

ABSTRACT BOOK

53rd Polish and 11th International
Annual Training & Scientific Medical Congress
of Students' Scientific Society and Junior Doctors

22nd-23rd May 2015



JUVENES PRO MEDICINA
ŁÓDŹ

Abstract Book 2015



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Congress of Students' Scientific Society and Junior Doctors

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Didactic Center of the Medical University of Łódź

251 Pomorska St., Łódź, Poland

Łódź 2015

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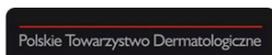
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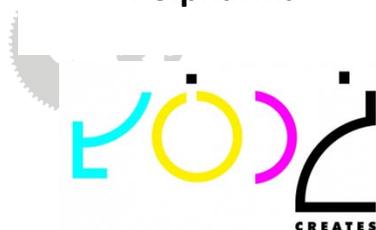
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ABSTRACT

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BOOK

Łódź 2015

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Basic science

Biofunctional studies of a new aroxyalkyl derivative of 2-methoxyphenylpiperazine – HBK-16 – with hypotensive and antiarrhythmic properties

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Introduction: $\alpha 1$ -Adrenergic receptor (AR) subtypes ($\alpha 1A$, $\alpha 1B$, and $\alpha 1D$) are G-protein-coupled receptors, activated by catecholamines. $\alpha 1A$ and $\alpha 1B$ subtypes are expressed in myocardium, whereas the $\alpha 1D$ is found only in coronary arteries. It has been shown that $\alpha 1$ -AR subtypes play an important role in cardiac hypertrophy, heart failure, apoptosis and ischemic preconditioning, as well as in the regulation of blood pressure. In our previous studies HBK-16 - a new aroxyalkyl derivative of 2-methoxyphenylpiperazine - displayed very high affinity for adrenergic $\alpha 1$ receptor. Moreover, it showed significant activity in adrenaline-induced arrhythmia in rats, which was stronger than that of carvedilol.

Purpose: Taking the above data into account the aim of our study was to determine the influence of HBK-16 on blood pressure, the ability of the studied compound to antagonise the pressor response elicited by methoxamine, and to assess its selectivity for $\alpha 1$ -adrenoceptor subtypes ($\alpha 1A$, $\alpha 1B$, $\alpha 1D$) in functional experiments.

Methods: The experiments were carried out on male Wistar rats. The influence of HBK-16 on blood pressure and blood pressor response was studied using a

Datamax apparatus (Columbus Instruments). In order to determine the selectivity of the studied compound at different $\alpha 1$ -adrenoceptors, its effect on various tissues was investigated. The influence on $\alpha 1A$, $\alpha 1B$ and $\alpha 1D$ -adrenoceptors was studied on isolated rat tail artery, mouse spleen and rat thoracic aorta, respectively.

Results: HBK-16 showed a significant hypotensive activity (the lowest active dose was 0.1 mg/kg), and significantly inhibited blood pressure increase elicited by methoxamine. The antagonist activity of HBK-16 toward $\alpha 1A$, $\alpha 1B$ and $\alpha 1D$ -adrenoceptors was assessed by inhibition of noradrenaline-induced contractions. HBK-16 concentration-dependently shifted the noradrenaline response to the right, without affecting the maximum response. The pA_2 values were obtained with Schild slopes not significantly different from unity, indicating a competitive interaction of the compound with $\alpha 1A$, $\alpha 1B$ and $\alpha 1D$ -adrenoceptors in the studied tissues.

Conclusion: In conclusion, the data from our experiments indicate that HBK-16 shows significant hypotensive activity, which is mainly due to its $\alpha 1$ -adrenoceptor blocking properties. Functional studies demonstrated that the tested compound is a non-selective, competitive antagonist of all subtypes of $\alpha 1$ -adrenoceptor. HBK-16 may be a promising substance for the development of $\alpha 1$ -adrenolytics optimal for the treatment of urinary tract dysfunctions with or without coexisting hypertension or arrhythmias.

Eth: This paper is approved by Local Ethical Committee.

Methyl-orvinol, a peripherally acting MOP agonists, is a new drug candidate in IBS-D therapy

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Introduction: Diarrhea-predominant irritable bowel syndrome (IBS-D) is a chronic functional disorder of gastrointestinal (GI) tract, associated with several inconvenient symptoms including diarrhea, abdominal pain, discomfort and bloating. The pathogenesis of IBS-D is multifactorial and until now no effective therapy has been developed. The endogenous opioid system maintains intestinal homeostasis, and thus may become an attractive alternative for currently used anti-IBS-D treatments.

Methyl-orvinol belongs to the family of 6,14-ethenotetrahydrooripavines (orvinols), which constitute a large group of opioids with strong analgesic properties. The action of methyl-orvinol is limited to the periphery, what results in reduced risk of its adverse effects.

Purpose: The aim of this study was to evaluate the effect of methyl-orvinol in mouse models of GI motility and abdominal pain, and in models mimicking symptoms of IBS-D.

Methods: The effect of methyl-orvinol was characterized *in vitro* and *in vivo*. First phase of experiments (*in vitro*) included evaluation of smooth muscle contractility in the mouse colon. Subsequently, several *in vivo* studies on GI motility were performed, using following mouse models: whole GI transit, fecal pellet output, and colonic bead expulsion. Furthermore, antinociceptive effect of methyl-orvinol was assessed in the mustard oil-induced model of abdominal pain.

Results: In vitro, methyl-orvinol (10^{-10} – 10^{-6} M) inhibited colonic smooth muscle contractions in a concentration-dependent manner. This effect was reversed by naloxone (non-selective opioid antagonist) and β -funaltrexamine (β -FNA, selective μ -opioid antagonist). In vivo, methyl-orvinol injected intraperitoneally at the dose of 0.1 mg kg⁻¹ significantly prolonged GI transit and inhibited colonic bead expulsion time. Methyl-orvinol action was inhibited in the presence of naloxone, β -FNA, and naloxone-methiodide (peripherally-restricted non-selective opioid antagonist), suggesting peripheral activity of methyl-orvinol. In mouse models mimicking IBS-D symptoms, methyl-orvinol reversed hypermotility and reduced abdominal pain.

Conclusion: Our data suggest that methyl-orvinol, as peripherally acting agent could become a novel drug in IBS-D therapy, with potency comparable to that of currently used antinociceptive and anti-diarrheal agents.

Eth: This paper is approved by Local Ethical Committee.



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The significance of T-129C polymorphism of the ABCB1 gene in patients with gastric ulcer.

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Introduction: Peptic ulcer is one of the most common disease of the gastrointestinal tract. It has been shown that in the Polish population of adults, pathogenicity is in the range from 5% to 10%. The most common causes of peptic ulcer disease are *Helicobacter pylori* infection and excessive usage of nonsteroidal anti-inflammatory drugs. A serious problem among people affected by peptic ulcer disease is ineffective treatment (*H. pylori* eradication difficulties). This may be related to the occurrence of multi-drug resistance which often has genetic background.

ABCB1 gene encodes P-glycoprotein which is a cellular transporter and is responsible for the removal of xenobiotics from the cytoplasm to the extracellular space. Increased levels of P-glycoprotein causes excessive removal of substances from the cell. In the case of treatment with chemotherapeutic agents (including drugs for the eradication of *Helicobacter pylori*) it can lead to drug resistance phenomenon. On the other hand, reduced amount of the protein leads to the accumulation of harmful substances in the cell, and thus development of various diseases. There are more than 50 known polymorphisms in the ABCB1 gene. Investigated T-129C polymorphism may affect the ABCB1 gene expression level and therefore potentially increase the risk of stomach ulcers development.

Purpose: The aim of this study was to evaluate the frequency of genotypes and alleles of ABCB1 polymorphism at position -129 in the group of healthy subjects

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and in patients with gastric ulcer. Further, to compare the frequency of the alleles and genotypes in both groups.

Methods: The investigated group included 80 patients diagnosed with gastric ulcer disease. The control group consisted of 67 healthy volunteers. Material used for research were gastric mucosal biopsies taken during endoscopy from patients with gastric ulcer. Within the control group peripheral blood was applied. Using the PCR-RFLP (polymerase chain reaction-restriction fragment length polymorphism) method the T-129C polymorphism of ABCB1 gene was determined. The presence of *H. pylori* infection among investigated group was evaluated by rapid urease test. The flow of work: DNA isolation, the PCR (Polymerase Chain Reaction) – qualitative assesment, agarose gel electrophoresis – to visualize the product, digestion of PCR products with enzyme (RFLP), agarose gel electrophoresis – to see the results of enzyme digestion.

Results: The presence of *Helicobacter pylori* was detected in 41 patients. Preliminary analysis showed no significant differences in the frequencies of genotypes and allele C in healthy individuals and in the group of patients suffering from gastric ulcers.

Conclusion: It can be assumed that the investigated polymorphism is not related to an increased risk of gastric ulcer development.

Eth: This paper is approved by Local Ethical Committee.

In silico analysis of miRNAs-mRNAs regulatory networks in esophageal squamous cell carcinoma

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Introduction: Recent findings indicate significant role of miRNAs in cancer. They regulate gene expression by targeting mRNA at posttranscriptional level. Thereby, aberrant expression of miRNAs may seriously affect genomic stability. Their alterations have been shown in several malignancies, including esophageal. However, since there is an emerging need for more profound understanding of cancer biology, only integration of expression data and further analysis of genomic changes may reveal a number of tumour-related signalling pathways and novel therapeutic targets.

Purpose: The aim of the study was complex analysis of miRNAs-mRNAs regulatory interactions in esophageal squamous cell carcinoma (ESCC), as one of the leading cancer-related death causes worldwide.

Methods: miRNA and mRNA expression profiles in ESCC were obtained from GEO database (AN: GSE43732, GSE20347 respectively) via GEOquery package of Bioconductor as normalized ExpressionSet objects. The obtained expression matrices were subsequently pre-processed by merging replicates as median. The probes not mapped onto any miRNA/gene identifier were discarded from further analysis. The missing values were imputed using KNN method (K=15). All pre-processing steps were performed using Babelomics 5. miRNA/mRNA expression data were integrated by calculating limma p-values and then, significant probes were correlated by inverse chi2 distribution in MAGIA2 tool. Significantly altered ($p < 0.05$, $FDR < 0.05$) miRNA-mRNA networks were visualized in Cytoscape 3. Pathway enrichment and GO terms analysis were performed in DAVID database.

Results: Regulatory network was constructed with 852 nodes and 1084 edges presenting interactions between miRNAs, mRNAs and transcription factors in ESCC. Further analysis revealed miR-183-5p, miR-125a-5p, miR-454-3p, miR-34c-5p, miR-196-5p, miR-182-5p, miR-32-5p as most significantly affected and negatively regulating such genes as BCL2, CDK6, CDH4, MAPK1, TGFBR2, PIK3C2A, NRAS, WNT1, PTEN and RET. Pathway enrichment analysis indicated alterations in ErbB, TGF-B, mTOR, MAPK, and WNT signalling involving 156 genes. GO analysis shown cellular process, biological regulation, metabolic process and cell proliferation as the most numerous abnormal biological processes.

Conclusion: miRNAs are an abundant group of regulatory molecules, essential for many cellular processes. Despite several genomic studies on ESCC, the integrated analysis of miRNA-mRNA regulatory interactions was managed to be conducted for the first time. Their alterations may be essential for carcinogenesis of esophageal through the regulation of MAPK or Wnt signalling pathways. These findings allow for improved understanding of cancer biology of esophagus and contribute to the development of novel therapeutic targets based on in silico algorithms predicting miRNA targets.

Eth:

Łódź 2015

MicroRNA in bladder cancer, expression profile and clinical implications.

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Introduction: MicroRNAs (miRNA) are small of approximately 17 to 25 nucleotides in length, single stranded, non-coding RNAs that play an important role in the control of gene expression at the post transcriptional stage, by inhibiting protein translation or promoting mRNA degradation. These molecules take part in the regulation of major biological processes by targeting multiple genes involving in: cell division, differentiation, growth, apoptosis, DNA repair etc., which suggests a close relationship with carcinogenesis.

Purpose: We aimed to define changes in expression profile of microRNA 99a-5p and 19a-3p in RNA samples derived from tumor tissue of patients suffering from the BC (bladder cancer) using quantitative reverse transcriptase real-time PCR (qRT-PCR). These studies are part of a wider project whose main idea is to evaluate the clinical utility of the tested markers which might be important in the process of non-invasive diagnostic and investigations of proliferative lesions in the bladder.

Methods: The samples of a cancerous tissue deposited in tissue bank of the Department of Clinical Genetics Medical University of Lodz were used to the analysis. The study involve a group of 40 patients suffering from the BC (histopathologically confirmed), of which 13 patients were diagnosed with muscle invasive BC (MIBC) and 27 with non-muscle invasive BC (NMIBC). The control group consists of 14 samples of normal urothelium, which did not reveal any cancerous changes during histopathological examination. We assessed expression

of microRNA using qRT-PCR and miRCURY LNATM Universal RT microRNA PCR Kit by Exiqon , Denmark. The kit includes a spike-in control primer set (UniSp6), one candidate endogenous control primer set (miR-103a-3p), two validated primer sets: hsa-mir-99a-5p and hsa-mir-19a-3p.

This study was approved by the ethics committee of the Medical University of Lodz (No: RNN/62/15/KE/M) and all patients gave written informed consent before entry.

Results: miR-99a-5p was significantly down-regulated in BC tissues, and even the lower expression of miR-99a-5p was correlative with the more aggressive phenotypes of BC. Meanwhile the level of expression was elevated in NMIBC compared to MIBC which corelates with better prognosis. miR-99a-5p might act as a tumor suppressor in bladder cancer by targeting fibroblast growth factor receptor 3 gene (FGFR3). MiR-19a-3p was up-regulated in bladder cancer tissues and high-level of miR-19a-3p was correlative with more aggressive phenotypes of BC. miR-19a-3p might act as an oncogenic microRNA in BC dependent on targeting phosphatase and tensin homolog gene (PTEN).

Conclusion: Our data indicate that miR-19a-3p and miR-99a-5p might serve as potential diagnostic and possible prognostic biomarkers for BC investigations.

Acknowledgements: The authors thank Prof. Marek Sosnowski and the staff of I Clinic of Urology Medical University of Lodz for help in obtaining samples from BC patients.

Eth: This paper is approved by Local Ethical Committee.

Inhibition of FABP4: a possible target in the treatment of IBS-C?

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Introduction: Irritable bowel syndrome (IBS) is a chronic, relapsing functional bowel disease, which considerably deteriorates patients' quality of life. It is one of the most frequently diagnosed gastrointestinal (GI) disorders worldwide, with the prevalence ranging from 11 up to 23%. The main symptoms attributed to IBS involve abdominal pain and/or bloating, distension and altered bowel movements. Patients often have comorbid extraintestinal symptoms of fatigue, sleepiness, depression and anxiety. Depending upon GI symptoms, IBS can be classified as constipation-predominant (IBS-C), diarrhea-predominant (IBS-D) or alternating (IBS-A). A fair number of hypotheses have been suggested to underlie the IBS development; however, due to its multifactorial nature, IBS still needs new tools for prevention, diagnosis and treatment.

