUDES ON DNAR ORDERS

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Background: We aimed to evaluate the level of knowledge of DNR orders: basics and details known by the medical and non-medical subjects. **Material and methods:** We ran a survey addressed to students at Petru Maior University- Tîrgu-Mureş (UPM group), University of Medicine and Pharmacy Tîrgu-Mures (UMF group)- General Medicine and Nutrition and Dietetics medical doctors of the Clinical County Emergency Hospital of Tîrgu-Mureş (SCJU group) general surgery and anaesthesiology. The data were collected by filling an anonymous questionnaire. The Ethics Committee of the participant institutes waived the IRB. **Results:** Out of a total number of 300 questionnaires the response rate was -245 (81.66%). UPM group. This group pretended to be completely naive as to DNAR orders. The negative statistic significant correlation was $p=0.004$, $r=0.251$ Still the group agrees with DNAR in case of strangers, family but also for themselves. ($p=0.005$, $r=0.016$) UMF group This group with part of the medical milieu know the DNAR whereabouts. Their knowledge is incomplete and surprisingly they pretend to know the legal framework. ($p=0.04$) SCJU group The group of medical specialists know the concept of DNAR ($p<0.001$) and also agrees with its application. However they are not so confident with their legal knowledge about DNR. ($p=0.80$). **Conclusions:** The population outside of the medical system is not familiarized with the notion of DNAR. The concept of "do not resuscitate" is an unknown variable for lay people, although its applicability is tempting for them. A more rigorous information of the population on the subject of DNRO, should be taken into consideration.

Keywords: lay people, survey, do not attempt resuscitation, order

BIOCHEMISTRY

STUDY ON CARBOHYDRATES CONCENTRATION IN VARIETIES OF APPLES GROWN IN THE REGHIN AREA

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Background: This paper aims to analyze the concentration of some carbohydrates, in some varieties of apples, which increase blood sugar. Depending on climatic and pedological conditions the concentration of carbohydrates in different varieties of apples differs. This paper shows the concentrations of sugars in some varieties of apples for a better recommendation of diets for diabetics.

Material and methods: Varieties for which measurements were made are: Jonathan, Golden Delicious, Red Delicious, Jonagold and Idared, varieties which are sold most frequently in markets. We analyzed three samples of each variety and established the amount of glucose and sucrose equivalent in the apple juice. Analysis has been made using a glucometer with biosensor before and after the acid hydrolysis of apple juice. **Results:** Results of the analysis show the varieties Red Delicious and Jonagold have the lowest concentration of glucose and sucrose (251mg/dl) while Golden Delicious, Idared and Jonathan varieties have the highest concentrations in glucose and sucrose: 488.531 and 629 mg/dl respectively. **Conclusions:** Considering that the varieties Golden Delicious, Idared and Jonathan have a level of carbohydrates concentration higher than double, varieties like Red Delicious and Jonagold are recommended for diabetics, due to their low level of carbohydrates which increase blood sugar levels.

Keywords: varieties of apples, sugars, diabetes, diet

DETERMINATION OF SERUM VITAMIN B12, HOMOCYSTEINE, ZINC, MALONDIALDEHYDE CONCENTRATION AND GLYCATED HEMOGLOBIN IN DIABETIC PATIENTS TREATED WITH METFORMIN COMPARED TO A DIABETIC CONTROL GROUP

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Background: Metformin is the most frequently used antidiabetic drug. A side effect of metformin is inhibition of vitamin B12 absorption, cofactor of methionine synthase. High homocysteine level and zinc deficiency contributes to cardiovascular diseases, such as intensified oxidative stress. The aim of this study was to compare metabolic balance, serum B12 vitamin, homocysteine, zinc and malondialdehyde levels in two diabetic subgroups. **Material and methods:** We studied 126 diabetic patients, one subgroup was treated with metformin, and we compared the results with a diabetic control group receiving other treatment. Blood samples were collected and processed in two phases: in the winter of 2011 (85 samples) for vitamin B12 dosage and we continued the study in the autumn of 2012 (41 samples), including also the rest of the dosages mentioned before. The average age of the patients was 59.63 years+/-12.32 (SD) in the control group and 63.05 years+/-9.36 (SD) in the group treated with metformin. **Results:** Serum vitamin B12 concentration was significantly lower in the metformin-treated group compared to the control group (p=0.0448). We found documented cardiovascular disease in 79% of the metformin-treated group, and in 67% of the control group. Malondialdehyde concentration (marker of lipoperoxidation) was higher in the metformin-treated subgroup compared to the control group (p=0.0936), the difference is close to the limit of significance, every diabetic presented increased value, which shows intensified oxidative stress. There was no significant difference between the two subgroups in metabolic balance. 35% of the patients presented zinc deficiency and 84% elevated homocystein level. **Conclusions:** Low serum vitamin B12 concentration, elevated homocystein level, zinc deficiency and intense oxidative stress are present in case of several diabetic patients, especially in the metformin-treated subgroup. Curing the vitamin B12 deficiency would be recommended in these patients, especially in case of long term treatment, to reduce the incidence of cardiovascular complications.

Keywords: diabetology, clinical biochemistry, metformin, vitamin B12, homocysteine

CARDIOLOGY

ANALYSES OF THE MYOCARDIAL FUNCTION IN FETAL VENTRICULAR HYPOPLASIA WITH VELOCITY VECTOR IMAGING (VVI)

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Background: The longitudinal systolic speed of fetuses grows significantly in pregnancy, while the global peak of the tension and of the myocardial deformation (strain) and the rate of deformation (strain rate) are lower as the pregnancy progresses. The strain ratio between the left and the right ventricle is steady in pregnancy, on the normal fetus, in comparison with the cardiac malformation. Strain, strain rate, and the velocity and vector of motion can be measured with this VVI. The volume of the cardiac chambers, the segmental and global ejection fraction can be analyzed by the VVI software as well. **Material and methods:** The paper analyses myocardial function in 7 fetuses with ventricular hypoplasia, compared with the normal heart function in 7 fetuses of the same gestational age. **Results:** Obvious decrease in ejection fraction and myocardial strain when comparing ventricular hypoplasia with a normal ventricle of the same gestational age. **Conclusions:** VVI software analysis indicates a distinct change in fetal myocardial function in case of ventricular hypoplasia. This software can be used to forecast the future ventricular function in fetal cardiac anomalies associated with chambers hypoplasia.

Keywords: fetal cardiology, strain, fetal ventricular hypoplasia

PREMATURE VENTRICULAR BEATS IN YOUNG PATIENTS – NOT ALWAYS BENIGN

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Background: Non-compaction cardiomyopathy (NCM) is a condition that affects the myocardium by failure of left ventricle compaction during embryogenesis. Patients diagnosed with NCM may be asymptomatic or symptomatic with progressive heart failure, arrhythmias, sudden cardiac death or thromboembolic events. The diagnosis is based on echocardiographic criteria that include a two-layered ventricular wall, with prominent trabeculations associated with intertrabecular recesses and is confirmed by cardiac magnetic resonance. The therapeutic strategies involve prevention and treatment of complications. **Material and methods:** We report a case of a 29-year old patient who is discovered with multiple premature ventricular beats (PVB) at a routine ECG. The patient is asymptomatic, without any familial or personal history of cardiac diseases. The Holter ECG shows sinus rhythm throughout the whole examination, with long periods of bigeminy, trigeminy and PVBs. **Results:** The echocardiography reveals a slightly dilated left ventricle with preserved ejection fraction, with a two-layered aspect of the lateral wall (thin compacted layer and a thick non-compacted layer), 3 trabeculations and deep recesses and a ratio of non-compacted/compacted myocardium of 2.0. The cardiac magnetic resonance (CMR) confirms the diagnostic, showing trabeculations of the left ventricle lateral wall that respect the criteria of a non-compacted to compacted myocardium ratio >2.3. **Conclusions:** Frequent premature ventricular beats can appear in normal, healthy subjects, but they can mask an underlying cardiac disease and may be their first manifestation. In this case, PVBs were associated with a non-compacted cardiomyopathy in a young asymptomatic patient. In NCM patients, associated cardiac and neuromuscular disorders should be ruled out and family screening should be performed, while the therapeutic strategies should focus on prevention of thromboembolic events and treatment of heart failure.

Keywords: echocardiography, cardiac magnetic resonance, premature ventricular beats, non-compaction cardiomyopathy

DYNAMIC LEFT VENTRICULAR OUTFLOW TRACT GRADIENT - A TREATMENT CRITERIA

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Background: Hypertrophic cardiomyopathy (HCM) is characterized by thickened but not dilated left ventricle. It is the most

common genetic disease of the heart, which is caused by different mutations in genes encoding proteins of cardiac sarcomere. It is transmitted in autosomal dominant pattern of inheritance. Obstructive hypertrophic cardiomyopathy is characterized by a disproportionate hypertrophy of myocardium with obstruction in left ventricle outflow tract (LVOT), with gradient ≥ 30 mmHg in rest or after exercise. Only 30% of HCM patients have the true nonobstructive form. **Material and methods:** We present a case of a 48 year old, smoker male patient with chest pain, mostly nocturnal shortness of breath and fatigue. Physical examination presents tachycardia, systolic murmur, BP: 170/100 mmHg. ECG reveals sinus rhythm, HR=85/min, left ventricle hypertrophy with negative T waves in lateral leads. **Results:** Echocardiography shows normal left ventricular global ejection fraction and predominant septal nonobstructive hypertrophy. Coronary arteriography showed no atherosclerotic lesions but revealed a very high post-extrasystolic gradient. We perform postexercise echocardiography which showed an increased LVOT gradient (57 mmHg) and SAM. For treatment we chose alcohol septal ablation, performed with success. At the 2 month follow-up the patient has no symptom and a 15 mmHg LVOT gradient after exercise. **Conclusions:** It is very important the assessment of subaortic gradient with exercise echocardiography in HCM patients without obstruction at rest. Alcohol septal ablation is a good and safe alternative for surgery. Family screening should be performed by echocardiography, history taking, physical examination, and evaluation on 12-18 month basis.

Keywords: hypertrophic cardiomyopathy, left ventricular outflow tract, obstructive gradient, echocardiography, septal ablation

IN TRANSIT RIGHT HEART THROMBUS

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Background: The prevalence of right heart thrombus in patients with pulmonary embolism is below 4%. Thrombi are mostly associated with massive pulmonary embolism and their presence is correlated with early mortality. For untreated A type (in transit thrombus) thrombi death rate can achieve 80-100%. Also the treatment is not elucidated. Trombolysis and embolectomy seems to be both effective, but heparin alone is insufficient. **Material and methods:** We report the case of a male patient who had presented in a territorial hospital complaining shortness of breath, fever, cough, transpiration. After 10 days of antibiotic treatment for pneumonia the patient presented loss of consciousness and a systolic BP of 70 mmHg. A CT angiogram of the chest was performed revealing massive pulmonary embolism, pulmonary infarction, pleural effusion and a right atrial mass. After initiating anticoagulant treatment the patient was redirected to our clinic. Patient arrives complaining mild shortness of breath, but hemodynamically stable (HR: 80/min, BP: 110/70 mmHg). **Results:** The echocardiography revealed a large mobile mass extending from the right atrium through the tricuspid valve into the right ventricle. After consultation with cardiovascular surgery, it was decided to pursue emergency surgical exploration with thrombectomy. The surgery was successful and the anatomic-pathologic examination confirms thrombus. **Conclusions:** Echocardiography study is recommended in all patients with PE. The presence of A type right heart thrombus is considered to be an immediate emergency. Further prospective studies are needed to elucidate the treatment strategies for right heart thrombi.

Keywords: right heart thrombus, pulmonary embolism, deep venous thrombosis, pulmonary infarction, embolectomy

COMPARATIVE ASSESMENT OF THE EFFICACY OF HANDHELD ECHOCARDIOGRAPHY (HHE) IN THE EVALUATION OF VALVE DISEASES IN THE EMERGENCY SETTING: CASE REPORT OF UNEXPECTED CAUSE OF DYSPNEA IN A YOUNG FEMALE PATIENT

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Background: Evaluation of valve diseases in the emergency setting **Material and methods:** Case presentation of a 44 years old female patient in whom the diagnosis of severe mitral stenosis with regurgitation, severe tricuspid regurgitation and pericardial effusion was done using a handheld echocardiography (HHE) in the emergency setting prompting to immediate specific care without delay. **Results:** We present comparatively images from both HHE and standard high-performance echocardiography. **Conclusions:** Despite the current generation of HHEs limited technical features which does not allow a complete diagnostic examination, these new devices should be regarded as a tool for immediate screening complementary to the physical examination. In the present case, the immediate availability of the HHE was of utmost importance for the early diagnostic of the underlying condition and the initiation of the appropriate treatment.

Keywords: hand-held, echocardiography, valvulopathy, mitral stenosis

MANAGEMENT OF FREQUENT VENTRICULAR PREMATURE BEATS IN PATIENTS WITHOUT STRUCTURAL HEART DISEASE USING SPECIFIC HOLTER ECG INDICES

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Background: Management of frequent ventricular premature beats (VPB) could be difficult in the setting of patients without significant heart disease. However, specific Holter ECG indices like circadian distribution of VPB and statistical parameters of heart rate variability (HRV) could be of help in treatment decisions. **Material and methods:** The 24 hours Holter recordings (Labtech EC-3H) of 20 symptomatic (palpitations) patients (9 women, 11 men, mean age 58.9 years) free of structural heart disease were processed for the study. All the patients have ≥ 1500 VPB on the Holter recording. The VPB were expressed in absolute and relative (% of total beats) hourly numbers. The circadian pattern was studied using t-test, the day being divided in three time-periods (16:00-22:00, 22:00-06:00, 06:00-16:00). We also studied the correlation between the ln transformed values of average hourly number and the relative number of VPB and the average hourly values of global and vagal HRV parameters (meanNN, SDNN and rMSSD) using Pearson's correlation. **Results:** There was no significant ($p>0,3$ for each comparison) tendency for circadian distribution of VPB. The number of VPB showed a significant correlation with rMSSD ($r=0,51$ and $p=0,02$ for the relative number), which became even stronger when the number of VPB was $>8000/\text{day}$ ($r=0,65$ and $p=0,04$ for both the absolute and relative number). **Conclusions:** In patients without structural heart disease does not exist a specific circadian distribution pattern of VPB. The significant correlation with the vagally mediated parameter rMSSD underlines the triggering/permitting effect of parasympathetic tone, which suggests that initiation of betablocker treatment could not be a routine therapeutic approach.

Keywords: Holter monitoring, ventricular premature beats, heart rate variability

PLAQUE QUANTIFICATION BY CORONARY CT AND INTRAVASCULAR ULTRASOUND IDENTIFIES A LOW CT DENSITY CORE AS A MARKER OF PLAQUE INSTABILITY IN ACUTE CORONARY SYNDROMES

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Background: The purpose of this study was to demonstrate the relationship between the presence and amount of a low-density core (LDC) with a CT density <30 HU at Coronary Computed Tomography Angiography (CCTA), and IVUS-derived markers of vulnerability in the culprit lesions (CL) of patients with acute coronary syndromes (ACS). **Material and methods:** In 43 patients with ACS, 105 coronary plaques were scanned using CCTA and IVUS for the quantitative and qualitative assessment of vulnerability markers. **Results:** The presence of a LAP was identified in 67.4% of the CL and 29.03% of the non CL ($p=0.0001$). The presence of a LDC >6.0 mm³ was significantly correlated with the percentage of the necrotic core (NC) (22.08% vs 7.97%, $p=0.001$) and the fibro-fatty tissue by IVUS (18.68% vs 15.87%, $p=0.02$). LDC volumes showed a good correlation with the percentage of the NC ($r=0.7303$, $p<0.0001$) and the fibro-fatty tissue in the CL ($r=0.4928$, $p<0.0008$). Quantitative plaque analysis revealed a significant difference in plaque composition between CL and non-CL in regards to the LDC (18.45 vs 6.5, $p<0.001$), the percentage of NC (20.74 vs 18.74, $p=0.02$), fibro-fatty tissue (17.77 vs 15.48, $p=0.002$) and fibrotic tissue (51.68 vs 54.8, $p=0.01$). **Conclusions:** VH-IVUS and CCTA plaque quantification showed that the presence of a low-density (<30 HU) core within the CL of patients with ACS represents a marker of vulnerability and correlates well with other CCTA and IVUS-derived features of vulnerability, particularly the NC of the plaque.

Keywords: plaque burden, coronary CT, IVUS, acute coronary syndromes, marker of plaque instability

INTRACORONARY INFUSION OF MONONUCLEAR BONE MARROW DERIVED STEM CELLS IS ASSOCIATED WITH LOWER PLAQUE BURDEN AFTER 4 YEARS

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Background: To assess the long-term effects of intracoronary stem cell (SC) infusion after acute myocardial infarction (AMI) on the local atherosclerosis process at the site of infusion after 4 years of follow-up. **Material and methods:** We evaluated 18 post AMI patients: group 1 consisted of 9 patients given an intracoronary injection of autologous mononuclear SC, and group 2 consisted of 9 patients given a placebo injection. Plaque number, plaque burden (PB) and coronary calcium score (CCS) were assessed using an Angio CT multislice 64 in the coronary tree 4 years after SC injection. **Results:** Total PB and CCS along the entire coronary segment distal to the infusion were significantly lower in the SC group (PB - 702 mm³ vs. 1.465 mm³, $p=0.0006$; CCS - 295 vs. 796, $p<0.0001$). The mean PB per coronary artery was 112.12 mm³±16.82 mm³ for the treated arteries vs. 189.56 mm³±20.98 mm³ for the untreated arteries ($p<0.0001$), while the mean CCS was 53.12±16.4 vs. 106.43±10.86 ($p<0.0001$). In the SC group, there was a significant difference in the mean PB (87.75 mm³ vs. 112.12 mm², $p=0.005$) and mean CCS (36.87 vs. 53.12, $p=0.04$) between the coronary segment infused with SC and the entire coronary artery. **Conclusions:** Multislice Angio CT assessment of the atheromatous plaques in the coronary tree 4 years after SC infusion in post-AMI patients indicates a significantly lower atheromatous plaque burden as shown by a lower plaque volume and lower CCS at the site of stem cell infusion compared with other coronary territories.

Keywords: stem cell, plaque burden, follow-up, coronary calcium score

INCREMENTAL VALUE OF PREPROCEDURAL CORONARY COMPUTED TOMOGRAPHIC ANGIOGRAPHY TO CLASSICAL CORONARY ANGIOGRAPHY FOR PREDICTION OF PCI COMPLEXITY IN LEFT MAIN STENOSIS.

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Background: The aim of our study was to assess the incremental value of Coronary Computed Tomography Angiography (CCTA) added to classical coronary angiography, for complex characterization of coronary lesions and prediction of procedural complexity in patients with significant Left Main (LM) stenoses. **Material and methods:** Thirty-six patients with LM disease were enrolled in the study, and each subject underwent CCTA followed by coronary angiography and percutaneous revascularization. **Results:** Logistic regression analysis indicated a good correlation between the angiographic-calculated and the CCTA-derived Syntax scores for the whole group ($r=0.87$, $p<0.0001$) and for the high risk subgroup ($r=0.86$, $p<0.0001$), but not for the low and intermediate risk ($r=0.38$, $p=0.21$ and $r=0.62$, $p=0.07$ respectively). In cases which required complex PCI procedures, both angiographic and CCTA Syntax score were significantly higher than in those who did not require complex revascularization procedures (24.5 ±11.5 vs 32.2 ±14.6, $p=0.09$ for Angio Syntax, 35.3 ±11.5 vs 25.2 ±11.3, $p=0.01$ for CCTA). In the same time, Ca scoring was significantly higher and plaque volumes were significantly larger in cases requiring complex revascularization procedures (299.5 ±359.6 vs 917.3 ±495.4, $p=0.04$ for calcium score, 79.7 ±28.5 vs 108.7 ±25.3 mm³, $p=0.002$ for plaque volumes). Multivariate analysis identified the following CCTA parameters as significant predictors of increased risk for complex intervention in LM lesions: plaque volume (OR 8.00, $p=0.008$), Ca scoring (OR 6.37, $p=0.02$) and CCTA Syntax score (OR 6.87, $p=0.01$). **Conclusions:** CCTA derived parameters provide incremental information to classical Coronary Angiography for preoperative assessment of lesion severity in complex left main stenosis. CCTA derived Syntax score significantly correlates with the classical Coronary Angiography Syntax score and identifies the subgroup of patients who will be more exposed to procedural complications during the revascularization interventions

Keywords: left main stenosis, coronary CT, syntax score

HIGH-SENSITIVITY C-REACTIVE PROTEIN AS A RISK MARKER FOR LEFT VENTRICULAR DYSFUNCTION AND REMODELING IN PATIENTS WITH TYPE II DIABETES MELLITUS AND ACUTE MYOCARDIAL INFARCTION

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Background: We aimed to assess the relation between persistence of elevated levels of hs-C-Reactive Protein (hsCRP) at 7 days after an acute myocardial infarction (AMI), and the major outcomes at 6 months, in patients with type 2 diabetes mellitus (DM). **Material and methods:** The study included 45 patients with type II DM divided into 2 groups according to their hsCRP levels at day 7 post-infarction: group 1 - 22 low-to-intermediate risk, (hsCRP 3 mg/l). **Results:** The left ventricular (LV) function and remodeling were assessed at baseline and at 6 months after the infarction. Ejection fraction (EF) at 6 months was significantly lower in gr.2 (46.27 +/- 4.7%, vs. 40.85 +/- 5.16%, p=0.0006) and presented an inverse correlation with hs-CRP at baseline (r=-0.47, p=0.15). The enlargement of the LV was more pronounced in group 2 (LVED volume 142.5 +/- 16.54 ml vs. 157.82 +/- 15.3 ml, p=0.002), same as the Remodeling Index (12.49 +/- 6.76% vs. 17.86 +/- 5.6%, p=0.005). Also, baseline circulating levels of hsCRP significantly correlated with the remodeling index at 6 months (r=0.36, p=0.01). **Conclusions:** Persistence of a marked inflammation at 7 days post-infarction is associated with a more severe remodeling and impairment of ventricular function in patients with type 2 DM and AMI.

Keywords: hsCRP, diabetes mellitus type II, acute myocardial infarction, left ventricular remodeling

HIGH CALCIUM SCORE PREDICTS SEVERITY OF THE CULPRIT LESIONS IN PATIENTS WITH ACUTE CORONARY SYNDROMES

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Background: Coronary calcium score, as determined by Angio CT multislice, has been proved to represent a reliable parameter which reflects the global cardiovascular risk. We aimed to study the characteristics of culprit lesions in Acute Coronary Syndrome (ACS) patients with low versus high calcium score. **Material and methods:** A total of 45 patients with ACS underwent 64-slice CCTA. Group 1- 19 patients with Ca score below 400, gr.2 - 26 with calcium score >400. In all patients a complex CT analysis of the culprit plaque was performed. **Results:** There were no significant differences between the groups at baseline as regard to age, gender, cardiovascular risk factors (p>0.2). In patients with high calcium score, culprit lesions presented a significantly larger amount of plaque burden than in patients with low calcium score (82.8ml versus 131.81ml, p<0.0001). This was also true when assessing in a subanalysis different cut-off points for definition of relatively higher calcium score (89.66ml versus 137.93ml, p<0.0001, for calcium score cut off 600HU, 97.88ml versus 137.57ml, p<0.0001 for calcium score cut-off of 1000). **Conclusions:** Our data shows that patients with high calcium score who develop an acute coronary syndrome present larger atheromatous plaque than those with low calcium scores, and the severity of the culprit lesions correlates with global cardiovascular risk as expressed by a high calcium score.

Keywords: calcium score, culprit lesions, acute myocardial infarction, cardiovascular risk

CARDIO CT MULTISLICE IN COMPLEX DIAGNOSTIC OF CORONARY MALFORMATIONS

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Background: Congenital malformations of coronary arteries have a prevalence between 0.2 % - 2.5%, being most frequently silent and associated with an increased risk of sudden cardiac death, syncope or tachycardia. The aim of our study was to reveal the role of Cardio CT multislice in diagnosis of coronary malformations. **Material and methods:** We present a series of 4 cases with congenital heart diseases diagnosed with CT multislice 64. In all the cases Angio CT examination was performed with the equipment 64 Somatom Sensation, after reaching a heart rate below 60 beats/min and after injection of 100 ml contrast agent, followed by three dimensional multiplanar reconstructions of heart cavities, coronary arteries and great vessels. **Results:** Coronary

artery malformations diagnosed with Cardio CT multislice 64 were the following: aneurysm of Valsalva sinus associated with multiple aneurysms of coronary arteries, origin of left coronary artery from ascending aorta above the aortic sinus, corrected transposition of the great arteries, origin of left coronary artery from the right cusp. All these cases presented with atypical chest pain and ECG aspects mimicking acute coronary syndromes. **Conclusions:** Coronary Angio CT proved to represent a modern imaging techniques extremely useful for diagnosis of coronary artery malformations and should be performed in all cases of chest pain with unknown etiology.

Keywords: coronary malformations, coronary CT, acute myocardial infarction

RADIOFREQUENCY ABLATION IN WPW SYNDROME - EXPERIENCE OF CARDIOLOGY CLINIC

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Background: The incidence of WPW syndrome in general population is 0.1-0.3%. The recommended treatment for arrhythmias with reentry mechanism is the radiofrequency ablation. The ablation of accessory pathways (AP) is associated with high success rate and reduced complication rate. In this study we present the experience of Cardiology Clinic in the interventional treatment of WPW syndrome. **Material and methods:** We enrolled 79 patients with WPW syndrome. Average age was 34 years. In 8 cases we observed right localization of the accessory pathway (1 case RA, 7 cases RPS) and 71 cases have left accessory pathway (45 LL, 5 PL, 20 LPS, 1 LA). In 38.03% of cases no electrocardiographic preexcitation was shown and in 12.68% of cases atrial fibrillation was associated. In case of left localization of the AP we used in 9.86% transseptal approach and in 90.14% the retrograde arterial approach. **Results:** The recurrence rate on the long term follow up was 11.39%. Five patients underwent the second ablation procedure with a 100% immediate success rate. We didn't note any procedure-related complication or on the access site. In case of left sided AP the transseptal approach showed lower procedure time and lower radiation time but is associated with higher risk for embolia and the costs are higher. In 9 patients we observed pericardial inflammation after procedure. **Conclusions:** In the experience of Cardiology Clinic the ablation of accessory pathways associates a success rate comparable with data from literature. Patients (mostly young people) benefit from curative treatment, no longer medical treatment is necessary, the risk of sudden cardiac death is lower (in cases when atrial fibrillation is associated) and the quality of life is significantly better.

Keywords: accessory pathway, ablation, WPW

ROLE OF REGIONAL NETWORKS IN DECREASING INTERVENTION TIMES IN STEMI

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Background: Reduction of total ischemic time from symptoms onset to deobstruction is critical for the further evolution of STEMI patients. The aim of this study was to assess the role of a regional STEMI network in decreasing intervention times in STEMI within the regional registry of Acute Coronary Syndromes in Central Romania. **Material and methods:** 13 territorial hospitals and the corresponding interventional center were included in a retrospective analysis on 7 years, having as endpoints treatment strategy, mortality and critical time intervals: from onset of symptoms to presentation, from first door to second door, from second door to balloon, and total ischemic time. **Results:** Implementation of a regional STEMI network led to a significant decrease in mortality from 23% to 6.35% in 7 years ($p < 0.001$). Time from onset of symptoms to presentation decreased from 217.4 min in 2012 to 149.4 min in 2013, time from first door to second door decreased from 215.7 min in 2012 to 178.5 min in 2013, time from second door to balloon decreased from 95.4 min in 2012 to 75.6 min in 2013, and total ischemic time decreased from 485.4 min in 2012 to 367.5 min in 2013. **Conclusions:** This study demonstrates the implementation of a regional network in STEMI is associated with a significant decrease of mortality rates and could lead to a significant reduction of critical interventional times in STEMI.

Keywords: STEMI registry, treatment strategy, critical time intervals, mortality

DENTAL MEDICINE

MALOCCLUSIONS AND HEREDITY – CASE PRESENTATION

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Background: The malocclusions are the result of the combined actions of hereditary factors over the dental-maxillary apparatus, these factors determining the maxillary and mandible growth pattern, and of the environment factors (parafunctional habits, nasal obstruction, allergies). The capacity of the orthodontic treatment to correct the consequences of the environment factors actions is universally accepted by orthodontists. The divergence of opinions appears in relation with the effect of the orthodontic treatment over skeletal bases, whether these could be modified beyond their hereditary potential. **Material and methods:** This study presents the case of an 8 year old mouth breathing patient with Angle class III malocclusion, who has followed a three year orthodontic, orthopedic and otorhinolaryngological treatment. The modifications produced on the facial, skeletal and dental level have been assessed at the beginning and at the end of treatment with the help of a clinical examination, study cast analysis, photostatic examination and lateral cephalometric examination. **Results:** At the end of the treatment I have noticed the amelioration of malocclusion, which is also proved by the aspect of the occlusal relationships and the correction of the functions disturbed as a consequence of the actions of the environment factors. **Conclusions:** Even if the treatment followed by the patient has applied both to the dental component and to the skeletal component of malocclusion, the influence of the vertical growth pattern left its mark on the patient's facial aspect.

Keywords: malocclusions, hereditary factor, environment factor

DETERMINATION OF RISK IN CARIES DEVELOPMENT IN PATIENTS CARRIERS OF FIXED APPLIANCES

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Background: Orthodontic treatment achieved especially with fixed appliances is an additional risk factor in the development of carious processes by increasing and maintaining increased the levels of cariogenic bacteria in saliva, but in the same time affects negatively the marginal periodontal tissue with the frequent occurrence of gingival inflammation and bleeding of gums. **Material and methods:** For this study were selected two groups of subjects aged 12-16 years old, respectively a control group of 10 patients without fixed appliances and a main group of 10 patients wearers of fixed appliances. In both groups were determined the salivary level of *Streptococcus mutans* and *Lactobacillus* and also the degree of caries-activity (based on values of index DMFT) and the pH value of saliva. In the same time the subjects were questioned about oral hygiene habits, respectively tooth brushing frequency, the use of mouthwash and interdental toothbrush. **Results:** The results of this study showed that all subjects from the main group were within the high risk group for caries initiation processes although the degree of caries activity is low or medium. More, it were observed lower values of salivary pH compared with those obtained in the control group even in patients whose degree of oral hygiene is good and very good. **Conclusions:** Orthodontic treatment carried out especially with fixed appliances represent an additional risk factor in the initiation of carious lesions by increasing and maintaining high levels of cariogenic bacteria in saliva.

Keywords: DMFT index, *Streptococcus mutans*, *Lactobacillus*, salivary pH

TOOTH DIMENSION MEASUREMENTS USING THE 2D IMAGE ANALYSING METHOD – RELIABILITY STUDY

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Background: The manual measurements of tooth dimensions are made by dental calipers. The etiological studies of dental anomalies require more complex measurements. The aim of this study was to evaluate the intraobserver reliability when applying

the 2D image analysing method to measure different tooth dimensions on study models. **Material and methods:** Ten study models were selected with fully erupted permanent teeth. Each tooth was photographed individually from buccal and occlusal view. A scale was positioned each time for image calibration. Images were processed using Image Pro Insight (Media Cybernetics) software. The following measurements were performed: mesio-distal (MD), occluso-gingival(OG), vestibulo-oral (VO) dimensions and tooth crown perimeter. The procedure was repeated after two weeks. Fleiss' correlation coefficients were calculated. **Results:** Capturing the image of a tooth surface takes about 3 minutes and performing measurements on a surface takes about one minute. A total of 354 teeth were measured and mean values were calculated for the differences between the two sets of measurements. The lowest differences were found for MD, OG and VO dimensions, all the values being below 0.2 mm. The crown perimeter differences were below 0.3 mm. For all measurements and for each tooth a high degree of reliability was found: all values of Fleiss' correlation coefficients were above 0.95. **Conclusions:** Our results concerning the reliability of this method are similar to the results found in the dental literature: each type of measurement fall into the category of excellent reliability. The 2D image analysing method is appropriate for measuring tooth dimensions with high precision. The method allows high fidelity, repeatable and accurate measurements, generating a database of standardized images for future studies. **Acknowledgement:** The study was supported by the Internal Research Grant no. 8/30.01.2013 of the University of Medicine and Pharmacy of Tîrgu Mureş.