Recently, a fatty acid binding protein 4 (FABP4), which is abundantly expressed in adipocytes and macrophages, has been considered as a causative factor in several GI disorders, including inflammatory bowel disease (IBD) or coeliac disease. Interestingly, many IBD symptoms overlap with those observed in IBS patients; therefore, a link between IBS and FABP4 has been suggested.

Purpose: The aim of the study was to determine the role of FABP4 inhibitor in the course of IBS-C.

Methods: The effect of FABP4 inhibitor, BMS309403, on mouse intestinal motility was characterised in vivo in distal colonic expulsion and faecal

pellet output (FPO) experiments. The effect of BMS309403 on GI motility was compared with the transit observed in the control groups. In order to assess the mRNA level of FABP4 in human colon biopsies, real time RT-PCR was performed.

Statistical analysis of obtained data was performed using Prism 5.0 (GraphhPad Software Inc.). ANOVA test was used for analysis of multiple treatment means.

Results: In vitro studies revealed a decreased mRNA expression of FABP4 in colonic biopsies in patients with IBS-D as well as IBS-C in comparison with healthy subjects. In mice, BMS309403 (1 and 5 mg/kg, i.p.) significantly reduced time necessary to expel colonic beads when compared with vehicle. FPO assays confirmed an increased GI transit resulting in higher number of excreted pellets.

Conclusion: Decreased mRNA expression of FABP4 in human biopsies from IBS patients indicates its possible involvement in the course of IBS. Furthermore, in vivo experiments in mouse models of GI transit showed that FABP4 inhibitor increases GI motility. Consequently, the inhibition of FABP4 may constitute an interesting molecular target for IBS-C therapy and warrants further investigation.

Eth:

Molecular alternations of PTEN tumour supressor gene associated with urothelial bladder cancer initiation and progression.

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Introduction: The PTEN gene belongs to the group of suppressor genes. It encodes the PTEN protein which combines the features of both lipid and protein phosphatases. As a lipid phosphatase, not only does it restrain the G1 stage of cell cycle, but it also initiates a process of apoptosis by affecting the PI3K/Akt pathway, which is associated with the development and progression of urinary bladder cancer (BC). As the second of aforementioned phosphatases, it influences the growth, survival and invasiveness of cells. Numerous genetic changes in PTEN lead to uncontrolled divisions of mutated cell as well as its insensitivity to signals provoking apoptosis, which consequences in the rise of a tumour.

Purpose: To identify a mutation in the PTEN gene (exons 1-9) in DNA samples isolated from cancerous tissues of patients suffering from the urinary BC, as well as to define the changes in expression of protein encoded by this gene.

Methods: The samples of a cancerous tissue deposited in tissue bank in the Department of Clinical and Laboratory Genetics of the Medical University of Lodz were used as materials in the study. A group of 46 patients suffering from the urinary BC (histopathologically confirmed) in the age ranging from 47 to 88, were examined using PCR reaction, Single Strand Conformation Polymorphism (SSCP) method and Quantitive Real-Time PCR (QRT-PCR) in order to assess the level of expression of the protein encoded by the PTEN gene. The study group for mutation detection included: 17 patients with non-invasive cancers at stage Ta, 15 patients at

stage T1, 5 patients classified as Papillary Urothelial Neoplasm of Low Malignant Potential (PUNLMP) and 9 patients with invasive cancers at stage T2. For the assessment of the expression level the study group contains respectively: 40 Ta, 27 T1, 14 \geq T2, 7 PUNLMP. The control group consists of 14 samples of normal urothelium, which did not reveal any cancerous changes during histopathological examination. Exon 1-9 of the PTEN was amplified and then separated in 10% native polyacrylamide gel during vertical electrophoresis. Finally the gel was dyed using silver ion techniques. The study was approved by the ethics committee of the Medical University of Lodz (No: RNN/61/15/KE/M) and all patients gave written informed consent before entry.

Results: We did not find mutations of the PTEN gene in the study group. Expression level of the PTEN protein was increased in 15 cases (17%), decreased in 45 cases (51%), while the rest remained at the same level as in normal tissue. The changes in expression of the protein were significantly predominant among the patients suffering from invasive cancers 9/14 (64%).

Conclusion: According to above study, mutations of the PTEN gene are very rare in BC tumor. The assessment of the expression of PTEN protein using the QRT-PCR technique seems to be more useful tool.

Acknowledgments:

The authors thank Prof. Marek Sosnowski and the staff of I Clinic of Urology Medical University of Lodz for help in obtaining samples from BC patients.

Eth: This paper is approved by Local Ethical Committee.

Cytogenetic aberrations observed in acute lymphoblastic leukemia.

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Introduction: Acute lymphoblastic leukemia (ALL) is the most common tumor/cancer (?) among children. It is estimated that ALL accounts for approximately 30% and 75% of cancers and leukemias among this age group. Cytogenetic alterations are one of many prognostic factors in ALL patients. The results of cytogenetic tests are crucial not only for establishing ALL risk groups, but also to predict the treatment response.

Purpose: The aim of this research was to evaluate the presence and analyze cytogenetic alterations in karyotype among children with ALL. The establishment of relationship between the occurrence of particular cytogenetic alterations in karyotype and the prognosis of patients with ALL was attempted.

Methods: 94 patients with diagnosed ALL that were treated in the Department of Pediatrics, Oncology, Hematology and Diabetology in Łódź

age between 16 months and 18 years. The study was conducted on the basis of the data in medical records of patients treated between 2008 and 2014. Apart from alterations in karyotype the following factors were taken into consideration: patient's age, gender, initial leukocytosis, steroid sensitivity at day 8, minimal residual disease at day 15, the percentage of cancer cells at day 33, the presence of Down syndrome, the occurrence of relapse and potential death of patient.

Results: 11,7% of patients had T-type ALL (n=11) whereas the rest (88,3%) had B-type ALL (n=83). 9,57% of the analyzed patients deceased. The relapse of the disease occurred in the case of 4 patients (4,25% of group) and all of them died. Among 9 deceased patients only one person was not steroid sensitive at day 8. Philadelphia chromosome was detected in 4,3% of all patients, whilst TEL/AML gene fusion in 19,78% and mutation of MLL gene in 7,6% of the group. 2 people (2,15%) had Down syndrome and cytogenetic tests confirmed multiplication of Y chromosome among 37,34% of patients; mainly one (45,16%) or two (also 45,16%) additional chromosomes were detected. 54,25% of patients had normal karyotype while among 30,85% hiperdiploidy was present. Additionally, other alterations in karyotype were confirmed in 46,8%. These alterations were mainly multiplications of chromosomes (trisomy, tetrasomy, pentasomy). In some of the patients monosomy was also present.

Conclusion: Among the children suffering from acute lymphoblastic leukemia (ALL) various alterations in karyotype are very often found in cytogenetic tests. Usually these are multiplications of chromosomes, monosomy of chromosomes or their deletion. Practically, among all patients who died such alterations were present.

Eth:

Enhanced activity of the endogenous opioid system alleviates gastric lesion in mice

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Introduction: Stomach is extremely sensitive to various stress stimuli and peptic ulcer has often been described as a stress-induced disease. Several reports showed that reactive oxygen species and enhanced production of inflammatory mediators contribute to the development of stress-induced peptic ulcers. The endogenous opioid system (EOS) regulates nociception and inflammation in the gastrointestinal (GI) tract. Furthermore, endogenous opioid peptides exhibit cytoprotective effect in GI tissues.

Purpose: The aim of the study was to validate EOS as a target for the treatment of stress-induced peptic ulcers using two mouse lines with different EOS activity.

Methods: In all experiments we used Swiss-Webster mice, separated by selective breeding into two phenotypes based on their sensitivity to forced swim stress-induced analgesia, namely low analgesia (LA) and high analgesia (HA). The characteristic feature of the HA phenotype is the hyperactivity of EOS. To induce gastric lesions we used the chronic mild stress (CMS) model, in which animals were exposed to a combination of mild stressors for a five weeks. The severity of gastric lesions was evaluated by clinical and macroscopic parameters. To investigate the mechanism of EOS-mediated gastroprotective effect, we used an opioid receptor

antagonist, naloxone (1 mg/kg, i.p.). Additionally, we examined myeloperoxidase (MPO) activity, as well as H₂O₂, glutathione (GSH) and thiobarbituric acid reactive substances (TBARS) levels in the stomach tissue.

Results: CMS-induced gastric lesions were reduced in HA compared with LA mice, as evidenced by significantly lower ulcer index and ulcerative lesion index (ULI) score. This effect was reversed in HA, but not in LA mice by administration of naloxone. No changes were observed in mice without exposure to CMS. Furthermore, there were no changes in MPO activity and H₂O₂ levels in HA vs. LA mice. GSH levels were increased in both HA and LA and this effect was reversed by naloxone. Interestingly, TBARS were increased in LA vs. HA mice and this effect was blocked by naloxone.

Conclusion: Increased activity of EOS exhibits gastroprotective effect via modulation of oxidative stress pathways, but not through reduction of neutrophil infiltration. We suggest that EOS may become a novel target for gastroprotective drugs and therapies.

Eth: This paper is approved by Local Ethical Committee.

Cardiology

Session: Cardiology

Is it the cardiac infarction or not, that is the question...

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Introduction: Takotsubo cardiomyopathy is a type of non-ischemic cardiomyopathy described for the first time on 1990 in Japan. It characterizes transient dysfunctions of contractility involve mainly apex and central part of left ventricular with a hypercontractile base of the left ventricular and without a significant coronary disease. It develops mostly among postmenopausal women after strong emotional stress. Clinical symptoms and ECG changes mimic a myocardial infarction of the anterior wall.

Purpose: A 66 years old woman with takotsubo cardiomyopathy - case study.

Methods: We used patient's medical history and examination's results.

Results: A 66-year-old woman was admitted to the emergency ward on January 2015. The patient was complaining since morning about sting with

expanding in the chest, suffocation and episode of profuse sweat. The ECG examination revealed changes suggesting a myocardial infarction of the anterior wall. Also results of laboratory exam (CK-MB, TNT) shown cardiac infarction. On those grounds immediate coronary angiography was taken. None significant arterial stenosis was found. At patient the myocardial infarction was disqualified and symptomatic treatment was urged. The next step was the echocardiography examination shown the contraction abnormalities. On the grounds of all exam results and symptoms the takotsubo cardiomyopathy diagnosis was made. The patient was discharge from the hospital after 4 days of hospitalization in well health condition.

Conclusion: Among postmenopausal women with myocardial infarction symptoms after strong emotional stress during diagnosis the takotsubo cardiomyopathy should be taken on board. Perhaps in similar cases we should consider an echocardiography examination before we introduce fibrinolytic treatment in hospitals without hemodynamic laboratory.

Eth: -

Session: Cardiology

Łódź 2015

Worsening heart failure as a prognostic measure in acute heart failure

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Introduction: Along with the phenomenon of population ageing, the number of patients with heart failure (HF) and hospitalizations for acute HF is growing and poses important public health and economic problems. Worsening heart failure (WHF) is a new measure that has been used to predict outcomes in patients hospitalized for acute heart failure.

Purpose: The aim of the study was to evaluate prognostic significance of WHF in patients hospitalized for acute heart failure (AHF).

Methods: In retrospective analysis we enrolled 51 consecutive patients (mean age: 61.8 years, female: 26.9%) hospitalized for AHF. Patients were divided into 2 groups: WHF (n=29, 56.9%) and non-WHF (n=22, 43.1%). WHF was defined as worsening of signs and/or symptoms during the acute phase of a heart failure episode requiring an intensification of intravenous therapy for heart failure or mechanical ventilation, renal or circulatory support from baseline to day 5. Prognostic measures including all-cause mortality, rehospitalization for cardiovascular causes and combined endpoint consisted of death and rehospitalization were collected 1- and 3- years after the date of discharge.

Results: In whole study population we observed 32 rehospitalizations (62.7%) and 8 deaths (15.7%) within 1 year, whereas within 3 years the number of rehospitalizations has grown up to 46 (90.2%) and deaths up to 16 (31.1%). Within

1 year patients with and without WRF did not differ significantly in terms of death (WHF: 24.1% vs. non-WHF: 4.6%, $p=0.6$) and rehospitalization (WHF: 55.2% vs. non-WHF: 68.2%, $p=0.3$). Also within 3 years there were no differences between the groups in terms of death (WHF: 31.25% vs. non-WHF: 31.58%, $p=0.9$) and rehospitalization (WHF: 78.1% vs. non-WHF: 94.7%, $p=0.1$). Cox proportional hazards analysis has revealed that experience of WHF during hospitalization was not associated with greater risk of mortality and rehospitalization within 1- and 3-years after discharge. Furthermore, in Kaplan-Meier analysis survival probability free from death, rehospitalization or combined endpoint calculated at 1- and 3-years after discharge was similar in both groups.

Conclusion: WHF was a very frequent finding in patients with AHF and was observed even in 56.9% of the study population. However, occurrence of WHF during AHF hospitalization was not associated with unfavorable prognosis.

Eth: -



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Łódź 2015

Session: Cardiology

Acute kidney injury in patients with acute heart failure

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Introduction: Heart failure (HF) is a major public health problem with a very high and still rising prevalence in general population. Renal dysfunction is a frequent finding among patients with HF and it is an important predictor of clinical outcomes.

Purpose: The goal of the study was to evaluate prevalence, predictors and prognostic significance of acute kidney injury (AKI) in patients hospitalized for acute heart failure (AHF).

Methods: In retrospective analysis we enrolled 100 consecutive patients (mean age: 65±13.2 years; 37% women) hospitalized for AHF. According to KDIGO guidelines, AKI was defined as an increase in serum creatinine by $\geq 0,3$ mg/dl within 48 hours or increase in serum creatinine to ≥ 1.5 times baseline within the prior 7 days or urine volume <0.5 ml/kg/h for 6 hours. Medical history, treatment administered during hospitalization, clinical and laboratory parameters were compared between patients with and without AKI. Prognostic measures including all-cause mortality, rehospitalization for cardiovascular causes and combined endpoint consisted of death and rehospitalization were collected 1- and 3-years after the date of discharge.

Results: Acute kidney injury was observed in 18% of the study population (mean

age: 69.6 ± 12.0 years; 38.9% women). Individuals who experienced AKI had more advanced renal impairment already in the beginning of hospitalization (eGFR 2day: 51.5 ± 21.5 vs. 65.7 ± 26.3 ml/min/m², $p=0.04$; eGFR 3day: 48.9 ± 23.8 vs. 66.3 ± 24.5 ml/min/m², $p=0.009$). Kidney function in those patients remained worse up to the end of hospitalization (eGFR discharge: 52.6 vs. 67.8 ml/min/m², $p=0.03$). Furthermore, the peak and discharge value of BUN were significantly higher in group with AKI. Patients with AKI had also higher value of CRP (72.0 ± 79.6 vs. 33.9 ± 40.0 mg/l, $p=0.004$) and WBC (10.1 ± 4.8 vs. 8.4 ± 2.7 G/l, $p=0.04$). Subjects with AKI in comparison to those without were more likely to have prior myocardial infarction (72.2 vs. 45.1% , $p=0.04$), had more often infection during hospitalization (50.0 vs. 24.4% , $p=0.03$) and received more often therapy with catecholamins (22.2 vs. 6.1% , $p=0.3$) and less often with aldosterone antagonists (38.9 vs. 93.2% , $p=0.005$). Predictors of AKI were aldosterone antagonists (OR 5.2; 95%CI 1.5-18.0; $p=0.009$) and catecholamins (OR 0.12; 95%CI 0.024-0.6; $p=0.01$). Surprisingly, AKI was not associated with greater risk of mortality and rehospitalization at 1- and 3- years after discharge. Moreover in Kaplan-Meier analysis event-free survival (rehospitalization, death and combined endpoint) at 1 and 3 years after discharge was similar in patients with and without AKI.