Keywords: tooth dimensions, reliability, 2D image analysis

STUDY OF DENTAL AND SKELETAL DISORDERS IN MONO- AND DIZYGOTIC TWINS

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Background: The aim of this study was to analyze and to compare the dental and skeletal morphology of mono- and dizygotic twins (MZ and BZ). **Material and methods:** 10 sets of monozygotic (mean age: 18,5 years) and 10 sets of dizygotic (mean age: 19,7 years) twins were examined, cast analysis, ortopantomography and lateral cephalometric films were analyzed. **Results:** The upper frontal teeth dimension and shape is the same in 99,69% of MZ and 93,91% of the DZ twins. In MZ twins we found different values for transversal arch width and upper intercanine distance. The dental malpositions were different in the DZ sets, especially in transversal and sagittal plan. The same differences were seen in the arch forms. The skeletal pattern was also different between the components of DZ twins. The cephalometric values showed slight differences of the interincisal angle both in MZ and DZ twins. **Conclusions:** Genetically influenced patterns can be explained by the results of our study.

Keywords: monozygotic twins, dizygotic twins, malocclusions

SKIN CANCER IN ORO MAXILO-FACIAL TERRITORY

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Background: Skin cancer is the most common type of cancer, having an increase incidence lately (each year more than 1 million people die from skin cancer); and facial region is the most affected one (85-90%). Although it occurs in a large number of patients, it can display a good prognosis, due to early diagnosis possibility and low incidence of metastasis (especially in basal cell carcinomas, the most frequent form). **Material and methods:** The aim of this paper is to present a study upon facial skin cancer, concerning incidence, gender, age, localization, type of surgical defect closure. A retrospective longitudinal study was conducted over a period of 4 years (January 2009 - December 2012), in The Oral and Maxillo-Facial Surgery Clinic Targu Mures; 271 cases with skin cancer (basal cell carcinoma, squamous cell carcinoma, melanoma) were enrolled. **Results:** The study upon skin cancer revealed: it is more frequent in females (52%); localized especially on nose region (27.30%); age ranged between 71-80 years - data consistent with literature; and affecting mostly people from countryside. Most of them are basal cell carcinoma (61,25%); over 65% of post-surgical removal defect were covered by primary suture; no significant variation on its incidence were found among the studied years. **Conclusions:** Nowadays, an increased number of facial skin cancer are diagnosed, due to public awareness on cancer risk related to sun exposure, as the main factor involved in its etiopathogeny (according to NASSA, at every 11 years, the incidence of solar flares is increasing with 10%). The most common skin cancer is basal cell carcinoma, with a higher incidence in female, on the

nasal region (similar to literature data); postoperative defects are mostly solved by primary suture.

Keywords: skin cancer, surgery, basal cell carcinoma

THE ACCURACY OF DIGITAL ORTOPANTOMOGRAPHY MEASUREMENTS IN COMPARISON TO THE CONVENTIONAL TOMOGRAPHY

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Background: Mandibular bone resorption has a negative influence on the possibilities of prosthetic restoration. Advanced mandibular bone atrophy and sublingual gland herniation generates disorders in maintenance and stability of the mandibular dentures. **Material and methods:** The aim is to highlight the correlation between measurements of radiographic image obtained from a digital panoramic radiographs (OPT) and computed tomography scan (CT). It is a retrospective study that shows various mandibular edentations. Both on the OPT digital image and on the CT, the following guidelines have been drawn: midline, a perpendicular through gonion midline and perpendicular to the mental foramen to the midline. We calculated the distance from the line drawn through the mental foramen which is parallel to the midline in edentulous alveolar ridge, at the lowest point latch and at the highest point of the ridge. To achieve the measurements, we used the two devices software: CliniView 10.1 for OPT and Syngo fastView for CT. **Results:** The results show significant differences ($p < 0,05$) between the measured dimensions. The smallest difference is found in measuring the distance between the mental foramen and the base of the mandible, and the most significant difference occurs in evaluating the lowest point from the jaw. **Conclusions:** Examination of OPT provides an overview of bone substrate. Accurate assessment, three-dimensional appearance of alveolar ridge, bone density be assessed with certainty only on the basis of conventional CT investigation. Both, OPT digital examination and the conventional CT offers the opportunity to evaluate fixed anatomical landmarks. These vary according to the status of the individual patient. Although image processing software has a 0.8% adjustment coefficient, the coefficient of distortion of the OPT device is an inconvenience that may adversely affect the assessment of the edentulous bone substrate.

Keywords: bone resorption, OPT, CT scan, prosthetic restorat

IMPACTED FRONTAL TEETH TREATMENT USING APICALLY POSITIONED FLAP. PRELIMINARY STUDY

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Background: When we treat surgically frontal impacted teeth it is important to choose the correct technique of surgical exposure. In the frontal zone esthetics is significant and we need to get healthy keratinized gingival tissue around the tooth at the end of treatment. **Material and methods:** We included in this preliminary study 10 cases of frontal impacted teeth (canines, incisors). The teeth were in the vestibular position. For all the cases we used apically positioned flap. After one year we looked for the keratinized gingival tissue around the tooth (coloration, contour and scars). **Results:** We found some changes in the gingival coloration and gingival contour. All the teeth presented scars after one year from the surgical treatment. **Conclusions:** This surgical technique observes the physical eruption of the tooth and maintain healthy keratinized gingiva.

Keywords: apically positioned flap, impacted teeth, surgical

MALIGNANT EPITHELIOID HEMANGIOENDOTHELIOMA - A RARE TUMOR OF ORAL CAVITY

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Background: Epithelioid hemangioendothelioma is a rare vascular tumor, with high potential for malignancy and metastasis. Frequency is 1/1.000.000, occurring mainly in lymph nodes, bones, lungs, liver. Rarely appears within oral cavity; only 5-6 cases being described in literature. Pathologically, it is considered a borderline tumor, thus, the treatment protocol is not standardized, yet. The purpose of this paper is to present a clinical case of epithelioid hemangioendothelioma of the hard palate, and difficulties of diagnosis and treatment encountered. **Material and methods:** Sixty years old male patient is presented in Oral and Maxillo-Facial Surgery Clinic, Targu Mures, with an ulcerative tumor of posterior palate on the right side, which occurred about three months ago, with no evident symptoms. The medical history of patient revealed a right inguinal lymph node mass; biopsy and pathological exam of it shows metastasis of malignant fibrous histiocytoma. The subsequent CT-scans highlight possible secondary determinations within liver, lungs and vertebrae; postoperative pathological diagnosis after D6 laminectomy refute the initial one, the positive diagnosis being malignant epithelioid hemangioendothelioma. Surgical removal was also done for the palate tumor; pathological exam was the same (as the last one). **Results:** Multidisciplinary management of the case - surgically and radio-chemotherapy - was favorable initially; than, unfortunately, increasing of initial lesions size, appearance of new ones and relapse of the palatal one (spreading within the whole maxillary sinus) was seen. **Conclusions:** Epithelioid hemangioendothelioma is a very rare borderline tumor seen in the oral cavity, whose diagnosis is difficult due to the small number of cases and the clinical similarity with other pathologic entities. Also, due to its unpredictable outcome, treatment (surgery versus radio-chemotherapy) remains controversial.

Keywords: Department of Oral and Maxillofacial Surgery, University of Medicine and Pharmacy Targu Mures, malignant hemangioendotheliona, oral cavity, treatment

EXAMINATION OF BOLTON INDEX COMPARING THE TRADITIONAL METHOD WITH A 2-DIMENSIONAL DIGITAL MEASUREMENT METHOD

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Background: The Bolton Index is one of the most important analysis in orthodontic treatment planning. It shows if there is a correct proportion in size between the maxillary and mandibular teeth. In this study we compared the digital and traditional method. **Material and methods:** 35 dental casts were measured using a Verniercaliper. The mean value was compared with the measurements from the scanned images of the dental casts. **Results:** The results showed that the digital method provided similar results with those of the traditional one with a mean difference of 0,23 mm. The Pearson correlation coefficients were very high and similar to each other: R=0,989 and R=0,988 for the Anterior Bolton Index (ABI) and Overall Bolton Index (OBI), respectively. No statistically significant differences were present from either the ANOVA or the paired t-tests. **Conclusions:** The used digital method is as accurate as the traditional one, it is faster and easier to carry out and it offers all the advantages of image storage and data for subsequent use.

Keywords: Bolton Index, traditional method, digital method

EXPERIMENTAL EVALUATION OF MECHANICAL STRESSES OCCURRING IN DENTAL IMPLANT SURROUNDING AREA DURING MECHANICAL LOADING

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Background: In this present study, the author offers to present the results of his preliminar investigations about the deformation of the fixation zone of endosseous dental implants during different mechanical loads, using modern, experimental method: Digital Image Correlation DIC/ Video Image Correlation VIC. **Material and methods:** It is an optic method has no direct contact and influence on the analyzed object, consequently it does not intervene at the intimacy of the given occurrence. In principle there were made a series of mandibles, identical of human lower jaw, using Rapid Prototyping method (namely deposition of succeeding layers through 3d scanning procedure). In these given lower jaws there were inserted dental implants, which were loaded with similar of masticatory forces (namely up to approx. 500 N). An original testing stand was designed for the support of the lower jaws, adjustable for different loading situations. With the help of the VIC method, (3d version) monitorization of the dental implants neighboring zone deformation fields began. **Results:** There could be made a series of useful conclusions concerning the peak tensions which appear during mechanical loading of dental implants in its surrounding area in relation with the dimensions of the alveolar crestal ridge and the used forces. **Conclusions:** The author tends to extend the area of interest on other, clinically debated and useful cases.

Keywords: UMF Tg. Mures, Department of Oral and Maxillofacial Surgery, dental implant, peak tensions, video image correlation

THE BEHAVIOUR OF COMPOSITES VERSUS COMPOMERS IN EROSION CONDITIONS – IN VITRO STUDY

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Background: Erosive lesions of enamel and dentin often need restorative procedures. Mostly tooth-coloured direct restoratives are used for this purpose. However, failure or success of aesthetic restorations depends on their behaviour under still persisting erosive conditions. This in vitro study evaluated the influence of erosive conditions on the morphological changes of the surface of different aesthetic direct restorative materials. **Material and methods:** The selected dental filling materials were two composites, one universal nano-filler (Filtek Z550) and a posterior composite (Xtra-fil) and two compomers (Dyract Extra and Twinky Star). Twenty disks (10mm×2mm) of each material were prepared according to the manufacturer's instructions. The obtained specimens were kept in artificial saliva and stored in oven at 37°C. After 24 hours each group was cycled in Coca Cola beverage 5×/day, for 50 days over 30 days. The acidic soft drink was employed at the temperature of consumption 4°C. Initial surface roughness ISR (Ra-µm) and at the 30th day (final surface roughness FSR) was measured with a rugosimeter. The response variable was the difference of final minus the initial roughness (ΔSR=FSR-ISR). Data were analyzed by one sample t test using statistical software (GraphPad In Stat) at p<0.05 significance level. **Results:** Data analysis showed a statistically significant alteration in surface roughness (ΔSR) of the specimens, Filtek Z550 (p<0.0001) had the highest change, followed by Xtra-fil (p<0.0006), Twinky Star (p=0.001) and Dyract Extra (p=0.003). **Conclusions:** Surface degradation was observed in all specimens immersed in the acidic drink. The tooth coloured dental filling materials had different behaviour under the same erosive conditions. The morphological surface differences of the tested dental restoratives may suggest possible variations of the clinical performance in intraoral erosive conditions. **Acknowledgement:** The study was supported by the Internal Research Grant no. 5/30.01.2013 of the University of Medicine and Pharmacy of Tîrgu Mureş.

Keywords: oral presentation, composite resin, compomer, tooth erosion, surface

FACIAL RECONSTRUCTION AFTER EXCISION OF SKIN MALIGNANCIES IN MAXILLO FACIAL TERRITORY

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Background: Malignant tumors are a heterogeneous class of diseases, characterized by uncontrolled cell division and their ability to invade the tissues, and cause metastases. There are two main differences between benign and malignant tumors: 1. Rapid tumoral growth with tissue infiltration (malignant tumors) 2. Metastatic dissemination - local tissues or in other organs (malignant tumors). Reconstruction of skin defects after excision of skin tumors in the maxillofacial territory, can cause problems regarding the surface of the surgical defect. **Material and methods:** The aim of the study is to highlight the possibility of facial reconstruction (advantages, disadvantages of various methods of closing after excision). We included in this preliminary study 12 patients with skin cancer. After excision of the tumor, depending on the size of the defect, we used primary suture, skin grafting or local flap. **Results:** We obtained good results for all patients that we included in our study (whether we used primary suture, local flaps or skin grafts). **Conclusions:** Primary suture is the most common approach when skin tumors present small diameters. If tumors have big diameters we can use local flaps and skin grafts. Age is not the main factor that we have to consider in facial reconstruction; older patients with no general problems have good prognosis. Skin grafts are ideal for facial reconstructions, when the postoperative defect can not be covered with local flaps. Local flaps present several advantages: similar texture and color, easy technique, loco-regional anesthesia, rapid healing.

Keywords: primary suture, skin graft, local flap

TUTORSHIP: INTENDED FOR STUDENTS OR TEACHERS?

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Background: This paper has been following the perception of the students from UMF Tîrgu Mureș in regards to the tutoring activity as well as setting up suggestions concerning the improvement of this activity. **Material and methods:** 17 item quizzes have been shared among the students from different departments (with different specializations/profiles) from UMF Tîrgu Mureș. They answered anonymously to the 17 items regarding the tutoring activity, the involvement of tutors-teachers in student specific problem-solving with the possibility option of writing tutoring-teaching related suggestions. The centralization of the answers allowed the evolution of the students' degree of satisfaction regarding the activity and involvement of the tutors. **Results:** Surprisingly, some of the students don't know their tutor-teacher nor their purpose or attributions, thus the student goes more frequently to the head of the year to solve or clarify certain issues, especially those concerning exams, scholarships, administrative issues, clarifications. Many students don't call upon their tutor-teacher because they don't even know that they have this possibility to solve certain issues. However, those who have called upon their teacher say that the tutor-teacher tried to help them promptly. More than half of those who were questioned, considered that the tutor-teacher does not provide the necessary information or the support they need. The students are not acquainted of the teacher's Regulation concerning tutorial activity and attributions and many students suggest the changing of the tutor-teacher. **Conclusions:** The study proves the interest that the institution has concerning freely expressed student opinions and suggestions. Not knowing the Regulation and the difficult access to the tutor-teacher leads to radical attitudes. Tutorship is an educational teaching, a professional attribution for the teacher and for the students, it could be a direct way to solve various specific issues.

Keywords: medical students, tutor teacher, efficiency, suggestions

CLINICAL OUTCOMES AFTER REGENERATIVE PERIODONTAL THERAPY WITH EMDOGAIN

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Background: Regeneration is defined as a reproduction or reconstitution of a lost o part of the body in such a way that the architecture and function of the lost tissue are completely restored. Clinically, the outcome of a regenerative periodontal treatment is assessed by clinical parameters(periodontal probing, radiographs). The aim of this study is to compare the clinical outcomes of regenerative periodontal therapy with enamel matrix proteins (Emdogain, EMD) in the treatment of intrabony defects with a control. **Material and methods:** In this randomized, controlled clinical study, 10 patients with chronic periodontitis were included. 2 groups (test and control) were received conservative periodontal therapy. In the test group different teeth were treated indication-related regeneratively with EMD. The scaling and root planing (SRP) and surgical treatment was carried out by one dentist. In the control group only conservative periodontal therapy were performed. The following parameters were recorded at baseline and after 8 months: pocket probing depth (PPD) and bone reduction based on x-rays. **Results:** In both groups a significant reduction in PPD was found. The difference between the test group and control group was significant. The EMD treated teeth showed a significant attachment gain. Within the test group, the radiographic examination of the EMD-treated teeth showed no significant change, whereas the not EMD-treated teeth showed significant bone reduction. **Conclusions:** Treatment of intrabony defects with EMD may lead to substantially higher gains of clinical attachment and defect fill. The indication-related use of EMD in dental practice can prevent further bone loss. However, these results need to be confirmed in large scale, multicenter controlled clinical trials.

Keywords: regenerative periodontal therapy, emdogain, intrabony defects

DERMATOLOGY

THOST-UNNA KERATODERMA – CASE REPORT

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Background: Thost-Unna keratoderma is an autosomal dominant disease caused by the mutation of the cytokeratin-1 producing gene. Cytokeratin-1 is found in epithelial cells cytoskeletal structure and maintains structural integrity and mechanical stability in epithelial cells and tissue. Clinically it is a hyperkeratosis plaques of the palms and feet that appear early as 2-3 years old and has a chronic evolution. In comparison with other hyperkeratosis diseases, Thost-Unna palmoplantar keratoderma doesn't affect hair, nails, teeth and internal organs. **Material and methods:** A 44 year old patient admitted in Dermatology Clinic of Tg. Mureş with yellow palmoplantar hyperkeratosis. First appearance is noted at the age of two and his brother has similar pathology. Clinical examination leads to Thost-Unna palmoplantar keratoderma diagnose. **Results:** Unna-Thost palmoplantar keratoderma has a chronic evolution that ultimately leads to function loss in the affected segments. Main therapy consists of systemic retinoid treatment. Clinical diagnostic is very important because genetic test are not widely available and there is an important trophic ulcer risk with skin biopsy. **Conclusions:** Thost-Unna keratoderma is an early life disease with a gradually worsening chronic evolution that has limited therapeutic measures.

Keywords: keratoderma, chronic evolution, therapeutic, biopsy, autosomal

CLINICAL ASPECTS AND TRANSMISSION WAYS IN CONDYLOMATA ACUMINATE OF CHILDREN

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Background: Condylomata acuminata are caused by up to 60 different strains of the human papillomavirus (HPV). HPV 6 and 11 are typically associated with benign disease. Genital warts in prepubertal children are uncommon and produce special concern in healthcare providers. **Material and methods:** From a total of 181 patients examined and treated for condyloma in Targu Mures Dermatology clinic from January 2002 to September 2013, we included in the study a total of three patients with age between 6 months and 6 years, both young male and female. We watched the appearance of the lesions and the presence of other clinical forms - flat warts or vegetative excrescences in these patients as well as ways of transmission in HPV infection. Characteristic lesions of this infection in patients tutors, treatment and follow up. **Results:** First patient a 6 year old young female with multiple vulvar vegetative excrescences, in association with flat warts around the nails. No presence of characteristic lesions of HPV infection in caregivers. No signs of sexual abuse. Second case a 4 year old young male with discrete lesion in the penis sheath, discreet pigmented. No other lesions characteristic of HPV infection, but his mother presents digital warts. Third a six months male baby with numerous papules skin colored in anal canal and on the surrounding perianal skin. Clinical characteristic was spread and asymptomatic. We notice the presence of multiple hand warts on child carers. **Conclusions:** HPV infection in the genital area is even in the form of papules, genital warts or condyloma acuminata. Although viral transmission may occur during delivery, from close family contacts, or by autoinoculation from skin warts, the possibility that these lesions may have been caused by sexual abuse should always be carefully considered. Special attention should be given to patients carers that may present localized warts on the hands.

Keywords: warts, HPV, flat, lesion, autoinoculation

ACRODERMATITIS CONTINUA OF HALLOPEAU – RARE PSORIASIS FORM

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Background: Hallopeau's acrodermatitis continua is a rare form of localized pustular psoriasis. Clinically it consist of pustules over red and scaly plaques found on phalanges fingertips, especially the index phalanges. Histological this is a neutrophil rich intradermic pustule. **Material and methods:** We will present you a series of patients from Dermatology Clinic of Tg. Mureş with particular clinical, therapeutic and evolution. **Results:** Hallopeau's acrodermatitis continua main attribute is a high resistance for systemic and topical treatment. Main complications consist in the destruction of the fingernail and finger osteolysis. Some cases can evolve into generalized pustular psoriasis (von Zumbusch), especially in the elderly. The tongue may become involved with fissuring or the annulus migrans of pustular psoriasis. This disease is frequently found in heavy female smokers. **Conclusions:** Hallopeau's acrodermatitis continua is a rare disease with a strong resistance for local and systemic treatments that can evolve with local and systemic complications.

Keywords: acrodermatitis, systemic, smokers, resistance, pustules

ENT (OTORHINOLARYNGOLOGY)

THE ROLE OF SLEEP ENDOCOPY IN EVALUATION OF PATIENTS WITH OBSTRUCTIVE SLEEP APNEA SYNDROME

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Background: The sleep disordered breathing represents a very actuality domaine, because it has an important implication in the quality of life. Known diagnostic methods play an essential role in staging of respiratory disorderd breathing. Sleep endoscopy is a diagnostic method used to determine the site of the collapse producer and / or upper airway obstruction. **Material and methods:** We studied a group of 70 patients, who presented to Galenus Privat Medical Center with symptoms of sleep apnea: snoring, diurnal fatigue, decreased ability to concentrate. ENT specific investigations have been conducted, with polysomnography and sleep endoscopy selectively. **Results:** Mean age of patients was 51 years, predominantly males. Sleep endoscopy allows assessment of upper airway collapse real during sleep. Correlation data obtained polysomnographic results allows real diagnosis. **Conclusions:** No diagnostic method in patients with obstructive sleep apnea syndrome, no single diagnostic value. Both the sleep endoscopy as well as other diagnostic methods should correlate with anamnesis and polysomnographic, view full and complete diagnosis of patients with sleep breathing disorderd.

Keywords: ENT Otorhinolaryngology, ENT Otorhinolaryngology, sleep endoscopy, obstructive sleep apnea syndrome

CONTRIBUTIONS TO PNEUMOSINUS DILATANS DIAGNOSYS

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Background: The Pneumosinus Dilatans diagnosys is considered quite rare in ENT practice and through its various symptoms fits in the border group pathology. These led to not having yet a full description and neither a team of specialists defined to manage it. The few publications, short presentations and only the extraordinary cases brought to discussion made this subject a less known one to the interested specialists. **Material and methods:** During the previous 40 years in the ENT Clinic in Tg Mures a number of 200 cases of hyperpneumatisation of paranasal sinuses presenting different symptoms were identified, admitted and treated. On behalf of the particular symptoms, imagistic data and interdisciplinary approaches we are now able to synthetise the new and representative elements. **Results:** Lining our gathered observations with the literature led us to a more complete clinical definition and also to a reconsideration of the ethiology of the disease. It also allows us to define new principles for a better working algorithym in general and a more comprehensive one especially. **Conclusions:** Because of the interdisciplinary approach of the pathology, the rising number of cases and the lateness of diagnosys and Rhinology consultation, we believe that a settlement of the issue is of a real interest. Without the possibility of talking about a regional determination, the high number of over the limit situations requires not only prevention but also a quick recognition of the disease for applying a treatment as soon as possible.

Keywords: pneumosinus dilatans, symptomatology, diagnosys

ENDOCRINOLOGY

CENTRAL COMPARTMENT LYMPHNODE DISSECTION FOR DIFERENTIATED THYROID CARCINOMA- PROPHYLACTIC VS THERAPEUTIC

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Background: Central compartment lymphnode dissection (CCLND) still remains a topic of intense controversy between endocrine surgeons. We discuss the pros and cons regarding prophylactic vs therapeutic CCLND, starting from our modest experience in this issue. **Material and methods:** Between May 2012 and June 2013 we have performed 22 total thyroidectomies and central compartment lymphnode dissection for differentiated thyroid carcinoma. We excluded patients with total thyroidectomies without lymphnode dissection and patients with associated unilateral or bilateral neck dissection. Demographic data, indications for surgery, histology and postoperative complications are presented. **Results:** The median age was 46 years (range: 19-73) and sex ratio were 15F:7M. The mean size of the tumor was 33 mm (range: 4-78mm) and the histology revealed papillary thyroid carcinoma or microcarcinoma, follicular and Hurtle-type thyroid carcinoma. Clinical or imagistic preoperative evaluation revealed suspected cervical lymphadenopathy in 12 cases; the rest of 10 patients received prophylactic central compartment lymphnode dissection. The median number of retrieved lymphnodes was 6 (range:1-19) and the median number of lymphnodes found positive for the disease was 4 (range 0-11). We had two patients with temporary postoperative dysphonia, six cases with temporary postoperative hypoparathyroidism ; short time follow- up did not permit any conclusion as regarding cervical recurrences. **Conclusions:** The benefits of therapeutic CCLND is unquestionable. Prophylactic CCLND on the other hand still meets a lot of controversy. We believe that prophylactic CCLND could bring usefull informations needed for better postoperative staging and radioiodine ablation therapy respectively.

Keywords: 123, lymphnode dissection, central compartment, prophyl

THE CHARACTERISTICS OF AMIODARONE INDUCED HYPOTHYROIDISM IN A MODERATE IODINE DEFICIT AREA.

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Background: Amiodarone, a class III anti-arrhythmic drug, has multiple effects on myocardial depolarization and repolarization that make it an extremely effective antiarrhythmic drug. However, amiodarone is associated with a number of side effects, including thyroid dysfunction (both hypo- and hyperthyroidism), which is due to amiodarone's high iodine content and its direct toxic effect on the thyroid. To evaluate the incidence of Amiodarone induced hypothyroidism (AIH) (type, rate of occurrence) and to identify the risk factors involved in its occurrence. **Material and methods:** We examined patients treated with amiodarone, between January 2002 and December 2011, who presented to our Department of Endocrinology Târgu Mureş for thyroid dysfunctions. **Results:** The retrospective study included 87 patients with thyroid dysfunctions; 58 (66.7%) patients had Amiodarone induced thyrotoxicosis and 29 (33.3%) had Amiodarone induced hypothyroidism (AIH). In the AIH group: 26 were women (89.6%), 3 were men (10.4%); the average age was 63.31 ± 11.85 years. Risk factors identified for the AIT group were female gender (RR = 1.48 OR = 5.6; Chi-squer = 5.7, p = 0.004) and Ac ATPO positive titer (RR = 4.2, OR= 7.8; Chi-square = 4.1, p < 0.001). The thyroid dysfunction occurrence was heterogeneous (0.2 - 183 months). The patients with Ac ATPO positive developed earlier thyroid dysfunction compared to those with an Ac ATPO negative (median 12 months vs. 24 months, p = 0.035, T test). **Conclusions:** In the context of the specific iodine geoclimatic intake and the area of origin, amiodarone - induced thyroid dysfunction spectrum is dominated by thyrotoxicosis. Female gender presentes a 5.6 times higher risk than male for the development of AIH and patients with Ac APTO pozitiv titer 7.8 times higher risk than those with negative titer. Screening and monitoring of thyroid function for patiens under chronic amiodarone treatment is necessary.

Keywords: amiodarone, hypothyroidism, risk factors, screening and monitoring

THYROID MICROCARCINOMA- A COMMON DIAGNOSIS NOWADAYS

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Background: Thyroid microcarcinoma (TMC) is defined as thyroid cancer incidentally found, that measures 1 cm or less. Its worldwide incidence has significantly increased in the last 30 years, as reported by different studies. The aim: to examine time trends of TMC in Mureș County and border areas in a retrospective, 23 years length study (1990-2012). **Material and methods:** Patients' clinico-pathological features were obtained from database registries of the Departments of Pathology and Surgery, Emergency County Hospital, Tîrgu-Mureș. Histological types of thyroid carcinomas were classified according to the WHO criteria (sixth edition, 2004). **Results:** TMC represented 26.78% (203 cases) of all surgically resected malignant thyroid tumors in the last 23 years. The men/women ratio was 1:9.6 and the patients' mean age at diagnosis was 51.2 years-old. 99% of TMCs were consistent with a diagnosis of papillary TMC, whereas only 1% of them were medullary TMCs. A statistically significant increase in the incidence of TMCs was observed after 2000 year (2001-2012, 8.57%), as compared to the previous period, 1990-2000 (29.7%, $p=0.0001$). **Conclusions:** Our study demonstrated increasing trends in the incidence of TMCs in the last 23 years in Mureș County. This increasing trend, especially of papillary TMCs, partly supports the real rise of thyroid cancer incidence. The results could be attributed to the more rigorous histopathological examination of the thyroid specimens in the last years. The widespread of more sophisticated and sensitive diagnostic tools, such as ultrasound and fine-needle aspiration biopsy could also explained, in a lesser degree, this increasing frequency.

Keywords: thyroid, papillary microcarcinoma, incidence

SELENIUM STATUS IN SCHOOLCHILDREN LIVING IN AN IODINE DEFICIENT REGION OF MUREȘ COUNTY

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Background: It was reported that in endemic regions selenium deficiency, besides iodine deficit may contribute to thyroid disorders. Mureș County is known as a mildly/moderately iodine deficient area, but the selenium status of its population has not been evaluated yet. The aim of our study was to assess the selenium status in schoolchildren living in iodine-deficient region of Mureș County. **Material and methods:** Fifty-four randomly selected schoolchildren between 6-14 years living in Gurghiu Valley were investigated during October-November 2013: 34 children from Glăjerie and 20 from Cașva. The morning fasting serum selenium level was determined by ICP-MS method (inductively coupled plasma mass spectrometry), the normal range being 36-112 mg/L. **Results:** The individual serum selenium levels were within the normal range in all schoolchildren. The mean value of the whole cohort was 78.6 ± 10.4 mg/L, however significant difference was observed between the two localities: 75.2 ± 9.9 mg/L in Glăjerie and 84.1 ± 9.0 mg/L in Cașva ($p=0.0026$, 95% CI: 3.29-14.61). **Conclusions:** Our pilot study measuring the selenium status in a representative group of schoolchildren from Gurghiu Valley, a mildly iodine deficient region of Mureș County shows an adequate selenium supply. However, further studies including other population groups (i.e. pregnant and breastfeeding women, patients with autoimmune thyroid diseases) as well as other areas of Mureș County are needed.

Keywords: selenium status, iodine-deficient area, schoolchildren

CLEAR CELL CHANGE IN THYROID TUMORS: A POTENTIAL DIAGNOSTIC PITFALL

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Background: Clear cell change (CCC) is a rare, but challenging finding in thyroid pathology. It can be associated to both primary

(benign or malign) and metastatic thyroid tumors, most commonly clear cell renal cell carcinoma (CCRCC). The differential diagnosis between these entities is crucial for an adequate treatment and management of these patients. **Material and methods:** Three thyroid tumors with extensive CCCs are presented. All but one of the cases were men, aged 54, 60 and 72 years-old, respectively. **Results:** Two cases were consistent with a diagnosis of follicular adenoma (with clear and signet-ring cells, respectively) and one case with a diagnosis CCRCC metastatic in the thyroid. All three cases revealed similar microscopic features: a well-demarcated mass composed predominantly of cells with abundant clear or pale eosinophilic cytoplasm, distinct cell borders and central, smooth nuclei (one case with large cytoplasmic vacuoles and peripherally displaced nuclei). The main criteria supporting the positive diagnosis (the morphological features and the immunohistochemical profile), as well as important clues in the differential diagnosis of these entities are discussed. The importance of Thyroglobulin and TTF-1, as well as CD10 staining in the differential diagnosis algorithm is emphasized and the potential pitfalls in setting the final diagnosis are also pointed out. **Conclusions:** Although uncommon, a thyroid metastasis of CCRCC could be misinterpreted as a CCC in follicular adenomas and vice-versa. In setting a correct diagnosis, immunohistochemical studies together with the patient's medical history are extremely important.

Keywords: clear cell change, thyroid follicular adenoma, metastatic thyroid tumors, clear cell renal cell carcinoma

GASTROENTEROLOGY

THE IMPORTANCE OF ENDOSCOPY VIDEO RECORDING IN CLINICAL PRACTICE

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Background: Digital recording of diagnostic and therapeutic endoscopy is widespread in endoscopy units. Its importance and advantages are presented below. **Material and methods:** During January 2010 - June 2013 we recorded 469 upper, respectively 586 lower endoscopies. Lower endoscopy diagnosed 36 inflammatory bowel diseases, 88 patients with colonic polyps, 76 patients with colorectal cancer. 112 endoscopies were performed for colorectal cancer screening. Biopsy samples were taken in 283 patients. Upper endoscopy diagnosed 77 esophageal varices, 23 patients with Barrett esophagus, 15 patients with intestinal metaplasia, 32 with gastric ulcer, and 33 with gastric or esophageal cancer. Biopsy samples were taken in 150 patients. **Results:** Video recording provides evidence for the quality of the endoscopic procedure, confirming the cecal intubation and a proper examination. Timing of endoscopy is also crucial in terms of quality of examination and endoscope sterilization. Chronic and evolutive diseases like Barrett esophagus, intestinal metaplasia, inflammatory bowel diseases and esophageal varices are easier to follow-up by serial endoscopies. Malignancy needs imaging for the best therapeutic decision. Proper detection of colonic polyps is proven by video recording. Analyzing histology among endoscopic data is improved, especially managing discrepancies regarding malignancy. A second opinion about endoscopic diagnosis is possible especially when referring patient to another center. The pathologist needs often endoscopic imaging too. Storage of imaging may be crucial for didactic and medico-legal reasons. Image recording also helps the patient better understand his condition. **Conclusions:** Digital recording of endoscopy is a very useful act with minimal costs and major benefits for the patients and the medical team.