Conclusion: AKI was a frequent finding in patients with AHF. Aldosterone antagonists and catecholamins were independent risk factors for development of AKI. Occurrence of AKI during hospitalization for AHF was not associated with adverse prognosis including rehospitalization for cardiovascular causes and all-cause mortality.

Eth: This paper is approved by Local Ethical Committee.

Session: Cardiology

“Saddle” Pulmonary Embolism in 33 years old patient- case study.

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Introduction: Acute Pulmonary Embolism is a life threatening condition and a 3-rd most common cause of death among hospitalized patient. Main causes of incorrect diagnosis are non-specific signs and symptoms and doctors' convictions that this condition is rare and typical for older patients. Mortality in untreated PE is high, however proper treatment reduce it to 2-8%.

Purpose: “Saddle” Pulmonary Embolism in 33 years old patient- case study.

Methods: We used patient's documentation (medical history, results of: ECG, ECHO, CT angiography, Doppler Ultrasound of lower extremities and blood tests).

Results: 33 year old man presented to the emergency department complaining of increasing shortness of breath and tachycardia. In past history untreated asthma from childhood. One month earlier patient had orthopedic Surgery, emergency and intensive therapy on left lateral malleolus and left leg was plastered. Moreover patient has reported swelling and pain of right leg for one week. The men had performed CT angiography and

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doctors diagnosed “Saddle” Pulmonary Embolism, which lodges the main PA bifurcation. Doppler Ultrasound revealed thrombus in right poplitea vena and in superficial veins. Blood test also collaborate with patient’s condition. D-dimer and BNP levels were extremely elevated. Echocardiography showed dilated right ventricle and shorten AcT to 60 ms, which might suggest pulmonary hypertension. When diagnosis became unquestionable Heparin (UFH) and Actylise were introduced. This treatment improved patient’s condition and after 7 days of hospitalization this man was discharged. Anticoagulation prophylactic (Warfin), INR control and regular cardiologist appointments were recommended to patient.

Conclusion: Risk factors of Pulmonary Embolism are: obesity, alcohol abuse, cigarettes and immobility. Not only extensive surgeries are likely to affect on this condition but small ones too. Common well known sources of embolism are deep vein thromboses. This condition mostly concerns patients above 40 year old, however is also possible among younger people. Even massive pulmonary embolism appears to be curable if diagnose and treatment are established immediately.

Eth: -

Session: Cardiology

Survey on increased body weight and obesity management in coronary heart disease patients in Latvia

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Introduction: Cardiovascular disease (CVD) is the leading cause of death in Latvia and other European countries, even though the methods of diagnostics and treatment fulfil all latest guidelines of CVD management. According to the data calculated by the Center of Disease Prevention and Control, every year in Latvia more than a half of all deaths are caused by cardiovascular disease. Primary and secondary prevention is an important part of its management, which allows to reduce morbidity, complication and mortality rates. This study was processed as a part of the cross-section study „EUROASPIRE IV” by European Society of Cardiology.

Purpose: The aim of this study was to assay the improvement of increased body weight and obesity as a cardiovascular risk factor in patients with known coronary heart disease (CHD) and to determine the quality of lifestyle changes in Latvia.

Methods: From 2010 until 2012 270 patients were included in “EUROASPIRE IV” after receiving treatment of a cardiovascular event (CE). Data from patients’ case histories were collected and analyzed. 1.03 ± 0.052 years after CE patients were invited to a visit for interview and examination. In January 2015 the patients were contacted via telephone, mail or e-mail for a follow up, and interviewed once again. After the follow up in January 2015 all patients were divided into two groups: group A (the End-point group - patients who had died or suffered from a non-fatal acute myocardial infarction or stroke after the follow up) and group B (patients who had not had any CEs). The results were analyzed and processed by using descriptive statistics methods (SPSS statistics software and Microsoft Excel).

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Results: At the beginning of the study 270 patients were included. 61.5% of them were male ($n = 166$), 38.5% – female ($n = 104$). The median age was 64.2 ± 0.749 and 67.7 ± 0.803 years for men and women respectively. The median Body mass index (BMI) was 28.0 ± 0.584 kg/m² for men and 29.8 ± 0.625 kg/m² for women. During the time of the hospitalization due to the CE 79.2% of men and 83.1% of women had increased body weight (overweight/obese).

Approximately 1 year later, during the first interview, 65.7% of men and 65.4% of women revealed that their eating habits were unhealthy, and 83.0% of men and 85.4% of women were still overweight or obese. However, only 13.9% of men and 14.4% of women admitted that they had tried to reduce their body weight. It was revealed that 58.8% of men and 44.2% of women had a high level of physical activity, but in 20.5% of men and 33.7% of women it was low.

Conclusion: Despite the therapy within 1 year the incidence of increased body weight as a risk factor does not improve, revealing that management of overweight and obesity has not been successful. It is crucial to educate patients and their family members that increased body weight is an important factor that predicts complication and mortality risks due to CVD.

Eth: This paper is approved by Local Ethical Committee., This work is a part of the doctoral thesis.

Session: Cardiology

Pulmonary arterial hypertension PAH versus pulmonary hypertension due to left ventricular dysfunction – comparison of clinical characteristics and sleep-disordered breathing significance

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Introduction: Heart failure (HF) caused by left ventricular dysfunction is common problem, but still with high mortality and thus new factors determining clinical course are sought. Recently sleep-disordered breathing (SDB), which affects up to 70% of patients (pts) with HF was recognized as determinant of worse clinical outcome. PAH is a rare disease and prevalence of SDB in PAH pts and its clinical implications remain unclear.

Purpose: Comparison of selected parameters in pts with different etiology of pulmonary hypertension with evaluation of SDB clinical importance.

Methods: 81 optimally treated pts were included: 39 HF pts (coronary artery disease, LVEF \leq 55%, SPAP $>$ 30 mmHg, NYHA class II-III) and 42 PAH pts (19 idiopathic, 17 congenital heart defects, 6 connective tissue diseases). Examinations included: echocardiography, spiroergometry, blood tests, anthropometry, Holter ECG monitoring with screening for SDB and estimation of apnea-hypopnea index (eAHI).

Results: While similar in NT-proBNP, TAPSE, supraventricular arrhythmia and maximal/ mean heart rate values, groups differed regarding several clinical

parameters. Pts in HF group were older (63 vs. 50 years in PAH group, $p < 0.001$), predominantly males (87% vs. 40% in PAH group, $p < 0.0001$), had lower SPAP (40 vs. 93 mmHg, $p < 0.000001$), lower LVEF (33 vs. 56%, $p < 0.000001$), higher BMI (28 vs. 25, $p < 0.001$), higher VO₂peak (21 vs. 15 ml/kg/min, $p = 0.0001$), higher platelet count (226 vs. 187 $\times 10^3/\mu\text{l}$, $p < 0.05$), lower hemoglobin (14 vs. 16 g/dl, $p < 0.01$), higher SDNN (118 vs. 100, $p < 0.05$), higher RMSSD (31 vs. 22, $p < 0.05$), higher triangle index (33 vs. 26, $p < 0.05$), more ventricular beats (2144 vs. 292, $p < 0.001$) and ventricular tachycardias (episodes 0.9 vs. 0.2, prevalence 20% vs. 9%, $p < 0.05$). SDB defined as eAHI > 15 was found in 64% of HF pts and in 36% of PAH pts ($p < 0.05$). Mean eAHI value was higher in HF than in PAH group (24 vs. 14, $p < 0.001$). In HF group, eAHI correlated with NT-proBNP and inversely correlated with LVEF and mean heart rate. Median eAHI was 18.7, pts with eAHI $>$ median had more supraventricular premature beats. In PAH group eAHI inversely correlated with age. In subgroup of eAHI < 15 , RMSSD values were higher. Median eAHI was 8.4, pts with eAHI $>$ median were younger and had higher BMI.

Conclusion: At similar NT-proBNP level, HF pts had better result of cardiopulmonary exercise testing and favorable heart rate variability parameters, but were more prone to ventricular arrhythmia than PAH patients. SDB in pts with PAH was less common than in the HF-induced pulmonary hypertension, but still affected more than one-third of the population. eAHI value was higher in left ventricular dysfunction than in PAH. Among pts with left ventricular HF, higher eAHI indicated more severe hemodynamic dysfunction and in PAH it was associated with clinical presentation in younger age.

Eth: -

Electrocardiographic indicators of left ventricular hypertrophy among patients with arterial hypertension

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Introduction: Left ventricular hypertrophy (LVH) is a relatively common asymptomatic complication occurring among arterial hypertension.

Purpose: The purpose of the research was comparing sensitivity and specificity of indices of LVH among patients (pts) with arterial hypertension.

Methods: The research was carried out among the group of 69 pts, including 18 females and 51 males. The average age for females was 69,94 and for males was 64,37.

They have been tested with use of 12-lead electrocardiogram (ECG) and transthoracic echocardiography. The following ECG indicators have been evaluated: Sokolow-Lyon index (totality of S wave in V_1 , V_2 , or V_3 and R wave in V_1 ,... or V_2 , $\dagger \geq 3,5mV$), Cornell voltage criteria (sum of R wave in aVL and S wave in V_1 , \square for females $>2,0 mV$, for males $>2,8mV$), Cornell product (product of the Cornell voltage criterium and during QRS $>2440mm$), Romhilt-Estes point score system. LVH was rated with use of following echocardiographic indicators: left ventricular end-diastolic dimension (LVEDD) (for females: $>55mm$, for males: $>59mm$), interventricular septum end diastolic dimension (IVS) ($>11mm$), left atrial dimension (LA) ($>40mm$) and left ventricular mass index (LVMI) (for females: $>95g/m^2$, for males: $>110g/m^2$).

The research was carried out among the group of 69 pts, including 18 females and 51 males. The average age for females was 69,94 and for males was 64,37.

Results:The electrocardiographic criteria for the diagnosis of LVH occurred when using Sokolow-Lyon index in 17.39% of the pts. Cornell voltage criteria of LVH occurred in 10,14% of the pts, and Cornell product in 17.39% of the pts, whereas in the case of a point system and Estes Romhilt criteria of LVH occurred in 20.29% of the pts. Probability of LVM estimated upon the Romhilt-Estes point score system concerned 36,23% of pts. In the echocardiography enlargement of LVEDD was revealed in 10,14% of cases, LA was increased in 76,81%, thickening of IVS in 89,86%, and the LVMI was abnormal in 95,65% of cases.

Left ventricular mass exceed accepted standards in 92,16% males and 88,89% females.

The specificity of ECG indicators of diagnosis of LVH has value 82,3% and the sensitivity 27%.

Assessment of expectation of LVH Romhilt-Estes point score system characterized specificity 82,3% and sensitivity 41%.

The electrocardiographic criteria for the diagnosis of LVH occurred when using Sokolow-Lyon index in 17.39% of the pts. Cornell voltage criteria of LVH occurred in 10,14% of the pts, and Cornell product in 17.39% of the pts, whereas in the case of a point system and Estes Romhilt criteria of LVH occurred in 20.29% of the pts. Probability of LVM estimated upon the Romhilt-Estes point score system concerned 36,23% of pts. In the echocardiography enlargement of LVEDD was revealed in 10,14% of cases, LA was increased in 76,81%, thickening of IVS in 89,86%, and the LVMI was abnormal in 95,65% of cases.

Conclusion:1. Electrocardiographic indices of LVH in comparison with echocardiographic parameters are characterized by low sensitivity, but high specificity.

2. Assessment of left ventricular hypertrophy Romhilt-Estes point score system has increased the sensitivity of electrocardiographic indicators.

3. General accessibility and reproducibility of results of 12-lead ECG have caused usefulness diagnostic test for initial assessment of LVH. Limited sensitivity and

specificity of this test must be considered.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Cardiology

Title:

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Introduction: Congenital heart defects usually manifest within hours or days after birth. However, due to lack of early symptoms the postnatal diagnostic sieve may not be always accurate and in some cases allow patients to be discharged without proper diagnosis and treatment which leads to exacerbation of patient's condition in the future. Especially complex defects may be dangerous and lethal if not detected early.

Purpose: We present 2-month-old girl admitted to the clinic with severe cardiorespiratory failure and suspicion of complex congenital heart defect in the form of anomalous pulmonary venous return. The patient was previously diagnosed with agenesis of corpus callosum. The patient stayed asymptomatic since labour and presented fatigue just before the admission. As the preoperative management heart catheterization and echocardiography were performed which revealed left atrium inflow restriction, additional structures in left atrium cavity and high pressure pulmonary valve insufficiency. It has been decided to perform Rashkind's procedure resulting in patient's condition improvement. The decision of correction of the defect was made. During Surgery, emergency and intensive therapy in extracorporeal circulation the patient was diagnosed with triatrial heart. Following pathologies were observed: left pulmonary veins returning to third atrium - cavity in the left atrium limited with the intraatrial membranes, right pulmonary veins returning directly to right atrium and additional membrane obstructing mitral valve inflow. The patient overwent the full correction Surgery, emergency and intensive

therapy - the physiological vessel connections were restored, the pathological membranes were removed and the iatrogenic atrial septal defect was closed with pericardial patch. Unfortunately after the Surgery, emergency and intensive therapy girl developed congestive pneumonia, acute kidney failure and generalized coinfection with various bacteria and fungi. The patient was treated in Intensive Pediatric Care Unit with peritoneal dialysis and wide spectrum antibiotics resulting in significant condition's improvement. After 2 months of total hospitalization the patient was discharged in good condition with no signs of recent diseases.

Methods: -

Results: -

Conclusion: Postnatal diagnostics of presented patient was not as scrupulous due to asymptomatic course of the defect. In fact, prenatal or early postnatal echocardiography should be performed routinely as the screening for congenital heart defects – sometimes asymptomatic but still the most common defects diagnosed after birth. The expanded neonatal examination would be the best method to avoid aggravation in following months.

Eth: -

Łódź 2015

Session: Cardiology

Title: Large mass in right atrium detected by echocardiographic examination

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Department: *Department of Rapid Cardiac Diagnostics*

Introduction: I present a case of 55-year-old female, who was referred to the hospital with dyspnea and exercise tolerance impairment over the last few weeks. Her prior medical history was unremarkable.

Purpose: Transthoracic echocardiography revealed a large (5 cm x 8 cm) pathological additional mass in the right atrium, which protruded into the right ventricle through the tricuspid valve resulting in partial valvular flow obstruction (peak velocity of 1,6 m/s). The echocardiographic features were characteristic of myxoma.