Keywords: endoscopy, internal medicine, endoscopy, digital recording

COMPLICATED CROHN'S DISEASE EVOLUTION

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Background: Crohn's disease is increasing in our region and the cases are more and more difficult as the patients are getting older. Since the introduction of the biological treatment in IBD the evolution of the disease has changed, but there are more difficult cases. In the literature there are mentioned a higher incidence of B and C hepatitis virus in patients with Crohn's disease, but few data are available about the treatment. **Material and methods:** The paper presents the case of a patient that raised a lot of questions in her 13 years evolution. One patient, female, 22 years at the diagnose of Crohn's disease (CD) in 1999, presented with CD colitis, weight loss, diarrhea for 6 months, fever, erythema nodosum and iridocyclitis. **Results:** In 2000 and 2002 she received the induction therapy with the Infliximab (Remicade) 5 mg/kg at 0, 2 and 6 weeks with remissions for about 2 years after each. In 2005 she was pregnant and during pregnancy she had no treatment, being all the time in remission. In 2009 we tried to put her on the infliximab again, but she developed allergy, also to azathioprine. She remained on Salofalk, Budenofal. In 2011 she received Humira (Adalimumab) with induction 80 mg-40mg, followed by 40mg at 2 weeks, with good evolution 8 months. She developed an acute hepatitis C. The TNF- was stopped. After the liver enzymes were normal, Methotrexate was administrated, but a medullar insufficiency developed. She developed erythema nodosum, and she is current on Adalimumab again with good evolution. **Conclusions:** When complicated with hepatitis C virus, Crohn's disease is difficult to treat. There are several questions: should we treat the hepatitis C virus, or the IBD? In our case we introduced again the biological treatment. In our database this is the only case of IBD complicated with hepatitis C.

Keywords: gastroenterology, internal disease, IBD, biological treatment, hepatitis C

ANEMIA IN COELIAC DISEASE WITH DUODENAL ATROPHIA

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Background: Aim: to determine the prevalence of anemia in the presence of duodenal atrophia in patients with coeliac disease.

Material and methods: We performed a retrospective study in a series of patients who were investigated by upper endoscopy in the Endoscopy Unit of Targu Mures County Clinical Emergency Hospital between 01.01.2009-31.12.2012. We included newly diagnosed patients with coeliac disease with histopathological confirmation. At least two bioptic samples were obtained from the distal duodenum, which were submitted to histopathological examination and scored according to Marsh criteria in 3 degrees. We included in our study only patients with duodenal atrophia. **Results:** We included 22 patients, with a median age of 35.63 years. There was a strong predominance of females with a female/male ratio of 10/1. Anemia was present in 11 patients (50%) with hypochromia and microcytosis in 9 cases and normochromia in 2 cases. In 3 patients the hypochromia and microcytosis was present with normal levels of hemoglobin. Other laboratory finding was elevated transaminases in 4 patients. **Conclusions:** Our data showed a low prevalence of coeliac disease with histologically confirmation, but the list of those who could possibly have coeliac disease can be extensive. Thus, endoscopists should consider biopsy of the duodenum at upper endoscopy examination in all patients with anemia.

Keywords: coeliac disease, anemia, duodenal atrophia, endoscopy

GENETICS

INVESTIGATION OF CATALASE GENE POLYMORPHISMS IN ROMANIAN POPULATION

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Background: Oxidative stress plays an important role in the pathogenesis of numerous complex diseases. An important component in cell defence against oxidative stress is catalase (CAT), an antioxidant enzyme. Catalase also regulates the expression of genetic polymorphisms therefore being a major factor in individual susceptibility to oxidative stress damage caused by reactive oxygen species. Catalase is a tetrameric enzyme which reacts very efficiently with hydrogen peroxide and converts it to water and molecular oxygen. This enzyme is present in the peroxisomes of all eukaryotic cells, being more abundant in erythrocytes, hepatocytes and kidney cells. The catalase gene is located on chromosome 11p13 and contains 13 exons. A frequent polymorphism in the promoter region of this gene consists of a C to T substitution at position 262 in the 5' region. The polymorphism is correlated with blood levels of catalase, and influences transcription factor binding and reporter gene transcription. **Material and methods:** The aim of this study is to evaluate the distribution of catalase genotypic variants in a Romanian population. The total study population consisted of 159 unrelated, healthy volunteers. Genotyping analysis of CAT C262T was conducted using PCR-RFLP assay. **Results:** The allele frequencies were 74,84% for allele C and 25,16% for allele T. The genotype frequencies were 53,44% homozygous CC, 42,76% heterozygous CT and 3,78% homozygous for mutant T allele (TT), consistent with Hardy-Weinberg equilibrium ($p=0,087$). **Conclusions:** Healthy individuals with variants of the CAT gene may have predisposition to complex diseases associated with oxidant exposures. This is the first study which evaluates the CAT C262T polymorphism in Romanian population.

Keywords: catalase gene, polymorphism, romanian population

GYNECOLOGY

THE PREGNANCY GYMNASTIC : MYTH, METHOD OR NECESSITY?

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Background: The paper has been following the evaluation of the pregnant's interest in the first quarter of the pregnancy concerning the applying for some services specialized in the gymnastics of the pregnant. **Material and methods:** There has been imagined a quiz including some more items, which has been distributed and accepted to be completed by a group of 100 pregnant women, at the gynecological cabinet/consulting room, in the moment of finding out the pregnancy (the first quarter). The criteria to be included in the study have been covering: the desired pregnancy, the attesting of the pregnancy between 6-12 weeks of amenorrhea, healthy pregnant without contraindications for the physical activity, available to complete the quiz. The information collected from the quizzes have been monitored and statistically processed. **Results:** The main reasons which determine pregnant women to follow the specialized gymnastics services have been the avoidance of weight gain, the entourage's recommendations, fashion, the hope that it will help in birth giving for those who want to give birth naturally. The relationship between the way they choose to give birth hasn't been in accordance with the physical activity and the environment in which they wish such activities to take place do not respect the scientific or medical criteria recommended. **Conclusions:** The gymnastics of the pregnant in our country represents mostly a fashion activity. The involvement of the medical and specialized staff is very reduced. Even if they apply for this services, a lot of pregnant women call for a caesarean section "on request".

Keywords: pregnant, gymnastic, interests

PREGNANT WOMEN INTEREST IN DENTAL HYGIENE

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Background: The aim of the present paper is to follow the pregnant women level of interest in dental hygiene, in the moment of pregnancy confirmation (first trimester). **Material and methods:** A questionnaire was designed covering several parameters, which has been accepted to be completed by a group of 100 pregnant women, in the moment the gynecologist confirmed the veracity of pregnancy (first trimester). The criteria for inclusion in the study consisted of: the intrauterine pregnancy diagnosis, in evolution, in the first trimester of pregnancy (6-12 weeks of amenorrhea), healthy pregnant woman, based on pregnant woman statement, without specific pregnancy pathology. **Results:** The study group included a number of 100 pregnant women with ages between 18-41 years old. A lower educational level was present in one case, secondary-education at 45 cases and the higher-education at 54 cases. 13 pregnant woman are from rural environment and 87 from the urban areas. The access to the dental-office was present at 89 from the cases and absent at 11 cases. The degree of interest for oral hygiene/health was from 8 (on 1-10 scale) to 90% from the cases, fear/anxiety from the dentist was present at 64% from the cases. 74% change their toothbrush on a period of three months, the dental floss is used by 1% of the patients, mouthwash only of 3%. Although the dental examination and the taking into consideration is mandatory, only 15% have realized a dental evaluation in the past three months before the pregnancy. In 72% from the cases nausea represented the reason evoked for the avoidance of dental consultation. **Conclusions:** The oral health in pregnancy is not a priority for the pregnant women. The hygienic education and the obligation to perform dental consult in pregnancy must be promoted. The prevention of dental diseases in pregnancy has as a base the oral cavity examination.

Keywords: pregnant woman, first trimester, oral hygiene

HEMATOLOGY

ATYPICAL DEBUT IN A SMALL B-CELL NONHODGKIN LYMPHOMA CASE

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Background: The NonHodgkin lymphomas are a heterogeneous group of malignant lymphoproliferations, which generally begin in the lymphatic territory and in one third of cases extralymphatic, most often in the digestive tract. Usually, patients present at diagnosis B symptoms like: fever, sweats, weight loss and slightly normochromic normocytic anemia. **Material and methods:** A young man, 26 years old, was admitted to our clinic in April this year, presenting by 2 weeks marked asthenia, shortness of breath, low grade fever and upper abdominal pain. Laboratory analyzes showed a severe microcytic hypochromic anemia (5.4 g/dl) with elevated ferritin and serum iron, and slight lymphocytosis (10800/mm³), reactive lymphocytes. On physical examination we observed axillary, laterocervical adenopathy of 1 cm and splenomegaly of 17 cm. Given the young age of our patient, we suspected an infectious mononucleosis but IgM antiEBV antibodies were negative, then we assumed a hemolytic anemia, but Coombs test and hemoglobin electrophoresis test were negative. **Results:** In May was performed a thoraco-abdominal CT, where we saw multiple lymph nodes under 15 mm and splenomegaly of 207 mm. At bone marrow biopsy we observed a mature B-cell lymphoproliferative process. In June splenectomy was performed which showed the diagnosis of small B-cell lymphoma. In July we decided to begin chemotherapy with Fludarabin and Cyclophosphamid, unfortunately without treatment response, with maintenance of lymphocytosis and severe anemia of 5.6 g / dL after 2 months of treatment. In October 2013 we changed the treatment with R-CHOP chemotherapy and we achieved a favorable response, lymphocytosis and anemia were improved after the first course. After the second course of R-CHOP we had a decrease value of ferritin. **Conclusions:** The onset of malignant lymphoproliferations is generally similar, but there are few cases when the diagnosis is difficult to sustain, because of atypical laboratory parameters, despite modern techniques.

Keywords: hematology, lymphocyte, anemia, adenopathy

THE RESULTS OF AN ALLOGENEIC TRANSPLANT FOR AN HLA – MATCHED UNRELATED DONOR IN A CASE OF ACUT MYELOID LEUKEMIA

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Background: Due to the existence of the Romanian Registry of Voluntary Donors and to the contracts it has with the large European Registry since 2013 it becomes possible for patients from our country to benefit of the import of stem cells in the case of the lack of donors in the Romanian Registry. **Material and methods:** Our patient with refractory acute myeloid leukemia was transplanted with success with hematopoietic stem cells from a donor from the German Registry. **Results:** The patient benefited of the positive effect of intensified conditioning and of the graft versus leukemia effects. He is now well and he is in complete hematological remission and full donor chimerism 100 days post transplant. **Conclusions:** Matched unrelated transplant from an HLA compatible stem cell or bone marrow donor is a feasible method of cure in the case of refractory patients without a compatible related donor.

Keywords: hematology, acute myeloid leukemia, unrelated stem cell transplant

IMMUNOPHENOTYPING BY FLOWCYTOMETRY FROM DIFFERENT BODY CAVITY FLUIDS

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Background: Immunophenotyping by multiparametric flowcytometry (MFC) is indispensable in the diagnosis and follow-up of hematological malignancies. MFC allow to evaluate multiple antigens simultaneously making it possible to identify and characterize the malignant cell population in cerebrospinal fluid, pleural and peritoneal effusion. **Material and methods:** We present 3 cases in which immunophenotyping by flowcytometry was helpful in detection of malignant cells from different body fluids other than peripheral blood or bone marrow. **Results:** In case 1 - a 34 year old female patient with treated acute lymphoblastic leukemia (ALL) - the immunophenotyping from cerebrospinal fluid identified the relapse in central nervous system (CNS) by the presence of the lymphoblasts positive for CD19, CD10, CD22 and CD34. In case 2 - a 46 year old male patient with plasmocytoma localized on vertebral column - immuno-phenotyping from pleural effusion revealed malignant plasma cells negative for CD45, CD19, CD20 and positive for CD38, CD138, CD56. In case 3- a 3 year old boy - the primary diagnosis of Burkitt-lymphoma was made on MFI of ascitic fluid. Monoclonal Kappa+ B-cell population was identified with the following antigenic profile: CD19+, CD20+, CD10+, CD22+, CD79b+, CD38+, HLA-DR+, CD5-, CD23-, FMC7-, CD200-, CD27-, LAIR1-, CD103-, CD11c-, CD34-. **Conclusions:** Immunophenotyping by multiparametric flowcytometry could improve the efficiency of detection of CNS involvement and it is an important and rapid method to identify and characterize the malignant cells in serous effusion such as pleural and peritoneal effusion.

Keywords: hematology, immunophenotyping, cerebrospinal fluid, pleural effusion

METHYLENETETRAHYDROFOLATE REDUCTASE (MTHFR 677 C>T AND 1298 A>C) GENE POLYMORPHISMS IN ROMANIAN PATIENTS WITH ACUTE MYELOID LEUKEMIA

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Background: There are a lot of study which investigated the role of MTHFR 677 C>T and 1298 A>C polymorphisms in acute lymphoblastic leukemia (ALL). There are no reports regarding the MTHFR gene polymorphism and risk of acute myeloid leukemia (AML). Therefore, the objective of the study was to investigate the association of MTHFR 677 C>T and 1298 A>C polymorphism of MTHFR gene with the risk of AML. **Material and methods:** We studied the MTHFR 677 C>T and 1298 A>C polymorphism in 98 adult AML patients and 305 healthy controls. The patients were diagnosed with AML at Hematologic Clinics from Tîrgu Mureş. Genomic DNA obtained from AML patients and controls were analyzed using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) assay to detect the MTHFR 677 C>T and allele-specific PCR technique for MTHFR 1298 A>C. **Results:** The frequencies of CT and TT genotypes for MTHFR 677 C>T polymorphism in AML patients were 37.77% and 18.88%, respectively, which did not show a statistically significant difference compared with those of the controls (OR=1.157, 95% CI 0.688-1.9451; OR=1.918, 95% CI 0.973-3.777, respectively). The frequencies of AC and CC genotypes for 1298 A>C polymorphism in our patients were 35.55% and 16.66%, respectively, which did not show a statistically significant difference compared with those of the controls (OR=0.931, 95% CI: 0.555-1.563; OR=1.405, 95% CI: 0.705-2.799, respectively). **Conclusions:** The MTHFR C677T and A1298C polymorphisms are not associated with the risk of developing acute myeloid leukemia in Romanian population. Acknowledgements This work was funded by Internal Research Grants of the University of Medicine and Pharmacy Tîrgu Mureş, Romania.

Keywords: acute myeloid leukemia, MTHFR, gene polymorphism

INVESTIGATION OF POINT MUTATIONS OF THE ABL GENE IN PATIENTS WITH CHRONIC MYELOID LEUKEMIA

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Background: Chronic myeloid leukemia (CML) is a hematopoietic stem cell disorder characterized by the reciprocal chromosomal translocation(9;22)(q34;q11), resulting in a BCR-ABL oncogenic fusion gene which encodes a cytoplasmic fusion protein with constitutive tyrosine kinase activity responsible for leukemogenesis. Different point mutations of the Abl gene were found in CML patients showing resistance to Imatinib mesylate. **Objective:** The aim of this study was to analyse the frequency of T315I and T351C mutation in CML patients from Hematology Clinics from Tîrgu Mureş. Also we investigate the relation between T315I and T351C mutations and resistance to CML treatment. **Material and methods:** Our study included 67 CML patients from Hematology Clinics from Tîrgu Mureş receiving tyrosine kinase inhibitor (TKI) treatment. The T315I and T351C mutations were investigated by amplification refractory mutation system PCR (ARMS-PCR). **Results:** T351C mutation was found in 32 patients(47.8%), while T315I mutation was observed only in one patient (1.5%) compared with another study (12.5%). Our results revealed an increasing proportion of the two mutated T315I and T351C ABL sequences during Imatinib mesylate therapy. **Conclusions:** Our study showed that T351C is the most frequent mutation in CML. It is well known that T315I gene mutation is associated with the resistance to all last generation drugs. Analysis of the T315I and T351C mutation should be mandatory in all patients receiving tyrosine kinase inhibitor (TKI) treatment.

Keywords: chronic myeloid leukemia, point mutation, resistance

HYGIENE

PENINSULA MUSIC FESTIVAL IN TÎRGU MUREȘ – PAST AND FUTURE

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Background: The study of drug consumption and health attitude among the youth makes it possible to know the risk factors that show correlation with health, general condition and drug use. **Material and methods:** During a festival called Peninsula Music Festival Tîrgu Mureș we examined smoking, alcohol consumption and drug usage habits of young participants using a questionnaire method. The collected data were compared with data obtained during other surveys. **Results:** The changes of both legal and illegal drug use habits led us to conclude that the same happens in our country as in the western Union countries. The frequency of drug trials grows among the youth, the habits of drug use change, cannabis derivatives and ethnobotanical drugs dominate while the proportion of opiate users is decreasing. The statistics are alarming among music festival participants: 83% of them are smokers, 64% have been drunk more than 10 times and the majority has tried any drug, about 10% of them being frequent users. **Conclusions:** Our study emphasises the importance of drug-prevention strategies and concludes the importance of making more effort in order to involve the younger generation in health education programmes.

Keywords: smoking, alcohol consumption, drug usage, music festival, health education

WASTE MANAGEMENT MONITORING SYSTEM OF MEDICAL ACTIVITIES

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Background: The general objectives are periodic evaluation of the management of hazardous waste and hazardous results of medical activity and the enforcement of national legislation on the management of hazardous waste and hazardous results of medical activity. The goal project is to protect health and prevent diseases in rural life. **Material and methods:** Complete reporting by health facilities with beds to Regional Public Health Centres (CRSP): CRSP Iasi, CRSP Mures, CRSP Cluj, CRSP Timisoara, INSP-CNMRMC. Gathering, processing data reported by CRSP Mures and complete national database of medical waste - INSP (National Institute of Public Health) - CNMRMC (National Center for Monitoring the Risk of EU average) - throughout 2013. **Results:** Qualitative and quantitative waste from medical activity. Reducing the risks associated with hazardous waste management practices in health facilities. Reduce the amount of waste by 25%. **Conclusions:** Improving management of wastes resulted from medical activity. Better management of wastes resulted from medical activity

Keywords: waste, management, health

VITAL CAPACITY OF THE LUNGS AND THE MUSCLE CONTRACTION STRENGTH OF THE HAND TO THE PUPILS FROM RURAL LOCALITIES FROM THE REPUBLIC OF MOLDOVA

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Background: For the assessment of pupils health status, one of the basic indicators is considered to be the level of physical development. Objectives: The development of standards of the vital capacity of the lungs and muscle contraction strength of the hand to pupils. **Material and methods:** The spirometry and dynamometry were performed on a sample of 847 (boys - 390, girls - 457) pupils from Ist-XIIth in rural localities from the Republic of Moldova. **Results:** The vital capacity of the lungs to boys is $1132.0 \pm 46.8 \text{ cm}^3$ at 7 years old and reaches 3709.1 ± 205.1 at 19 years old. The vital capacity of the lungs to girls at the age of 7 years old is $996.3 \pm 41.5 \text{ cm}^3$ and reaches 2216.7 ± 149.3 at 19 years old. Muscle contraction strength of the right hand to the boys

of 7 years old is 9.2 ± 0.5 kg (left hand - 8.4 ± 0.5) and reaches at 19 years old respectively 47.5 ± 1.8 and 42.6 ± 2.3 kg. Muscle contraction strength of the right hand to the girls of 7 years old is 8.0 ± 0.3 kg (left hand - 6.9 ± 0.3) and reaches at 19 years old respectively 25.0 ± 2.9 and 22.7 ± 2.6 kg. **Conclusions:** These data are prior, because for the development of standards of the vital capacity of the lungs and muscle contraction strength of the hand to the pupils is necessary to perform also measurements to the pupils from urban localities.

Keywords: pupils, spirometry, dynamometry

HEALTH STATUS ASSESSMENT OF PUPILS FROM THE SOUTH AND NORTH AREA FROM THE REPUBLIC OF MOLDOVA

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Background: Population health is a goal of primordial importance in any state policy, because health is the most precious value and an indispensable component of the development and social prosperity. **Material and methods:** In the study were included 4 high schools from the Republic of Moldova, which included 830 pupils. The prophylactic medical examination was performed by a team of medical specialists: surgeon, orthopedist, dermatovenerologist, ophthalmologist, otorinolaryngologist, gynecologist, dentist, neurologist and family doctor in every studied locality. We analyzed and evaluated the prophylactic medical examination results and children health status. **Results:** According to the obtained data was determined that in the north of the country prevail endocrine, sanguin system diseases, mental, behavioral, nervous, circulatory and skin disorders, versus other pathologies that are found in the south. On the first place are digestive system diseases that in the south are 63.7%, registering three times more than in the north - 26.6%. In the north of the country prevail endocrine diseases accounted for 11.6% and were recorded three times more frequently than in the south - 4.1%. Regarding to respiratory system pathologies they are more frequently met in south - 32.1%, versus northern region - 19.8%. **Conclusions:** In the analysis and comparison of pupils health status from the two studied regions we found big differences in the distribution of pathologies in different systems, which suggests that the living environment has a great importance in shaping population health. Obtained data form to us the idea that dispensary and prevention of pathologies in these regions should take different forms.

Keywords: health status, pupils, prophylactic medical examination

HEALTH STATUS OF PUPILS FROM THE REPUBLIC OF MOLDOVA

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Background: Health status of the population has socio-economic and scientific features of the present, represented by the state reached by science and medical practice, and the concrete possibilities of society to ensure population health. **Material and methods:** In the study were included 4 rural schools from the Republic of Moldova. The pupils were subjected to prophylactic medical examination performed by a team of 9 specialists: surgeon, orthopedist, dermatovenerologist, ophthalmologist, otorinolaryngologist, gynecologist, dentist, neurologist and family doctor. **Results:** According to the obtained results we found that in the morbidity structure of pupils from rural areas prevail respiratory system diseases, accounted for 34.3% of all recorded diseases. The circulatory system diseases are situated on the second place and occupies 16.5%, being followed by connective system diseases and congenital malformations with 8.4 %. Respiratory system diseases are encountered more frequently to pupils of Ist - VIth form, and digestive system diseases to the pupils of VIIth - XIIth form. Analyzing health groups we have determined that in the first group are included 20.5% pupils, in the second health group - 63.1% pupils, in the third group - 15.9% and in the fourth group - 0.5%. **Conclusions:** In the process of studying of pathologies structure, which are encountered to the high school pupils from the Republic of Moldova, we noticed that it has similarities with that of adults, however, they differ greatly. Health groups tend toward the scale with better results but the percentage of those with chronic diseases is quite high taking into account that in this category we speak about children.

Keywords: pupils, health status, pathology

SUBJECTIVE COMPLAINTS SPECIFIED BY CHILDREN WHEN USING THE COMPUTER

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Background: Subjective complaints specified by children when using the computer. **Material and methods:** The subject of the study was the students of the 7th form. The method used was the questioning. We analyzed 552 questionnaires. **Results:** The new informational flow, the using of computerized and the spreading of games on a computer, influence the health and education of the child. Almost 43.0% of the questioned students confirmed that they get tired and 33.0% become sometimes tired when they use the computer. A quarter of them had the feeling of tiredness in 5 hours of work. The number of unpleasant feelings in the eyes (pricks, smarting pain, the drying of the eyeball, a feeling of "sand" in the eyes, profuse lacrimation, etc.) - 35.4%. Headaches were reported in 28.5% of cases, other 26.2% of changes were referred to pains in the region of the spine at different levels. A small number of changes referred to pains in the limbs, numbing of fingers, itching - 3.1%. 2.6% of changes referred to fatigue, 2.5% - to slumber, 0.8% - to dizziness. There were also reported positive feelings - good mood, entertainment - 0.9%. **Conclusions:** There are pro and against arguments in using of the computer in the process of education of children and an ideal solution should be found to use it harmlessly for their health. The key of the success in this case is to limit the time spent with the computer.

Keywords: hygiene, children, using of the computer, the health and education of the child

EXTREME TEMPERATURES IMPACT ON HUMAN HEALTH IN THE R. MOLDOVA

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Background: Extreme temperatures impact on human health in the R. Moldova. **Material and methods:** As research materials were used the daily data of ten years (2001-2010) of air temperature and humidity, as well as the number of deaths in four regions of the country in warm period (April-September). **Results:** Climate change represents a serious threat to public health in all countries. Annually the number of extreme frosts as climate change manifestations are increasing. Cold winter of 2005/2006 and 2009/2010 have conditioned a significant death excess in many European countries. In the Republic of Moldova the study of extreme temperatures impact on human health has premised of arguing and drafting the Health Sector Plan for climate change adaptation. It was established that the rise of air temperature by 1°C increases the number of excess deaths by 0.7 cases per day for all causes. In abnormally hot summer 2007 there were 587 excess deaths. The increasing share of deaths was registered in the following population categories: 8.4% in urban and 6.0% in rural areas, and 12.6% of excess deaths in urban females. The most vulnerable to higher temperatures is the population aged over 60 years ($r=0.35$, $p<0.00$). In the structure of deaths by cause it was observed that people suffering of cardiovascular diseases are more vulnerable to heat (13 excess deaths per 100,000 population). Also, it was determined the temperature threshold of excess deaths for R. Moldova by using the Apparent Temperature and Humidex index - 27°C and 30°C respectively. On the base of study results the information materials on behavior during heat wave for different population groups were developed. **Conclusions:** The size and nature of climate change impact on human health justifies the necessity of awareness of the problem at all levels of society in order to provide intervention measures and adaptive response to these conditions.

Keywords: hygiene, climate change, public health, risk of increased air temperature

STUDY OF THE LIFESTYLE AND GENERAL HEALTH CONDITION OF CERTAIN POPULATION GROUPS FROM MURES AND BACAU COUNTIES

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Background: The aim of the study is to establish the general health condition of Mures and Bacau county residents. The project comprises the study of lifestyle in terms of feeding habits and use of certain substances that may influence the health condition.

Material and methods:

Data was obtained through questionnaires about body mass index, alcohol and cigarette consumption, feeding habits, physical activities, population optimism, etc. Measurements were taken in 7 settlements of Bacău county (Pustiana, Valea Mare, Lespezi, Tuta, Bahna, Nicorești, Frumoasa) and in the town of Târgu Mureș (employees of the Azomureș factory). **Results:** Two thirds of the questioned adult population have a higher than normal body mass index (Mureș 70.76%; Bacău 72.26%). Concerning feeding habits, breakfast is served by more than half of the monitored population (Mureș 66.67%; Bacău 52.78%). Smoking is not specific to the population of Bacău county (68% never smoked, and 16.33% has quit over a year ago) as compared to Mureș county (27% never smoked, and 33.24% has quit over a year ago). Alcohol use is more severe in Bacău county (23% has one drink every day) as compared to Mureș county, where only 7.18% has one alcoholic drink every day. According to the calculated score, 90% of the Bacău county population and 85% of the Mureș county population has a satisfactory and excellent health score. **Conclusions:** There are certain differences in the lifestyles of the studied population groups, with an unsatisfactory and alarmingly low health score in case of a smaller group in Bacău county.

Keywords: lifestyle, health score, risk factors

AIR QUALITY MONITORING AMONG UNIVERSITIES IN TG-MURES

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Background: We proposed to make a general view regarding smoking and exposure to smoke within our University, in contrast with the existing legislation regarding smoking within public institutions of the Universities. Along with the investigations held at our university we extended these to other universities to find out how the non-smoking legislation is respected in public establishments of universities in our hometown. **Material and methods:** Using an Aerosol Monitor unit to measure the total PM 2.5 (fraction that increases when the air is contaminated with cigarette smoke determined in mg/cubic meter) we determined the air quality in several target locations of our University in holiday season (through 3521 measurements collected) and during full didactical periods (through 1900 definitions). We included three other universities in this monitoring process. The average values were later compared and assessed in a series of statistical tests. **Results:** Analyzing the holiday period our university head the most polluted air showing the P.M. 2.5 of 0.016 mg/m³. The smallest figures were registered at the Ecologic University Dimitrie Cantemir. In the following there were analyzed the recordings from the didactic period where the registered values were significantly higher ($p < 0.0001$) in comparison with the readings from the holiday season. From several points within the universities there were reading 7 times higher than in the holiday season (0.056 mg/m³ in comparison with 0.008 mg/m³). **Conclusions:** The results show two evident conclusion, that there is smoking within the buildings of the universities and within our university the non-smoking students are totally exposed to exhaled cigarette smoke. We can conclude that giving up on smoking and respecting the existing legislation are solemn duties of a conscious university student.

Keywords: students, PM 2.5 exposure, smoking, second hand smoking, Aerosol Monitor PM

HEALTH HAZARDS OF THE WASTE DISPOSAL ANT NEUTRALISATION: A CASE STUDY

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Background: The chronic obstructive pulmonary disease (COPD) is a non-reversible pulmonary affection characterized by a limited airflow through the respiratory tubes. Its main risk factor is smoking but the occupational factors also have an important impact. This case study presents the association between professional exposure and the risk of developing a chronic obstructive pulmonary disease. **Material and methods:** The subject is a 61 year old non-smoking male, employed as a locksmith at the Mures County Hospital but also fulfilling an active role in the neutralization of medical waste. Consequently, in the last 13 years he was exposed to metal and textile dust, to steam coming from the sterilizer and suffered from extended solicitation of the osteoarticular structures. Recently, he was diagnosed as having COPD, post exposure to mixed dust. **Results:** The subject was followed through the mandatory periodic screenings and three hospitalizations at the Medicina Muncii Clinic in Targu Mures. The evolution of the subject's spirometric parameters (CV, VEMS, IPB) reveal that the interruption of the professional exposure combined with a corticosteroid topic treatment leads to a significantly improved health state. **Conclusions:** Toxicology analysis have shown that the

inhalable dust is over the allowed limit at the neutralizing medical waste section in the Mures County Hospital leading to an increased risk of COPD due to professional exposure. Therefore, preventive methods should target the reduction of exposure at work.

Keywords: COPD, spirometry, prevention

INFECTIOUS DISEASES

HELICOBACTER PYLORI INFECTION IN HIV-POSITIVE HOSTS WITH GASTRO-INTESTINAL SYMPTOMS

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Background: Helicobacter pylori infection is one of the major causes of gastro-intestinal complaints among the general population. Objectives: to assess the importance of Helicobacter pylori infection among patients infected with human immunodeficiency virus (HIV) with digestive symptoms. **Material and methods:** We performed a retrospective, cross-sectional study, upon a group of 47 HIV-infected patients admitted to the Clinic of Infectious Diseases I Țirgu-Mureș, during a 3-year period (November 2010-November 2013) with gastro-intestinal complaints: upper abdominal pain, nausea, vomiting. We performed 8 (17.02%) serological tests - IgG anti-Helicobacter pylori antibodies and 39 (82.98%) Helicobacter pylori stool antigen detection tests. We collected data regarding the result of the diagnostic tests, the patients' immune and virologic status and statistically processed the data using Microsoft Office Excel 2007 programme. **Results:** 13 (27.65%) HIV-positive patients were co-infected with Helicobacter pylori. The average level of CD4+ T-cells among these patients was 299 cells/μL, with a median of 209 cells/μL and range 5-663 cells/μL. The average HIV-RNA plasma viral load was 75103 copies/mL, with median level of 40476 copies/mL, ranging from undetectable to 280855 copies/mL. **Conclusions:** The frequency of Helicobacter pylori infection among HIV-positive hosts with gastro-intestinal symptoms was 27.65%.

Keywords: Helicobacter pylori, human immunodeficiency virus, gastro-intestinal symptoms

THE ACUTE INFECTIOUS BACTERIAL DIARRHEA- ETIOLOGICAL SPECTER AND ANTIBACTERIAL SENSITIVITY

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Background: Evaluation of etiological, clinical and therapeutical aspects of the acute diarrhea disease. **Material and methods:** Retrospective study on the acute diarrheic disease cases of bacterial etiology at the patients hospitalized at the Infectious Clinic I Țirgu Mureș in day care and continuous hospitalization regime between 1st of January 2013 and 15th of November 2013. **Results:** During the period of the study 63 patients were hospitalized, with an age ranging between 2 months and 80 years, who presented a clinic manifestation of the acute diarrheic disease and positive coproculture for different bacterium. Sex ratio was M:F=1,33. E. Coli represented 47.61% of the total bacterial infections (Enteropathogenic E.Coli 39.68%, EHEC 3.17%, EIEC 4.76%) , followed by Salmonella OMA 28.57%. Shigella cases represented 7.93% (Shigella Flexner 1.58%, Shigella Boydi 3.17%, Shigella dysenteriae 1.58% and Shigella Sonnei 1.58%). Pseudomonas aeruginosa was present at 12.69% of the coprocultures. Two patients presented coproculture positive for Yersinia enterocolitica. 60% of the Enteropathogenic E. coli presented resistance to Ampicilline, 28% to Ceftriaxone. Salmonella kept its sensitivity to Quinolones, Cephalosporines, CXT, Aminoglycosides. The Shigella species were resistant to Ampicilline. The antimicrobial sensitivity of the Salmonella and Shigella roots was on a high level for Quinolones, Ceftriaxone. **Conclusions:** The acute diarrheic disease with Enteropathogenic E. coli occupies an important position in the child pathology. Ceftriaxone, Quinolones and in a lower percentage Ampicilline still constitute the election therapy of the bacterial enterocolitis. The therapeutic strategy stipulates the knowledge and usage of the data given by the sensitivity testing.

Keywords: 1 Departament of Infectious Diseases, UMF Țirgu-Mu, bacterial acute diarrhea,, sensitivity testing,

GRAM-NEGATIVE BACILLI INFECTIONS: CLINICAL, ETIOLOGICAL AND THERAPEUTIC PARTICULARITIES IN HIV IMMUNOSUPPRESSED VS. IMMUNOCOMPETENT PATIENTS

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Background: Objectives: to assess the etiological, clinical and therapeutic features of Gram-negative bacilli (GNB) infections in HIV-positive patients compared to immunocompetent patients. **Material and methods:** A longitudinal, retrospective, case-control study was conducted, including all cases of GNB infections admitted to the Infectious Diseases Clinic between 01.02.2011-31.01.2012. This etiology was supported by cultural methods. The patients were divided in 2 groups: A (HIV-positive) and B (HIV-negative). A comparative analysis of the data was performed (demographics, clinical, laboratory, therapy and evolution). **Results:** There were 59 cases of GNB infections - 24 in group A and 35 in group B. Gender distribution was unbalanced (62.50% vs. 37.50% and 68.57% vs. 31.43% in favor of women in A and B, respectively), most patients from rural area in A (72%) vs. 20% for B; the most affected age group was 18-24 years and over 60 years in HIV+ and HIV- group, respectively. The dominant clinical manifestations were CRS infections and UTI for A (25% each), UTI for B (62.80%); severe pneumonia in 16.66% of group A and 5.70% (group B). For both groups the predominant etiology was *E. Coli* (33.33%/37.20%), *Pseudomonas aeruginosa* (25%/17.14%) and *Klebsiella pneumoniae* (16.66%/17.14%). The isolates were most susceptible to carbapenem in both groups (95% and 85%); group B showed greater resistance to quinolones, 3rd generation cephalosporins, aminoglycosides, beta-lactamase inhibitors (42.40%, 60%, 37.10%, 49.69%) compared to A (27%, 30.45%, 25%, 29%). **Conclusions:** HIV patients have a larger variety of clinical manifestations during GNB infections compared to non-HIV patients, where urinary infections are predominant. GNB pneumonia in HIV patients tends to be severe and recurrence is common. The required duration of antibiotherapy is similar among the 2 groups. Seropositive patients display a higher susceptibility to antibiotics. We conclude that GNB infections cannot be regarded as an important cause of death during the HIV infection.

Keywords: HIV, infection, Gram-negative bacilli

NEUROLOGICAL OPPORTUNISTIC INFECTIONS AND IMMUNE RECONSTITUTION SYNDROME IN HIV-INFECTED PATIENTS

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Background: In the era of advanced antiretroviral therapy (ART), opportunistic infections (OI) of the central nervous system (CNS) are a continuous challenge. Extra complexity is brought by correlating OI to the immune reconstitution inflammatory syndrome (IRIS) induced by ART. Objectives. To study OI of the CNS in patients with AIDS, the incidence of neuro-IRIS and its impact upon the evolution and prognosis of the cases. **Material and methods:** The retrospective, descriptive study upon HIV-infected patients with CNS opportunistic infections, diagnosed between January 2009 - October 2013. We evaluated demographic, clinical, immunological and microbiological data. We assessed the clinical and imaging evolution and the impact of IRIS upon disease outcome and prognosis. **Results:** 47 HIV-infected patients, under ART, with a mean value of CD4 T-lymphocytes 189 cells/ μ L, were diagnosed with CNS opportunistic infections. The most common OI was *Cryptococcus neoformans* meningitis - 36.68% of cases. Cerebral toxoplasmosis has been found in 12 (25.53%) patients; 10 (21.27 %) patients had tuberculous meningoencephalitis, while 3 cases were diagnosed with mixed forms of meningoencephalitis (tuberculous and fungal) and 10.64 % of cases with progressive multifocal leukoencephalopathy (PML). Three patients (diagnosed with PML, cerebral toxoplasmosis, tuberculous meningoencephalitis) met the criteria for IRIS - unmasking type. We registered 10 (21,27%) deaths. **Conclusions:** Opportunistic infections of CNS remain a problem in HIV-positive patients with advanced immune suppression. Neuro-IRIS was not associated with higher mortality rate.

Keywords: central nervous system, opportunistic infection, inflammatory immune reconstitution syndrome, human immunodeficiency virus

RENAL FUNCTION DISTURBANCES IN HIV INFECTED PATIENTS

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Background: HIV infected patients can develop renal affections during their life in up to 30% cases. The objective of this study is to determine the kidney function disturbances in our HIV infected patients. **Material and methods:** We performed a retrospective cross-sectional study on 40 HIV positive patients (24 male, age 15-40 years) monitored at Infectious Disease Clinic I TgMures. We monitored the kidney function since the beginning of antiretroviral treatment until 2012. The renal function was evaluated by eGFR (estimated glomerular filtration rate). According to age, gender, body mass index we used different formulas like Schwartz, Cockcroft-Gault, Modification on Diet in Renal Disease (MDRD), Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI). Renal dysfunction was defined as a glomerular filtration rate (GFR) < 60 mL/min/1.73m². The obtained eGFR was correlated with the duration of antiretroviral (ARV) treatment, the used ARVs and LTCD4 count. Statistical analysis was performed by Fisher test. **Results:** In 22 (55%) patients eGFR was 60-90ml/min at least once during the study, 11 (27.5%) had values less than 60ml/min, 7 (17.5%) had only values above 90ml/min, the average duration of 8.23 years of ARV treatment had no influence on eGFR, lower eGFR was recorded in patients receiving protease inhibitor (IP) containing treatment by comparison to those treated without IP (p=0.04), the nadir of LTCD4<200/µL had no effect on eGFR (p=0.23) **Conclusions:** Decrease of eGFR was transient, the lower values were directly correlated with IP containing ARV regimes

Keywords: HIV, kidney, eGFR

HIV ASSOCIATED DERMATOLOGIC DISEASES

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Background: Dermatologic disorders may appear at any stage of HIV infection. They include viral, bacterial, fungal, parasitic infections, tumors and miscellaneous disorders such as allergic manifestations, xerosis. Dermatologic disorders may appear at any stage of HIV infection. They include viral, bacterial, fungal, parasitic infections, tumors and miscellaneous disorders such as allergic manifestations, xerosis. **Material and methods:** A retrospective chart review was performed using the data of 186 HIV positive patients with mucocutaneous disorders admitted to the 1st Infectious Diseases Clinic of Tg. Mureş during 2010 and 2011. Demographic data, dermatologic diseases, T CD4+ cell count, HIV viral load, the presence or absence of antiretroviral therapy were noted. **Results:** The mean age of HIV positive patients with dermatologic diseases was 25.63±8.89 SD years. 52.2% of the patients were males. The mean T CD4+ cell count was 309±304 DS cells/mm³. In 15.67% of patients the HIV viral load was below 400 copies/ml. 87.63% were receiving antiretroviral therapy. The distinct categories of dermatologic diseases were fungal infections (73.65%), followed by viral infections (34.4%), miscellaneous disorders (26.34%), bacterial infections (18.27%) and tumors (3.76%). The most frequent mucocutaneous disorder was oropharyngeal candidiasis (51.61%), followed by perioral herpes simplex (15.59%), chronic prurigo (10.75%), esophageal candidiasis (10.75%), vaginitis (6.45%) and allergic reactions (4.83%). Many diseases were noted in each of the above mentioned categories, such as furunculosis, genital warts, herpes zoster, oral hairy leucoplachia, xerosis, psoriasis guttata, alopecia areata and others. **Conclusions:** A wide range of dermatologic diseases can be associated with HIV infection. Their presence can raise the suspicion of unknown HIV infection, and conduct to subsequent HIV testing.

Keywords: dermatologic disease, HIV, candidiasis, herpes simplex, chronic prurigo

INTERNAL MEDICINE

THE COST-EFFECTIVENESS OF IMMUNOTHERAPY FOR HYMENOPTERA VENOM ALLERGY

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Background: Immunotherapy for Hymenoptera venom allergy (including bee venom allergy) in Europe is a discussed problem from the point of view of cost-effectiveness. The aim of the present work was thus to illustrate the necessity of immunotherapy for Hymenoptera venom allergy despite the high costs. Presently there is only one patient in Mures who receives immunotherapy for bee venom allergy. **Material and methods:** The case report presented today regards a 54-years old-man with bee sting exposure. He has a history of two severe systemic reactions to bee venom after being stung (2009 respective 2010) with cardiovascular and respiratory symptoms. He has no others allergies. The patient was referred to an allergologist in 2010. His allergen-specific IgE antibodies in serum had a value of 50 kU/l (NV:35kU/l). He began the immunotherapy with Venomenhal on September 2010 with rush therapy during the initial phase. He finished the immunizations on October 2013. **Results:** The diagnostic criteria for the bee venom allergy was met: the patient's allergen-specific IgE antibodies in serum had a high value. According to the EAACI guidance he had indications for initiating bee venom immunotherapy [3]. During the period of time of receiving venom immunotherapy our patient was stung by a wasp without developing a systemic reaction to the wasp venom. Is our patient the only one in Mures who made immunotherapy because of the high costs? Is immunotherapy for Hymenoptera cost-effective? Venom immunotherapy is effective for preventing systemic reactions to Hymenoptera stings and resulting deaths [1, 2]. We also have to consider patients' anxiety about future reactions to Hymenoptera stings. If anxiety decrease, the quality of life to those with venom immunotherapy will be improved. These are the main issues when arguing the cost-effectiveness rate of venom immunotherapy. **Conclusions:** We want to highlight the importance of immunotherapy for bee venom allergy despite the costs.

Keywords: immunotherapy, bee venom allergy, cost-effectiveness

SERIAL CHANGES IN LIPID PROFILE AFTER RENAL TRANSPLANTATION

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Background: Abnormalities in lipid metabolism are frequent in renal transplant recipients and results in high cardiovascular risk. Lipid changes are multifactorial, patient related factors but also immunosuppression are likely to be involved. The aim of this study was to investigate the prevalence of lipid abnormalities in kidney transplant recipients and the influence of the immunosuppressive drug regimen over the lipid profile. **Material and methods:** This analysis is a retrospective study conducted on a group of 50 patients that underwent kidney transplantation between July 1st 1997 and July 1st 2012. Changes in lipid profile in correlation with immunosuppressive regimen, clinical and laboratory data were studied during the first 3 years following kidney transplantation. **Results:** The prevalence of hypercholesterolemia was 69,69% at 3 months, 45,61% at 12 months, 39,39% at 24 months and 26,66% at 36 months after renal transplantation. Hypertriglyceridemia was present in 54,54% patients at 3 months, 37,50% at 12 months, 30,30% at 24 months and 13,33% at 36 months after transplantation. In patients treated with Tacrolimus, values of total cholesterol were significantly higher at 3 months than at 12-24 months ($p=0.0066$) and at 24-36 months ($p=0.0056$) follow-up. Triglycerides were significantly higher at 3 months than at 6-12 months ($p=0.0390$) and at 24-36 months ($p=0.0064$) follow-up. In patients treated with Cyclosporine, total cholesterol values were significant higher at 3 months than at 6-12 months ($p=0.0099$) and 12-24 months ($p=0.0405$) after transplantation. **Conclusions:** Dyslipidemia is extremely prevalent after kidney transplantation. Hypercholesterolemia and hypertriglyceridemia are most common in the first 3 months after transplantation. In our patients, Tacrolimus based immunosuppression regimen confers a more atherogenic lipid profile when compared with Cyclosporine.

Keywords: kidney, transplantation, lipid profile, immunosuppression, hypercholesterolemia

THE USEFULNESS OF NARROW-BAND IMAGING COLONOSCOPY IN THE EVALUATION OF COLORECTAL POLYPS

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Background: Narrow-band imaging (NBI) is a new-developed endoscopic technique with good accuracy in the characterization of mucosal lesions, based on better visualization of vascular patterns. The aim of the study was to assess the value of the method in the diagnosis of colonic lesions. **Material and methods:** We performed conventional colonoscopy, followed by magnification and NBI in 54 patients. We assessed color, vascular network and mucosal pattern and used NBI International Colorectal Endoscopic (NICE) classification, in order to discriminate adenomatous from non-adenomatous polyps. Polyps were resected by polypectomy or biopsy and send for histologic evaluation. **Results:** We assessed 105 colorectal polyps. According to NICE classification, we classified polyps into 3 types: type 1 (predictive of hyperplastic polyp), type 2 (predictive of adenomatous polyp) and type 3 (predictive of invasive cancer). We obtained findings of NICE classification type 1 in 25 polyps (23%), type 2 in 78 polyps (74%) and type 3 in 2 polyps (3%). Fourteen polyps with NICE 2 appearance presented irregular vessels or irregular pattern. Histology showed high-grade dysplasia in these cases. Five serrated adenomas were misclassified as hyperplastic polyps (NICE 1). NICE 3 lesions corresponded with advanced adenocarcinoma on histologic evaluation. **Conclusions:** NBI is a useful tool for the real-time evaluation of colonic polyps. The analysis of color, vessels, surface pattern allows the distinction between neoplastic and non-neoplastic lesions. Further strategy (resection, surveillance) could be recommended on the basis of endoscopic diagnosis.

Keywords: narrow-band imaging, polyps, colorectal, histology

PSEUDOMYXOMA PERITONEI – A RARE CLINICAL ENTITY

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Background: Pseudomyxoma peritonei (PMP) is a very rare clinical entity, characterized by a mucinous tumor with intraperitoneal dissemination, often associated with gelatinous ascites and usually secondary to a mucinous tumor of the cecum. The evolution of the tumor is slow. It rarely metastasizes. The morphological character is that of a benign or of a low-grade tumor. Its biological behavior is that of a malignant tumor, being an infiltrative and extensive lesion. The first choice treatment is surgical cytoreduction and intraperitoneal hyperthermic chemotherapy. **Material and methods:** We present the case of a 63 years old patient, admitted to the Clinic of Internal Medicine II, Emergency County Hospital Targu Mures, complaining for about a month of a diffuse abdominal pain, with low intensity, intestinal transit disorders, fatigue, loss of appetite and weight loss of about 10 kg in 7 months. **Results:** The clinical examination revealed a diffuse sensitivity at palpation, more intense in the right flank. Lab results revealed elevated levels of ESR and cholesterol. The abdominal CT scan described multiple confluent nodular images in the transverse colon and ascites around the liver, the spleen, in the ileum and in the space behind the urinary bladder, thus rising suspicion of a peritoneal carcinomatosis. Examination of the abdomen, chest, thyroid and urinary system did not reveal the presence of a neoplastic process, so that a diagnostic laparoscopy with peritoneal biopsy was recommended. Histopathological examination of the biopsy sample revealed the diagnosis of pseudomyxoma peritonei. **Conclusions:** PMP is a rare clinical condition in patients undergoing laparoscopy. The clinical outcome and laboratory were nonspecific, except the abdominal CT scan that raised the suspicion of a peritoneal carcinomatosis. The diagnostic and staging of the lesion relies on explorative laparoscopy with peritoneal biopsy, respectively on the histopathologic and immunohistochemical examination of the surgical sample.

Keywords: pseudomyxoma peritonei, clinical outcome, laparoscopy, peritoneal biopsy

DOSAGE ADAPTATION OF CIPROFLOXACIN IN RENAL FAILURE. PHARMACOKINETIC STUDY.

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Background: Considering the reduction of GFR in patients with chronic kidney disease, adapting the fluoroquinolones dosage generates controversy, since FDA and EMEA recommendations are not based on studies on special populations (renal failure patients). The aim of this research is to measure the plasma concentration of ciprofloxacin at patients with various stages of renal failure for therapeutic drug monitoring as well as to identify the origin of pharmacokinetic variability using as co-variable the clearance of endogene creatinine. **Material and methods:** A pharmacokinetic study was conducted on a number of twenty patients, diagnosed with chronic kidney disease, II-V stages. The plasma concentration of ciprofloxacin was determined in these cases through a HPLC valid method at set time intervals, based on an algorithm which included plasma peak and steady-state concentration. Exclusion criteria consisted of: replacement of renal function, pregnancy and lactation, simultaneous treatment with inhibitors/inductors CYP1A2. **Results:** Therapy efficiency was assessed based on clinical criteria. The pharmacokinetic criteria were used to create a predictive model, but only 41% of the variability was caused by renal disease, the variability being associated with GFR, determined by creatinine clearance. Side-effects (their prevalence and severity) were associated with the levels of ciprofloxacin plasma concentration on the limit or below the therapeutic interval. **Conclusions:** Therapeutic drug monitoring is useful in adapting the ciprofloxacin dosage at patients with chronic kidney disease, but increasing the trial population and creating a validating population of the predictive model (which should include other justified co -variables) is recommended.

Keywords: chronic kidney disease, ciprofloxacin, HPLC method, therapeutic drug monitoring

A SPECIAL CASE OF THROMBOANGIITIS OBLITERANS

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Background: We would like to present a special case of a 25 year old young lady. **Material and methods:** For the first time she was admitted to the 2nd Medical Clinic of Tg.Mures in June of 2009 at the age of 22 with critical ischaemia of the left leg. She was an active and passive smoker without any important anamnestic data. Her intermittent claudication started about 2 month before first hospitalization, rest pain appeared 2 days before she was admitted to the clinic. **Results:** The values of CW Doppler of the left a.dorsalis pedis and a.tibialis posterior were lower than 10 Hgmm. With duplex Doppler color method we saw left a.femoralis occlusion from the origin. There were signs of phlebitis migrans. No positive antibodies for autoimmune diseases or thrombophilia. No cardiovascular risk factors (except smoking). It started a slow improvement with haemoreologic treatment (CW Doppler values 50/55 Hgmm). She appears 2 years later continuing smoking. Next admittance to the hospital in january of 2012 with signs of postthrombotic syndrome and claudication at 50m. With duplex Doppler we saw chronic left V. femoralis communis and V. femoralis plus right v. poplitee and v. tibialis posterior thrombosis. With angiography we saw left A. femoralis communis, bilateral a. femoralis and right a. tibialis anterior occlusion. **Conclusions:** The peculiarity of this case is a smoker young lady suffering from thrombangiitis obliterans with severe bilateral greatartery occlusion associated with deep and superficial vein thrombosis with multiple localisation.

Keywords: critical ischaemia, deep vein thrombosis, phlebitis migrans, young smoker lady

NEONATOLOGY

PROPHYLACTIC LESS INVASIVE SURFACTANT ADMINISTRATION TO EXTREMELY LOW BIRTH WEIGHT PRETERM NEWBORN

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Background: Respiratory distress syndrome is the most frequent disease of preterm newborn. Previously known as hyaline membrane disease, it is characterized by immature lung parenchyma and surfactant deficiency. According to the National Guideline prophylactic surfactant replacement therapy is recommended to all preterm newborn with a gestational age under 26 weeks, in the first fifteen minutes of life. It is also indicated to preterm newborn if their gestational age is over 26 weeks and if intubation at birth is required or they are born from mothers who did not receive an antenatal corticosteroid cure. **Material and methods:** Less Invasive Surfactant Administration (LISA) consisted of exogenous surfactant administration via thin endotracheal catheter through direct laryngoscopy followed by non-invasive ventilation (CPAP). **Results:** Although a new technique, LISA has been successfully implemented in the Regional Center of Neonatal Intensive Care Unit UGON Targu-Mures. All Extremely Low Birth Weight (ELBW) preterm newborn who met the criteria for prophylactic surfactant replacement therapy had a favorable outcome with fewer cases of cerebral lesions and milder forms of chronic pulmonary disease. None of these preterm newborn needed mechanical ventilation. **Conclusions:** Less Invasive Surfactant Administration (LISA) is an effective way for surfactant replacement therapy and is associated with a decreased rate of complications.

Keywords: LISA, ELBW, prophylactic, surfactant

OCCUPATIONAL HEALTH

HAZARDS' PERCEPTION AT WORKPLACE - DIAGNOSTIC AND ACTION TOOL

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Background: Taking medical, technical and organizational measures are the mainstay of the periodic medical examination, but for a fair and comprehensive analysis of the influence of pollutants or hazards on health at work there is required a subjective assessment of how the employee perceives these pollutants, especially how he perceives the action of these pollutants over its body. **Material and methods:** The study was based on 100 employees in a factory producing electronic components and plastic items for auto industry. The questionnaire consisted in 9 questions, 12 of these being multiple choice questions and 7 being open questions. The questionnaire allowed the subjective study of the workplace temperature, noise, vibration, dust, volatile organic compounds, employee's perception of their own health status, self-assessment of hazards and workplace conditions in relation with the employee's health status, as well as physical effort and mental strain at work. **Results:** Over 40% of employees feel the presence of at least three hazards in the workplace, while 73.48% of them believe that their health is affected by the presence of these hazards. Most of the employees consider some minimal technical measures could decrease the risk of health deterioration in the workplace, as follows: good air ventilation, proper maintenance of the temperature, proper control of noise and vibrations, correct manipulation of toxic agents. **Conclusions:** The presence of physical and chemical hazards in the workplace is perceived by the most of employees. Furthermore, they consider the presence of physical and chemical pollutants in the workplace is able to adversely affect their health. Subjective perception of hazards should be studied along with the results of the annual medical examination as well as some objective measurements of pollutants in the work environment, because only in this way it can be defined a correct set of medical, technical and organizational measures for health protection at workplace.

Keywords: occupational medicine, environmental medicine, occupational hazards, workplace conditions, periodic examination

PERIODICAL MEDICAL EXAMINATION IN HOSPITAL STAFF

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Background: Periodical medical examination of hospital staff is one of the most difficult mission of an occupational medicine doctor, who has to face with "strong personalities" of the medical staff. That is why, in most cases the examination is superficial. **Material and methods:** We performed a general examination for 308 employees in a small to medium general hospital, as a part of annual mandatory medical examination, according to the provision of Romanian laws. The examination consisted in taking past medical history and effective clinical examination, as well as ECG and a set of lab tests. **Results:** Most of the employees suffered from at least a single medical condition, generally not knowing about that before. The highest incidence (28.68%) condition was hypertension, followed by obesity (13.97%) and venous disease (13.24%). Other medical conditions were as follows: diabetes mellitus (5.88%), hypothyroidism (4.11%), lung diseases, rheumatological diseases, neurological diseases - each less than 3%. Analysing each category of condition related to the department membership, we observed each type of condition is more specific for a certain department, except hypertension which is specific to all departments in the hospital. **Conclusions:** Despite the specificity of the workplace, the incidence of unknown conditions is high among the hospital staff and only a careful medical evaluation can find some medical condition that could be harmful to the general health status of employees. Hypertension, often untreated is the main medical condition found, followed by obesity and venous disease, so we consider these three conditions could be defined as related to occupation diseases. Although the incidence of diabetes mellitus is still low, it is higher than national prevalence, that is why we consider it could be alarming for psychosocial overload at workplace and it needs close monitoring.

Keywords: periodical medical examination, hypertension, venous diseases, obesity, diabetes mellitus

IMPAIRMENT OF COLOUR VISION IN SOME WORKERS EXPOSED TO ORGANIC SOLVENTS

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Background: Recent research shows that occupational exposure to several solvents can impair color vision in exposed workers. The purpose of this study was to evaluate the visual outcome of chronic occupational exposure to a mixture of organic solvents by measuring color discrimination, visual acuity, collecting also work history of occupational solvent exposure, alcohol consumption and drug use. Occupational related color vision impairment usually results in blue-yellow color discrimination, or in a combination of blue-yellow and red-green loss. **Material and methods:** We presented a group of 12 solvent organic exposed patients, 8 females and 4 males admitted in the Clinic of Occupational Medicine Tg-Mures in 2013, and a control group of 10 nonexposed patients, and we examined also the relation between disorder of colour vision and age, alcohol consumption and other drug use. Their estimated exposures to solvents was between 5 and 35 years. Colour vision was tested by Ishihara and Fansworth 15 desaturated test, wich consists of 15 moveable coloured caps. The task involves arranging the caps in a continuos rainbow sequence starting at a fixed reference cap. **Results:** We found 2 persons in the exposed group who presented red-green colour vision impairmant, and 1 person with blue-yellow impairment. 3 pacient presented mild loss in visual acuity. We found colour vision impairment only in 1 case in nonexposed group, red-green colour vision impairment. **Conclusions:** These finding suggest that exposure to chronic occupational exposure to organic solvents may lead to acquired colour vision impairment, but it is need for further investigation among solvent exposed workers.

Keywords: organic solvents, colour vision, dyschromatopsia

OPHTHALMOLOGY

IRIS BILLOWING DURING PHACOEMULSIFICATION MANEUVERS IN RABBITS TREATED WITH SELECTIVE ALPHA1 BLOCKER OR 5 ALPHA-REDUCTASE INHIBITOR

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Background: The aim of our research was to study intraoperative iris behavior during some phacoemulsification maneuvers (cannula irrigation and irrigation-aspiration) in rabbits treated with selective alpha1 blocker (Tamsulosin) or 5 alpha-reductase inhibitor (Finasteride). **Material and methods:** We performed an experimental study on 26 Metis male rabbits. All possible steps were taken to avoid animal suffering. The animals were divided into three groups: Group 1 consisted of 6 rabbits which did not receive any treatment, Group 2 was formed of 10 rabbits, which received 0.4mg tamsulosin/kg, for 43 days, Group 3 was composed of 10 rabbits, which received 2.5mg finasteride/kg, for 43 days. Drugs were administered through gavage feeding once daily. Tablets were crushed into powder, mixed with distilled water 0.8-1.2 mL and emulsifying agent Tween 80. The operations were performed under general anesthesia, by the same surgeon, masked to animal medication. **Results:** By comparing Group 1 Control and Group 3 Finasteride we found statistically significant differences ($p = 0.036$). In rabbits treated with Finasteride the risk of intraoperative iris billowing is increased compared with those without treatment ($RR = 6$). The results are almost similar compared with those obtained in rabbits treated with Tamsulosin. The incidence of iris billowing (early stage of IFIS) in Control Group was 8.33% and in rabbits treated with Tamsulosin was 57.14%. The risk is significantly higher in rabbits included in Tamsulosin group ($RR = 6.85, 0.99 - 47.26$). **Conclusions:** We showed an increased risk of intraoperative iris changes, almost similar in the two groups of rabbits treated with Tamsulosin and Finasteride. It is unclear how Finasteride can cause intraoperative floppy iris syndrome. Further studies are needed to confirm or to deny a possible interaction between Finasteride, the androgenic receptors and the myoepithelial cells of the iris dilator.

Keywords: Ophthalmology, alpha-blocker, 5 alpha-reductase inhibitor, cataract

STUDY UPON TEARS CRYSTALLIZATION TEST, A USEFUL TECHNIQUE FOR ASSESSING TEAR FILM INSTABILITY

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Background: Sjögren's Syndrome is a chronic autoimmune disorder, characterized by lymphocytic infiltration of the exocrine glands. Dry eye is a complex clinicopathological entity involving tear film, lacrimal glands, eyelids, and a wide spectrum of ocular surface cells, including epithelial, inflammatory, immune, and goblet cells. The purpose of our study was to assess tear crystallization type in patients diagnosed with autoimmune diseases and dry eye. **Material and methods:** We performed a prospective 3 years study on 336 patients diagnosed with rheumatoid arthritis, systemic lupus erythematosus, polymyositis, mixed connective tissue disease, progressive systemic sclerosis. Method: tears from conjunctival bag, 5-10µL at room temperature, microscopic examination, Rolando classification for tear crystallization type. To assess the severity of dry eye symptoms we used OSDI questionnaire. Ophthalmological examination included TBUT, ocular surface integrity - slit lamp examination directly and after vital dyes staining (fluoresceine, lissamine green, rose Bengal). SPSS 17.0 and GraphPad Prism statistical software were used for statistical analysis. **Results:** We recorded the following results: statistical significant association between OSDI and ocular surface damages ($p=0.001$); no association between rheumatoid arthritis stage and eye damage ($p=0.164$); statistically significant association ($p=0.001$) between tear crystallization type and ocular surface damages. **Conclusions:** In our study type III tears crystallization was most frequently recorded. In very severe cases tears crystallization does not occur. Tear film instability due to alteration of the mucous layer causes severe ocular surface changes. Tears crystallization test allows easy and quick detection of tear film alterations.

Keywords: ophthalmology, autoimmune disease, dry eye, tears crystallization

ORTHOPEDICS

CLINICAL AND RADIOLOGICAL EVALUATION OF PROXIMAL FEMURAL NAIL IN THE TREATMENT OF INTER-AND SUBTROCHANTERIC FRACTURES

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Background: This study presents the clinical and radiological results of the Gamma Nail fixation in 135 patient, with inter-and subtrochanteric fractures, between 2008-2013, in our department. **Material and methods:** We analyze the clinical and radiological data from 135 consecutive patients who underwent PFN (Proximal Femoral Nail) fixation between 2008-2013. We have two group of patients. In the first group we have 75 cases the diagnosis with intertrochanteric fractures and in the second group we have 60 cases with subtrochanteric fractures according to AO classification. The mean ages of the patients was 67 years, and 82 were male and 53 women. The clinical data collected include the duration of surgery, blood loose, intra-and postoperative complication, X-ray review at 3,6,9,12 months and VAS scale evaluation for pain and the patients express they satisfaction or not after surgery. Both group have the same pre-and postoperative medication and rehabilitation protocole. **Results:** The rate of intraoperative complications was 4.5 % and the mortality rate, after 3 months, was 6,5. The X-ray review present excellent results in 76 % of cases, 19 % good and 5 % poor, with no difference between the two group. The VAS scale for pain decrease after surgery in all cases and 85 % of patients express they satisfaction after surgery in both group. Operation duration was similar for both group and was no difference between blood loss, hospitalization days and residual hip pain after 6 months, evaluated with the VAS scale, including the mobility. **Conclusions:** The Proximal Femoral Nail can be used succesfully in this types of fractures and present advantage over other procedure (DHS,SHS) in term of reduced blood loss, residual hip pain and hospitalization lenght. Our results are comparable with the series from literature and show that the outcome is predicted by the surgical team experience, adequate instruments and implants and patients understanding and demands.

Keywords: hip-fracture, PFN, radiological evalutaion

OUR RESULTS IN ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION USING HAMSTRING TENDONS. A MINIMUM THREE YEARS FOLLOW UP

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Background: Primary anterior cruciate ligament reconstruction using hamstring tendons is estimated to be one of the most commonly performed orthopaedic procedure. Our aim was the evaluation of a minimum three years of clinical results of anterior cruciate ligament reconstruction using hamstrings autograft, with biocomposite interference screw (Conmed) on tibial side and XO Button® Fixation System (Conmed) on femoral side. **Material and methods:** We retrospectively enrolled 34 patients with primary ACL reconstruction with a hamstrings autograft, made by the same senior surgeon from 2009 to 2010. We included patients with complete ACL rupture verified by MRI, who were skeletally mature and between the ages of 18 and 59 years. 29 patients were men and 5 were women. Fixation was made with biocomposite interference screw on tibial side. The femoral fixation was performed with the use of XO Button® Fixation System (Conmed). Clinical and radiological evaluation was performed three, six weeks, after the surgery and then yearly, using the Lysholm scoring system, Tegner activity scale and AP and LL radiographs. **Results:** The Lysholm score was good and excellent in 32 cases, with a mean Lysholm score of 94.5, only two patients being classified as poor; the mean preoperative Tegner activity score was 4 (range, 3-4), and the post-operative mean score was 6 (range, 4-7). There was one case with graft ruptures due to an acute injury. **Conclusions:** With use of an accurate and proven surgical and rehabilitation techniques, primary ACL reconstruction using hamstring tendons are good options for the ACL reconstruction. Hamstring technique is deemed to have the following benefits: smaller scar, less pain, quicker recovery, better kneeling ability, better jumping strength, better ability to straighten the knee.