Methods: The patient was referred for an urgent Surgery, emergency and intensive therapy.

Results: The early postoperative recovery was uneventful, but echocardiography performed four weeks after the Surgery, emergency and intensive therapy revealed regrowth of mass in the right atrium. Meanwhile, histopathological examination of removed tumor showed features suggestive of untypical melanoma with high proliferative capabilities.

Conclusion: The patient was disqualified from further surgical and

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ABSTRACT BOOK

oncological treatment. The patient was discharged home and died two weeks later.



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Łódź 2015

Session: Cardiology

Infective endocarditis in a young patient with bicuspid aortic valve complicated with peripheral embolism.

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Introduction: We present a case of 24-year-old male, who was admitted to the hospital with fever, malaise, sweating and pain of the muscles and joints. He also presented loss of appetite and decrease in body weight. In the medical history he had three surgeries because of inflammatory and purulent changes in the inguinal and rectal area. The antibiotic therapy was implemented (gentamycin, augumentin). Obtained culture from the wound showed Staphylococcus aureus. Obtained cultures from the blood after the antibiotic therapy were negative. Transthoracic and transesophageal echocardiography revealed infective endocarditis of bicuspid aortic valve with mycotic abscess. Mild aortic insufficiency was also observed. One day after TEE, peripheral embolism of the left lower limb was observed. Due to large vegetation and signs of peripheral embolism patient was transferred to the Department of Cardiothoracic Surgery, emergency and intensive therapy, where he underwent aortic valve replacement. His recovery was uneventful.

Purpose: -

Methods: -

Results: -

Conclusion: Appropriate therapy of infective endocarditis brings positive results.

Eth: -



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Łódź 2015

Session: Cardiology

Coexistence of significant congenital and acquired heart disease.

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Introduction: -

Purpose: -

Methods:

Results: We present a case of 55 year-old female, who was admitted to the department of cardiology with a history of mitral valve disease of rheumatic etiology and aggravating symptoms of cardiac failure. Transthoracic echocardiogram revealed enlargement of both atria and the right ventricle, severe tricuspid valve regurgitation as well as combined mitral valve disease. Additionally, pulmonary hypertension and enlargement of the coronary sinus was noted. On transesophageal echocardiography a large thrombus protruding from the left atrial appendage was observed. Typical venous return of right pulmonary veins was not found. Computed tomography revealed anomalous left upper and lower pulmonary vein drainage into coronary sinus and further to the right atrium. Patient was referred for cardiothoracic Surgery, emergency and intensive therapy, the recovery from which was uneventful.

Medical University of Łódź

“Troponinase” - When troponin is too sensitive- significance of CKMB

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Introduction: Acute Coronary Syndrome (ACS) is currently one of the most frequently suspected conditions among patients admitted to the ICU clinics in Poland. Over the past two decades cardiac troponins (cTn) have emerged as the preferred biomarkers for noninvasive detection of myocardial injury. In conjunction with the typical ECG findings of ischemia, elevated serum cTn levels confirm diagnosis of MI. However neither cTnT nor cTnI are exclusively released as a result of ischaemic myocardial cell necrosis but also with numerous nonischemic diseases. The increased sensitivity and widespread use of cTn tests in a variety of clinical scenarios may lead to detection of troponin levels in the absence of ACS. The use of creatinine kinase (CKMB) marker which is less sensitive but more specific to ischemic injury of myocardial cells will aid in specific identification of myocardial infarction.

Purpose: The purpose of the research is to determine whether patients with positive score of CKMB and TnT are more likely to undergo major adverse cerebrovascular or cardiovascular events compared to patients with negative score of CKMB but positive score of TnT.

Methods: The group of 281 patients admitted to ICU with ACS symptoms

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was divided into two cohorts, where the research group has positive CKMB score (>24 U/l) ($n=117$) and the control group has negative CKMB score (<24 U/l) ($n=164$). Both cohorts have positive TnT score ($>0,003$ ug/ml). The timing of reinfarction, stroke, major bleeding and death was determined in both groups via telephone questionnaire within 2 years of visit on the ICU. Collected data was correlated with the laboratory tests results performed at the time of admission to the ICU, to assess which patients were at higher risk of undergoing major adverse cerebrovascular or cardiovascular events (death, heart reinfarction, stroke), which were the end points of the research.

Results: According to the questionnaire, mortality in research group (8,5%, $n=10$) was significantly higher than in the control group (1,8%, $n=3$) ($p=0,008$). Additionally, 16 % ($n=19$) of the patients from the research group reached an end point of the research compared to 9% ($n=13$) from the control group ($p=0,03$).

Conclusion: Presented data indicates that patients with positive CKMB level at the time of ACS symptoms are at higher risk of death. This indicates necessity to reintroduce CKMB as a confirming biomarker for ACS.

Eth: This paper is approved by Local Ethical Committee.

Cardiosurgery and interventional cardiology

Identification of factors that predispose to complications after implantation of pacemakers.

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Introduction: Pacemakers are used when the sinus node, due to various diseases, permanently stops to fulfill its role or there are impaired conduction through the natural electrical connection between the atriums and ventricles of the heart.

Purpose: Estimation of factors predisposing to postoperative complications after implantation of pacemakers.

Methods: From the years 2004-2010 data of 1112 patients with implanted pacemakers were analyzed. Data of 121 patients who, because of complications, required reintervention in the coronary care unit were selected.

Results: 12.9% of patients experienced complications. The largest part of them were lodge infections - 19%, lodge infections with the presence of an abscess – 17,8%, perforation – 15,4% and pacing threshold increase – 14.2%. The most common pathogens causing infections were

Staphylococcus epidermidis – 47% and *Staphylococcus aureus* – 29,4%. Re-interventions were related mainly to pacemaker replacement – 21,8%, exchange of electrodes – 21,8%, electrode repositioning – 17,2% and the revision of the pacemaker`s lodge – 16%. Types of pacemakers, which are more predisposed to developing complications, are CRT, DDD and ICD. Lower percentage of complications occurred in patients with implanted AAI, VVI, VDD.

Conclusion: Type of implanted pacemaker and implantation time affects the number of complications. Results of further analyses and other conclusions will be presented during the speech at the conference.

Eth: This paper is approved by Local Ethical Committee.



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Session: Cardiosurgery and interventional cardiology

Acute cardiac tamponade after balloon cryoablation in patient with atrial fibrillation

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Introduction: Atrial fibrillation (AF) is the most common supraventricular arrhythmia, which may lead to deterioration of life quality and severe complications. Nowadays ablation is increasingly being used method of the paroxysmal AF treatment, particularly indicated in patients with AF-related symptoms and ineffective pharmacotherapy. According to the safety, cryoablation is considered to be more safe comparing to classical ablation with high-frequency current.

Purpose: The aim of this study was to present a case report about acute cardiac tamponade after balloon cryoablation in patient with atrial fibrillation.

Methods: Research

Results: 62-years old patient with stable ischemic heart disease and recurrent paroxysmal AF (treated without anticoagulation - 0 points in CHA₂DS₂VASc), was admitted at the hospital in order to perform balloon cryoablation. On admission patient was hemodynamically stable, with

normal blood pressure values. ECG revealed sinus rhythm 70/minute with LAH. Transesophageal echocardiography excluded the left atrium thrombosis. The procedure of balloon cryoablation was performed without complications via the right femoral access. After the procedure the sudden drop in blood pressure with tachycardia was observed. Immediate bedside echocardiography revealed cardiac tamponade. Because of life threatening urgent pericardial puncture was performed and 600ml of bloody fluid was aspirated. Further patient's condition was stabilized by intravenous fluids, fresh frozen plasma and dopamine infusion. In the following days the patient remained stable without evidence of pericardial effusion in echocardiography. After 12 days patient in good general condition was discharged from hospital with the recommendation of regular intake of anticoagulant (warfarin) for 3 months after cryoablation.

Conclusion: Balloon cryoablation appears to be safer method than cryoablation with high-frequency current, however there still could be severe complications such as cardiac tamponade. Therefore careful qualification of patients with AF for cryoablation is strongly recommended.

Eth: This work is a part of the doctoral thesis.

Session: Cardiosurgery and interventional cardiology

Haemolytic anaemia due to perivalvular leak in a patient after aortic valve replacement.

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Introduction: We present a case of 74-year-old male, who was admitted to the hospital with gradual impairment of exercise tolerance, hypertension, hypercholesterolemia and chronic renal failure.

Purpose: The patient had a medical history of autoimmune haemolytic anaemia with cold agglutinins which was inactive at the time of hospital admission. Seven years earlier he had aortic valve replacement.

Methods: Laboratory examination revealed haemolytic anaemia. Echocardiography revealed aortic regurgitation due to perivalvular leak.

Results: It was determined that the cause of patient's anaemia was mechanical. Pharmacotherapy was chosen as the best treatment option in his condition.

Conclusion: The patient's haemoglobin increased and a satisfactory exercise tolerance was achieved.

Eth: This paper is approved by Local Ethical Committee.

Session: Cardiosurgery and interventional cardiology

Normocytic anaemia as a risk factor of acute kidney injury after coronary artery bypass grafting

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Introduction: Improving long-term outcomes in coronary artery bypass grafting (CABG) make that number of performed procedures is rising, and patients with more numerous co-morbidity are operated. Every co-morbidity is associated with higher risk of postoperative complications, which significantly elevate mortality and cost of hospitalization. Knowing the increased risk of concrete complication we can alter perioperative treatment do minimalize it. One of the most common and dangerous complication in cardiac Surgery, emergency and intensive therapy is acute kidney injury (AKI), associated with higher mortality. A lot of patients develop evident renal failure after CABG though their serum creatinine level before Surgery, emergency and intensive therapy was right.

Purpose: The aim of the study was to analyze the relationship between preoperative erythrocyte parameters (RBC-red blood cells, HGB-hemoglobin, HCT-hematocrit, RDW- red blood cell distribution also MCV,MCH, MCHC) and incidence of acute kidney injury after off-pump

coronary bypass grafting, and examine is preoperative anemia associated with higher risk of AKI?

Methods: Study involved 287 patients (64 females, 223 males) with the mean age 63,56 who underwent isolated off-pump coronary artery bypass grafting (OPCAB) in 2012. The indication for Surgery, emergency and intensive therapy was severe coronary artery disease. We divided patients into 2 groups: A (without AKI after operation, 269 pts) and B (who developed postoperative AKI, 18 pts.). Preoperative erythrocyte parameters (Hgb, Hct, RBC, MCH, MCHC, MCV, RDW) were compared between groups. To define AKI we used RIFLE classification (injury when eGFR decreased $\geq 50\%$ after Surgery, emergency and intensive therapy). eGFR was calculated with Cockcroft-Gault formula.

Results: There were a statistically significant differences between groups in RBC, HCT, HGB, RDW ($p < 0.05$), but groups did not differ with respect to MCV, MCH, MCHC ($p > 0.05$). Groups were also similar with respect to age and gender distribution. Our data are not compatible with normal distribution, so we took medians into consideration. In group A (n= 269) median Hct=0.42 RBC=4.81 HGB=9.00 RDW= 13.70 whereas in group B (n=18) median Hct= 0.40 p RBC=4.42 HGB=8.45 RDW= 14.30

Conclusion: Patients with acute kidney injury after isolated off- pump coronary bypass grafting statistically had lower elected erythrocyte parameters than patients without this postoperative complication. Normocytic anemia may be a risk factor of AKI associated with cardiac Surgery, emergency and intensive therapy. It may also results from subclinical kidney injury before operation.

Eth: This paper is approved by Local Ethical Committee.

Session: Cardiosurgery and interventional cardiology

The influence of aspirin nonresponsiveness on the patency of the peripheral vessels in patients after intravascular procedures.

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Introduction: The aspirin nonresponsiveness is defined as an inability to induce the expected influence on the action of platelets. There are no guidelines concerning the laboratory assessment of this phenomenon. One of the parameters that is being used to evaluate an extent of the platelets inhibition is PFA-100. It measures the time of occlusion of an aperture in membrane covered with collagen and epinephrine (CEPI). The lack of an appropriate extension of the time of occlusion indicates the aspirin nonsensponsiveness.

Purpose: The aim of the study was to state if the laboratory showed resistance to aspirin and the schedule of the antiplatelet therapy influences on the time of patency of the vessel after PTA procedures.

Methods: 50 (27 males and 23 females) patients have been qualified for the retrospective research. The study population comprised people after PTA procedure (in some cases with additional usage of stents) in the area of peripheral vessels. The mean time of observation was 15,6 months [median: 10 months (4-23)]. The information on the patency of vessels was gained from the histories. In case of the lack of data on ultrasound examination was

performed. The figures for patency of vessels were correlated with clinical variables, parameters of platelets and a response to ASA evaluated with PFA-100.

Results: In 38 cases (74,5%) a significant stenosis or obstruction of the lumen of vessel was noticed after the mean time of observation of 13,1 months. In females restenosis occurred more often than in males (chi-square = 0,4). No significant differences in the mean response to ASA between the groups with and without restenosis was observed (189 vs. 190 s), as well as an occurrence of laboratory resistance to ASA (chi-square = 0.38) or parameters of platelets: MPV, PDW and P-LCR.

There were no differences between “aspirin-resistant” and “aspirin-responder” group with regard to the artery patency in any analyzed period, however a tendency to more frequent occlusion occurred during first 12 months after the procedure. Anticoagulant treatment (aspirin, clopidogrel, anticoagulants or their combinations) did not influence type of out-come.

Conclusion: In analyzed population aspirin nonresponsiveness assessed using PFA-100 method did not have impact on clinical out-come after endovascular procedures.

Eth: This paper is approved by Local Ethical Committee.

Session: Cardiosurgery and interventional cardiology

Secondary Aortoduodenal fistula as a complication after aortic prosthesis

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Introduction: In this paper we would like to describe you an uncommon but also very dangerous complication of aortic prosthesis which is aortoduodenal fistula. It may occur within a few days up to several years after Surgery, emergency and intensive therapy. The exact pathogenesis is unknown. The key is quick diagnosis and implementation of appropriate treatment, which regardless of the used method unfortunately still does not give one hundred percent certainty of recovery.

Purpose: The purpose of this case report is to present a case of 78-year-old patient who was admitted to the department for sewing the perforation formed between the duodenum and the part of the abdominal aorta and removal the aneurysm formed around the prosthesis. The patient, 14 years after aortic graft implantation has admitted to the hospital with acute abdominal pain occurring for several months. Gastroscopy showed a loss of the postbulbar part of duodenal wall closed by artificial vascular prosthesis. It was intraoperatively demonstrated that the fistula was the result of the formation of decubitus on the prosthesis and spread infection within it. Place of perforation was found around the lower anastomosis of vascular graft which was sutured in two layers. The aneurysm was removed. New prosthesis has been implanted and covered with garamycine sponge. It was also additionally

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sewed up with double layer of posterior lamina of peritoneum. The patient was released after a few days back home in stable condition.

Methods: There are two theories on the development of the disease. One of them is the infection of the graft of aorto-duodenal anastomosis. The second one says about the pulsating pressure of the wall of the prosthesis on the intestine. Detection of perforation obliges to remove the damaged or infected graft and reconstitute the structures. This process may involve resection of part of the duodenum, in which there is a defect and the creation of gastrointestinal anastomosis. Another method is sewing the fistula with two rows of stitches. For further secure the place of Surgery, emergency and intensive therapy, the duodenum is sewn up with the greater omentum lobe. It is shorter and less invasive method but it gives higher risk of bile leakage. There are still many speculations on advantages of proper technics used to save life of patients with aortoenteric fistulas.

Results: A secondary aorto-duodenal fistula is the most serious complication of the vascular graft introduction. It requires fast intervention and maverick thinking as it is an unusual pathology. Every taken reaction and implemented therapy is hazardous and has nearly unpredictable results. That is why it is so worth to focus on such topic.

Conclusion: As we presented in our work, the aortoduodenal fistula is very unusual and hard to cure disease. There will never be a hundred percent certainty of recovery despite of many treating contingencies. Aortic perforations belong to the hardest diseases with the lowest rate of survival. That is why it is so important to pay special attention to any symptoms that may suggest presented disease.

Eth: -

Dentistry

Needle phobia – a problem worth consideration?

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Introduction: Dental fear is a widespread, commonly known phenomenon, which is insinuated to majorly induce the avoidance of dental care. Not rarely does it take the form described as needle or injection phobia, which is of main interest in this paper.

Purpose: The aim of the study was to investigate the problem of injection phobia as well as to look into various ways to alleviate the pain experienced during the administration of local anesthetic by using alternative anesthetic techniques. Also, the purpose was to search for more niche methods to deal with phobic patients, such as autohypnosis or systematic desensitization.

Methods: Several papers were analyzed so as to get the comprehensive picture of the concept and to find solutions to the issue concerned. Also, a survey was conducted among students of dentistry, other medical and non-medical faculties to assess the approximate frequency of needle phobia as well as the possibility of developing the disorder investigated due to negative dental experiences from their childhood.

Results: It has to be admitted that fear of injection is an existing problem. It affects an estimated 4% of the general population. In many cases this is the reason why a multitude of adults tend to evade dental treatment when clearly required. There are numerous alternative anesthetic methods or aids,

such as needleless jet-injector systems, computer-controlled local anesthetic systems, vibrating supplementary devices, topical anesthetics etc. that prove to be useful in pain management. Nevertheless, psychological techniques, like systematic desensitization or autohypnosis, might as well turn out to be likewise efficient.

Conclusion: All in all, the concept of injection phobia needs to be considered every time during patients' dental treatment as it occasionally occurs in our society. Consequently, it shall not be neglected nor undervalued. On the contrary, the insightful diagnosis combined with individually adjusted therapy or form of anaesthesia is strongly recommended in order to provide the best quality of dental treatment to our phobic patient.



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Łódź 2015

Session: Dentistry

Endodontic retreatment – systematic literature review.

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Department: *Department of Endodontics*

Introduction: Despite the uninterrupted progress in Endodontics, the more and more advanced methods of root canal treatment applied by clinicians as well as the use of increasingly effective materials, the failure of the initial procedure still seems to be an existing problem. Therefore, the need for endodontic retreatment is to be faced with on everyday basis.

Purpose: The aim of the study was to investigate the possible ways of endodontic retreatment. That is, in particular, the use and the effectiveness of machine rotary systems as well as different gutta-percha and sealer solvents. The purpose was to explore the pros and cons of various rotary retreatment files, such as Mtwo R (VDW), D-RaCe (FKG Dentaire), R-Endo instruments (Micro-Mega), ProTaper Universal Retreatment Systems (Dentsply) in comparison to traditional hand instruments. The authors also examined the outcome of endodontic retreatment performed with or without solvents.

Methods: Several papers were analyzed so as to assess and compare the efficiency of certain endodontic retreatment instruments and materials.

Results: It has been noticed that none of the rotary or hand retreatment systems remove the root fillings completely. Furthermore, in comparison to hand instruments they appear to be equally effective. According to some authors the removal of filling material with machine systems is faster but there is a risk of higher heat production. The efficiency in removing gutta-percha sealer by some of them is questioned. It is also worth mentioning that rotary systems may lead to dentinal defects. As far as the solvents are concerned, the efficiency of eucalyptol, orange oil, xylol, chloroform and turpentine oil was compared. Xylol proves to be the most effective, yet the reports of its carcinogenic activity make its use questionable. Essential oils are the least noxious for body tissues, but their efficacy was not confirmed. The study has shown the superiority of rotary canal retreatment without any solvents. Moreover, the usage of gutta-percha and sealer solvents tends to deteriorate the force of the connection between tooth hard tissues and the future root filling.

Conclusion: In conclusion, the machine rotary files might be an option worth considering in endodontic retreatment. However, the usage of solvents in endodontic retreatment appears to be controversial.

Session: Dentistry

How does socioeconomic status of patients impact on frequency of dental check-up?

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Institiut: Medical University of Bialystok

Department: Restorative Dentistry Scientific Circle next to Department of Restorative Dentistry; Scientific Circle next to Department of Statistics and Medical Informatics

Introduction: Education has an influence on awareness of oral health care. The place of employment demands not only appropriate qualifications but also esthetic appearance. Incomes from work allow to make more frequent dental appointment and use additional preventive procedures.

Purpose: The aim of the study was to know the correlation between socioeconomic status of patients and frequency of dental check-up.

Methods: The information were obtained with a authors' survey. 331 questionnaire forms were filled in by patients of Specialistics Clinics in University Hospital in Bialystok. First of all authors received a permission from Bioethical Commission. Data was analyzed with Statistica 10.0 (Ch² Pearsona Test; $p < 0,05$).

Results: The group of patients who have incomes from their work more frequent ($p = 0,002$) than patients who get unemployment benefits (65,94 % vs. 58,3 %) have visited dental office for 6 months. First group of patients

are made dental check-up more often (40,74 % vs. 27,27 %). Correlation between source of income and frequency of dental check-up is statistically significant. ($p < 0,001$). Peoples with university education statistically ($p < 0,001$) more often than people with primary education make dental appointment every 6 months (40,57 % vs. 29,82 %) and visit dental office more often (62,04 % vs. 48,39 %).

Conclusion: Level of education and source of incomes have influence on frequency of dental appointments. Patients who have university education, incomes from their work, make an appointment with a dentist more often.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Dentistry

Dental torture? Level of anxiety among patients undergoing root canal treatment - a survey study.

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Institiut: *Medical University of Lodz*

Department: *Department of Conservative Dentistry and Endodontics*

Introduction: Despite of increasing awareness of dental procedures, people often have negative associations related to endodontic therapy. Patient's attitude and knowledge is a relevant aspect affecting the whole treatment process.

Purpose: The main purpose of the study is to assess patients' anxiety about endodontic therapy on the basis of survey study.

Methods: A questionnaire survey comprising 18 questions was distributed to patients in the Department of Endodontics Medical University of Lodz.

Results: The majority of respondents declared that they know what is root canal treatment. Most of the surveyed patients had experienced the endodontic therapy before. It was found that apprehension about the treatment affects most respondents. The study identifies the most fear-generating factors, pain is considered to be the main cause of anxiety.

Conclusion: Although the majority of patients declare the knowledge about root canal treatment, the therapy is often considered as unpleasant and painful. Endodontists should take measures to reduce anxiety and show patients that modern endodontic techniques are connected with greater precision, faster treatment and limited discomfort.

Medical University of Łódź

JUVENES PRO MEDICINA 2015
ABSTRACT BOOK

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Dentistry

A comparison of the shaping abilities of three nickel-titanium rotary instruments in simulated L-curved canals

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Department: Department of Endodontics

Introduction: One of the main objectives of root canal preparation is to shape canal system effectively whilst maintaining the original configuration without creating any iatrogenic events. Shaping the canal is the most time-consuming and difficult part of root canal therapy. The shaping procedure can be achieved either by classical hand or by mechanical preparation. A number of studies reported the superiority of rotary NiTi instruments over stainless steel hand files.

Purpose: The purpose of this study was to compare the shaping ability of three nickel-titanium rotary instruments in simulated L-curved canals. Hyflex CM (Coltene-Whaledent), ProTaper Next (Dentsply Maillefer) and eS5 Endostar (Poldent) rotary instruments were used in this experimental study.

Methods: In the present study, 30 resin blocks with simulated artificial L-curved canals were used and randomly divided into three groups. Before preparation by rotary instruments working length and canal patency were confirmed and the blocks were filled with black ink and photographed. The canals were prepared to an apical size of 30 according to the recommendations of the manufacturer. Each instrument was used only once. Pre-operative and post-operative images were superimposed by GIMP 2.6.

To investigate the shaping abilities of endodontic instruments, the amount of material removed at the different levels of the root canal, the change of working length and apical transportation were measured. The results were statistically analyzed with ANOVA, Kruskal-Wallis and Mann-Whitney tests.

Results: Hyflex CM Files ensured more central apical preparation and maintained the original shape in this region as compared to the other systems. On the other hand, the ProTaper Next instruments removed more resin from the coronal part, ensuring better conicity of this part of the canal with minimum deviation from the original course. In present study, statistically significant higher difference of change of working length was observed for ProTaper Next than Hyflex CM ($p < 0,05$).

Conclusion: Within limitation of the study, the results indicate the similar shaping abilities of compared systems in simulated L-curved canals. During preparation, no instruments fractured and no aberrations were observed.

Eth: This paper is approved by Local Ethical Committee. Łódź 2015

Session: Dentistry

Prevalence of premature loss of deciduous teeth in preschool children from Lodz

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Department: Department of Oral Surgery

Introduction: Premature loss of primary teeth means their extraction before physiological eruption of permanent teeth, in stadium when the roots of are not resorbed yet, or are resorbed only in small part, and the germs of the corresponding permanent teeth are still in their early stage of development. Early loss of primary teeth may have a lot of consequences, for example: malocclusion, inhibition of alveolar process. Chronic periodontitis may adversely influence germs of permanent teeth.

Purpose: To assess a pattern of premature loss of deciduous teeth in preschool children from Łódź.

Methods The patients selected for this retrospective study were selected by analyzing dental records of children, aged from 0 to 5 years old, treated at the Department of Oral Surgery of Medical University in Lodz. The children were divided into 6 age groups – children under 1 year, 2-, 3-, 4-, 5- and 6-years old. The studied group was analyzed according to sex, age, number of extracted teeth, and causes of extraction.

Results: Majority of primary teeth was extracted due to dental caries, whereas second reason was trauma. In total group of 656 patients, in 798 procedures, under local or general anesthesia, 2057 primary teeth were extracted. Only 93 of them were extracted because of other causes, such as

trauma – 77 cases and congenital or neonatal teeth in 16. Maxillary teeth were more often subjected to extraction than the mandibular (1563 to 494). Maxillary central incisors were the most often extracted teeth and their prevalence was 32,13% of all extracted teeth. There was no difference between boys and girls in the extracted type of tooth but there were significant differences among the different ages. The patients most frequently affected were 3 years old (181 patients, in average 3,22 extracted teeth per child) but the highest average number of extracted teeth per child was in 5-year old children group.

Conclusion: "This study has concluded that despite the improvements in pediatric dentistry over the last decades, caries and the subsequent pulpal pathologies remain the most common reason for extraction of primary teeth."

Eth:-



JUVENES PRO MEDICINA

Łódź 2015

Session: Dentistry

Effect of preemptive analgesia with paracetamol on post-extractive pain.

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Department *Student's Association by the Department of Dental Surgery*

Introduction: Post extractive pain is a frequent concern of many patients. Research about oral analgesics applied prior to extraction reveal significant reduction of pain intensity after local anaesthesia recedes. It is based on admission of an analgesic prior to nociceptive stimulus which causes preventive central hypersensitisation. One of the basic analgesics is paracetamol.

Purpose: The aim of the study was to assess the impact of preemptive analgesia using paracetamol on the intensity of pain in the post-extraction period.

Methods :The study involved 20 patients admitted in the Department of Oral Surgery, Medical University of Warsaw, with two teeth qualified for extraction. Paracetamol was given to each patient 60 minutes prior to extraction and the tooth was removed under local anaesthesia. The patient was asked to take paracetamol in case of pain and fill a questionnaire including questions related to pain intensity according to 0 to 10 scale (0-no pain, 10- maximum pain the patient can imagine) evaluated during first 48 hours post extraction. The patient was to determine the number of paracetamol pills taken within 12 hours post extraction and evaluate bleeding intensity from the alveolus. A week later another tooth was extracted under local anaesthesia without additional oral analgesia prior to

extraction. The same instructions were given and the same questionnaire was to be completed. The results were analysed statistically.

Results: The average age of patients was 35 years. The study included 12 men and 4 women. Statistical analysis shows that the average pain intensity over the first 12 hours post extraction without additional oral analgesic was estimated by the patients as 2 according to 0 to 10 scale. This value decreases after 48 hours to 0.68. Most patients reached for additional paracetamol after 2, 4, 8 and 12 hours. Statistics for the pain intensity after preemptive extraction shows that patients experienced significantly less intense pain, which never exceeded the value of 1 and lasted no longer than 24 hours. Only five patients reached at this time for additional painkillers, usually 5 hours after the extraction. After an additional analgesic premedication fewer patients complained of subjective feeling of bleeding.

Conclusion: "This study has concluded that despite the improvements in pediatric dentistry over the last decades, caries and the subsequent pulpal pathologies remain the most common reason for extraction of primary teeth."

Eth: This paper is approved by Local Ethical Committee.

Session: Dentistry

Parental awareness concerning dental trauma and its treatment in children- questionnaire study.

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Introduction: Dental trauma is the second most common cause of patients seeking help in dental surgery. Research shows, that 30% of children suffer from injuries of deciduous teeth and 25% of permanent teeth. Prevention from injury, provided first aid and appropriate treatment of trauma in children depends on commitment and knowledge of parents.

Purpose: The aim of the study was to assess the impact of preemptive analgesia using paracetamol on the intensity of pain in the post-extraction period.

Methods : The questionnaire contained 30 questions concerning various cases of dental trauma among children and ways of handling them. 600 parents of children receiving treatment at the Department of Pediatric Dentistry at Medical University of Warsaw took part in the questionnaire. Completed questionnaires were subjected to statistical analysis using the chi-square test and Spearman's rank correlation coefficient. A statistical significance of the results will also be assessed ($p < 0,05$).

Results: Into the study 600 questionnaires were included, 141 were excluded because of their incorrect filling. 68% of respondents claimed that

they never received information concerning treatment at the time of injury, while 17% of them received such information from their dentist or pediatrician. Only 19% of the parents would replant a knocked out permanent tooth. Among the respondents, 26% would carry a tooth to the dentist in a handkerchief, 17% in a cup of water, 11% in child's mouth, while one-third of the parents claims, that they have no such knowledge and are unaware of the influence of deciduous teeth injury on health of a permanent tooth. It has been observed, that there is twice as high awareness regarding knowledge on injuries in parents of children who have experienced dental trauma in the past is, comparing to those with no dental trauma history. There is a strong coefficient between parents' education and chosen means of transport of a tooth to the dental surgery or method of its cleaning.