Keywords: orthopaedics, ACL, hamstrings

DEVELOPMENT AND VALIDATION OF A ROMANIAN VERSION OF THE INTERNATIONAL KNEE DOCUMENTATION COMMITTEE (IKDC) SUBJECTIVE KNEE EVALUATION FORM

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Background: There is a constant increase in using patient-reported instruments for evaluating clinical outcomes in orthopaedics and traumatology, with much emphasis on the patient's grade of satisfaction and subjective evaluation of pain, function and quality of life. The International Knee Documentation Committee subjective knee form is such an instrument, endorsed by many scientific orthopaedic societies. We aimed to develop a Romanian version of the IKDC Subjective Knee Evaluation Form, assess its inter- and intra-observer reproducibility, and validate it using the Visual Analogue Scale as comparison. **Material and methods:** Our study included 29 patients treated at the Clinic of Orthopaedics and Traumatology of Tîrgu Mureş between April - June 2013, with a variety of knee disorders: knee osteoarthritis, anterior cruciate ligament rupture, meniscal and chondral lesions. For inter- and intra-observer reproducibility assessment we performed 3 consecutive interviews of the patients - two done by two different interviewers 60 minutes apart, and a third done by the first interviewer at 2 days after the first interview. All patients completed the Visual Analogue Scale for validity assessment. Statistical analysis consisted of descriptive statistics and special tests (Mann Whitney, Pearson, Bland Altman) using Graph Pad and Analyse-It software. **Results:** Mean age was 52.7 ± 15.7 years, with a male/female ratio of 1.2/1. IKDC score values ranged from 20.51 ± 7.71 for the osteoarthritic patients to maximum values of 77.64 ± 10.84 for anterior cruciate ligament rupture. Based on the Bland Altman test we observed a very good inter- and intra-observer reproducibility of our version of the questionnaire. Testing for validity against the values of the Visual Analogue Scale showed a strong negative correlation with the IKDC score, and thus a good validity. **Conclusions:** Our Romanian version of the IKDC Subjective Knee Evaluation Form is easy to use, valid and reproducible instrument for assessing symptoms, function and activity level of patients with different knee disorders.

Keywords: subjective evaluation, validity, reproducibility, knee, Romanian

CLINICAL OUTCOMES AFTER PATELLAR RESURFACING VERSUS NONRESURFACING IN PRIMARY TOTAL KNEE ARTHROPLASTY FOR OSTEOARTHRITIS

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Background: The patellar resurfacing during total knee arthroplasty (TKA) for osteoarthritis remains controversial. There are authors who recommend routine resurfacing, some who do not recommend resurfacing and some who suggest selective resurfacing. Our purpose was to evaluate the short and midterm results of total knee arthroplasties performed with and without patellar resurfacing. **Material and methods:** Between January 2004 and December 2011 the same operative team had performed a consecutive series of 206 primary TKA. A total of 80 patients were recruited; with 40 patients in each group. All patients received the same type of cemented posterior stabilised TKA - NexGen, Zimmer, Indiana, USA - comparing total knee arthroplasties performed with and without patellar resurfacing. The preoperative Knee Society Score and Function Scores were calculated. Patients also were assessed for Clinical Anterior Knee Pain Rating. **Results:** Seventy five patients were operated on both sides and 5 had unilateral TKA. The mean preoperative KSS was 41.2 for the resurfacing group and 41.6 for the nonresurfacing group. This improved postoperatively to 94.73, respectively to 95.35, with no difference between the two groups ($P = 0.68$). The mean preoperative function score was 43.50 for resurfaced patella and 43.91 for nonresurfaced. This improved to 90.4, respectively to 91.1, again with no significant difference ($P = 0.54$). Postoperative Clinical Anterior Knee Pain Rating was a mean of 0.11 for resurfaced and 0.15 for nonresurfaced patellas, with no difference on analysis. Patients who had bilateral TKA had a slightly higher Clinical Anterior Knee Pain Rating than those who had single knee surgery, irrespective of whether the patella was resurfaced or not. **Conclusions:** In patients who underwent primary TKA, there were no advantages of performing resurfacing of the patella at last follow-up. The observed effects are clinically important despite their modest magnitude. Additional, carefully designed randomized trials are required to strengthen this claim.

Keywords: TKA, total knee arthroplasty, knee osteoarthritis, pate

PERIPROSTHETIC FRACTURES OF THE FEMUR AFTER TOTAL HIP REPLACEMENT

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Background: Periprosthetic femoral fractures are more common due to increasing of total hip replacement (THR) rates - both primary and revision arthroplasties, the aging population, the growing number of patients living with a hip endoprosthesis in situ for more than 20 years, and the broader indications for THR. The Vancouver classification is a widely accepted, reliable and valid system for classifying periprosthetic femoral fracture, also offering a treatment algorithm. We evaluated the results of treating this type of fractures using the Vancouver group recommendations. **Material and methods:** We assessed a consecutive series of 39 periprosthetic femur fractures after THR (23 women, 16 men, aged 66 ± 7 years) treated by the same operative team between 2000 and 2009 and followed for a mean of 84 months (42-148). Fractures were classified according to the Vancouver system, and treated non-operatively, with open reduction and internal fixation (with or without bone grafting) or with revision surgery with either a cemented or uncemented femoral stem. **Results:** There were 6 type A fractures, 18 of type B1, 12 of type B2 and 3 of type B3, with no type C fractures. We obtained an 84.61% union rate with initial treatment that increased to 97.43% after the second procedure, with fracture union and a stable implant in the majority of cases and a 25.64% complication rate. All type A fractures healed uneventfully; there were 3 failures in the type B1 fracture group, 1 in the type B2 group and none in the type B3 group. This highlights the still on-going debate regarding the differentiation of stable vs. unstable stems in type B fractures. **Conclusions:** We obtained results that demonstrate a good success rate in treating the majority of periprosthetic femur fractures and - based on our results - we support the use of the Vancouver system as a treatment algorithm in these cases.

Keywords: periprosthetic fracture, femur, Vancouver classification, total hip replacement

INTRA-ARTICULAR LESIONS ASSOCIATED WITH THE ANTERIOR CRUCIATE LIGAMENT DEFICIENT KNEE

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Background: Rupture of the anterior cruciate ligament (ACL) leads to different degrees of knee joint instability, which associates meniscal and/ or articular cartilage lesions. If ACL reconstruction is delayed, the intra-articular lesions may increase in severity. In this retrospective observational study we aimed to evaluate the prevalence and severity of intra-articular lesions associated with ACL ruptures. **Material and methods:** We included data from a consecutive series of 63 patients with ruptures ACL treated by arthroscopic ligament reconstruction in our Clinic between August 2011-September 2013. We used hamstring autografts in all cases, with femoral button fixation and a tibial interference screw. The type, number and location of intra-articular lesions found intra-operatively were obtained from the patients' operative records. Patients were included in one of two groups based on the delay between injury and surgery: less than 12 months (group I, 33 patients) and more than 12 months (group II, 30 patients). **Results:** There were 35 male and 28 female patients, with the mean age of 28 ± 12 years. Patients from group I were operated upon at a mean of 6 weeks post-injury, while those from group II underwent surgery at a mean of 20 months after injury. In group I we found lateral meniscus tears in 25 cases (75.76%), medial meniscus tears in 12 patients (36.37%), ICRS I and II cartilage lesions in 8 cases (24.24%) and ICRS \geq III cartilage lesions in 6 cases (18.18%). Patients from group II presented lateral meniscal tears in 28 cases (93.34%), medial meniscal tears in 15 cases (50%), and cartilage lesions in 21 cases: ICRS I-II in 10 cases (33.34%) and ICRS \geq III in 11 cases (36.67%). **Conclusions:** A delay of more than 12 months between injury and ACL reconstruction can increase the number of associated meniscal lesions and the prevalence and severity of chondral lesions.

Keywords: intra-articular lesion, knee, anterior cruciate ligament, ligament reconstruction

A LONG TERM FOLLOW UP OF ACETABULAR COMPONENT REVISION FOR ASEPTIC LOOSENING AFTER CEMENTED TOTAL HIP REPLACEMENT

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Background: One of the most common problems following cemented total hip replacement is aseptic loosening of the acetabular component. This is frequently associated with an important loss of bone stock that further increases the difficulty of revision interventions. We conducted this study to evaluate the long term results of cemented total hip replacement, with the main purpose of assessing aseptic loosening of the acetabular cup. **Material and methods:** Between 1995 and 2003 a number of 2167 cemented total hip arthroplasties were performed in our clinic. From these we selected 127 patients that were followed for a minimum of 10 years. Mean age was 64 ± 13 years, with 79 female and 48 male patients. Patient follow-up ranged from 10 to 18 years, with a mean of 13.5 years. At each follow-up visit, patients were assessed both clinically and radiologically. Aseptic loosening was diagnosed based on radiological findings of bone resorption around the acetabular component and using the criteria of Hodgkinson et al. **Results:** The overall rate of survival of the acetabular component was 96.85% at 5 years and 88.97% at 10 years. Preoperatively, the mean Harris hip score was 46 points (25-69) and at the last examination it was 85 points (62-95). Results were excellent and good in 95 cases (74.80%), satisfactory in 29 cases (22.83%) and unsatisfactory in 3 cases (2.36%). 16 patients needed revision surgery: 14 cases for aseptic loosening of the acetabular component and 2 cases for recurrent dislocation. We found the most significant bone loss in Gruen zones 2 and 3. **Conclusions:** Aseptic loosening of the acetabular component affects the longevity of cemented total hip replacements. Early diagnosis is important to avoid further bone loss, underlining the significance of continued follow-up.

Keywords: total hip replacement, cemented cup, follow-up, revision

PATHOLOGY

PITFALLS IN THE DIAGNOSIS OF B-CELL "GREY ZONE LYMPHOMAS"

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Background: B-cell lymphoma, unclassified, has been describe by the World Health Organization classification in 2008 to be a provisional entity, presents features between diffuse large B-cell lymphoma (DLBCL) and classic Hodgkin lymphoma (CHL). These tumours are more common in men, aged between 20 and 40 years, and have more aggressive clinical course with poorer outcomes than either CHL or DLBCL. It's typically associated with mediastinal disease, and extranodal involvement is rare. **Material and methods:** We describe the case of a 55-year-old man, clinically diagnosed with gastric neoplasm and lymph nodes metastasis. A gastric and epiploic biopsy was performed. Although biopsy specimens were histologically similar with diffuse large B-cell lymphomas, some of the tumor cells were Reed-Sternberg like. **Results:** The tumour cells were positive for CD 30, PAX 5 and mature B-cell markers, such as CD 20 and 79a, but negative for CD 10, CD 15 and LCA. Uniform expression of CD 20 and others B-cell markers and absence of CD 15 would favour the diagnosis of grey zone lymphoma. **Conclusions:** These "borderline cases" are always difficult to be diagnosed. The treatment of B-cell lymphoma, unclassified, is a challenge because its an aggressive disease, and its rarity limits experience not only with diagnosis but also with therapeutic approaches, wich are not yet established. The particularity of this case is the localisation of the lesion (stomach) and the age of the patient. We have to understand that B-cell lymphoma, unclassified, it's a provisional entity.

Keywords: diffuse large B-cell lymphoma, B-cell lymphoma unclassified, Hodgkin lymphoma, gastric neoplasm

COLORECTAL CARCINOMA IN A 14 YEAR-OLD-GIRL: A CASE REPORT

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Background: Colorectal carcinoma is very rare in childhood, with an incidence of only 1.3 per million cases. Most of the cases appear sporadically, and shows a male preponderance (M:F=2:1). The most common sites of involvement are the right and transverse colon along with recto-sigmoid region, and has a poor outcome than in adults. **Material and methods:** We present a case of a 14 year-old-girl hospitalized with fever, abdominal pain, diarrhea and rectal bleeding. Imagistic investigations indicated a descending colonic tumor. A segmentary resection with T-T anastomosis was performed. For histopathologic and molecular diagnosis we performed immunohistochemistry and molecular biology reactions (KRAS, BRAF mutations, and bat25-bat26 markers). **Results:** Macroscopy showed an ulcero-proliferative tumor, with circumferential growth and obstruction of the intestinal lumen. Histopathologic evaluation confirmed a well differentiated adenocarcinoma, with mucinous component that involved the subserous layer, with angio-lymphatic and perineural invasion. Five lymph nodes out of 28 showed metastatic deposits - stage Dukes-MacC3, TNM stage pT3N2a. The molecular profile of the tumor did not confirm favorable response to anti-EGFR therapy. **Conclusions:** Although the incidence is very low and the symptoms are not specific, when a child presents abdominal pain, modified bowel habits or bleeding, an intestinal colonic adenocarcinoma shouldn't be excluded.

Keywords: colorectal carcinoma, children, anti-EGFR therapy

MYELODISPLASTIC SYNDROME ASSOCIATED MYELOID SARCOMA: AN UNUSUAL PRESENTATION OF A RARE DISEASE

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Background: Myeloid sarcoma is an uncommon solid malignant tumor composed of myeloid blasts/blast-equivalent precursors in an extramedullary site, most commonly occurring in the soft tissues and skin, and less often in the nervous system. **Material and methods:** A 66-year-old man was urgently admitted with symptoms of pancytopenia and bone marrow biopsy was performed. On

the same day his condition has been complicated with paraplegia. MRI of the thoracic spine showed an epidural mass at the T1-T3 levels. **Results:** Histological examination of bone marrow biopsy demonstrated an increased number of myeloid blasts, that were present also in the excised tumor. Immunohistochemically, these cells were positive for LCA, CD117 and MPO, bone marrow blasts expressing CD99, too. Substitution treatment and the chemotherapy for leukemia, did not affect the tumor, and the patient died. **Conclusions:** It is important, that myeloid sarcoma is a LCA positive neoplasm with or without CD99/CD79a positivity, and should be considered in the differential diagnosis of lymphoblastic lymphoma and CD99-positive round cell tumors.

Keywords: pathology, myelodysplastic syndrome, myeloid sarcoma, nervous

PRIMARY OVARIAN MALIGNANT MÜLLERIAN MIXED TUMOR: A CASE PRESENTATION

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Background: We present a case of a 63 years old woman who has an abnormal uterine bleeding. She needed an endometrial curettage for recovering with therapy and diagnosis. After the malignancy histopathology diagnosis, performed in a very short period of time, she needs surgery, hysterectomy with anexectomy. **Material and methods:** The endometrial curettage and the total hysterectomy piece had been fixed in formaline and examined according to the protocols. There had been analyzed histological sections, which had been colored in HE and also there were performed immunohistochemistry stains. **Results:** In the endometrial curettage there were observed tumoral fragments with carcinosarcoma aspect. In the total hysterectomy part there were seen bilateral ovarian tumors with the same carcinosarcoma aspect, which produced metastases in lymphatic nodes and in the epiploon too. The uterine body had never presented pathological changes in this tumoral context. **Conclusions:** The carcinosarcoma is a rare primary ovarian tumor which represents 1% malignity of the ovary. Most of them are diagnosed in advanced stages. In our case the diagnosis was based on the endometrial metastasis.

Keywords: ovarian carcinosarcoma, endometrial metastasis, lymph nodes metastasis

HISTOPATHOLOGICAL ASPECTS IN INTRAOCULAR MALIGNANT TUMORS

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Background: Eye globe tumors represent a small percentage of the ophthalmic pathology, most of these tumors are benign, and especially involving the conjunctiva (epithelial tumors, melanocytic tumors, etc.) Intraocular tumors instead are usually malign. The most common intraocular primary tumor is the choroidal melanoma in adults and the retinoblastoma in childhood, and the most frequent intraocular metastases are from the epithelial tumors (carcinomas and adenocarcinomas). **Material and methods:** Analyzed all patients from the Pathology Laboratory and the Ophthalmology Clinic during the last 8 years (2006-20013). The tissues samples were processed with the standard Hematoxylin-Eosin staining (formaldehyde fixation, paraffin embedding, sectioning and staining). For the positive diagnosis and differential diagnosis, immunohistochemical reactions have been made. **Results:** During the follow-up period was there were 17 cases of choroidal melanomas, 3 retinoblastomas and 2 metastases. The majority of the cases were registered in 2007. Incidence based on age showed that choroidal melanoma had the highest incidence in the 6 decade of life, retinoblastoma was more common in the first decade, and the secondary tumors, metastases, were more frequent in the 70 years group. Gender distribution showed a higher frequency of choroidal melanoma and metastases in females, and a higher frequency of retinoblastoma in young boys. **Conclusions:** Intraocular malignant tumors most frequent diagnosed are choroidal melanomas, retinoblastomas and metastases. Immunohistochemical reactions and genetic tests are mandatory for a positive diagnosis and differential diagnosis.

Keywords: ophthalmology, dermatology, choroidal melanoma, retinoblastoma, metastases

BURKITT LYMPHOMA – AN UNCOMMON CAUSE OF UPPER GASTROINTESTINAL BLEEDING

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Background: Differentiation of primary gastric Burkitt lymphoma (BL) from other B-cell lymphomas is often difficult. Patients may present with acute abdominal symptoms that can lead to emergency laparotomy before the diagnosis of BL can be made. **Material and methods:** We report an unusual case of extranodal BL. **Results:** A 60-year old female was hospitalized with massive hematemesis. An emergency gastroscopy revealed a protruded tumor localized in the antral part of the stomach. Based on the patient's status, an emergency gastrectomy was performed. Macroscopically, the tumor was well defined, covered by normal mucosa with a central depressed area. Microscopically, proliferation of medium-sized cohesive lymphoid cells admixed with macrophages that displayed a starry sky appearance and a high mitotic rate was observed. The tumor cells expressed CD20, CD79a, and CD10 and were CD3, CD5, CD23, TdT and Cyclin D1 negative. A high Ki67 proliferative index was also seen; nearly 100% of nuclei were positive. The patient died five days after surgery due to bronchopneumonia and renal failure. **Conclusions:** Beside gastric tumors, BL is an important differential diagnosis in patients presenting with upper gastrointestinal bleeding. Despite a proper diagnosis, lack of screening programmes and an improper follow-up increase the rate of death in patients with gastric cancer. This work was partially supported by the University of Medicine and Pharmacy of Targu-Mures, Romania, projects frame: POS-UMFTGM-CC-13-01-V01.

Keywords: Burkitt lymphoma, stomach, hematemesis

PEDIATRICS

THE EXPERIENCE OF THE PEDIATRIC CLINIC II IN THE TREATMENT OF WILMS' TUMOR

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Background: Wilms' tumor is the second malignant solid tumor in children, following neuroblastoma, with an incidence of 7.6 new cases/1.000.000 children under 15 years/year. It appears frequently in children with reno-urinary malformations or genetic diseases, such as Beckwith-Wiedeman, WAGR and Denys-Drash syndromes, hemihypertrophy, etc. Results have been ameliorated by multimodal therapy. The aim of the paper is to present the possibilities, identify the difficulties and share our results in the treatment of children with Wilms' tumor. **Material and methods:** Between 2012-2013 we investigated and treated 4 children with Wilms' tumor, aged 8 months-10 years, 3 girls and 1 boy. Clinical, laboratory and imagistic results are presented. **Results:** One patient had stage II and another stage III disease, the remaining two patients underwent surgery and are to be staged after the histological and surgical assessment. The favorable prognostic factors were: favorable histology, normal serum ferritin levels and LDH values less than 1000 U/L in 2 patients. High blood pressure was noted in 3 patients, hematuria was absent in all patients. Iron deficiency anemia was diagnosed in all patients. Surgical removal of the tumor was performed in Tîrgu-Mureş in 2 patients, following the SIOP recommendations. Treatment was performed according to the 2001 SIOP protocol. All patients are alive, 1 completed her treatment, the other 3 are performing their chemotherapy. One child underwent total abdominal irradiation because of tumor spillage during surgical removal. **Conclusions:** Wilms' tumor patients can be investigated and treated as it has been recommended by the SIOP 2001 protocol, at the Pediatric Clinic from Tîrgu-Mureş. We also identified the issues which may be subject to further amelioration.

Keywords: Pediatrics, Oncology, Wilms' tumor, child, chemotherapy

A RARE CAUSE OF HYPOGLYCEMIA IN INFANTS – BECKWITH-WIEDEMANN SYNDROME

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Background: Hypoglycemia in infants may be caused by hyperinsulinemia, inborn error of metabolism, medications, alcohol, hormone deficiencies, prolonged starvation, alteration of metabolism associated with infection and organ failure. Beckwith-Wiedemann syndrome is a rare genetic disorder, caused by dysregulation of imprinted growth regulatory genes within the Ch.11p15 region and it is characterized by pre or postnatal overgrowth, macroglossia, abdominal wall defects, organomegaly, hemihypertrophy, renal tract anomalies and an increased risk of childhood tumors (especially Wilms tumor). Pancreatic cell hyperplasia, which is also often present in this syndrome, could lead to life-threatening hypoglycemia. **Material and methods:** We report a case of an infant with Beckwith-Wiedemann syndrome who presented episodes of hypoglycemia from the first day of life, close up to 9 months. Because of macroglossia he needed continuous nasogastric tube feeding until 8 months. In order to prevent severe decrease of blood sugar levels, he was fed with a formula prepared in 5% glucose solution and he received treatment with Proglycem (Diazoxide). **Results:** After several months of treatment with Proglycem and continuous nasogastric tube feeding, our patient is now asymptomatic, able to eat a semi-solid diet from bottle and he is developing almost normally. **Conclusions:** In case of an infant with macroglossia, abdominal wall defect, organomegaly and hypoglycemic episodes, diagnosis of Beckwith-Wiedemann syndrome should be considered. Early treatment of hypoglycemia is very important in order to avoid further complications which could lead to brain damage or death.

Keywords: hypoglycemia, Beckwith-Wiedemann syndrome, proglycem

NEONATAL SEIZURES ... A CONSTANT CHALLENGE FOR THE PEDIATRICIAN

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Background: Seizures are excessive paroxysmal and synchronous electrical discharges caused by depolarization of central nervous system neurons. It represents the most important indicator for neonatal neurological damage, but also a large number of neonatal seizures are caused by metabolic diseases. **Material and methods:** In order to have a clear image of the issue concerning the seizures in neonatal period, and also about its pathological implication on short and long term, we investigated a new born aged eight days, who was admitted (Pediatric Clinic 1 Targu-Mures) with neonatal seizures. The newborn was complex investigated, in this way being found the cause of seizures. **Results:** Diagnosis of neonatal seizures is often difficult to implement. Symptoms are uncharacteristic, seizures may have a rudimentary character, atypical. The symptoms submitted newborn were: upper limb contractures (30 sec), without loss of consciousness, with deviation eyeballs that repeat 3 times. We searched the possible causes of seizures: organic causes (central nervous system infections and malformations, intracranial hemorrhage), metabolic causes (hypocalcemia, hypomagnesiemia, hyponatremia, etc), toxic metabolic diseases, aminoaciduria. Hypocalcemia in newborns can have an early onset (day 3-4) or late (day 8), and the causes are multiple: the parathyroid agenesis, maternal diabetes, hypoparathyroidism, etc. Under treatment the clinical course was favorable. **Conclusions:** Hypocalcemia is the commonest metabolic disorder in the neonatal period (term/preterm). Hypomagnesiemia is frequently associated. There were not reported neurological or neurobehavioral effects, long-term hypocalcemia diagnosed in the neonatal period.

Keywords: pediatrics, seizure, newborn, hypocalcemia

THE RAPID STREP TEST – A USEFUL TOOL IN STREPTOCOCCAL INFECTION DIAGNOSIS

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Background: The rapid strep test is a quick and accurate diagnostic tool used to determine streptococcal bacteria in patient's throat. Patients benefit by rapid confirmation of streptococcal cause of their sore throat, in terms of antibiotic treatment, duration of illness and elimination of possibility of spread of infection to others **Material and methods:** The main objective of this study was to compare the results of rapid strep test with the traditional test for a strep throat, i.e. throat culture. We used One-Step Diagnostic Test from Chem True, manufactured by Shanghai Chemtron Biotech Co, Ltd, for rapid test of streptococcal infection, and throat culture provided by Mures County Hospital laboratory. **Results:** The rapid test has been performed in 20 patients with sore throat. Five tests were positive and 15 negative. All positive cases have been confirmed by throat culture, and 1 rapid test could not be interpreted. **Conclusions:** Rapid strep test is a quick and reliable test, and could be successfully used in outpatients and inpatients, the first result being the reduction in unnecessary use of antibiotics.

Keywords: general pediatrics, rapid test, streptococcal infection, sore throat

THE ROLE OF ULTRASOUND IN DIAGNOSING HORSESHOE KIDNEY IN CHILDREN

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Background: The horseshoe kidney is the most common of all renal fusion anomalies. Kidney are connected at their lower poles by a parenchymatous or fibrous isthmus that crosses the midplane of the body. **Material and methods:** In 8 years period 16 000 abdominal ultrasound were performed in the Second Pediatric Department of Mures County Hospital. We identified 9 cases of horseshoe kidney. **Results:** One of this cases was asymptomatic and the other 8 were associated with urinary tract infection symptoms or abdominal pain. Six cases were associated with other congenital malformations of the urinary system, such as: complete or incomplete duplication in one or both pyelocaliceal systems, vesico-ureteral reflux, hydronephrosis. Other anomalies

have been found involving the: cardiovascular system, central nervous system and also hypospadias. **Conclusions:** Horseshoe kidney is a renourinary malformation that can be diagnosed using abdominal ultrasonography.

Keywords: general pediatrics, horseshoe kidney, malformations, ultrasound

THE POLYMORPHISM OF IL-6-572 G/C GENE IN OBESE CHILDREN

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Background: Genetic variation in the human IL-6-572 gene (G allele or C allele) has been associated with several heritable traits, including nutritional disorders, especially obesity and malnutrition. In obesity multiple anomalies occur including cytokine production, which increase the severity and frequency of infections. The aim of the work was to study the clinical and genetic factors in children with obesity. We examined whether obese subjects differ from IL-6-572 genotype distribution, and also the correlation of this genotype with the anthropometric parameters and biochemical characteristics. **Material and methods:** The study included two comparable age and sex groups of children: 98 children with obesity and 121 with normal body weight/ random controls. We assessed anthropometric parameters (body mass index, medium upper-arm circumference and tricipital skinfold) and biochemical metabolic parameters (protein, lipid profile). All children were genotyped for IL-6-572 G/C gene polymorphism which was determined by the polymerase chain reaction using specific primers. **Results:** The median age was 112.8±32.81 months in obese group. The distribution of IL-6-572 CC, CG and GG genotypes in obese group were 47.28; 51.31 and 1.4%, while for the control group were 8.81; 25.95 and 65.24% respectively. Comparing the obese group with control group we obtained a higher risk for the allele C to develop obesity ($p=0.001$); the protein, cholesterol concentrations and anthropometric parameters differ between obese and normal weight children. **Conclusions:** IL-6-572 G/C gene polymorphism is a significant factor for nutritional disorders; in our study, alleles CC was associated with obesity. Further studies are warranted to investigate the genetics of fatness phenotypes in Romanian children.

Keywords: pediatric nutrition, IL 6 572, obesity, children

ACE I/D AND NPHS2 R229Q GENE POLYMORPHISMS IN CHILDREN WITH NEPHROTIC SYNDROME

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Background: Nephrotic syndrome (NS) is a common renal problem encountered in children. The role of angiotensin-converting enzyme (ACE) insertion/deletion (I/D) gene polymorphism in various renal disorders has been investigated. We undertook this study to investigate the genetic polymorphisms of ACE I/D and NPHS2 R229Q in children with idiopathic nephrotic syndrome (INS), as well as its relationship with patient's clinical response to steroid therapy. **Material and methods:** This study comprised 42 pediatric patients with nephrotic syndrome. Fifty children without previous renal diseases and without proteinuria were enrolled as a control group. ACE I/D and NPHS2 R229Q polymorphisms were determined by the polymerase chain reaction and RFLP technique utilizing specific primers. **Results:** The distribution of ACE DD, ID, and II genotypes in NS patients were 28.57; 54.76 and 16.67%, respectively; the corresponding numbers for the control group were 47.5; 42.5 and 10%, respectively. ACE genotypes were not significantly different between patients and control groups ($p>0.05$). Mutation of NPHS2 R229Q gene, was found in two patients with congenital NS. The study groups consisted of 85.71% cases with steroid-sensitive nephrotic syndrome (SNSS) and 14.29% cases with steroid-resistant nephrotic syndrome (SRNS). No statistically significant difference was found between steroid sensitivity and ACE genotypes. **Conclusions:** The current study reveals no association between the ACE gene I/D polymorphism and steroid responsiveness. Because NPHS2 R229Q gene mutation was found in all cases of CNS, a screening of this gene in children with CNS in the adjacent counties is required. Further studies with a larger number of patients are needed. **Acknowledgements:** This work is funded by Internal Research Grants of the University of Medicine and Pharmacy Tîrgu Mureş, Romania.

Keywords: children, nephrotic syndrome, gene, polymorphism

CLINICAL AND HISTOPATHOLOGICAL PROFILE OF THE NEPHROTIC SYNDROME IN CHILDREN

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Background: Nephrotic syndrome (NS) is a clinically heterogeneous disease characterized by different histological variants and genetic determinants. NS generally has a favourable long-term prognosis, about 90 % of affected children exhibit an excellent glucocorticoid responsiveness, but most suffer at least one relapse. Steroid resistance (SRNS) develops in 10 % of children and many of these exhibit focal segmental glomerulosclerosis (FSGS). SRNS remains one of the most intractable causes of end-stage renal disease (ESRD) in the first two decades of life. Idiopathic SRNS accounts for more than 10% of children who progress to end-stage renal disease. Treatment of SRNS remains a difficult challenge in pediatric nephrology. Objectives of study: to study the clinico-histopathological profile and outcome of children with NS. **Material and methods:** We evaluated clinical features, laboratory data and histopathology of 203 children with nephrotic syndrome seen at the 2nd Pediatric Clinics of Târgu-Mureş and 1st Pediatric Clinic of Budapest. **Results:** From the 203 patients (male:female ratio 1.54, average age at diagnosis 4.48 years) with nephrotic syndrome included in this retrospectiv study, 49.26% presented steroid-sensitive NS, 11.82% steroid-dependent NS and 38.92% SRNS, 11 patient had congenital and 9 infantil NS. 126 patients had impure nephrotic syndrome, haematuria was present in 59 patients, hypertension in 107 patients. Percutaneous renal biopsy was performed in 88 cases (43.35%), presenting minimal-change disease in 38.63% and (FSGS) in 34 patients (42%). ESRD developed in 38 patient (18.72%). **Conclusions:** The most dominant lesions are MCNS and FSGS. According to literature data the incidence of FSGS and steroid-resistant nephritic syndrome has increased in the last years, confirmed in our study. Every fourth child with nephrotic syndrome progress towards ESRD. Prospective studies or at least standardized treatment for complicated cases is urgently needed.

Keywords: pediatrics, nephrotic syndrome, end-stage renal disease, focal segmental glomerulosclerosis

OVERWEIGHT AND OBESITY PREVALENCE IN URBAN AREAS OF MURES COUNTY

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Background: Overweight and obesity are labels for ranges of weight beyond what is considered "healthy", defined as abnormal/excessive fat accumulation that may impair health. All statistics agree on increasing child obesity prevalence. WHO relates to obesity as an epidemic. In recent years, several studies conducted in our country attempts to identify aspects of the epidemiology of this condition in Romania. The aim was to determine the prevalence of overweight and obesity in children, in urban areas of Mures County. **Material and methods:** Between September 2012-June 2013 we conducted anthropometric measurements by displacement in the four municipalities and three of the seven cities of our county. The target population was urban infantile population of Mures, according to centralized data, 69 602 individuals 0-19 years-old. Applying calculation formula of a representative sample out from a overweight and obesity prevalence of 5-20% in other studies in Romania, we evaluated 236 children, stratified according to existing data on age and sex distribution. We considered overweight a BMI-for-age above the 85th percentile and obesity over P95. **Results:** Nutritional-status disorders (global overweight and obesity) totaled 17.37%; by age, we found maximum percentage at 10-14 years (27.58%), then 5-9 years: 18.96% and 15-19 years: 13.11%; lower prevalence was observed in young children (4.24%). Obesity was more common than overweight (11.44% vs 5.93%) at all ages. **Conclusions:** Prevalence of child nutritional-status changes in urban areas of Mures County exceeds one fifth (one of 16 children presenting overweight, and one of eight - obesity), with high paratrophy rate in infancy. Overall, the highest prevalence was observed in the 10-14 years category. Both overweight and obesity were found the maximum at the same age, followed by 5-9 years group and then

adolescence. Education measures, development and implementation of assessment protocols are needed, for accurate assessment, awareness of nutritional disorders magnitude, and empowerment of factors involved in prevention and management.

Keywords: Pediatrics, child, epidemiology, obesity, overweight

PATHOLOGY OF URETEROVESICAL JUNCTION IN PEDIATRIC PATIENTS. A RETROSPECTIVE STUDY ON 15 YEARS.