Conclusion: The study showed that parents' knowledge on first aid in case of dental trauma is inadequate. It seems necessary to raise the awareness of parents through specific educational programs.

Eth: This paper is approved by Local Ethical Committee. Łódź 2015

Dermatology and venerology

Elevated level of serum uric acid in patients with chronic plaque psoriasis

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Introduction: Elevated serum uric acid concentration is commonly found in patients with psoriasis. It predisposes patient to gouty arthritis and is now considered as an emerging risk factor for cardiovascular mortality and morbidity.

Purpose: The study aims to evaluate the relationship between serum uric acid level, common inflammatory markers, disease severity, cardiovascular risk and concomitant joint ailments in patients with psoriasis.

Methods: The initial phase of the study included patients with exacerbation of chronic plaque type psoriasis lesions selected from Dermatological Wards patients, and age and sex matched generally healthy individuals. Assay of serum uric acid, C-reactive protein and lipid profile was done for all patients and controls on admission to the hospital ward. The second phase of the study further expanded both test and control groups and introduced set of questionnaires used to standardize measurement of disease severity, cardiovascular risk and joint ailments. Patients, whose medications or concomitant diseases are known to be the cause of elevated serum uric acid level were excluded from the study. Statistical analysis of the data was performed in STATISTICA 10 software

Results: In the initial phase of the study, the mean value of serum uric acid was $6,49 \pm 1,89$ mg/dL ($p=0,053$) and C-reactive protein (CRP) $7,5 \pm 12,34$ mg/dL ($p=0,02$) in patients with psoriasis. Obtained results for the examined group of patients did not appear statistically significant in case of serum uric acid but relevant difference between groups started to emerge. In the ongoing second phase of the study, analysis on metabolically matched groups showed statistically significant difference in serum uric acid level ($p=0,049$), CRP and erythrocyte sedimentation rate (ESR) ($p=0,0005$). No statistically significant correlation was found between Modified Psoriasis Epidemiology Screening Tool (PEST), Self-Administered Psoriasis Area and Severity Index (SAPASI) or the disease duration and serum uric acid or C-reactive protein within study group for the time being. Although ESR was significantly correlated with SAPASI ($p=0,04$) and CRP

Conclusion: The observations show that psoriasis is a systemic inflammatory process and dermatologists should not only focus on treating skin lesions, but also diagnose and monitor coexisting disturbances, in order to prevent the development of associated metabolic cardiovascular and rheumatologic disorders. Serum uric acid level has a potential of being relatively cost efficient and effective monitoring tool for patients with psoriasis and should be considered as a routine measurement. Further study on a larger group of patients is still required.

Eth: -

Session: Dermatology and venerology

Does systemic treatment of plaque psoriasis influence on adipokines serum level?

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Department: Department of Dermatology

Introduction: Psoriasis is common autoimmune-mediated chronic inflammatory skin disease. It is well known, that psoriatic patients are more likely to develop cardiovascular diseases or metabolic syndrome. It has been proven that psoriasis therapy may cause fluctuations in adipokines such as adiponectin, leptin and resistin serum level. Nonetheless, the influence of long-term therapy with monoclonal antibodies on these cytokines was not fully explicated.

Purpose: To assess adiponectin, leptin, resistin serum level throughout long-term biologic therapy in patients with plaque psoriasis in comparison to control group.

Methods: The blood samples from 50 plaque psoriasis patients were collected ahead of trial and in 12th, 24th and 52nd week of biologic therapy (with adalimumab, etanercept, infliximab and ustekinumab). Enzyme-linked immunosorbent assay (ELISA) was used to evaluate serum level of adiponectin, leptin and resistin in psoriatic patients and in control group (27 subjects).

Results: Serum level of adiponectin was notably reduced in psoriasis group (141,70 vs 179,51 ng/ml). However, serum level of leptin and resistin was significantly higher in psoriasis group (489,75 vs 254,20 pg/ml, 2,35 vs 2,06 ng/ml and). Serum level of resistin and leptin was decreasing during therapy (resistin: 12th week - 1,93 ng/ml, 24th week - 2,18 ng/ml and 52nd week - 1,96 ng/ml; leptin: 12th week - 477,90 pg/ml, 24th week - 382,64 pg/ml, 52nd week - 284,99 pg/ml). Serum level of adiponectin during therapy was still decreased (12th week - 132,80 ng/ml, 24th week - 135,57 ng/ml).

Conclusion: During treatment of psoriasis with monoclonal antibodies significant changes in serum levels of adipokines (adiponectin, leptin, resistin) are observed. By cause of adipokines presence in “psoriatic march” the reduction in development of metabolic syndrome and cardiovascular diseases may be achieved by proper control of psoriasis.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Dermatology and venerology

A comparative analysis of the effectiveness of treatment juvenile acne with Isotretinoin therapy

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Introduction: Juvenile acne is a chronic inflammatory disease induced by hormonal changes - excessive androgen stimulation. The disease is not only an aesthetic and medical problem but also psychological which can cause a reduction of the quality of patient's life.

Łódź 2015

Currently local and systemic treatment are used in average and severe form of juvenile acne. The basis of the systemic therapy are antibiotics - Tetracycline and Isotretinoin. Patients are often afraid of using Isotretinoin which is natural vitamin A acid derivative, due to the long list of side effects attributed to this drug inter alia its effects on mental state. Detailed and thorough knowledge of the most common side effects and the effectiveness of Isotretinoin therapy, may in the future lead to greater acceptance of this drug by patients.

Purpose: The aim of the research was the comparative analysis of the effectiveness of Isotretinoin therapy with another medicinal preparations used in the treatment of juvenile acne and the analysis of the side effects of Isotretinoin in the population of Lodz.

Methods: The study was carried out by using surveyed method from (November 2014 to February 2015). The author's survey consisting of 24 questions was sent to 300 patients at the age of 18 to 50 suffering from juvenile acne who were treated in the Dermatology and Venerology Outpatient Clinic between year 2000 and 2014. During the study, medical records stored in the Clinic were analyzed after obtaining written informed consent of the patients. The collected results were statistically analyzed.

Results: The results will be presented during the conference.

Conclusion: The conclusion will be presented during the conference.

Eth: This paper is approved by Local Ethical Committee.

Session: Dermatology and venology



JUVENES PRO MEDICINA

Łódź 2015

PHACE Syndrome - case report

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Introduction: PHACE is a neurocutaneous disorder, described first time in 1978. The literature on the subject is very poor. The diagnosis of PHACE had created problems for a long time. Now a multidisciplinary group of specialists established initial diagnostic criteria to confirm the disease. The hallmark of PHACE syndrome is facial hemangioma; other features are: posterior fossa brain malformations, large facial hemangiomas, arterial defects, coarctation of aorta, congenital heart defects, eye abnormalities and sometimes sternal defects. The symptoms may have a milder or more aggravated progress as a result of variability. The present study describes an 18 year-old-male with PHACE. Our patient was being diagnosed towards Dandy-Walker syndrome due to presence a hydrocephalus, congenital disorder in the posterior cranial cavity and the dysgenesis of the cerebellum. However, the patient's symptoms altogether were defined as PHACE syndrome.

Purpose: case report

Methods: case report

Results: case report

Conclusion: case report

Eth: -

Session: Dermatology and venerology

Kynurenic acid in skin care – pros and cons

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Introduction: In our preliminary study it was demonstrated that kynurenic acid (KYNA) is present in human sweat.

KYNA is a metabolite of tryptophan exerting anti-inflammatory, antibacterial and anti-proliferative effects. Previously, it was shown that herbs and honeybee products are rich in KYNA. Bearing in mind high herbal and honey cosmetics usage the safety of their ingredients should be carefully investigated.

Purpose: The aim of this study was to (a) investigate the influence of KYNA on keratinocytes and dermal fibroblasts in vitro, (c) investigate the effect of KYNA on skin cells exposed to ultraviolet B (UVB) radiation in vitro, (c) determine the amount of KYNA in cosmetics and herbal preparations used for skin care.

Methods: An immortal human keratinocyte cell line (HaCaT) and dermal fibroblasts (HSF) were used. Cell proliferation was determined utilizing 5-bromo-2'-deoxyuridine (BrdU) assay. HaCaT cells were treated with KYNA (10 pM – 5 mM) for 24 hours prior to irradiation with UVB (25 mJ/cm²). The effects of KYNA and UVB were evaluated by assessing DNA

damage in the single-cell gel electrophoresis (comet assay). Two comet scores: tail DNA and olive tail moment were analyzed statistically. $P < 0.05$ was considered significant. Commercial cosmetics and herbal preparations used for skin care were purchased from licensed producers. Each herb was weighed and prepared according to manufacturers' guidelines. KYNA was isolated on an ion exchange resin Dowex 50 and determined by using the high performance liquid chromatography (HPLC) system.

Results: Under in vitro culture conditions KYNA in a wide range of concentrations (1 pM – 5 mM) did not inhibit proliferation of HaCaT cells. In low pico- and micromolar concentrations a slight enhancement of BrdU incorporation into cellular DNA was detected. In contrary, the dose-dependent decrease of HSF proliferation was noticed in KYNA concentrations ranging from 0.1 to 5 mM.

In comet assay, KYNA in concentrations up to 1 mM did not affect organization of DNA strand break in keratinocytes. An enhancement of DNA damage was noticed only in highest KYNA concentration tested (5 mM). UVB (25 mJ/cm²) irradiation alone evoked DNA damage. Treatment of HaCaT cells with KYNA at concentrations from 10 pM to 100 μM before exposure to UVB did not affect DNA damage produced by light. KYNA at concentrations of 1 mM and 5 mM enhanced DNA lesion in HaCaT cells exposed to UVB. Although KYNA was detected in the majority of investigated cosmetics and all herbal preparations used for skin care, its concentration was low

Conclusion: According to our findings, there is no reason to suspect that KYNA might be harmful to skin cells. Furthermore, its use in scarring and wound healing as well as in daily skin care should be taken into consideration.

Eth:

Session: Dermatology and venerology

The assessment of the effect of a cosmetic product brightening the skin of people with discolorations of different etiology.

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Introduction: Hyperpigmentations are disorders displaying with the color change of the skin, its non specific shape, the lack of symmetry and the irregular location. They appear regardless of age, sex and often as a congenital defect. From the medical point of view, it is a disorder connected with overproduction of melanin by pigmentary cells. The formation of discolorations is due to both endogenous and exogenous. Cosmetics topically applied can help with uneven colors of the skin.

Purpose: The aim of the work was to assess the effectiveness of a cosmetic product applied on a skin with discolorations of different etiology.

Methods: The research was conducted in a group of 30 volunteers (agreement of the Ethics Commissions no RNN/58/15/KE/M) at the mean age of 50 who has used day cream for 6 weeks. The condition of the skin was measured at the beginning of the research, and after 3 and 6 weeks of using the product. The measurement of the cheeks and the forehead skin was carried out by using Mexameter and VISIA Complexion analysis. The volunteers assessed subjectively the effectiveness of the product. The cosmetic product (no 1473) consisted of the UVB/UVA filters, vitamin PP, shea butter, vitamin E, Rumex extract and biomimetic peptide (antagonist MSH).

Medical University of Łódź

Results: The regular application of the cream has caused the lightening of the facial skin by 13% in 88% respondents , and by 20% in 96 % respondents , respectively , after 3 and 6 weeks. (Mexameter). At the same time the number of UV spots has dropped by 9% in 80%, respondents, and by 10% in 84% respondents (VISIA complexion analysis). After 6 weeks of using the product , 83 % of volunteers agreed that the skin was lightened , about leveled colors. Moreover, the volunteers has claimed that the tested product has moisturizing and smoothing features.

Conclusion: The regular use of the cosmetic product that contains a combination of vitamin PP, Rumex extract and biomimetic peptide reduces the intensity of discolorations of different etiology. The contest of the filters helps to prevent the formation of hyperpigmentation and it can be also used as a complement to pharmacological treatment.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Forensic Medicine

Medical errors in pediatrics

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Introduction: Medical error, also called medical malpractice or error in medical practice, is not a legal concept. In forensic medicine it is frequently recognized that medical error involves inappropriate management (action or inaction), inconsistent with current medical knowledge and practice, the effects of which could have been avoided with ordinary care, without having to take emergency actions. The study analyzes the medico-legal opinions concerning the correctness of medical treatment in pediatric cases. The choice of specialization was not accidental - the authors concluded that the deficiencies in diagnostic and therapeutic procedures to which children are subjected can lead to serious consequences, sometimes affecting the whole of their adult life. It should be noted that there are few comprehensive studies on this topic.

Purpose: Analysis of medico-legal opinions on medical malpractice cases related to prevention, diagnostics and treatment of children in order to assess the scale of the problem and to characterize the phenomenon. Attempt to determine the causes of medical malpractice errors in medical treatment of children.

Methods: Medico-legal opinions concerning the correctness of medical treatment of children, issued by the Medical University of Lodz Department of Forensic Medicine in the years 2007 – 2009 were analyzed.

Results: Almost all of the analyzed cases concerned criminal proceedings (civil lawsuits percentage approximated 6% only). The investigation was conducted mostly for involuntary homicide (Art. 155 of the Penal Code) and exposure to the risk of loss of life or serious personal injury (art. 160 of the Penal Code). Among the analyzed material, in addition to the typical pediatric errors relating to the diagnostics and treatment of childhood diseases, errors in the field of pediatric Surgery, emergency and intensive therapy and anesthesia constituted a large group. Almost 60% of the cases involved cases with fatal outcome; nevertheless, as it follows from the statistics, only in every fourth opinion the experts regarded the physicians' actions as inappropriate.

Conclusion: As demonstrated by the study, the most frequent causes of medical errors include the negligent performance of the medical examination and the failure to order additional tests and examinations necessary to assess the case.

Eth: -

Session: Forensic Medicine

Infanticide, miscarriage or illegal abortion - case report

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Introduction: The paper presents a case of late miscarriage (during the second trimester of gestation) with massive injuries to the fetus, including decapitation.

Purpose: -

Methods: -

Results: In October 2014, the ambulance station dispatcher received a notification from a man who reported that his concubine was giving birth. When the ambulance team arrived at the place, rescuers found the woman bleeding from the genital tract. She was taken to a hospital in Skierniewice, where the birth of the fetus head and placenta took place. The police was notified by the hospital. At the woman's home, the remaining fragments of the fetus – the distal part of the right lower limb and trunk with the other limbs – were revealed. The cohabitant was arrested and woman was questioned. Because of the suspects' divergent testimony and intoxication (the woman had 4.98 ‰ of alcohol in the blood, the man almost 3 ‰) the case was reported to the prosecution, which, on suspicion of manslaughter, decided to conduct a medico-legal autopsy to elucidate the mechanism of fetal death.

Autopsy was performed 5 days after the death in the Department of Forensic Medicine in Lodz. The fragmented body and the placenta were delivered to the Department. Anthropometric study determined the gestational age of the fetus at about 20 weeks. On this basis, it was found that the fetus was incapable of extrauterine life. Examination and autopsy showed complete separation of the head from the body within the neck, right lower limb amputation in the knee joint and fragmentation of the umbilical cord. The nature of the injuries was considered to be indicative of pulling on the lower limbs, which were the leading part of the fetus. Toxicological examination of the body revealed the presence of ethyl alcohol in a concentration of 1.35 ‰.