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Background: The juxtavesical portion of the ureter (UVJ) forms a functional valve which allow one way urinary flow and provide protection to the low pressure urinary tract. Functional disorders of the ureterovesical valve cause irreversible damage in the kidneys. This diseases can be: obstructive megaureter, ureterocele, ureterovesical stenosis, ureteral ectopia and vesicoureteral reflux (VUR). The aim of our study was to emphasize the pathology of this anatomical entity and to verify the therapeutic compliance.

Material and methods: Our study comprised all the pediatric patients admitted in Pediatric Nephrology Compartment in the Pediatrics Department No. 2 Targu-Mures, diagnosed UVJ disorders between 1st of January 1998 and 31st of October 2013. The patients were analysed in terms of age, sex, diagnosis and medical or surgical treatment results. **Results:** We analysed 202 patients of which 176 (87,1 %) with VUR. 88.1% of patients first presented in the hospital with urinary tract infection (UTI), out of which E Coli was highlighted in 64,8%. 61 patients with VUR presented bilateral involvement. From 241 affected ureters, 66,3% are in girls. A rate of 77,2% patients were medically treated by chemoprophylaxis out of which 44,2% were cured. The average of chemoprophylaxis cures was 13,3 months for VUR grade I, 27,9 months for VUR grade II and 27,6% for VUR grade III. 22,8% of patients received surgical treatment. VUR was surgically treated by subureteric transurethral injection in 12 cases, with 50% success. In 23 patients open surgery was done, 5 cases requiring nephrectomy. For 18 patients, per-primam ureteral reimplantation was done, complications occurring in one case. **Conclusions:** UVJ disorders are common in pediatric urological patients and are generally exposed by UTI, VUR occupying a significant proportion of them. UVJ disorders VUR grade I-III are treatable by chemoprophylaxis with good results. Surgical treatment is indicated in high grade VUR, uncontrollable fever and impaired renal function.

Keywords: ureterovesical junction, vesicoureteral reflux, ureteral reimplantation, suburetheric transurethral injection

PHARMACY

CHIRAL SEPARATION OF BETA-BLOCKERS BY CAPILLARY ELECTROPHORESIS: CARVEDILOL VS. PROPRANOLOL VS. SOTALOL – A CASE STUDY

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Background: The beta-blockers comprise a group of drugs, frequently prescribed in modern therapy, mostly to treat cardiovascular disorder. Each of these drugs possesses at least one chiral center, and an inherent high degree of enantioselectivity in binding to the beta-adrenergic receptors. Despite their high degree of stereoselectivity, the large majority beta-blockers are administered clinically as racemates. It is unequivocally clear that elaboration of new methods for the chiral separation of beta-blockers becomes a necessity and through its procedural difficulties also a challenge. **Material and methods:** Capillary electrophoresis (CE) proved to be a powerful alternative to the more frequently used chromatographic methods; its advantages being related to the high separation efficiency, relatively short analysis time, low consumption of solvents and reagents and large variety of efficient chiral selectors. Three frequently used beta-blockers with different structural and stereochemical characteristics were elected as model compounds: carvedilol, propranolol, sotalol. Several natural and derivatized cyclodextrine (CD) derivatives were evaluated as chiral selectors in order to obtain optimum chiral resolution and short analysis time. **Results:** The effects on the enantioseparation of the CD type and concentration, composition and pH of the background electrolyte, capillary temperature, applied voltage and injection parameters have been studied. The migration order of the two enantiomers was established by spiking. The results obtained for the three analytes were compared; and tried to find the connection between the efficiency of stereoselectivity and the chemical structures of the analytes. Highly satisfactory results were obtained from the analysis of the selected analytes from pharmaceutical preparations. **Conclusions:** There are three main aspects that should be considered, in the evaluation of a chiral separation: the role of the chemical structure of the analyte, the structure of the chiral selector and the effect of the experimental parameters.

Keywords: enantioseparation, cyclodextrines, capillary electrophoresis, chiral resolution

SAFETY EVALUATION OF THE USE OF ARTIFICIAL SWEETENERS IN CHEWING GUMS AND CANDIES

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Background: In products as chewing gums or candies, the presence of sugar was correlated with the development of colonies of bacteria responsible for tooth decay. Therefore, replacement of sugar with artificial sweeteners might bring some health benefits. Unfortunate, some animal studies showed toxic effects of artificial sweeteners. Due to this fact, accepted daily doses (ADI) were stated for the artificial sweeteners. The purpose of this work is to measure the concentrations of artificial sweeteners in solid sweets and to evaluate if there is a possibility to exceed the ADI values by using such products. **Material and methods:** An HPLC-UV system with a LiChrospher select B (5 µm) column was used. Mixture of acetonitril and phosphate buffer (pH = 2.5) was used as mobile phase in a gradient mode. Sample preparation is very easy allowing high sample throughput. Several chewing gums and candies (both sugar free and with sugar) were analyzed. **Results:** Separation of acesulfame, cyclamate, saccharine and aspartame was achieved in 16 minutes (column re-equilibration included). None of the tested products contained cyclamate. Concentrations ranged 0 - 0.45, 0 - 0.45 and 0.29 - 2.61 mg/g product for acesulfame, saccharine and aspartame, respectively. Only one product exceeded European regulations regarding the concentrations of sweeteners permitted in solid sweets: it contained 2.61 mg/g of aspartame instead of 2.0. When compared with the individual ADI for sweeteners one can see that hundreds of chewing gums are necessary to exceed the accepted amounts. **Conclusions:** The described method is suitable for easy detection of sweeteners in chewing gums and candies. Amounts of sweeteners in chewing gums and candies are very low compared with their ADI. Such products might be safe and useful in avoiding sugar stimulated tooth decay.

Keywords: artificial sweeteners, chewing gum, HPLC, determination

EFFECTS OF OLANZAPINE AND RISPERIDONE ON WEIGHT DURING GESTATION

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Background: Atypical anti-psychotic drugs exhibit weight gain side-effects, which were shown to be correlated with an increased risk for neural tube defects in infants. **Material and methods:** Olanzapine and risperidone influences on body weight during gestation were investigated in rats. Eighteen female Wistar rats were divided into 3 groups: Group A (control group) - not receiving any substance, Group B - receiving olanzapine 6 mg/kg body weight by oral route, and Group C receiving risperidone 3 mg/kg body weight by oral route. The medication was administered during the entire gestation period, and weight variations were noted and compared weekly until parturition. **Results:** Weight gain was statistically significant after the first, second and third week of gestation ($p < 0.05$) in all animal groups, when compared with their initial weights. Weight gain was also statistically significant in both risperidone and olanzapine treated animals when compared with the control group ($p < 0.01$) but no statistically significant differences were observed between the two experimental groups ($p > 0.2$). **Conclusions:** Although human pregnancy data suggest that weight gain was the most pronounced in women receiving olanzapine in our animal study, both risperidone and olanzapine groups had significant weight increase during gestation period compared with the control group. Larger numbers of animals are required in order to understand the real effects of olanzapine and risperidone on weight during gestation.

Keywords: olanzapine, risperidone, weight gain, gestation

THE CHARACTERIZATION OF QUINOLONE ANTIBIOTICS BY UV SPECTROPHOTOMETRY

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Background: Quinolones are an important class of antibacterial compounds that are widely used in both the human and veterinary medicine. A comparative study of UV spectral behavior in different solvents and interpretation of chemical structure relationship - UV spectra of the studied compounds using model compounds were performed. **Material and methods:** Eighteen quinolones representatives and four model compounds were selected in order to analyze this class of compounds by UV spectrophotometry. The solutions were prepared in methanol, 0.1M HCl, 0.1M NaOH. **Results:** UV spectra recorded in the quinolone derivatives show three absorption maximum values located around 210-230 nm, 270-290 nm and 315-330 nm. The absorption bands exhibited both hipsocrome and batocrome displacements, by comparison in different solvents. The most commonly change observed was a slight hipsocrome displacement at acidic pH (protonated form prevails) and basic pH (anionic form prevails). The structural differences are reflected in the minimal changes of UV spectra only when there are auxochrom substituents. **Conclusions:** The correlations between the chemical structure of quinolone derivatives and their UV spectra using model compounds were established. UV spectra are relevant for the identification and purity control of the studied substances and also useful for specific analytical signals identifying obtained in the analysis of complex mixtures by separation methods such as capillary electrophoresis.

Keywords: quinolones, fluoroquinolones, UV spectrophotometry

IDENTIFYING THE MOST IMPORTANT DIETARY SUPPLEMENTS FOR WEIGHT LOSS AND THE MOST COMMONLY USED DIETS BASED ON A QUESTIONNAIRE

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Background: The purpose of this study was to identify the most frequently used dietary supplements for "fat burning" and weight loss which have a legal status in Romania and the types of diets, based on a questionnaire. **Material and methods:** Questionnaires

were distributed in three private gyms and the sports gym of The University of Medicine and Pharmacy Tirgu Mures. Study participants were informed upon the confidentiality of personal data. **Results:** Of the respondents who completed the questionnaire $n = 113$ (87 were men and 26 were women) 75.22% (67 men and 28 women) admitted taking dietary supplements. The mean age of the studied lot was 23.2 ± 5.3 years, over two thirds of respondents were students. **Conclusions:** Among men most frequently used dietary supplements were for muscle gain often associated with weight loss dietary supplements (paradoxically) while in women the most frequently used dietary supplements were those for weight loss, vitamins and minerals. Of the diets, the most frequently used were hyperprotein diet and ketogenic diet. The paper also analyzes the legal/illegal status of substances used for weight loss and their potential for abuse.

Keywords: dietary supplements, weight loss, fat burning dietary supplements

THE IMPORTANCE OF BIOSIMILAR MEDICINES

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Background: Biosimilar medicines are new biopharmaceuticals that are "similar" but not identical to the innovator product. These medicines have revolutionised the management in treatment of the most difficult to treat diseases and have helped to prolong and improve the quality of lives of many patients. **Material and methods:** We are presented the importance of biosimilar medicines from several points of view: for patients, for clinicians, for pharmacists and for authorities. **Results:** Biosimilar medicines offer a major opportunity for greater access to affordable healthcare. This opportunity is at least equally significant to the emergence of generic medicines over the past decades. These products allow greater access for patients in advanced therapy and provide to physicians an affordable and therapeutically equivalent alternative to essential but expensive reference products. Pharmacists have a major role in critically appraising biosimilar medicines and making recommendations for their use. We present the existing situation of biosimilar products on the pharmaceutical market in Romania. **Conclusions:** Reviewing the significance of biosimilar products, we can conclude that they require special attention in all health areas.

Keywords: pharmacy, biosimilars medicines, affordable healthcare

VENOM METALLOPROTEINASE

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Background: Venom is generally referring to a large range of toxins used by certain types of animals to inject it into their victims by mean of bite, sting or any other sharp body feature. Animals use it for hunting or for own self-defense. Importance of prey-predator relationship made these toxins, through evolution, to act quickly and be highly potent. One group of toxins received particular attention, namely metalloproteinase (VMP) being among the most abundant enzymes in venoms. Their associations with particular symptoms such as local and systemic hemorrhage and interference with hemostatic systems, facilitating loss of blood could lead to new anti-coagulants or anti-hypertensive drugs. **Material and methods:** **Results:** It will be highlighted some of the basic principles of the structure and functions of VMP as well as their biochemical characteristics. Recent developments which have elucidated some of the mechanisms will be also discussed. **Conclusions:** Extensive research in metalloproteinase could lead to surprising results providing new or alternative solutions for some diseases and offer a wide range of possible drugs with therapeutic efficacy.

Keywords: venom, metalloproteinase, VMP, new drugs

NONAQUEOUS CHIRAL CAPILLARY ELECTROPHORETIC SEPARATION OF SELECTED H1-ANTIHISTAMINES

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Background: In recent years, capillary electrophoresis (CE) has gained increased popularity, mainly in the field of chiral separations. The use of nonaqueous background electrolytes offer further advantages such as unique separation mechanisms, higher efficiency, shorter analysis time and lower currents. In this work the applicability of different cyclodextrins (CDs) and macrolide antibiotics was evaluated for the chiral separation of selected analytes, using nonaqueous capillary electrophoresis (NACE). **Material and methods:** Four, first generation, sedative H1-antihistamines with very similar chemical structure (pheniramine, brompheniramine, chlorpheniramine and promethazine-) were selected as model molecules. Three CDs (beta-CD, hydroxypropyl-beta-CD, sulfobutylether-beta-CD) and three macrolide antibiotics (azithromycin, clarithromycin, roxithromycin) were employed as chiral selectors in nonaqueous media. The effect of different variables (solvent type, chiral selector type and concentration, background electrolyte composition) was also investigated. Separation efficiency was evaluated by terms of resolution. **Results:** Unfortunately chiral recognition was not observed with the use of antibiotic chiral selectors, but all CDs showed interaction with the analytes. Baseline chiral separation was achieved using a dual CD system consisting of a neutral and charged CD. **Conclusions:** The method developed, employing a dual chiral selector system was compared to an earlier, similar method in aqueous media. Due to the diminished intermolecular interactions observed in NACE, much higher chiral selector concentrations were needed in order to achieve comparable results. The high viscosity of the b and the increased concentration of chiral selector gave rise to an increase in the migration time of analytes. As major advantages, nonaqueous solvents were able to solubilize macrolide antibiotics and offered higher selectivity by the wide variety of readily available solvents.

Keywords: NACE, antihistamines, chiral separation

PHYSIOLOGY

OCCUPATIONAL HAZARDS IN DENTISTRY - PHYSIOLOGICAL ASPECTS

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Background: At the workplace, dentists are exposed to various harmful factors, namely: static effort in forced position, irrational lighting of the room and as a result eye strain, emotional tension caused by local noise and vibration. One of the most common occupational hazards is local vibration. The objectives of the work were to study and characterize the physiological consequences of unfavorable ergonomic conditions in dental work. **Material and methods:** The following methods were applied: bibliographical, descriptive, analytical, chronometrical, experimental. **Results:** The study showed that musculoskeletal pain is the most common among dentists and it can be induced by mechanical vibration that affects the body through the upper limbs, causing changes in the vascular, nervous, and articular systems. A revelatory vascular manifestation of HAVS is vibration induced white finger (VWF), the main characteristic of which is finger blanching caused by vasospasm triggered by hypothermia. Since overweight people with metabolic syndrome are predisposed to peripheral vascular disease, they have the highest risk of developing VWF. Recent experimental data suggest that exposure to vibrations induces perturbation in the endothelial mechanisms of vasoregulation. Endothelial cells under the influence of various factors release a number of vasoactive substances that play an important role in the regulation of normal vascular tone. At the same time exposure to vibration can lead to an increase of blood viscosity accompanied by hemoconcentration. **Conclusions:** The consequences of exposure to vibrations occur inclusively at dentists working with dental handpieces that emit vibrations within normal limits. The explanation is the combination of vibrations with other unfavorable ergonomic factors. The compliance of rules and recommended preventive measures will limit the clinical manifestations of hand-arm vibration syndrome.

Keywords: dentistry, physiology, HAVS, ergonomic factors, vibration, vascular changes

SPONTANEOUS ATRIAL FIBRILLATION IN AGING, HYPERTENSIVE RATS. A NEW EXPERIMENTAL MODEL.

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Background: Experimental models of unprovoked atrial fibrillation (AF) are lacking. The aim of this study was to develop the first experimental model of spontaneous AF in rats and to describe its phenotypic features. **Material and methods:** Radiotelemetry ECG transmitters were implanted in 8 young (14-wk-old) and 8 aging (55-wk-old) spontaneously hypertensive rats (SHRs), and in 4 young and 4 aging Wistar-Kyoto (WKY) rats. Quantification of AF episodes and heart rate variability (HRV) analysis were performed based on 24-h ECG recordings in conscious rats. An emotional stress protocol and carbamylcholine injections were also completed. Then, aging rats were euthanized and left atrial (LA) samples were histologically examined. **Results:** All aging SHRs presented spontaneous AF (median 91.5; range 4-444 episodes/24h), whereas only 2 young SHRs presented a single episode of AF, and no episodes were recorded in WKY rats. HRV analysis demonstrated decreased low-frequency components in aging SHRs compared to age-matched WKY rats ($P=0.03$) and decreased low/high frequency ratios in both young and aging (both $P=0.02$) SHRs compared to age-matched WKY rats. In aging SHRs emotional stress significantly reduced the number of arrhythmic events, while carbamylcholine significantly increased atrial electrical instability. Six aging SHRs presented LA endocardial fibrosis, while intra-atrial thrombosis was present in 3 aging SHRs and in none of the WKY rats. **Conclusions:** This study provides the first experimental evidence of spontaneous AF in rats. Autonomic imbalance with relative vagal hyperactivity may be responsible for the increased atrial arrhythmogenicity observed in this model. Our results suggest that this sympatho-vagal imbalance preceded the occurrence of AF, but was not sufficient to induce AF on its own. The absence of LA histological abnormalities in 2 of the 8 aging SHRs suggests that atrial fibrosis is more likely to be a facilitator of atrial arrhythmogenicity in our model, rather than a prerequisite.

Keywords: experimental model, atrial tachyarrhythmia, autonomic nervous system, endocardial fibrosis

CHARACTERIZATION OF INTERNEURON POPULATIONS IN PILOCARPINE-INDUCED TEMPORAL LOBE EPILEPSY

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Background: Epileptic seizures are clinical manifestations of neuronal discharges produced by the hyperexcitation and/or excessive synchronization of neurons in the central nervous system. The causes of the morphological changes, as well as their timing are only partially described. The aim of the study is to detect the underlining neuronal loss in the hippocampus, with emphasis on the identification of interneuron populations involved in hyperexcitability during seizures; we also aim to quantify the changes that may appear in the perisomatic and dendritic inhibitory interneuron populations. **Material and methods:** In order to study the morphofunctional changes in rat hippocampus we used a model of drug induced epilepsy. First, scopolamine was administered to juvenile male Wistar rats, in order to reduce the peripheral effects of the muscarinic agonist. Then we injected pilocarpine, which induced status epilepticus. Later the seizures were stopped with Diazepam in an attempt to reduce the mortality rate. The surviving animals were monitored continuously using a motion-detection video system. We focused on detection of spontaneous recurrent seizures (SRS), which are characteristic to the model. After the appearance of the SRS animals were sacrificed, the removed brain was sectioned and we used Nissl staining as well as triple immunohistochemical labeling to differentiate the interneuron subtypes based on their neurochemical content. **Results:** Layer thickness and length of stratum oriens and radiatum-lacunosum-moleculare decreased significantly (50%, $p < 0.01$). Perisomatic interneurons and axo-axonic cells did not show any change. We observed a significant loss of oriens-lacunosum moleculare (O-LM) interneurons. The bistratified interneurons were not affected. Neither of these interneuron cell deaths showed any correlation with spontaneous seizure frequency. **Conclusions:** The significant loss of O-LM cells may increase hyperexcitability. Preserved perisomatic inhibition coupled with modified dendritic inhibition can be observed leading to large scale synchronization and propagation of excitation to the neocortex with consecutive SRS.

Keywords: hippocampus, pilocarpine, epilepsy, rat, interneuron

PSYCHIATRY

THE PATHWAY TO CARE OF PATIENTS WITH DEMENTIA IN MURES COUNTY

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Background: Nowadays, 1 in 15 people over age 65 and 1 in 4 people who are over 85 years old are diagnosed with dementia. The majority are diagnosed in the advanced stage of the disease, which have consequences on quality of life of the patients and their families. The aim of the study is to estimate the duration and the pathway to care of patients with dementia, keeping in mind the importance of early diagnosis in this disease. **Material and methods:** This is a prospective study, interview based, conducted by a questionnaire (WHO Pathway Encounter form) applied to new cases (25 patients and their caregivers) which were referred to Psychiatry Clinic II Targu Mures in a period of three months. We evaluate demographical (age, gender, professional status, marital status) and medical (associated comorbidities) items, and we observed the pathway to care of patient from the first symptoms to diagnosis and treatment of dementia. **Results:** The majority of patients were women, widowed, over 70 years old. The delay until the first consult varies from days to years, the majority of referral were done by the general practitioner (GP), short delay after GPs consultation. There are not redundant consultations. **Conclusions:** The diagnosis of dementia have been done in advanced stages, high tolerance of symptomatology in early stages by patient and relatives suggest need of psychoeducation about evolution of disease and possibility of treatment.

Keywords: pathway to care, dementia, early diagnosis

SYMPTOMATICAL POLYMORPHISM IN CHILDREN WITH NEURO-PSYTRIATRIC DISORDERS: EPILEPTIC ONSET IN YOUNG CHILDREN WITH BRAIN TUMORS+AUTISM SYMPTOMS. CASE PRESENTATION

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Background: The anual incidence of brain tumors in children under the age of 15 is 3.5 cases per 100,000. These are characterised by a great histological diversity,a prognosis influenced by age,neurological sequele and fortunately by a low incidence. The basic element in the prognosis and classification of brain tumors in children remains descriptiv classification (WHO Classification of tumors of the nervous system). At small child are more common the location of supratentorial tumors. Clinical symptoms are polimorfc seizures along with headache, vomiting, motor deficits, sensory disorder,delay in neuro-psycho-motor development with autism symptoms. **Material and methods:** To be presented a one year old patient with epileptic spasms in flexion in bursts at the moment of falling asleep, preceded by the delay in neuro-psycho-motor development, environmental carelessness with mental and visual discontact,motor stereotypies of the hands. The patient was neurologically, physically, psychologically tested, also by EEG, brain imaging (CT and MRI), showing an oligodendroglioma. **Results: Conclusions:** Brain tumors in young children are frecuently supratentorial located, debuting with a polimorph neuro-psychological picture, consisting in seizures, along with delay in neuro-psycho-motor development or acquisitions loss with autistic symptoms, motor deficits, vomiting, headache, irritability, anorexia. Laboratory investigations and also the correct diagnosis, early treatment are favorable prognostic factors.

Keywords: child, brain tumors, symptomatic polymorphism

ATTACHMENT DISORDER AS A VULNERABILITY FACTOR IN CHILD PSYCHOPATHOLOGY

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Background: In the child`s life occur traumatizing events that can change its behavior, transitory or lasting, and it`s mental

functioning, especially if the child is younger. the child's mental vulnerability it is ability or inability to withstand environmental constraints, its ability to anticipate events and to alter the course or inability to influence them. Mother-child separation remains a traumatic event, being particularly strong in children from 5 months to 3 years. The child develops an anguished attachment reaction described by Bowlby, whose evolution and severity depends on the age of the child at the time of separation and the duration of being apart. **Material and methods:** 47 children were evaluated, with ages between 5, 10 and 17.8 years, they were hospitalized in Pediatric Clinic of Neurology and Psychiatry in Targu Mures, in 2013. They were examined clinically and psychologically they were applied different specific scales and questionnaires: STAI-C, MASC, CAT, family drawing. The clinical diagnosis was established by DSM IV TR, ICD 10. **Results:** Separation of mother and child is a traumatic event that modifies child behavior more so how it is smaller. **Conclusions:** Emotional deficiencies (absence of the mother, mental illness of the biological parents, early institutionalization, physical abuse, poor socio-economic situation, the temperament traits of the child constitutes an etiopathogenic factor determining: cognitive and affective disorders, psychosomatic manifestations, emotional and behavioral disorders, adaptation disorders, emphasized personality traits.

Keywords: child vulnerability,, attachment disorder, affective deficiencies

POSSIBLE ASSOCIATION OF GABRG2 RECEPTOR GENE POLYMORPHISMS WITH IDIOPATHIC GENERALIZED EPILEPSY

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Background: Idiopathic generalized epilepsy (IGE) describes a group of epilepsy syndromes with no apparent neurologic abnormalities or structural brain damage and no identifiable cause other than a genetic predisposition. Over the past ten years many genes have been identified to be involved in idiopathic epilepsies. Mutations in the gamma-aminobutyric acid type A receptor (GABRG2) gene have recently been associated with idiopathic generalized epilepsies and febrile seizures. We examined the possible association of the GABRG2 receptor gene polymorphism with IGE in pediatric patients. **Material and methods:** We perform a case control study involving 36 patients with epilepsy and 73 normal control subjects children (which did not have any history of neurological disorders) admitted in Department of Pediatric Neurology in Tg Mures. DNA was extracted from peripheral blood samples using standard methods. GABRG2 SNP211037 (Asn196Asn) and GABRG2 (nucleotide position 3145 in intron G->A) were analysed by PCR-RFLP (restriction fragment length polymorphism) assay. Two pairs of PCR primers were used to amplify the associated gene and digested products detection was performed with 2% agarose gel electrophoresis. Genotypes and allelic frequencies for the GABRG2 gene polymorphisms in both groups were compared. **Results:** We did not find a significant difference of the GABRG2 (nucleotide position 3145 in intron G->A) gene between controls and epileptic groups. But, in contrast, the frequency of C allele GABRG2 (SNP211037) in patients with idiopathic generalized epilepsies was significantly higher than that in healthy control subjects. Also, the number of epileptic patients with C/C homozygous genotype appears greater compared with the T/T genotypes (54% vs 20%, $p=0.003$). **Conclusions:** The results are similar with another two studies. These data suggest that the GABRG2 gene might be one of the susceptibility factors for idiopathic generalised epilepsy.

Keywords: GABRG2 gene polymorphism, idiopathic, generalized epilepsy

PSYCHOLOGY

THE ATITUDINAL-BEHAVIORAL RELATIONS OF THE CHILD WITH THE DOOR

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Background: The work aims to highlight the relations that may determine the aparition of the "door complex" at child. **Material and methods:** To highlight the existence of some atitudinal-behavioral relations between child and the door were used as investigation methods: observation, analysis of the results and the biographical analysis. **Results:** From the collected data and from the psychological investigation that was made, results the fact that, especially at the level of family but also of the community in general it is necessary to specify correctly and coherent the place and the role that the child has, this one is a being and not an object, fact that demonstrates that in some cases the aparition of deviant behavioral attitudes is the unwanted result of these situations. Among with the psychiatric intervention the psychotherapeutic one through psychotherapeutic story finds its viability in the programe of recovery in case of "door complex" aparition. **Conclusions:** The efficient psycho-therapeutic intervention determins a reevaluation of the childs place in family, parents attitude and behavior being defining in maintaining a harmony in psychical development of the child, the benefic effect being perceived after a period of some years.

Keywords: child, door complex, therapeutic story

PUBLIC HEALTH

HEALTH EDUCATION IN SCHOOLS

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Background: Health education is the cheapest method of primary prevention. The aim of our activity was to organize health education in schools, especially in Mures County, with the participation of 6th year medical students from the Faculty of General Medicine, Nutrition and Nursing. **Material and methods:** All students were assigned to deliver an one hour lecture about different topics in health education for school children, in different classes and in counties where they come from. **Results:** Approximately 80% of these students carried out their assignment and they lectured 2100 hours of health education in schools. The most frequently chosen themes were: sex education, personal hygiene, healthy diet and emergency. They also delivered lectures about: drugs, smoking, sexually transmitted diseases, alcoholism, etc. **Conclusions:** During 2006-2013, medical students in their last year of study from the Faculty of General Medicine, Nutrition and Nursing contributed with about 2100 hours to raise awareness in the domain of health education in at least 63000 pupils.

Keywords: health education, primary prevention, medical stud

BLOOD PRESSURE MEASUREMENT ACCURACY IN A COMMUNITY HEALTH PROMOTION EVENT

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Background: Blood pressure measurement is commonly performed at home and various community health promotion events but even small inaccuracies can lead to an under- or over-estimation of hypertension. The aim of the present study was to assess the accuracy of the blood pressure measurements performed at an annual community health fair in Arad. **Material and methods:** The study sample included 744 adults. Blood pressure measurement was performed at the event using aneroid equipment by nurses or properly trained volunteers. The subjects were also asked to report systolic and diastolic blood pressure values measured previously at home or at the family physician's office. Blood pressure values measured at the event were compared with those reported from the latest measurement performed elsewhere. Mean values were calculated and the Wilcoxon matched-pairs signed-ranks test was applied to compare the medians. Raw data analysis at the individual level was also performed. **Results:** The means and medians of the systolic blood pressure measured at the community health promotion event were significantly higher than the means and medians of the values measured previously (mean TAS: 139.5 vs 131.83 mmHg) Also, the means and medians of the diastolic blood pressure measured at the event were significantly higher than the values previously known to the participants (mean TAD: 82.57 vs 79.28 mmHg). **Conclusions:** The significantly higher mean and median systolic and diastolic values could be explained by the "white coat" phenomenon reported in hypertensive patients. In order to avoid the adverse consequences of misleading blood pressure measurements, great care should be taken in removing all the factors that can interfere with an accurate blood pressure measurement.

Keywords: blood pressure screening, measurement accuracy, "white coat" phenomenon

SMOKING IN PREGNANCY: PRELIMINARY STUDY ON KNOWLEDGE, ATTITUDES AND PRACTICES RELATED TO SMOKING DURING PREGNANCY

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Background: Smoking during pregnancy is a major problem and a challenge for public health as it affects the health of both mother and fetus. To develop effective strategies of intervention on pregnant women on smoking cessation, it is useful to identify the knowledge, attitudes and practices related to smoking during pregnancy. The study objectives were to assess the level of knowledge of the dangers of smoking pregnant women, to determine support needed to help women quit smoking during pregnancy, to our document on social and psychological factors that maintain smoking or influencing smoking cessation during pregnancy. **Material and methods:** We used a cross-sectional survey by questioning newborn mums the second day of life, the clinics of Obstetrics and Gynecology I and II, in Targu-Mures, during December 2012-March 2013. The questioning was done by convenience, based on a questionnaire consisting of 112 questions. **Results:** The questionnaire was completed by 176 newborn mums aged 15-44 years (mean 28 years). About 38% of women smoked before pregnancy, 64.2% of whom regularly. 39.7% found that family and friends are an influential entourage smoking. Of those smokers, 73.4 % had tried at least once to quit smoking. 47.8% could not stop smoking before pregnancy, primarily because of habit. In the opinion of 71.7% of women, their health respective child health would be the most important reasons to stop smoking. Among female smokers, 52.5% have not heard about a program to quit smoking and 73.3% have not received information from health care providers about the risks of smoking. **Conclusions:** Smoking mothers feel responsible for their health and their children, but they must be better informed about the dangers of active and passive smoking during pregnancy. Smoke intervention strategies should focus not only on smoking status of pregnant women but also to provide support for partners, friends and family members.

Keywords: active and passive smoking, pregnancy, newborn mum

EFFECTS OF NUTRITIONAL INTERVENTION ON COGNITION AT PATIENTS WITH ALZHEIMER'S DISEASE

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Background: Losing weight is a major concern for professionals caring for patients with Alzheimer's disease and sometimes may precede the onset of classic symptoms of Alzheimer's disease. In the present research we sought to identify first, nutritional status and in the second point the effects of nutritional intervention on cognition at patients with Alzheimer's disease. **Material and methods:** This research was conducted, from march 2013 until september 2013 on an number of 22 patients, with moderate Alzheimer's disease at the Mental Health Centre, Tîrgu Mureş. All participants had caregivers who received counseling regarding nutritional supplementation in these patients. Before and after the nutritional supplementation were assessed: indicators of nutritional status, body mass index (BMI) and the cognitive functions was evaluated using the Mini Mental State Examination (MMSE, 0-30 p). **Results:** After statistical processing of data above, it results in an average of around 73±4 years of age. After nutritional supplement, patients have increased in weight by 3.4 kg and MMSE score was improved by 2 points at the end of the 6 month study. So our finding of weight gain and the positive effects on cognitive function after nutritional supplement formula are consistent with other controlled trials. **Conclusions:** Nutritional intervention in subjects with moderate Alzheimer's disease leads to improved nutritional status that it cannot be excluded by positive effects on cognitive performance. We need more studies with more subjects in which effects should be evaluated not only on nutritional parameters, but also on ADL (activities of daily living) functions and quality of life will be evaluated.

Keywords: Alzheimer's disease, cognitive functions, nutritional status

IS IT WORTH TO PERFORM ULTRASOUND SCREENING FOR DETECTION OF LIVER LESIONS?

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Background: Ultrasound is an easy, available, cheap and repeatable examination, but its use as a screening tool in liver pathology has not been demonstrated yet. Exposure to chemical agents can be potentially hazardous for the liver, but the damage may not be detected through laboratory tests. The aim of the study was to perform a screening abdominal ultrasound to detect potential liver lesions in a healthy population exposed to chemical components. **Material and methods:** We examined 300 healthy subjects from a chemical industry. Abdominal ultrasound was performed using a Philips HD11 machine, with 3.5Mhz convex array transducer, in grey scale, color Doppler and Power Doppler mode. We measured: left liver lobe, right liver lobe, portal vein, biliary duct and hepatic veins calibers. We noticed the degree of steatosis and the presence of focal lesions in the liver. The results were compared with the final clinical diagnosis. Specificity, sensibility, positive and negative prediction values were calculated. **Results:** Mean age was 42.6 years with a female/male ratio 3/1. 73.33% of the subjects presented liver abnormalities. 38% of the evaluated subjects presented diffuse or focal liver lesions. The lesions were: steatosis - 22.3%, hepatomegaly - 5.3%, hemangioma - 4.6%, focal nodular hyperplasia - 0.33%, suspicion of malignancy (hepatic carcinoma) - 0.33%. Subjects were further investigated by CEUS, MRI and CT and the diagnosis of focal lesions was confirmed at 86.8% of the patients. The diffuse liver lesions were 100% confirmed. The sensitivity of focal lesion detection was 89.2% and the sensibility 92.1% with a PPV 100 for diffuse lesions and 98 for focal lesions. **Conclusions:** Ultrasonography is a great tool in the detection of liver lesions. It can be used as screening in special groups of individuals, if they are exposed at work to potential hepato-toxic components, although it is time-consuming.