Conclusion: On the basis of the autopsy image, it was established that the fetus was probably alive while passing the birth canal. Death occurred as a result of sustained injuries. The described case was confronted with other literature reports to compare the circumstances and the mechanism of injury.

Eth: -

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Session: Forensic Medicine

An analysis of medico-legal opinions on the correctness of prehospital medical care proceedings based on material from Department of Forensic Medicine in Lodz from the years 2007-2009

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Introduction: Nowadays, patients and their families are more dissatisfied with the medical care, and sometimes claim that it was incorrect. In some cases, the prosecutor's office is notified of an error committed by the medical personnel. After gathering evidence, the files are sent to forensic medicine experts, who are asked to issue an opinion concerning the correctness of medical practice.

Purpose: Analysis of medico-legal opinions on the correctness of prehospital medical care proceedings, issued by the Department of Forensic Medicine in Lodz in 2007-2009, and comparison with the results of research concerning the years 2003-2006 to show the underlying trends.

Methods: Analysis of 3326 medico-legal opinions issued in 2007-2009 in the Department of Forensic Medicine in Lodz.

Results: Opinions on the correctness of prehospital management accounted for 3,58% of all commissioned in 2007-2009. Nearly all of the cases were

reported to the prosecution by the patients or their family members. In most cases the victims were men. Approximately 18% of the cases were opinions on the proceedings in relation to a juvenile, the vast majority were children under five years of age. Death occurred in 69% of the opinioned cases, whereas in the minors' group the death rate exceeded 90%. Half of the notifications submitted to the prosecutor concerned emergency physicians, slightly fewer – primary care physicians, in some cases, emergency dispatchers or nurses were accused. Most of the investigation proceedings were carried out for the potential exposure to the risk of loss of life or serious bodily injury - art. 160 of the Penal Code, or involuntary manslaughter – art. 155. Most frequently – in over 20% of cases – the opinions concerned diseases of the respiratory system.

Conclusion: In most cases – 73% of reviews commissioned in the analyzed period, the experts found that medical treatment was correct. Among the 28 cases where an error was found, therapeutic errors accounted for the highest percentage – about 45% of cases, and organizational errors for the lowest. Only in 5 cases it was impossible to issue an unequivocal opinion of the procedure, which was caused by too skimpy evidence and divergences in the witnesses' testimony.

Eth: -

Session: Forensic Medicine

Disadvantages of the procedure of obtaining the informed consents from the patients

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Introduction: An informed consent is a document defining a range and terms of intervention of medical personnel in the patient's private sphere. The issue of the proper procedure for obtaining informed consent is questionable. The required full consciousness of the decision is difficult to receive due to the circumstances surrounding the treatment (emotional state, the influence of drugs). Apart from cases when the medical intervention is required immediately to save the life of the casualty, the primary obligation of the of the medical stuff obtaining an informed consent is to inform the patient about the risks and consequences of the procedure.

Purpose: The aim of the study is to analyze the conditions of legality of the procedure of obtaining the informed consent to perform the surgical procedure in a patient.

Methods: The study is based on the analysis of normative acts defining the requirements and proper form to fulfill the obligation of obtaining an informed consent and also the judicature indicating the specific cases of defective information in the context of a lack of legality consent of the patient (including the unexplained consent or treatment exceeding the range of the consent).

Results: The term of informed consent occurred in polish law relatively recently that is why the proper conditions and methods of obtaining it by physicians are not well widespread. What is more, the patients are not aware of ability to possess the full information about planned procedures, treatment options and its possible consequences. To declare informed consent, the patient must have adequate reasoning and be in possession of all relevant facts. There are situations when informed consent is signed by patients effected by mental illness, high level of stress or intoxication. In many cases the contents of document is insufficient for undertaken actions or not understandable for the patient because of medical language.

Conclusion: The informed consent for diagnostic and treatment procedures is a fundamental right of the patient which is regulated by the law. Properly obtained consent is also a valuable instrument that protects the physician in possible law conflicts.

The essential issue is to educate medical personnel about methods of obtaining the informed consent to make it legitimate document which will contain satisfactory information for the patient and be a non-time-consuming procedure for the doctor.

Eth: -

Session: Forensic Medicine

Serial murder of two women - a case report

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Introduction: Multiple or serial murders are of interest not only to the public and the media, but also to forensic specialists worldwide. The paper presents a case of double murder of two women, the perpetrator of which eventually turned out to be the son and brother of the victims.

Purpose: The authors present the circumstances, the results of examination of the bodies at the place of their disclosure, as well as the results of medical and forensic autopsy of the two women.

Methods: Inspection of the bodies at the crime scene and post-mortem examination. Analyze of a case dossier materials.

Results: Inspection of the bodies at the crime scene and post-mortem examination of both victims revealed, among others, bludgeon wounds to the head, bruises in the subcutaneous tissue and head muscles of the head, fractures of the calvaria and base of the skull, contusions, tears and lacerations of both hands.

Conclusion: The autopsy results allowed to conclude that the injuries had been inflicted by means of a hard, blunt or blunt-edged tool used with an average or considerable force. It was also suspected on the basis of the

autopsy that the perpetrator might have used a taser to incapacitate the victims.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Forensic Medicine

Medical errors in gynecology and obstetrics, based on the medico-legal opinions issued by Department of Forensic Medicine in Lodz in 2007-2009.

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Introduction: A steady increase in the number of cases associated with so-called medical errors has been observed in the recent years. The cases arousing most emotions, both of the interested parties and of the public opinion, are those related to gynecology and obstetrics.

Purpose: The aim of the study was to analyze medico-legal opinions concerning the correctness of medical procedures in the field of gynecology and obstetrics, issued by the Department of Forensic Medicine in the years 2007-2009.

Methods: Retrospective analysis of medico-legal opinions concerning the correctness of gynecological and obstetric procedures, issued in 2007-2009 in the Department of Forensic Medicine in Lodz.

Results: Within the analyzed period of time, 160 medico-legal opinions concerning the aforementioned issues were identified, including 56 of 2007, 47 of 2008 and 57 of 2009. In 72% of cases, they had been ordered by the prosecutors' offices, in 20% by courts, and in 8% by police headquarters.

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Most of the cases concerned obstetrics and correctness of labor management, significantly fewer – gynecological problems. The investigation was most frequently conducted in terms of the potential exposure to the risk of loss of life, or serious personal injury, i.e. under Art. 160 of the Penal Code, as well as involuntary homicide , i.e. under Art. 155 of the Penal Code (64% of the total number of cases). Most allegations by the aggrieved parties were associated with failure to perform, or too late performance of cesarean section, while only one case involved the problem of a cesarean section performed without medical indications.

Conclusion: Irregularities in medical treatment were observed in 59 cases; however, only in 30 a causal relationship between them and the resultant exposure to the risk of loss of life, serious personal injury, or one of the forms of damage to health could be demonstrated. The most frequently observed irregularity was failure to monitor the fetus wellbeing with cardiotocography during labor.

Eth: -

JUVENES PRO MEDICINA

Łódź 2015

Session: Forensic Medicine

Multiple chop wounds as the cause of death of a woman and her two children – case report

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Introduction: Chop wounds are wounds caused by a heavy, sharp-edged weapon or tool used with a considerable force. The appearance of injuries of that type on the body surfaces resembles that of cut wounds. However, in addition to an injury to the superficial structures, extensive damage to the underlying tissues, including bones, is present in such cases. Most often they are inflicted by a foreign hand and situated within the head, which is associated with extensive craniocerebral injuries, most frequently fatal.

Purpose: -

Methods: -

Results: The paper presents a case of triple homicide – of a woman and her two children – committed with an axe, with subsequent unsuccessful suicidal attempt of the perpetrator, who was the woman's husband and father of the children. Visual inspection of the victims was carried out at the crime scene, then their bodies were transported to the Department of Forensic Medicine in Lodz for medical and forensic autopsy. Each victim had numerous chop wounds, located mainly on the head and neck.

Conclusion: The results of autopsies and accessory investigations allowed to establish that the wounds were inflicted by a foreign hand while the victims were still alive. All the victims demonstrated signs of massive blood loss, additionally, air embolism heart failure was revealed in the woman, and extensive craniocerebral injuries in one of the children.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Gynecology and Obstetrics

Is treated hypothyroidism related to pregnancy complications?

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Introduction: Untreated, or inadequately treated, hypothyroidism increases the risk of pregnancy complications and deficits in intellectual development in infants.

Purpose: Our aim was to compare the prevalence of most common pregnancy complications in healthy patients and patients with treated hypothyroidism.

Methods: Retrospective analysis of medical data of 225 patients who delivered in I Department of Obstetrics and Gynecology Medical University of Warsaw in 2014 was made.

The study group (SG) consisted of 79 patients with hypothyroidism diagnosed before or during pregnancy. All patients were treated with levothyroxine. The control group (CG) consisted of 146 patients with normal TSH levels in the first trimester, without hypothyroidism before pregnancy. Multiple pregnancies were not included in the study.

The statistical analysis included χ^2 test and logistic regression analysis in order to calculate the odds ratio (OR).

Results: 52 patients (23% of all women) have been diagnosed with

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hypothyroidism before pregnancy. 27 women (12%) were diagnosed with hypothyroidism during the 1st trimester.

Median dosage of levothyroxine supplementation before pregnancy amounted 75 µg and during pregnancy it was significantly higher (87,5 µg vs 75 µg; $p < 0.001$). Both groups were comparable in age (SG– 32.3 years vs CG –31.3), BMI (SG- 29.4 vs CG- 28.3), gestational age at delivery (SG- 38.6 vs CG- 38.5), parity (primiparas: SG- 60.9% vs CG- 54.4%), mode of delivery (cesarean section: SG- 54.4% vs CG- 54.5%).

There were no significant differences between both groups in the frequency of analyzed pregnancy-related complications (gestational diabetes: SG 13.9% vs CG 13%; pregnancy induced hypertension: 7.6% vs 9.6%; preeclampsia: 0.0% vs 2.1%; premature rupture of membranes: 21.5% vs 17%). IUGR occurred less often in the study group (1.3% vs 8.2%), but the difference was not statistically significant ($p = 0.06$).

There were no statistically significant differences between APGAR scores in 1st and 5th minute in the groups. Infants with scores ≤ 7 were delivered by 8.9% of patients from the study group and 4.8% from the control group ($p = 0.2$). The risk of delivering a newborn with Apgar score below 7 was about twice as high in patients with hypothyroidism (OR=1.9 (95% CI 0.7-5.7) but without statistical significance. Premature birth occurred in 9.6% of patients in the SG and 9.7% in the CG ($p = 0.9$). Median neonatal birth weight was 3340g (SD= 642g). There were no statistically significant differences between the groups, both in low birth weight (<2500 g) (CG 8.9% vs SG- 10.1%) and very low birth weight (<1500 g) newborns (CG- 2.2% vs SG- 1.4%).

Conclusion: Hypothyroidism is a common disease in women in childbearing age. It is likely that due to wide screening for hypothyroidism in the first trimester of pregnancy and adequate thyroxine supplementation, hypothyroidism has no influence on the frequency of most common pregnancy-related complications and newborn health condition.

Eth:

Session: Gynecology and Obstetrics

Medical University of Łódź

Effectiveness of teaching elderly women with pelvic organ prolapse how to use cube pessaries during the day

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Introduction: Frequency of pelvic organ prolapse (POP) in women increases with age, especially after menopause. POP non-operative treatment with cube pessaries is nowadays applied more often. Using pessaries only during the day, and taking them out for the night, considerably decreases complications' risk. There is a few data on the possibility of teaching inserting and taking out pessaries in elderly women.

Purpose: Assessment of the effectiveness of teaching elderly women day only use cube pessaries. Designing brochures for patients to facilitate learning of inserting and taking out cube pessary.

Methods: In the study we included female patients aged 65+, who were offered therapy with cube pessary use due to POPQ ≥ 2 . During the visit each patient was instructed how to insert and take out the pessary. On the control we analysed if the pessary was used and what caused the difficulties. On the basis of patients' remarks the leaflet was formulated.

Results: In the analysis we included 74 patients, who were 65-86 year old (on average 73,3). 49 women confirmed using pessaries on the control visit.

Due to mostly asked questions and expressed comments the brochure was designed.

Conclusion: Cube pessaries can be used for the day only in majority of elderly women with pelvic organ prolapse.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Gynecology and Obstetrics

The usefulness of the introital pelvic floor ultrasound in teaching how to perform the Kegel's exercises

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Introduction: Pelvic floor muscle exercises (Kegel's exercises) are one of the most often-used nonsurgical treatment options for stress urinary incontinence. Their efficacy depends on the proper technique of performing the muscle exercises. Introital pelvic floor ultrasound (PF-US) is becoming more often used in urogynecological patients. A lot of specialists inform about the possibility of teaching female patients how to perform pelvic floor muscle exercises during pelvic floor ultrasound. However, the real utility of PF-US for such use was not evaluated in many studies.

Purpose: The aim of the study was to assess the usefulness of introital PF-US for teaching the pelvic floor muscle exercises.

The additional aim of the study was to design the brochure for patients how to perform Kegel's exercises.

Methods: In the study we included 82 women aged 35-76 (average 58,2). On the beginning pelvic muscle strength was assessed manually using the

modified Oxford scale. Then, during introital PF-US performed with a transvaginal probe, female patients were instructed how to perform Kegel's exercises in a proper way. After that the pelvic muscle strength was assessed manually with Oxford scale use once again. On the basis of the results of our study and the analysis of the literature, the instruction of pelvic floor muscle exercises was prepared for the patients.

Results: In two groups of patients who were able to perform Kegel's exercises before PF-US teaching on the mediocre level (Oxford values 2 and 2,5) statistically significant improvement in the efficiency of doing Kegel's exercises was noticed (respectively $p < 0,0000$ and $p < 0,05$). The improvement of Kegel's exercises efficiency was not noticed in patients who performed exercises on high level before teaching during introital pelvic floor ultrasound. In Oxford 3 group p value was 0,09. In 33% of patients from Oxford value 1 group and 10% of women from Oxford 1,5 value group there was noticed slight improvement of Kegel's exercises efficiency, however the difference was not statistically significant.

Conclusion: Introital pelvic floor ultrasound seems to be helpful for teaching and improving the technique of pelvic floor muscle exercises.

Eth: This paper is approved by Local Ethical Committee.

Session: Gynecology and Obstetrics

Analysis of the method of termination of pregnancy in nulliparous women after 35 years of age

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Introduction: Nowadays, late motherhood is more frequent. Because of socioeconomic reasons a significant number of women decides for the first pregnancy after 35 years of age. Unfortunately, pregnancies at that age are connected with a higher risk of complications.

Purpose: The aim of the study was to analyse the way of the end of pregnancy in nulliparous women after 35 years of age.