Keywords: internal medicine, occupational medicine, ultrasound, liver disease, screening

SMOKING HABIT OF HYPERTENSIVE PATIENTS ASSISTED IN AN INTEGRATED AMBULATORY SYSTEM FROM TARGU MURES

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Background: The main goal of the assistance of hypertensive patients is the reduction of total cardiovascular risk. Smoking cessation is a very effective intervention that halves the total cardiovascular risk. The scope of the study is to evaluate the smoking habit of hypertensive patients, the frequency of abandoned smoking in patients with and without established cardiovascular disease. **Material and methods:** From the electronic database of the Procardia integrated ambulatory system in Targu Mures, Romania, we selected all the hypertensive patients with known smoking status, consulted between 2003-2012. So we selected 3992 hypertensive patients. Sex distribution: 48.9% male, 51.1% female. We studied the frequency of smokers, and ex-smokers according to the presence or absence of cardiovascular risk factors, and established cardiovascular diseases. For data management we used the Medprax integrated database system. Statistical analysis was performed using the SPSS 20 programme. **Results:** The frequency of smoking in the studied patient population was 19.3% (23.2% male - 15.7% female), the frequency of ex-smokers was 27.4% (40.9% male - 14.5% female). The lowest smoking rate was found in patients with coronary artery bypass surgery 9.1%. Patients with a former myocardial infarction had a similar smoking rate as patients in the EUROASPIRE studies 19.5%, while the frequency of ex smokers in this group is significantly higher than in the general population of hypertensive patients 41.5%. Patients with peripheral artery disease had a high smoking rate 27.2%. Diabetic hypertensive patients without established cardiovascular disease had a smoking frequency of 14.9%, while the frequency of ex-smokers in this group was 35.3%. **Conclusions:** In the studied hypertensive patient population the presence of an established cardiovascular disease increased the smoking cessation rate. There is a large group of smoker patients in whom smoking cessation could be the most effective intervention for preventing disease progression and for global cardiovascular risk reduction.

Keywords: smoking cessation, smoking, cardiovascular disease

DATA AND ANALYSIS OF DRUG USE IN ROMANIA

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Background: In Romania in 2008 the first "stores of dreams" were opened in which over three years have been sold under the cover name of "ethno-botanical" various psychotropic chemicals. This phenomenon has surprised and found unprepared both lawmakers and the public health system. This is resulting in increased ethno-botanical agents and number of consumers. After European Union statistics Romania got the fourth place of ethno-botanical consumption. **Material and methods:** The study examined the national and local data on the number of persons admitted for treatment. We followed drug consumption by sex, age group and type of drug in the period between 2005-2012. The official data are published and provided by CIADO, ANA and the GPI of the Health Ministry, Internal Ministry. **Results:** Between 2007-2009 the number of consumers has increased which was resulted in doubling the number of hospitalization. It can be observed an increasing number of female consumers and in the age group under 35 years. Examining other substances which are in content "ethno-botanical products", the ratio of hospitalized consumers has increased. **Conclusions:** The change of legislation reduced the number of consumers who receive treatment in the health system, but it is estimated an increase among young consumers. In Romania, the causes of the increasing number of consumers is due to the reason that the subject is treated as taboo, and to the fact that currently, the access to drugs is quite easy, and in this sense, efforts made to prevent and to quit become vitally.

Keywords: ethno-botanical, drugs, psychotropic substances

RADIOLOGY

CT FINDINGS IN A SEVEN YEAR OLD PATIENT WITH UPPER DIGESTIVE HEMORRHAGE- CASE REPORT

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Background: We present the case of a seven year old male patient who was admitted to the Department of Pediatrics I of University of Medicine and Pharmacy Tîrgu-Mureş for malaise, hematemesis and anemia. After superior digestive endoscopy, esophageal varices were found, so the patient was sent to our department for a CT scan. Here we discuss our findings. **Material and methods:** We performed an abdominal CT angiography on a Siemens 64 rows detector multislice device using 64x0.6 mm slice collimation with reconstructed slice thickness of 1 mm. Used parameters were 200 kV, 220 mA, pitch of one and a 0.5 s rotation time. We performed the bolus tracking technique with a triple phase data acquisition using intravenous contrast medium administration. First, precontrast phase was performed followed by arterial phase, triggered by the increasing of density of abdominal aorta at 100 HU, and then, with a delay time of 25 seconds (60 seconds from the beginning of contrast medium administration) portal-venous phase was acquired. Scan ROI was between lung base and the pelvis. **Results:** Precontrast phase showed the presence of ascites. In postcontrast phases it could be observed an anomalous portal vein with lack of visualization of intrahepatic portal branches and cavernous transformation of the portal vein. Also, the presence of perigastric and esophageal varices has been noted. **Conclusions:** We have concluded that the portal hypertension was caused by a malformation of the portal vein, with hypoplasia of the right and left branches, associated with cavernous transformation of the portal vein, ascites and collateral circulation (esophageal varices).

Keywords: portal vein, esophageal varices, portal hypertension, cavernous transformation

IMPORTANCE OF CT ACQUISITION PROTOCOL IN EVALUATION OF FAT CONTAINING STRUCTURES

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Background: Computed tomography uses X-rays to create radiodensity-based grayscale images with the Hounsfield units (HU) being used as a quantitative scale. Measured as linear transformation of the original attenuation coefficient measurement their values are defined by a scale where water HU are equal with zero and air=-1000. However for most tissues the radiodensity values vary with photon energy (voltage and amperage dependent) - a difference of more than 30% for energies between 40 and 100 keV. Due to the different acquisition protocols there are fluctuations between the mA and kV values in CT examinations, providing multiple possible values for fatty tissue radiodensity. **Material and methods:** Using a predefined search methodology we performed multiple interrogation of medical databases with the purpose of finding published papers involving the evaluation of fat HU. A number of 32 freely available papers were included. **Results:** The HU values varied between -10 and -105 for upper values and -120 and -250 for the lower limit. There is a large heterogeneity of HU values used to evaluate the patients' fat (with a variation coefficient of more than 43% for the upper values, those series appearing with a positive kurtosis of +7.54 and a negative skewness of -2.1). When looking at the average yearly threshold changes we have noticed a homogenous data series with a mode of -110. **Conclusions:** There is a lack of consensus on what the HU values of fat containing structures should be. The widest accepted threshold is -30 to -190 HU (as a direct consequence of one of the first papers measuring visceral fat). When reporting computed tomography examinations it is important to evaluate lesions which appear lipid-rich as compared with established tissues.

Keywords: computed tomography, hounsfield units, fat, image analysis, diagnostic imaging

RHEUMATOLOGY

EVALUATING THE EFFECT OF PROSTAGLANDINES IN DIGITAL VASCULAR DISEASE IN A PATIENT WITH SECONDARY RAYNAUD'S PHENOMENON

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Background: Raynaud's phenomenon (RP) characterized by episodic vasospastic attacks occurs in several connective tissue diseases, and may be associated with irreversible tissue damage with ulceration and scarring. The experience with prostaglandine E1 in RP is limited. **Material and methods:** We report a case of a 78 years old, non-smoker female patient, who was admitted to the County Hospital Tg-Mures, complaining of Raynaud's phenomenon for about 6 years, sclerodactyly, with one month prior to admission developed painful digital ulcer on the right upper limb. Medical history was significant for peripheral arterial disease, ischemic heart disease. Laboratory investigations were positive for Anti-RO-52 antibodies, negative for antinuclear antibodies, rheumatoid factor, positive Schirmer test. She was on treatment with aspirin 75 mg, *Pentoxifylline* 400 mg twice a day, nitrates 20 mg twice a day. Nailfold video-capillaroscopy (NVC) showed bushy capillary formations microhemorrhages, avascular areas. Digital photoplethysmography (DPP) revealed no arterial blood flow on the affected finger. Cardio-respiratory examinations were normal. We initiated alprostadil infusion 20 mg /day, 10 ng/kg/minute twice a day, 10 days long. **Results:** After 10 days treatment with alprostadil, the digital ulcer was healed, the pain disappeared. DPP showed an increase in arterial blood flow, with an increase in peripheral perfusion from 0 mV/V to 0,3mV/V. **Conclusions:** Alprostadil treatment was effective treating digital ulcer in a Raynaud's phenomenon secondary to Systemic Sclerosis, in Sjögren syndrome. Prostaglandine treatment could be promising in treating digital ulcers in Raynaud's phenomenon.

Keywords: Raynaud's phenomenon, ulcer, photoplethysmography, nailfold capillaroscopy, prostaglandines

CAPILLAROSCOPY IN RHEUMATIC DISEASES

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Background: Capillaroscopy is the safest and fastest diagnostic system for detecting morphological alterations of the microcirculation. Objective: Raynaud's phenomenon (RF) and other acrosyndromes are associated with non specific capillaroscopic findings, mainly of functional origin. However in some cases more important capillaroscopic abnormalities can be found which can be misleading, especially when this syndrome are associated with RF. **Material and methods:** We examined 38 patients with Raynaud's phenomenon (RF) in according with LeRoy and Medsger criteria, who were admitted in University Clinic of Rheumatology Tg.Mures. We used the videocapillaroscopic equipment, a high resolution Video-Capillaroscope with lens from x50 to x500, integrated, and a high resolution color screen on which image can be observed. **Results:** 16 patients had primary RF and 22 patients had secondary RF obvious changes in the nail fold. 31% of patients had normal capillary pattern, while 68% had nail fold capillary changes with dilatation, tortuosity and loss of capillary loops, microhaemorrhages, and angiogenesis (55% of patients had minor abnormalities, 13% of patients had major abnormalities). In the normal capillary pattern capillaries of the distal row of the nail fold have an open hairpin shape, homogeneously sized and regularly arranged in a parallel fashion and range in number 9 to 14. Major changes are evident in patients with systemic sclerosis (SSP) with digital ulcers, 3 patients, and/or in connective tissue diseases with secondary RF, with ulcerations and sometimes gangrene, 2 patients. **Conclusions:** Since capillaroscopy can detect even minimal changes of the microvessel structure its use is mandatory in the presence of clinical symptoms of microangiopathy, Raynaud's phenomenon.

Keywords: Rheumatology, microcirculation, capillaroscopy, Raynaud's Phen

SURGERY

CEPHALIC DUODENOPANCREATECTOMY FOR PANCREATIC CANCER TREATMENT WITH INVASION OF THE SUPERIOR MESENTERIC VEIN WITH VASCULAR FISTULA

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Background: Despite the advances in oncology, pancreatic cancer remains a condition with a poor prognosis and low operability rate. In pancreatic cancer, the distant metastases are considered criteria for inoperability, instead of the invasion of the portal vein or superior mesenteric vein. Portal vein invasion may be suspected preoperatively by CT or angiography, but often it is an intraoperative finding. **Material and methods:** We present the case of a patient with a pancreatic tumor, located in the uncinate process. Intraoperatively we found the invasion of the superior mesenteric vein. We performed cephalic duodenopancreatectomy with segmental vein resection and reconstruction of the superior mesenteric vein with a Goretex prosthesis. **Results:** Histopathological examination shows moderately differentiated pancreatic adenocarcinoma and histopathological analysis of the fragment revealed mesenteric vein tumor invasion. The postoperative course was favorable and the patient is discharged on the 9th day. **Conclusions:** In pancreatic cancer, invasion of the superior mesenteric vein does not represent anymore a contraindication for radical resection. Mesenteric vein resection increases survival and quality of life after surgery.

Keywords: pancreatic cancer, superior mesenteric vein, duodenopancreatectomy

THE SMALL BOWEL PATHOLOGY IN THE CASUISTRY OF SURGICAL CLINIC NO.1 MURES COUNTY HOSPITAL

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Background: The study refers to the small bowel pathology encountered in casework of Surgery Clinic No 1, Mures County Hospital. **Material and methods:** We used the database of the clinic. The analyzed period of time is about 10 years, between January 2004 and October 2013. Group structure was analyzed in terms of age, sex, diagnosis, type of surgery, histopathological examination. **Results:** Of the 18271 patients hospitalized, 8835 patients representing 43.35% were diagnosed with digestive disorders. The small intestine was affected in 476 cases (5.33%; 4,90% females and 5,94% males). Of these only 52 patients (10.61%; 12,12% females and 9,80 males) had the specific pathology of the small intestine: 18 cases (3.67%) of malignancies and 34 (96.33%) benign, the remaining cases being represented by other pathologies (gastric, colic, etc.) where the small bowell was also involved. Most of the malignant tumors were GIST tumors (7 of 18 cases, i.e. 38,88%). The incidence of small bowel diseases in our clinic's casuistry represented 0.28% of all hospitalized patients. **Conclusions:** Bowel pathology is rare (except for traumatic lesions) in surgical practice. Bowel diseases are very difficult or even impossible to diagnose preoperatively, the diagnosis is that of an acute complication requiring close laparotomy. Involvement of the small intestine is relatively common in other pathologies. Though its specific pathology is very rare in surgical practice, due to its accessibility and plasticity it is widely used in other digestive organs' surgery.

Keywords: abdominal surgery, digestive surgery, small bowell pathology, GIST tumors

PREDICTIVE FACTORS OF POSTOPERATIVE LOCAL INFECTIOUS COMPLICATIONS

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Background: Local infectious complications may dramatically affect postoperative morbidity and mortality. They also have a serious effect on both human and material resources involved, and they may seriously increase hospital costs. In patients with local infectious complications an early diagnosis and determining the correct therapeutic approach is a priority, any delay may increase the possibility of a therapeutic failure. Scientists dealt with this problem in different ways, some of them emphasising clinical signs,

others biological markers or prediction scores, the results being more or less encouraging. The present study aim to determin the relationship between local postoperative complications and proteic fractions determined from the serum and peritoneal liquids, compared with the C reactive protein (CRP) as an unspecific inflammatory marker. **Material and methods:** The study includes patients admitted to and operated to the Surgery Clinic No 1 of the Mures County Hospital, between 08.09.2012 - 08.06.2013, all of them having peritoneal drainage subsequent to surgery. The study is a prospective longitudinal one, of the electroforetic modifications of proteic fractions in the serum and the peritoneal liquid, determined by geometric electrofocusing and CRP levels, in patients with local postoperative complications. **Results:** Proteic values of the first postoperative day in the batch with local infectious complications showed a significantly lower total proteins, and albumins determined in the peritoneal liquid ($p < 0.05$). The difference of alpha-1, alpha-2 and gammaglobulin is not statistically significant between the serum and those from the drainage liquids. We also identified a significant relationship between the CRP and the alpha-2 globulin, in the batch with local complications. **Conclusions:** Determining the values of proteic fractions from the peritoneal drainage liquid in the first postoperative day allows us to predict the onset of postoperative local infectious complications, in the surgical patient.

Keywords: abdominal surgery, postoperative complications, infection, prediction

CONSIDERATIONS ON THE SURGICAL APPROACH TO THYROID CANCER

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Background: Thyroid cancer is a relatively rare malignant tumor, representing about 2% from the entire malignant pathology. Thyroid cancers are more frequent in women and the majority of cases appear between the ages of 25 and 65 years. The incidence of this cancer has increased in the last decade. The objective of the study is to follow the evolution of thyroid cancer patients based on the risk and type of surgery performed. **Material and methods:** Our work is a retrospective analytical study extended over a period of 10 years (2004-2013) based on cases from the Surgery Clinic 1 of Targu-Mures County Hospital. We used a randomized group of 50 patients with thyroid cancer (TC). The 50 thyroid cancer patients were divided into two groups, one with low risk and one with high risk according to MACIS criteria and histologic nature of the tumor. For both groups we followed immediate and remote postoperative results according to the type of surgery. **Results:** Out of 50 patients admitted and operated in our clinic with thyroid malignant pathology in 2004-2013, 31 (62%) patients were with high risk, 19 (38%) were with low risk. From the operations performed on the patients 17 (34%) were total thyroidectomies, 16 (32%) were hemithyroidectomies, 5 (10 %) were total thyroidectomies with bilateral cervical lymphadenectomy (neck dissection), 4 (8%) were palliative operations such as tracheostomy and nutrition gastrostomy, 4 (8%) were reinterventions for completion, and 4 (8%) were reinterventions for complications (hematoma). **Conclusions:** Operations like total thyroidectomy and radical neck dissection are clearly necessary in patients with increased risk of thyroid cancer. Even though opinions are not unanimous we believe that total thyroidectomy is effective also for low-risk patients with thyroid cancer.

Keywords: classic, thyroid, surgery, cancer

LAPAROSCOPIC APPROACH IN SURGICAL TREATMENT OF UMBILICAL HERNIA

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Background: The approach for surgical treatment of umbilical hernia can be classic or laparoscopic. The high rate (15-30 %) of relapses in classical treatment requires a different approach. In recent years laparoscopic cure due to better results tends to replace the classical method. **Material and methods:** The laparoscopic approach for umbilical hernia was introduced in 2013 in the First Surgery Clinic from Mures Clinical County Hospital. A number of 7 patients have been operated for umbilical hernia by laparoscopic approach. We used the technique with three trocars introduced in the left abdominal flank. For reinforcement a double-layer PTFE prosthesis was used which was fixed to the abdominal wall by tacks (SorbaFix) and four threads of Prolene. **Results:** Postoperative evolution was favorable in all patients. The mean duration of surgery was 60 minutes. There were no intraoperative complications. Postoperative complications were represented by urinary retention in one case and a seroma in another patient. Patients were discharged at 2-3 days after surgery. Postoperative control at 3 weeks did not reveal the presence of other complications. **Conclusions:** Laparoscopic approach in umbilical hernia repair is a safe and effective method, with excellent early results. Unfortunately the high costs reduce the number of patients who can benefit from this method.

Keywords: abdominal, laparoscopic, umbilical, hernia, laparoscopy

THE IMPORTANCE OF LYMPHOSCINTIGRAPHY IN SENTINEL NODE BIOPSY FOR BREAST CANCER

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Background: Sentinel Node Biopsy (SNB) represents a standard method to define the ganglionic status in case of patients with breast cancer who does not present lymphatic metastasis at physical examination and imaging studies. The association of the lymphoscintigraphy to SNB gives additional information related to the localization and number of sentinel lymph nodes. **Material and methods:** We performed a retrospective study over a period of 14 months, the aim being the assessment of the importance of lymphoscintigraphy in order to determine the localization and number of SLN. **Results:** SNB technique was performed in 27 cases between September 2012 and November 2013. Our detection index was 96.3%, in one case the sentinel node could not be detected, and it required axillary dissection. In each case the SLNs were located in the homolateral axillary region. The number of the excised SLN varied from 1 to 7, with an average of 3,5. We found at lymphoscintigraphy an average number of 2 hot spots. **Conclusions:** The lymphoscintigraphy has an important predictive value in the localization of the SLN and minor role in its number determination.

Keywords: breast, oncology, sentinel node, breast cancer

TANNER LAPAROSCOPIC GASTROPEXY FOR GASTRIC MEZENTERICOAXIAL VOLVULUS - CASE PRESENTATION

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Background: Gastric volvulus is a rare stomach pathology that can evolve into serious complications without suitable surgical treatment. **Material and methods:** This paper presents the case of a 48 years old male who was admitted with the following complains: postprandial abdominal pain associated with nausea and vomiting. Exploring gastroscopy and barium passage meal x-ray revealed a mezentericoaxial gastric volvulus. Laparoscopic Tanner gastropexy was performed as surgical treatment. **Results:** The patient's postoperative outcome was uncomplicated. At the 6 months postoperative follow up, the patient is asymptomatic and the gastroscopy highlighted a physiological position of the stomach. **Conclusions:** Gastric volvulus is a rare condition, usually diagnosed when complications occur. Laparoscopic gastropexy is an effective method of treatment for gastric volvulus but generally suitable for uncomplicated cases.

Keywords: gastric, laparoscopy, volvulus, gastropexy

THE EXPERIENCE OF I. SURGICAL CLINIC – MURES COUNTY HOSPITAL AFTER THE FIRST 24 IMPLANTED VENOUS ACCESS PORTS

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Background: Implanted venous access ports are devices of real use for patients who require parenteral administration of drugs during longer or repeated periods, especially for chemotherapy. They can simultaneously be used for blood transfusions or for administering other drugs that require intravenous administration. The catheter is inserted into the central veins, preserving thus the peripheral veins with certain benefits for the patients. The purpose of the paper is to present the feasibility of the method and the complications encountered in our clinical practice. **Material and methods:** We did a retrospective analysis of clinical statistics

starting with the date of the first implant in January 2009 up until November 2013. We analyzed all the data of the patients that received implanted venous access ports, studying postoperative complications, pathology and other demographic data. **Results:** A number of 24 cases were analyzed. The male/female ratio was 5/7. The youngest patient was 27 years old and the oldest 71. The colorectal cancer as primary diagnosis was encountered in 12 (46%) cases, the breast cancer in 6 (23%) cases and 8 (31%) case of other types of malignancies. The approach in the right subclavian vein was used 18 times (75%), and in the left subclavian vein 6 times (25%). There were a number of three complications (12.5%) misplacement of the catheter, cutaneous fistula and subcutaneous hematoma. **Conclusions:** This device is safe in the hands of experienced surgeons, but requires special attention during the assembling of the components. The complications in our group were similar to those mentioned in the literature. The small number and less important complications recommend the method for application in neoplastic pathology, for patients of all ages.

Keywords: general surgery, surgery, access ports, chemotherapy

COMPLICATED HYDATID HEPATIC DISEASE – A CASE REPORT

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Background: Hydatid disease is a helminthic anthroponosis which can occur almost anywhere in the body, especially in the liver and lungs. The definitive diagnosis requires a combination of imaging, serologic and immunologic studies. Ultrasonography and computed tomography imaging are highly accurate in detecting a hepatic hydatid cyst. Surgical treatment remains the best option if feasible. Unfortunately, in case of many patients the disease is diagnosed at an advanced stage, and palliative surgery, if carried out without or with incomplete anti-infective treatment, frequently results in relapses. **Material and methods:** The authors report the case of a 41 years old male patient referred to our department with a large cystic mass occupying his entire right abdominal quadrants, detected by abdominal ultrasound. The features of the mass on US were consistent with hydatid disease and the abdominal CT scan reveals nine hepatic cysts, the greater measuring 40x30x20 cm. The surgical approach was the first choice because of the large dimension of the mass. Cystectomies were associated with maximal excision of the pericystic cavities, suture of the biliary fistulas, tactical cholecystectomy and external biliary drainage. One month later the patient was reoperated using a thoracic approach for 2 remnant cysts in segments 7 and 8. Five years after, another 10 cm hydatid cyst in segment 4 was operated. **Results:** The postoperative course was uneventful, with full recovery. **Conclusions:** We report that hydatid hepatic cysts can rarely reach an extremely large size and that these giant cysts might lead to perforation and anaphylaxis; therefore surgical resection is mandatory. Relapse of the disease is frequent, despite of postoperative anti-infective therapy and requires further surgical treatment.

Keywords: hepatic hydatid disease, relapse, reoperation

10 YEARS OF COLO-RECTAL SURGERY IN OUR EXPERIENCE

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Background: In a period of ten years (from October 2004 till October 2013) we revised 505 cases of colo-rectal cancers admitted and treated in our clinic. Extensive cross-search into our database was performed in a struggle to assess how new operative techniques are implemented and what are their results. **Material and methods:** Using MedCalc™ v.12.7 several descriptive and inferential statistic variables were interpreted for those 505 cases including: age distribution, gender, emergency vs. programmed admission, cancer localization, correlation between tumor diameter and hospital deaths, correlation between localization and histological type of tumor, TNM classification distribution and accuracy of documentation in our records. We also assess the effectiveness of treatment by interpreting the prevalence of recurrence, early and late complications and modern vs. classical types of surgery performed according to international standards. **Results:** Emergency vs. programmed admission and male vs. female distribution for colorectal cases are almost identical but a slight prevalence for colonic vs. rectal cancer was noticed. The precise localization shows a prevalence for rectal cancer in over 41% of cases with a 5 cm above anal verge documented most common location in 20% of cases. We found a positive statistically significant correlation between tumor diameter and in hospital rate of death and a statistical significant deviation to the left for the age distribution in our patients. Another statistical significant prevalence was found for adenocarcinomas vs. carcinomas, but only for 88% of documented cases. Prevalence for new laparoscopic

resection techniques and the use of the mechanical anastomotic devices are also interpreted. **Conclusions:** A documented 87% of favorable outcome with a low recurrence rate and few postoperative complications from a batch of 505 colo-rectal patients suggest a comprehensive acknowledgement status in surgical management of those patients in our clinic.

Keywords: abdominal surgery, colo-rectal cancer, cancer, colon surgery, rectal surgery

DOUBLE COLOVESICAL FISTULA COMPLICATING A RECTO-COLONIC DIVERTICULAR DISEASE -A CLINICAL CASE STUDY

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Background: Although the incidence of diverticular disease has increased lately, it is still lower than 5% for people younger than 40 years of age. In contradiction, for people older than 80 years of age the incidence is as high as 65%. A colovesical fistula represents a rare complication of colonic diverticular disease, with an estimated incidence of 2-4%. Diverticulosis usually represents the underlying condition along with other causes like malignant diseases, radiation and Chron's disease. **Material and methods:** We present the case of a patient, aged 39, admitted in our service suffering from pneumaturia, fecaluria, vesical tenesmus and persistent urinary tract infection. Prior to the admission in our service, two endoscopic examinations of the colon and cystoscopies were performed, without any pathological findings. Finally after repeating the cystoscopic examination, several colovesical fistulas were discovered. After a mechanical preoperative bowel preparation, we performed in a single session a rectosigmoid resection with colorectal termino-terminal anastomosis, segmental resection of urinary bladder with cystoraphy, double drainage of the pelvic excavation and single subcuticular drainage. **Results:** The patient was discharged healthy on the 14th postoperative day, and the colovesical fistulas were also confirmed by histopathological findings. **Conclusions:** Colonoscopy has a low rate of diagnosis for colovesical fistulas, but it is useful in the diagnosis of underlying conditions such as diverticular disease, Chron's disease and malignancy. By cystoscopy, the existence of a fistular tract is very difficult to assess, usually non-specific findings being discovered, like the presence of bullous edema. Nevertheless pneumaturia and fecaluria are pathognomonic findings for the diagnosis of colovesical fistulas. The preoperative endoscopic examinations are very important in assessing the underlying etiology of colovesical fistulas in order to choose the best therapeutic protocol for each case.

Keywords: colovesical fistula, recto-colonic diverticulosis, diverticular disease

THE EFFICIENCY OF CEFTAROLINE FOSAMIL IN MRSA INFECTIONS

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Background: Soft tissues infections are among the most common complications of abdominal surgery. MRSA (methicillin - resistant *Staphylococcus aureus*) is responsible for approximately 75% of these, alone or in association with other germs. **Material and methods:** We conducted a prospective study, seeking the effectiveness of treatment with ceftaroline fosamil in soft tissue infections with MRSA. A number of 10 consecutive patients who had soft tissues infections with MRSA were observed, all of them operated at the Surgical Clinic No. 1, Emergency County Hospital Tîrgu-Mureş. Our interest was the effectiveness of the antibiotic from a clinical point of view, also observing wound sterilization by performing repeated bacteriological examinations. **Results:** After treatment with ceftaroline fosamil bacteriological examinations showed the disappearance of MRSA cultures. The wounds became granular, prepared for secondary suture or reconstructive surgery. Only one patient died because of his comorbidities. **Conclusions:** Ceftaroline fosamil is effective in soft tissues infections, especially those caused by MRSA. All patients who received the antibiotic had a good tolerance without side effects.

Keywords: soft tissue, methicillin-resistant *Staphylococcus aureus*, ceftaroline fosamil

GIANT ABDOMINAL TUMORS IN THE EXPERIENCE OF THE 1ST CLINIC OF SURGERY MURES COUNTY HOSPITAL

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Background: The aim of the study is to present the cases of giant abdominal tumors and their surgical treatment in the experience of the 1st Clinic of Surgery. **Material and methods:** We studied the cases of the 1st clinic of surgery over a period of 10 years (2004-2013). We included the cases with giant abdominal tumors. Several parameters were analyzed: age, gender, tumor diameter and localization, type of operation, histopathologic examination's result. **Results:** 27 patients were included, 81,52% female, 18,52% male, aged between 27 and 78. The most frequent localizations were the ovary (29,63%) and the retroperitoneum (25,93%). The average tumor diameter was 27 cm. The histopathologic examination highlighted malignant tumors in 51,85%, where the surgical treatment was limited to citoreduction and biopsy sampling from the tumor. We found inconsistencies (25%) between the histopathology result and the intraoperative diagnosis in case of chystic ovarian tumors. **Conclusions:** Although nowadays various nonivasive and low-cost investigation methods are available, we frequently face in our practice gigant abdominal tumors, when the surgical treatment is limited to citoreduction and biopsy. The patients shows up in advanced stages in absence of the correct sanitary education.

Keywords: general surgery, oncology, gigant tumor, abdomen, surgical approach

GASTRIC SLEEVE - LATE RESULTS IN THE CASUISTRY OF THE FIRST SURGERY CLINIC, MURES COUNTY HOSPITAL

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Background: Morbid obesity is one of the most important public health problem worldwide. Romania ranks third in terms of number of obese patients. Obesity enhances the evolution of severe comorbidities as: hypertension, ischemic heart disease, diabetes. Although longitudinal gastrectomy is the most recently introduced in the therapeutic arsenal of bariatric surgery, the technique has gained its place, being simple and bringing important results on reducing excess body mass and comorbidities. **Material and methods:** This paper is a retrospective study based on our 34 cases of laparoscopic longitudinal gastrectomies, being made from 2008 to 2013. We followed the weight loss, evolution of comorbidities and postoperative complications occurrence in a follow-up at 3, 6, 12 months and nowadays. **Results:** The group of patients showed a mean age of 43,5 years, 19 were women, 15 were men with an average BMI of 46,8. Among comorbidities, we met 15 hypertension patients, ischemic heart disease 7 cases, diabetic 5 cases, hiperglicemia 5 cases, hepatic steatosis in 4 cases, one case of abdomen scar. At the end of follow-up, mean weight was 105,4, with an average BMI of 34,7. Among postoperative complications, one case presented dry skin, hair loss, bone and joint pain. **Conclusions:** 1. Rate of weight loss is not equal. In the first 3 months, patients lost more than half of EW, then trend down, often following a period of stagnation, after 6 months the weight tends to stabilize and weight loss continues slowly. 2. The absence of hunger was also noticed positively by all patients. 3. Reducing comorbidities as hypertension, diabetes and normalized values of blood glucose, cholesterol and triglycerides is obvious. 4. EW decrease is statistically significant, but was directly correlated with initial BMI, improving the quality of life of operated patients.

Keywords: obesity, sleeve gastrectomy, laparoscopy

UROLOGY

SUPRACLAVICULAR LYMPHADENOPATHY AS THE FIRST SIGN OF ADVANCED PROSTATE CANCER - CASE PRESENTATION

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Background: Patient S.I. 67 years old, with drug controlled hypertension disease, presented to the general practitioner with a painless left supraclavicular tumor developed 3 months ago. He is referred to an internal medicine department for further investigations, diagnosis and specialized treatment. **Material and methods:** Considering the location of the tumor and asymptomatic character of the disease, as differential diagnosis we uncounted lymphoma and other diseases with cervical metastases. During hospitalization time, in addition to the standard laboratory tests, we requested hematology consultation, surgery consultation and histopathological examination of the left supraclavicular tumor. CT scan of the thorax-abdomen-pelvis, and urology consultation has also been performed. **Results:** The patient was hospitalized in good general condition, the physical exam revealed a 2x2 cm round, mobile, painless tumor in left supraclavicular region, and multiple mobile and painless formations 0,5x0,5 cm in the right supraclavicular region, without other pathological changes. Urinalysis found 10 erythrocytes; and otherwise normal results. CT describes multiple cervical lymph nodes, supraclavicular, mediastinal, retroperitoneal, one hepatic focal lesion and multiple lesions with osteocondensation in the vertebral body and the pelvic bones. The high PSA value (100 ng / ml) and the digital rectal examination (prostate with completely hard right lobe) made us suspect a prostate cancer. The histological examination of the excised left supraclavicular lymphadenopathy described papillary adenocarcinoma, with PSA immunopositivity. The ultrasound-guided prostate biopsy confirmed our clinical suspicion; the histological result was adenocarcinoma of the prostate, Gleason 4+3=7 with perineural invasion. **Conclusions:** Prostate cancer is a common pathology in elderly patients with latent evolutionary character. Performing PSA and digital rectal exam is very important in men over 50 years. Interdisciplinary cooperation is important in management of cases with advanced prostate cancer.

Keywords: prostate cancer, PSA, ultrasound guided prostate biopsy, rectal digital examination, supraclavicular lymphadenopathy

IMMUNOHISTOCHEMICAL DIAGNOSIS OF PRIMARY SYPHILIS WITH HARD CHANCER HIDDEN BY PHIMOSIS

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Background: Syphilis is a sexually transmitted disease caused by the bacterium *Treponema pallidum*. It may also be transmitted mother-to-child (congenital syphilis). Syphilis incidence reported in 2011 was 8,2/100000 in males and 1/100000 in females. In blacks the incidence is 2s3 higher than in white people. In 2008, 63% of the reported primary and secondary (P&S) syphilis cases were among men who have sex with men (MSM). During 2004-2008, rates of P&S syphilis increased the most among 15-24 year-old men and women. (Centers for Disease Control U.S.A) **Material and methods:** We report a case of a white Caucasian male 23 year old with heterosexual orientation, who came in the emergency room with phimosis. We performed clinical examination, blood tests, surgery and after treatment a follow up of 12 month. **Results:** At the clinical examination we have noticed inguinal lymph nodes bilaterally and inflammatory phimosis. Blood tests revealed leucopenia of 2.860 µL and negative results for syphilis. We suspected a STD but the patient denied. After circumcision we sent the tissue at the histology and the microscopy showed an inflammatory tissue with a lot of plasmocytes and the IHC reveals ki67 positivity in 15-20 % of cells and also macrophages CD68+, T lymphocytes (CD4+,CD8+) and B CD20+. At the Dermatology the patient was investigated for syphilis and the tests were positive and with high levels, also his wife was positive but the 1 year daughter was negative. They followed antibiotic treatment with 2.4 million IU Moldamin two doses and after 12 month they are negative. **Conclusions:** Primary syphilis can have subtle symptoms. In this case phimosis was hiding the painless chancre and with false negative serology which made the diagnosis

harder. All cases of phimosis with inguinal lymph nodes should be carefully investigated for STD. An epidemiological investigation is mandatory to find out all the contacts.

Keywords: immunohistochemistry, chancre, syphilis, plasmacytes, painless

SIDE EFFECTS OF SUBCUTANEUS INJECTIONS AND MULTIPLE PLASTIC BALL IMPLANTATION IN PENIS FOR THE PURPOSE OF PENILE AUGMENTATION (CASE REPORT)

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Background: Bigger sexual organ was the symbol of power in many cultures. Injection of foreign substances into penis in order to increase the sexual organ was reported especially in Asian and Eastern European countries. **Material and methods:** A 44 year old man presented with a history of injection of unknown material under the skin and subcutaneous tissue of his penis for purpose of augmentation, several months ago. The patient had a history of imprisonment, and he had implanted five balls (made from toothbrush shank) in different parts of his penis also for the augmentation of the penis girth. At presentation, the patient presented deformity of the whole penis from the base to glans penis, with paraphimosis and severe LUTS. As a first step we performed large excisions of the penile, and penoscrotal skin and subcutaneous tissue in order to liberate the glans penis from the constriction. There were extracted 5 plastic balls from the penile subcutaneous tissue. On 14 day after the surgery, phalloplasty was performed. Postoperatively the patient has a cosmetically acceptable penis with normal erections. **Results: Conclusions:** Fibrotic lesions of the penis resulting from injection for the purpose of penile augmentation may have important cosmetic and sexual functional consequences. Patients had to be informed about the disfiguring effects of injections into the genitals, the significant side effects, which often leave patients with severe handicap. Management is based on complete excision of the foreign material with organ-preserving phalloplasty, which may give satisfactory long term-results.

Keywords: penis, side effects, subcutaneous injection, case report

DIFFICULTIES IN PROSTATE CANCER DIAGNOSIS

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Background: In recent decades the incidence of prostate cancer increased significantly, it is considered the second most common cancer in men. In daily practice the urologists are dealing with several problems such as high level of PSA and negative biopsy results or ASAP. In our retrospective study we processed the histopathological results of ultrasound guided transrectal prostate biopsies, performed between 2009-2012 at the Urology Clinic of Targu Mures in cases of 754 patients with suspicion of prostate cancer. **Material and methods:** From the total of 754 (100%) cases of prostate cancer suspicion (increased PSA level, positive digital rectal examination, and search starting point for distant metastasis, etc), 61.2% were aged 60-75 years. **Results:** The ultrasound guided biopsy confirmed adenocarcinoma of the prostate in 361 cases (47.68%). In 5.57% of the cases the histopathological finding revealed ASAP. Majority of the confirmed cancers had high Gleason scores 7 (in 137 cases) and 8 (122 cases). As for the indication for biopsy in 94.9% of the cases it was an increased level of PSA (47.16 ng / ml) with limits between 2.3 and 2689.98 ng / ml. In cases of ASAP the median PSA value was 12.95 ng/ml. **Conclusions:** Screening for prostate cancer can increase significantly the number of cases detected in early stages, but at the same time increases the number of negative prostate biopsies also. An elevated level of PSA doesn't mean prostate cancer in all of the cases, while cancer can be identified in cases with low PSA levels also. Active prostate cancer is helpful especially in younger patients, aged 50-70 years.

Keywords: prostate cancer, ASAP, biopsy, PSA

THE CORRESPONDENCE BETWEEN PT AND PN STAGE IN PATIENTS WITH PARENCHYMAL RENAL TUMORS EVALUATED NO ON PREOPERATIVE CT

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Background: The objective of this study consists in finding the correspondence between the pT and pN stage in patients diagnosed was performed with parenchymal renal tumors evaluated on preoperative CT (T1-4 N0M0) for which radical nephrectomy with staging lymph node dissection. **Material and methods:** We performed a retrospective study over a period of 16 months (November 2011- March 2013) in which we included 52 patients. The inclusion criteria were the presence of the renal tumor revealed on preoperative CT, without distance metastases, without detected tumoral lymphadenopathy. The CT results were compared with the histopathological results. **Results:** 32 of the patients were male and 20 female. 27 of the patients were diagnosed with left renal tumor and 25 with renal tumor on the right side. Postoperative histopathological examination revealed pT1 stage in 10 patients, pT1b in 12 patients, pT2a in 7 patients, pT2b in 6 patients, pT3a in 10 patients, pT3b in 5 patients and pT4 in 2 patients. In majority of the cases included in this study, the N stages determined on preoperative CT correspond to the postoperative diagnostic evaluated on the histopathological examination. In 49 of the cases the histopathological examination did not reveal metastases in lymph nodes: pN0. Two of the cases, stage pT3 presented positive lymph nodes (pN1 and pN2) and one case in stage pT4-pN1 that was not detected on preoperative CT. **Conclusions:** Even if the staging lymph node dissection is recommended, in pT1 and pT2 stages conservative surgery represents occasionally an option which exclude the lymph node dissection, so that simple nephrectomy also could follow the same model. The value of lymph node dissection emerges in pT3 and pT4 stages when in 3 cases (17,64%) histopathological examination reestablished the diagnosis according pN, so that the patients can benefit from an adequate monitoring and oncologic treatment.

Keywords: renal tumor, staging, CT, preoperative

CUTANEOUS URETEROSTOMY, AN OPTION FOR PATIENTS WITH TOTAL CYSTECTOMY

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Background: The objective of the study was to determine if there is any interest today in keeping a formal surgical indication the cutaneous ureterostomy after total cystectomy. **Material and methods:** We retrospectively reviewed the medical charts and follow-up data for 32 patients who underwent CU between January 2011 and May 2013 at our hospital, in correlation with histological results. The inclusion criteria were: T2 or higher bladder cancer and radical or total cystectomy performed. Ten patients were excluded because they did not match the eligibility criteria. **Results:** From the total of 22 patients included in the study, 11 patients underwent right CU, 2 patients left CU and 9 patients right "double-barrel" ureterostomy. In 9 of the patients with unilateral ureterostomy the contralateral kidney was removed, one had congenital solitary kidney and 3 patients were hospitalized with solitary kidney after surgery. The mean age of the patients in the study group was 62.94±8.74 years. The check-up conducted after 6 weeks on the patients with single cutaneous ureterostomy allowed the withdrawal of the ureteral stent in 11 cases (84,61% catheter free). Among the patients with double-barreled cutaneous ureterostomy, the withdrawal of both ureteral stents after 6 weeks was possible on only 5 patients (55,55% catheter free). These results were maintained at 3 and 6 months follow-up. **Conclusions:** There is no ideal urinary diversion till now, but CU could be the first option for urinary diversion in patients with BMI below 25 or with solitary kidney. Also in elder patients with associated comorbidities or with short life expectancy due to an advanced neoplasia CU could be used, even bilaterally, with the necessity of maintaining ureteral catheters in over 45 % of the cases.

Keywords: bladder cancer, cutaneous ureterostomy, total cystectomy

PERCUTANEOUS NEPHROLITOTOMY (PCNL) IN PATIENTS OVER 70 YEARS OLD. IS IT SAFE?

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Background: PCNL represents the main indication for patients with kidney stones, even in the presence of various comorbidities. In our clinic open surgery for this pathology is less than 0.5% of all procedures for renal stones. The objective of this paper is to assess the safety and efficacy of this procedure in patients over 70 years. **Material and methods:** A retrospective study was performed for a period of 16 years (1997-2012). A total of 323 patients were included in this study (162 women, 161 men), aged over 70 with renal stones. They were treated endoscopically by PCNL or antegrade ureteroscopy. 85 patients (26.31%) had comorbidities that were preoperatively diagnosed and treated where necessary. **Results:** Overall status of "stone free" at the end of surgery was present in 263 patients (81.42%). 60 patients (18.58%) had residual fragments. Residual stones were solved by a new PCNL session, spontaneous elimination or ESWL. The most common complications were bleeding and infection. We had no deaths. No hemostasis nephrectomy was necessary. **Conclusions:** Recognized preoperative comorbidities do not represent risk factors in elderly patients, but they require a rigorous evaluation in the preoperative period. The number, size and complexity of the stones directly influences the "stone free" status at the end of the surgery.

Keywords: PCNL, elderly patients, safety, stone-free

RARE CASE OF RETROPERITONEAL TUMOR IN YOUNG PATIENT

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Background: Schwannoma is a benign tumor derived from glial cells of peripheral nerve sheaths. It is an uncommon and usually benign condition, which can become malignant in less than 1% of cases and the clinical and imaging features are nonspecific, with intense positivity for S-100 protein. Because these, its features can be easily confused with: retroperitoneal metastasis, Castleman disease (lymph node hyperplasia). **Material and methods:** A patient aged 43, is presented to the Urology service with stronger abdominal discomfort in the right flank. On ultrasound suspicion of a retroperitoneal tumor in right side has been raised, possible from the right kidney. CT scan reveals a right retroperitoneal tumor, which has low contrast enhancement, localized retro-cavally, and lower posterior right kidney with no evidence of metastasis and in some incidence seem to have intimate contact with the kidney. The patient underwent surgical procedures- right subcostal incision para-rectal extended; wide approach is one that allows close inspection of the kidney; we have no neoplastic involvement, therefore it is prepared, easily mobilized, allowing access behind the kidney. We excised a tumor of 60x50mm, with its own capsule without suspicion of invasion of adjacent organs. Also we performed interaorticocaval lymph node dissection. **Results:** By this surgical method the retroperitoneal tumor was excised with kidney preservation. Histopathological examination result: cellular schwannomas, two interaorticocaval lymph nodes with normal structure. Subsequently, follow-up three months after surgery. **Conclusions:** Being a retroperitoneal tumor localized near the great vessels and lymphatic drainage an extemporaneous biopsy lymph node tissue is indicated for extended lymph node dissection. Although the location is difficult, the adequate surgical approach allows us to preserve the right kidney.

Keywords: retroperitoneal tumor, lymph node dissection, schwannoma, extemporaneous biopsy

STUDY OF IRRADIATION IN PATIENTS WHO UNDERWENT RETROGRAD URETEROSCOPY FOR MANAGEMENT OF URETERAL STONES

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Background: The growth incidence of urinary superior tract lithiasis require a lots of numbers of endoscopic interventions under fluoroscopy. This assessments requires to evaluate the radiation doses to protect both patients and medical staff involved. **Material and methods:** We evaluated 62 patients who underwent retrograde ureteroscopy for management of ureteral stones in the period

07.01.2013 - 30.06.2013, also we divided the patients into two groups according to localization of the stones. The absorbed dose was measured in cGycm² using a dosimeter "air kerma-area product" integrated in the fluoroscopy unit. The evaluation criteria are represented by: the stone size, stone radioopacity, body mass index (BMI), waist circumference, intraoperative conditions, duration of exposure to radiation. **Results:** 23 patients were with lumbar ureteral stones (A) and 39 patients were with pelvic ureteral stones (B). From the first group (A) 14 were males and 9 were females with stones size 5-7X10-11 mm. From the group (B) 30 patients were males and 9 were females, with stones size in the same limits as A group was. In group A the median value of irradiation was 761,2 cGycm² and exposure to radiation was between 86-892, while group B had the following values: 553,7cGycms and the exposure radiation time 80-782. **Conclusions:** Overweight, obesity, increased two to three times the radiation dose absorbed by the patient. The intraoperative conditions like impacted stone in the ureteral mucosa, tortuous ureter, ureteral stenosis, increases the time of exposure to radiation and consequently the patient absorbed dose, with values above 50% from the average dose absorbed.

Keywords: retrograde ureteroscopy, irradiation, ureteral stones, obesity

COMPARISON OF RAPID URINE TEST, SEDIMENTATION AND BACTERIAL CULTURE

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Background: Urinary tract infections (UTI) are the most frequent bacterial infections especially in women under 35. Our aim was to compare microscopic analysis of sedimentation, rapid urine tests with bacterial culture and antibiotic sensitivity test (AST). **Material and methods:** Between March - November 2013, 629 urines were examined at the Marmed Urology Ward. Rapid Urine tests (LabStrip U11 Plus) Sediment analysis (centrifuge of 2000 rpm for 5 minutes) and bacterial culture were performed. Bacterial growth exceeding 100.000 CFU/ml was considered pathological. We tested 9 antibiotics: ampiciline (AM), amoxiciline (AMC), cefotaxime (CTX), cefuroxime (CMX), gentamicine (GM), nalidixic acid (NA), sulfametoxazole (STX), tetraciline (TE), ciprofloxacin (CIP), and nitrofurantoin (F). In some cases, amikacine (AK), imipenem (IPM) were also examined. **Results:** Bacterial culture, 129 cases presented pathogenic bacteria: 85.27% exceeded 100.000 CFU/ml: E. coli- 69.09%; 11 Klebsiella spp.- 10 %; 11 Enterococcus spp. -10%; 6 Streptococcus agalactiae 5.45%; 2 Pseudomonas aeruginosa 1.81%; 3 Proteus mirabilis- 2.72% and one Staphylococcus saprophyticus 0.09%; 7.31% samples were contaminated. Sediment examination showed high leucocyte value (>3) in 64 and presence of bacteria in 62 cases. Rapid urine tests were performed in 615 cases. Leucocytes: 65 samples between 15-100: 37 had positive urocultures. Nitrites: 30 cases were detected. Pathological urocultures associated with normal urine test results were found in 86 cases. AST for E coli: showed resistance to AM (65.78%), AMC (48.68%), NA (40.78%), SXT (38.15%), TE (46.05%), CIP (38.15%), NOR (40%). CTX (18.42%), CMX (15.8 %), GM (22.36%), F (17.1%) and IMP (0%) showed lower resistance (p<0.0001). **Conclusions:** Rapid urinary analysis alone cannot show correctly the presence of an actual UTI. The growing number of resistant bacteria proves the importance of uroculture. An important issue is that all three examinations must be done using either the same urine sample, or different samples but they must be collected correctly.

Keywords: urinary tract infections, rapid urine test, sedimentation, bacterial culture

ROLE OF LOCAL TISSUE STATUS IN VESICO-VAGINAL FISTULA REPAIR AFTER INTRAVESICAL FOREIGN BODY

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Background: Acquired vesico-vaginal fistulas (VVF) are abnormal communications between the bladder and the anterior vaginal wall, being responsible for great inconvenience, discomfort and physical disability. We aim to present a rare case of iatrogenic VVF caused by a foreign intravesical body, later identified as a gauze. **Material and methods:** A 75-year-old female patient with a history of hysterectomy 4 years before, presented with hypogastric pain and urinary incontinence. At ultrasound, left-sided

ureterohydronephrosis was found together with a 4 cm wide, deflective intravesical lesion. At plain abdominal X-ray, this lesion was irregular, opaque, with a tissue-like, inhomogeneous texture. At digital vaginal examination, an abnormal orifice was found on the anterior vaginal wall, with serous vaginal discharge. Cystoscopy revealed a foreign body covering both a VVF and the left ureteral orifice together with a highly inflamed mucosa. The VVF was confirmed at speculum examination using the dye technique.

Results: Surgical treatment was planned. Using a hypogastric incision, the bladder wall was exposed and cystotomy was performed. The foreign body was extracted and the VVF explored. Because of intense inflammation, the tissue layers were difficult to dissect, the bladder and vaginal walls being inseparable. After thorough debridement, the VVF was closed using only the bladder layer, the vaginal one being abandoned. The bladder was kept "dry" by external urinary diversion (2 mono J ureteral and 1 Pezzer bladder catheters) for 2(5) weeks. The patient was pad-free at 3 months follow-up. **Conclusions:** Local tissue status, like severe adherence and fibrosis can be responsible for a challenging VVF repair. However, by using versatile surgical techniques together with removal of the causative factor, complete closure can be achieved.

Keywords: vesico-vaginal fistula, repair, foreign body

NUTRITION

NUTRITIONAL FACTS ABOUT PATIENTS WITH ABDOMINAL OBESITY

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Background: Abdominal obesity is a recognized cardio-vascular risk factor and is a mandatory criteria for diagnosis of metabolic syndrome. Lifestyle interventions, primarily dietary, are the most important part of the management of patients at risk for cardio-vascular events. The aim of the study was the analysis of dietary habits of people with abdominal obesity. **Material and methods:** Type of study: cross-sectional. Target population: subjects with abdominal obesity. Sample: convenience sample: 257 patients who presented in the Endocrinology Outpatient Clinic between February and November 2013. Inclusion criteria: abdominal obesity according to the International Diabetes Federation definition. Exclusion criteria: secondary causes of increased waist circumference. Variables: age, sex, environment, food pyramid (based on a food frequency questionnaire analyzed using a web-based assessment tool). **Results:** Mean age of the group was 43.27 ± 19.82 years. Sex distribution favored women (81.71%) and 69.64% of subjects came from urban areas. Male eat significant higher amounts of meat and protein (3.57 vs. 2.67 servings/day, $p < 0.001$), while women eat higher amounts of concentrated sweets, fruits and vegetables. People who receive treatment for metabolic disturbances eat lower amounts of all food groups, except for fruits and vegetables (7.49 vs. 6.92 servings/day, $p = 0.17$). Subjects without other risk factors apart from abdominal obesity eat higher amounts of all food groups, significant for concentrated sweets (2.6 vs. 1.8 servings/day, $p = 0.002$). **Conclusions:** People with abdominal obesity eat higher amounts of all food groups than the recommended food pyramid. Those who already have developed metabolic complications tend to eat healthier, without achieving the "ideal" food pyramid. More focus should be put on diet recommendations in order to prevent metabolic complications. **Acknowledgement:** Partial results were presented at the 6th PhD Conference, 4-6 July 2013, Tîrgu Mureş.

Keywords: nutrition, metabolic syndrome, food pyramid, abdominal obesity, food frequency questionnaire

POSTERS

STUDY ON LYMPHATIC METASTASIS OF BREAST CANCER DEVELOPED WITH THE BACKGROUND OF FIBROCYSTIC MASTOPATHY

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Background: Lymph nodes are a favorite premise of tumor dissemination and an indicator of the risk of developing distant metastasis. **Material and methods:** We have performed a particular study, analyzing 33 cases of metastatic lymph nodes from patients aged 26 to 79 years, diagnosed with invasive ductal carcinoma with the background of fibrocystic mastopathy. The study of lymphatic metastasis was based on the presence or absence of invasion of malignant cells in the axillary lymph nodes. According to this criterion, the armpit may be negative if missing malignant SIPO, or positive if cancer cells are present. The cases (*sectorectomy or mastectomy with axillary exploration*) were classified under the World Health Organization's *Scarff-Bloom-Richardson* histological grading system- SBR). **Results:** From the initial group of 63 cases of breast carcinoma with the background of fibrocystic mastopathy, invasive ductal carcinoma was the most common histological type associated with fibrocystic mastopathy and 52%. We noted a low percentage of cases of ductal carcinoma associated with fibrocystic mastopathy with increasing degree of malignancy, from 59.2% for carcinoma in situ at 25% for SBR grade III. The incidence of lymph nodes metastasis increased with tumor aggressiveness, from 36% in invasive ductal carcinoma SBR I to 42% in invasive ductal carcinoma SBR, reaching 70% in invasive ductal carcinoma SBR III. Age group 40-49 years was the best represented, 47%. **Conclusions:** Axillary lymph nodes receive lymph drainage 85% of all breast quadrants, the remainder being received by the internal mammary lymph nodes. Invasion of metastatic lymph nodes is the most representative model of aggressiveness of a carcinoma and the main character to be considered for predicting the disease. Axillary lymph nodes invasion probability increases with the diameter of tumor formation and the degree of malignancy SRB.

Keywords: fibrocystic mastopathy, breast carcinoma, histopathological examination

THE KNOWLEDGE AND SKILLS' LEVEL OF PUPILS FROM IVTH FORM ON HEALTHY LIFESTYLE

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Background: One of the most important factors of health is the behavior. So the formation of a sanitary behavior is of major importance for the strengthening the pupils' health. Objectives. Assessment of skills and aptitudes of pupils from IVth grade to develop a healthy lifestyle. **Material and methods:** In the study we included 194 pupils from IVth grade from Chişinău and from various rural localities from the Republic of Moldova. Evaluation was performed using a questionnaire that included questions on pupils' hygienic habits. **Results:** Analyzing students' answer to the question whether they cover their nose and mouth with a tissue when they sneeze to avoid spreading germs in the air, we find that 96,9% of them said yes. When we asked if they can borrow their comb to a friend at his request, 43,5 % of them said yes, 56,5 % - said no. Every time after eating are brushing their teeth 35,1% of respondents, in the morning and evening before sleep - 19,6%, in the morning only - 25,3 % of pupils. Every evening wash their feet 83,2% of pupils, in need - 11,0 %, once a week - 2,1% of respondents. **Conclusions:** The knowledge and skills' level of pupils from IVth grade on healthy lifestyle is not entirely satisfactory.

Keywords: pupils, behavioral, healthy lifestyle

PHARMACOTOXIC POTENTIAL OF OTC DRUGS

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Background: OTC (over the counter) drugs are drugs that can be released without a prescription. These drugs are intended for self-medication, the short-term treatment of certain diseases, easily diagnosed by the patient. However, some of these show a real pharmacotoxic potential, despite compliance with the eligibility criteria in this category because there is no risk-free drug, under a non-individualized pharmacotherapy. **Material and methods:** Working method consists of a statistical study conducted on two groups, 0.1% of the population of Tîrgu Mureş (130 people) and 10% of open circuit pharmacies located in Tîrgu Mureş (22 pharmacies), using questionnaires. Statistical analysis of results was done with Microsoft Excel program. **Results:** The results are calculated in percentages and are detailed in the paper as of diagrams. 27% of patients directly address pharmacists, of which 45% are not interested in the pharmacotoxic potential of drugs. 41% of patients are satisfied with the counseling of pharmacists. 61% of pharmacists give precise explanations about side effects and possible drug interactions. **Conclusions:** The survey results render a general picture about the knowledge potential of OTC medicines pharmacotoxic strategies Tîrgu Mureş self treatment population and not least about the attitude of pharmacists and pharmacy assistants in the OTC medication counseling. So the responsibility lies for the patient to use the medication without consulting a specialist and pharmacist for dispensing medicines without a minimum query.

Keywords: pharmacotoxic potential, OTC drugs, clinical pharmacy

EARLY DETECTION OF ALZHEIMER'S DISEASE: A SYSTEMATIC LITERATURE REVIEW

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Background: Actions to delay or slow down the progression of Alzheimer's disease (AD) are more effective when implemented in pre-clinical stages of the disease. This makes early detection essential. During the past few years there has been an increased interest in developing new biomarkers that can predict AD development. This review's purpose is to analyze worldwide early detection possibilities found in international and Romanian literature. **Material and methods:** We have done a systematic research of the PubMed and Cochrane electronic databases, followed the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analysis) statement guidelines, using the following search words: early detection, Alzheimer's disease, biomarkers in dementia. We added all Romanian literature found in this domain. **Results:** A number of 3838 studies were found. 328 potentially relevant articles were identified. After duplicate removal and abstracts/titles scanning, we applied the inclusion/exclusion criteria and 48 papers were reviewed in detail. There were difficulties in accessing Romanian literature due to the lack of a national database. Among the most common early detection biomarkers mentioned in these studies are CSF p-Tau levels, mutation in Presenilin-1 gene, alterations in structural MRI, PET radiotracers for imaging P-glycoprotein, blood biomarkers, pupil flash response and others. **Conclusions:** Although there are a large number of biomarkers in study, many of them still require extended research until they could be used in practice. In Romania, the level of accessibility to early detection methods is low.

Keywords: Alzheimer's disease, early detection, biomarkers, accessibility

RARE CAUSES OF VENOUS THROMBOEMBOLISM IN YOUNG PATIENTS

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Background: Venous thromboembolism (VTE) is a common disease with multiple risk factors which include age, a history of familial thrombosis, a personal history of thrombophilia, surgery, cancer, obesity, deep vein thrombosis, prolonged immobility, pregnancy, and use of oral contraceptives. Thrombophilia is a inherited or acquired condition that increases the tendency to venous thromboembolism. Anabolic steroids are known for their prothrombotic effect and their use is strongly linked to venous thromboembolism. **Material and methods:** We report a case of a young male, 26 years old, accusing pain and swelling in the right leg and mild breathlessness on exertion. Doppler echography showed thrombus in the iliofemoral vein, D-dimers tested positive,

and thrombus in the inferior cava vein and pulmonary embolism in the inferior lobar arteries were discovered on a CT angiogram. The patient had a history of smoking, denied any personal history, but admitted thrombotic familial history of an aunt with deep vein thrombosis. On further questioning, he admitted having used high-dose intramuscular testosterone injections without any medical prescription, as a frequent gym user. **Results:** A high level of testosterone was revealed in the blood tests and further genetic investigations were conducted. Protein C, protein S, homocysteine and antithrombin deficiencies can be tested only after discontinuation of anticoagulant treatment and consequently, were ruled out. Tests for factor V Leiden, factor II and MTHFR C667T gene mutations were negative, but the patient tested positive for the heterozygous mutation of MTHFR A1298C gene. **Conclusions:** In patients with thrombotic events undergoing exogenous testosterone treatment, previously undiagnosed genetic thrombophilia has been discovered. In this particular case of a previously healthy young individual, we concluded that the genetic mutation correlated with family history and testosterone abuse has contributed to the onset of VTE.

Keywords: venous thromboembolism, testosterone, acquired thrombophilia, inherited thrombophilia, genetic mutations

A STUDY OF ECHOCARDIOGRAPHIC FEATURES OF HYPOTHYROIDISM AND HYPERTHYROIDISM ASSOCIATED HEART FAILURE

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Background: Thyroid dysfunction, both hyperthyroidism and hypothyroidism, can act as an aggravating factor when associated in heart failure patients. The aim of our study was to identify characteristic echocardiographic patterns which could reveal the consequences of thyroid dysfunction. **Material and methods:** Echocardiographic data were collected in 72 patients with hypothyroidism (40 women, 32 men, mean age 62.3 yrs) and 42 patients with hyperthyroidism (31 women, 11 men, mean age 59.3 yrs) and symptomatic heart failure (NYHA class III and IV) and were analyzed using the chi-square test. **Results:** The LVED diameter >60 mm ($p=0.32$), LVEF < 40% ($p=0.35$), grade 2 or 3 diastolic dysfunction ($p=1$), significant mitral regurgitation ($p=0.11$), right ventricular enlargement ($p=0.24$), systolic pulmonary pressure > 60 mmHg ($p=0.13$) or increased pericardial thickness ($p=0.14$) showed no significant statistical differences between the two groups. Only an increase in the thickness of the intraventricular septum (>12 mm) was significantly more frequent in patients with hypothyroidism ($p=0.001$). **Conclusions:** The lack of significant difference between the majority of echocardiographic parameters reveals that no specific pattern could be identified in heart failure patients presenting the two types of thyroid dysfunction. Most likely, the echocardiographic features reflect only the consequences of the underlying causes of heart failure.

Keywords: echocardiography, hypothyroidism, hyperthyroidism, heart failure

SLEEP PATTERNS AND DISORDERS IN PREGNANT WOMEN

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Background: Women could have sleep disturbances during pregnancy, including difficulty in getting to sleep, nighttime awakenings and vivid dreams, with possible clinical consequences. The aim was to investigate sleeping habits of pregnant women, the patterns of sleep, and the impact of sleeping characteristics on pregnancy. **Material and methods:** The study was a hospital based pilot study and was designed as descriptive and cross-sectional research. The study included 25 pregnant women, with the gestational age between 5-35 weeks. The data were collected through (face to face) interviews, using standard and own designed questionnaires (socio-demographic characteristics, quantitative and qualitative characteristics of sleep and data about pregnancy). **Results:** 72% (18 patients) of the pregnant women complained about decreased sleep time, 48% (12 patients) of them classified their sleep as average, and 12% (3 patients) suffered from significant insomnia. Snoring, as a marker of sleep apnea, occurs frequently during pregnancy, but in our cohort only one third complained about this. The most common symptom which disturbed the sleep was micturition stimulus during nighttime. **Conclusions:** In our cohort of pregnant women overall sleep quality was not a problem. However, major sleep disturbances are well known, clinically relevant risk factors for complications during pregnancy, especially for fetal retardation. For this reason it is important to evaluate the sleeping habits of pregnant women, to correct sleep disturbances and to increase sleep quality.

Keywords: sleep patterns, women, pregnancy, consequences

CORRELATION BETWEEN ENDOSCOPIC LESIONS IN PATIENTS WITH LOW-DOSE ASPIRIN THERAPY AND HISTOLOGICAL CHANGES IN GASTRIC BIOPSIES

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Background: The risk factors for upper digestive mucosal injury in patients with long term low-dose aspirin are not well defined despite the increasing use of aspirin in cardiovascular disease treatment and increasing upper digestive bleedings related to drug use.

Material and methods: Consecutive patients undergoing chronic treatment with low-dose aspirin who underwent an endoscopy were enrolled. At least two biopsies from the antrum and two from the corpus in each patient were obtained. Endoscopic lesions were classified according to the Lanza score, the most widely used one in literature. **Results:** A total number of 260 patients were enrolled, 152 without gastric atrophy (GA) and/or intestinal (IM) in gastric biopsies with a mean Lanza score of 1.46 ± 1.13 and 108 with GA and/or IM in whom the mean Lanza score was 2.28 ± 1.23 , the difference being statistically significant between the two groups. Active *Helicobacter pylori* infection in gastric samples was associated in each group with a higher Lanza score, but the difference was not statistically significant (1.6 ± 0.9 vs. 1.36 ± 1.1 , $p > 0.05$ in patients without GA and/or IM and 1.78 ± 1.24 vs. 1.64 ± 1.17 , $p > 0.05$ in patients with premalignant lesions). Significant endoscopic lesions (gastric or duodenal ulcers) were present in 36 patients (13.8%) taking low-dose aspirin, more frequent in patients with GA and/or IM, but the difference was not significant in our groups (10.5% vs. 18.5%, $p = 0.07$). **Conclusions:** Gastro-duodenal endoscopic lesions are more frequent in patients with gastric atrophy and/or intestinal metaplasia in gastric biopsies, but active *Helicobacter pylori* infection seems not to increase the severity of mucosal lesions in patients taking low-dose aspirin.

Keywords: aspirin, gastroduodenal lesions, histology

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