Methods: A matched retrospective cohort study was conducted among patients who delivered at Pirogow's Hospital, previously Madurowicz's Hospital in Łódź in 2007-2012. A study group of 418 nulliparous women aged 35 or older was enrolled. The control group included 406 nulliparous women aged 34 or younger. A duration of pregnancy, way of delivery (normal vaginal delivery, forceps delivery or Caesarean section(CS)), indications for CS and the urgency of this procedure (whether it was elective or urgent) were evaluated. The results of the study were analysed by Statistica 12.0 and Excel programmes.

Results: In study group 112 women (26,79%) gave birth in normal vaginal parturition, in 4 cases (0,96%) forceps delivery was conducted, 302 patients undergone CS (72,25%). In control group results present as follows: normal vaginal delivery – 182 (44,83%), forceps delivery – 14 (3,45%), CS – 210 (51,72) (Chi² test, p = 0,00000). In study group there were 54 preterm deliveries (before 37 hbd) (12,92%), while in control group only 16 (3,94%) (Chi² test, p = 0,00000). In study group 52,98% of CS's were elective whereas 47,02% were emergency. In control group elective CS's constituted 33,33% and emergency CS – 66,67% (Chi² test, p = 0,00001).

Conclusion: Nulliparous women after 35 years more often give birth via caesarean section. Moreover, it can be observed that in the study group percentage of elective indications was higher than in the control group. Nulliparous women after 35 years of age more often born prematurely.

Eth:



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Łódź 2015

Session: Gynecology and Obstetrics

Case study of high risk pregnancy ended in 26th week of gestation with unforeseen cesarean section.

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Introduction: Fetal peripheral flow evaluation including umbilical arteries is an inherent part of fetal echocardiography. Possible flow abnormalities are features suggesting circulatory fetal centralization and indicate fetal vascular stress. We present a case of 38 year old patient C1P1 referred to the Department of Prenatal Cardiology, Polish Mother's Memorial Hospital Research Institute due to positive PAPP-A test suggesting increased risk of 21. trisomy. Fetal echocardiography revealed incorrect flow via umbilical artery with periodic absent umbilical arterial end diastolic flow, AEDF. Moreover the fetus was small for gestational age. We observed initial phase of intrauterine growth restriction and the hyperoxygenation test was proposed. No reaction in peripheral flow was found. Before next echo examination cesarean section was performed due to preterm birth at 26 weeks. The infant weighing 320g with Apgar scores of 1/1/1, died following extremely low birth weight.

Purpose:

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JUVENES PRO MEDICINA 2015
ABSTRACT BOOK

Methods:

Results:

Conclusion:

Eth:



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Łódź 2015

Session: Gynecology and Obstetrics

Evaluation and comparison of efficacy and safety of Foley catheter with and without traction in preinduction of labour

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Introduction: A total of 197 women with unfavourable cervix induced at term hospitalized in Pirogowa Specialistic Hospital in Lodz, Poland between June 2013 and March 2014. It is an analysis of data gathered on preinduction by use of Foley catheter. It is a very common procedure nowadays and it is worth considering which form of it is the best when we estimate efficacy, safety and patients' comfort. What else is important is that only one more paper except ours focuses on two mostly used methods of preinduction with Foley catheter: one with and another without a traction.

Purpose: The aim of the study was to evaluate the efficacy and safety of labour preinduction with the use of the Foley catheter with and without traction.

Methods: Two cervical ripening study arms were used: Foley catheter with traction (105 women) and in Foley catheter without traction (92 women). The catheter was removed if it did not fall out spontaneously, when regular contractions appeared or on patient's request. Lack of spontaneous onset of labour was followed by induction of labour. The patients were advised to walk as much as possible during

preinduction. In all the patients CTG had been done to evaluate the condition of the fetus.

Results: The cesarean section rate was significantly higher in the Foley catheter without traction group (Foley catheter without traction 52% vs. 44% in the Foley catheter with traction group, $p < 0,05$), as well as assisted labour rate (12% in no traction vs. 3% in group with traction, $p < 0,05$). The preinduction with the Foley catheter alone lasted much longer than the one with traction (795 min vs. 266 min, $p < 0,5$). On the other hand, there was no significant difference in duration of whole labour or first and second period of labour. Foley catheter was spontaneously expelled more often in the Foley catheter with traction group (83,8% vs. 9,89%, $p < 0,05$). Patients with Foley catheter with traction were the ones who asked for its removal more frequently than patient from the other group (16,2% vs. 3,29%, $p < 0,05$). In 38% of patients with Foley catheter with traction vs. 15% of women with Foley catheter without traction ($p < 0,05$) preinduction led directly to labour and no induction was required. In these patients whose Foley catheter was expelled spontaneously, time from expulsion to the beginning of labour was shorter among women preinducted with Foley catheter with traction (18 h 14 min) than among these without traction (23 h 8 min).

Conclusion: Both Foley catheter with traction and Foley catheter without traction are useful methods of labour preinduction. However, Foley catheter with traction seems to be a safer method because of significantly shorter time of preinduction, lower cesarean section and assisted labour rates as well as higher efficacy in leading to labour without following induction. Also preinduction with Foley catheter with traction caused the beginning of labour in significantly shorter period of time.

Eth:

Session: Gynecology and Obstetrics

The new observation in prenatal narrowing of the aorta in two cases

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Introduction: Coarctation of the aorta (CoA) – pathological narrowing of this great vessel – is regarded as an irreversible congenital heart defect. However, false-positive images of CoA resulting from functional disturbances are reported and cases of spontaneous regression of this defect are fairly rare.

Purpose: To present a new hypothesis of regression of suspected prenatally CoA.

Methods: Case A: Thirty-one-year-old C3P2, at 35w5d of GA presented at the Prenatal Cardiology Department for fetal echo, referred by her obstetrician due to suspected CoA.

At the tertiary fetal cardiology center there were four fetal echo exams : at 35w5d, 36w, 37w and 38w of gestational age which revealed: a disproportion in size at the level of atria, ventricles and great vessels, hypoplastic aortic arch and several small ventricular septum defects. The differential diagnosis included pulmonary hypertension and the coarctation of the aorta. The fetus was in good cardiological condition during all examinations (10 points of CVPS). The striking abnormality was umbilical cord encircling the neck of fetus which was noticed in the third exam.

Case B: Twenty-year-old C1P0, suffering from hypothyroidism, at 38 weeks of GA was referred to our institution also with suspicion of fetal CoA. One echo examination was performed before the delivery, revealing an abnormal three-vessel view and a strong disproportion in size at the level of atria and ventricles, with the right heart larger than the left. This fetus also presented umbilical cord tightly wrapped around the neck.

Results: Newborn A, female was born at 38 weeks of gestation by vaginal birth. The CoA was not confirmed after delivery. Ventricular septum defect was confirmed postnatally and operated in the 9th month of postnatal life .

Newborn B, female was born at 39 weeks of gestation by cesarean section. Normal heart anatomy was described by pediatric cardiologist. The child was discharged on the 8th day of its postnatal life in good condition.

Conclusion: 1. Functional disturbances may mimic prenatally narrowing of the aorta.

2. Umbilical cord enlacing the fetus neck should be look for in suspected cases of fetal CoA.

3. Improvent of the parent's counseling process in these situations is needed so that they were not unnecessarily stressed.

Eth:

Session: Gynecology and Obstetrics

Analysis of the accuracy of transvaginal ultrasound performed by different gynecologists in detecting the endometrial diseases in postmenopausal asymptomatic women.

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Introduction: Ultrasound examination is performed during almost every gynecological examination. It is caused by easy access to ultrasound equipment and the fear of overlooking cancer of female reproductive system. As a consequence of that procedure asymptomatic patients with ultrasound image ‘suspicious for endometrial pathology’ are admitted to hospital for invasive diagnostic. However there is no screening for the endometrial cancer available now, including transvaginal ultrasound.

Purpose: The aim of the study was the analysis of the value of transvaginal ultrasound (TVS) examination performed by different gynecologists in diagnosing endometrial diseases in asymptomatic postmenopausal women.

Methods: Postmenopausal asymptomatic women with the sonographic image ‘suspicion of endometrial pathology’ admitted to the hospital for invasive diagnoses were included in the study. We considered sonographic

diagnosis correct in all cases where histopathological diagnosis revealed endometrial cancer, polypus or hyperplasia.

Results: 107 postmenopausal women age between 52 and 77 years were included

in the study. The predictive value of positive transvaginal ultrasound (TVS), performed by different gynecologist, varied from 0% to 39%.

Sonographic pictures which best correlated with endometrial pathology were: irregular echogenicity of endometrium width over 12 mm and fluid with solid elements in the uterus cavity. Conclusion: 1. There were big differences in the predictive value of endometrial diseases of transvaginal ultrasound performed by different gynecologists in postmenopausal women without abnormal bleeding. 2. Ultrasound pictures of irregular echogenicity of endometrium width over 12mm and fluid with solid elements in endometrial cavity well correlated with endometrial pathology.

Eth: This paper is approved by Local Ethical Committee. Łódź 2015

Head and neck medicine

Evaluation of treatment results of patients after eye socket reconstructive Surgery, emergency and intensive therapy

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Introduction: In recent years the amount of injuries of the upper and middle face floor is growing (44-71% of all facial skeleton trauma), in which the most common results are eye socket fractures. This area consists of delicate and susceptible to injuries structures which may effect in high risk of serious complications such as: enophtalmos, diplopia, impaired movement of eyeballs or sustained facial paresthesia. In most of the cases the treatment of these injuries is surgical. Autogenous bone grafts, titanium implants and individual poliethylene implants are the most popular materials to reconstruct the traumatic lesions. The usage of these materials has its own advantages and disadvantages. On the other hand, every surgical intervention may lead to complications.

Purpose: The purpose of the research was to evaluate the causes of injuries, results of treatment and possible patients' complications after eye socket reconstructive surgeries.

Methods: The research was conducted among patients of the Department Of Maxillofacial Surgery, emergency and intensive therapy, who undergone the Surgery, emergency and intensive therapy of eye socket reconstruction after trauma in this area (excluding oncological patients) between 2011 and 2014. Data were acquired from 30 patients in age range 19-60 years old (age median was 32 y.o.), from which 80% were man. The diagnose was

based on the clinical examination and Computed Tomography. The clinical data based on the medical documentary and taken anamnesis were analysed. The following criteria were taken under consideration: the kind of surgical access and reconstructive material, number of surgeries, the size of remained paresthesia and impairment of field of view.

Results: The most frequent cause of injury was beating (42%) and transport accidents (29 %).The majority of patients suffered from sustained facial paresthesia after injury (84%) and more than a half from more frequent irritation of the eye on the operated site in comparison with eye on the healthy part of the face (53%). Also, the major part of the examined group noticed changed symmetry of the face – compared to appearance before the accident, but the same group was satisfied with achieved cosmetic effect (75%). Some of the patients pointed out on sustained diplopia in one or more directions of view (38%).

Conclusion: Injuries of facial skeleton in eye socket area that are qualified to surgical treatment, very often result in severe functional and esthetical disorders. The post-injury complications of the majority of patients are decreased after surgical treatment. The satisfactory cosmetic effect has been achieved while using individual-shaped implants. Therefore, it is important to improve treatment methods which can help people with facial skeleton trauma to achieve the best possible anatomical compatibility of reconstruction and surgical access, which can be the least invasive and traumatic for the patients

Eth:

Session: Head and neck medicine

Diagnosis and pharmacological treatment of symptomatic vitreomacular traction (VMT) in aspect of the new classification of vitreoretinal interface (VMI).

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Introduction: As the eye ages, the posterior vitreous hyaloid detaches from the retinal surface. This process is referred to as posterior vitreous detachment (PVD) and it is associated with the change of the liquid and gel vitreous volume during ageing. In some patients however, only a partial PVD occurs and part of the posterior hyaloid remains attached to the foveal area and that can lead to vitreomacular traction. Until recently, the only treatment for VMT, macular holes and other diseases related to abnormalities of the vitreoretinal interface was vitrectomy. A less invasive and traumatic approach might be to induce a PVD by intravitreal enzyme injection as proposed in several macular disorders. Ocriplasmin is a truncated form of human plasmin created via recombinant technology DNA from a yeast (*Pichia pastoris*) expression system. It acts both as an interfactant and liquefactant by exerting its proteolytic activity against the two major components of the vitreoretinal interface: fibronectin and laminin. Injection of intravitreal ocriplasmin represents a new option to be considered along with expectant management and surgical intervention in select patients with symptomatic VMA and VMA-associated macular hole.

Purpose: The aim of this paper is to assess the incidence of symptomatic vitreomacular traction (VMT) by optical coherence tomography (OCT) and to select a group of patients, which qualify for treatment with ocriplasmin

on the basis of the new optical coherence tomography (OCT)-based anatomic classification system for diseases of the vitreomacular interface (VMI).

Methods: One-thousand-two-hundred-twenty-eight eyes of 634 patients were examined by optical coherence tomography angiography within three months in The Nicolas Copernicus State Hospital in Koszalin. After comprehensive interpretation of the OCT scans, they were divided into different types of traction (isolated, concurrent, focal, broad). The significant criterion was also the interview, including refraction test - the best-corrected visual acuity (BCVA) and metamorphopsia assessment.

Results: Vitreomacular traction (VMT) were diagnosed in 38 patients (44 eyes) in one or both eyes; focal isolated tractions were diagnosed in 7 patients (9 eyes), focal tractions with epiretinal membrane in 2 patients (2 eyes), broad tractions with epiretinal membrane in 2 patients (2 eyes), concurrent tractions in 15 patients (18 eyes) and there were 12 patients (13 eyes) after laser photocoagulation. Indications for treatment include: focal traction without epiretinal membrane, age < 65 years, phakic patients.

Conclusion: In examined group of patients there were only 7 patients adequate for enzymatic vitreoretinal treatment. Average age of patients was over 65 years. What is significant, there were no diagnosed patients with macular hole < 400 microns and coexistent VMT. Patients with full-thickness macular hole were already classified as 4th stage in Gass classification as full-thickness macular hole with full posterior vitreal detachment.

Session: Head and neck medicine

"White Saturday" - for the sake of better hearing for elderly

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Introduction: Due to the increasing number of older people in our society more attention should be paid to the correct diagnosis and treatment of hearing loss in these patients because of hearing loss in people over 60 years old, who are often still working, can eliminate them from the labor market . In the group of patients using hearing aids are also those who do not obtain the maximum benefit for it, which reflects in the quality and comfort of their lives.

Purpose: Evaluation of hypoacusia, quality of life and probability of implantation treatment of the elderly people who were submitted for hearing screening events conducted in Department of Head and neck medicine of Barlicki Memorial Hospital in Łódź in October 2012 and April 2015.

Methods: Campaign, called: "White Saturday", was aimed at patients with the problem of hypoacusia, to whom hearing aid does not help compensate their hearing loss. 91 people were tested from the point of view of hearing implant implantation. Patients underwent pure tone audiometry and in the examination room they got to know the alternative solutions to their hearing problems. In addition, patients completed questionnaires which collected demographic and epidemiological data, as well as the assessment of the quality of life with hearing aid (standard questionnaires APHAB and GBI).

Results: 61 questionnaires were collected with the demographic and epidemiological data, 50 questionnaires Glasgow Benefit Inventory (GBI) which measured quality of life and 50 abridged questionnaires of results of the use of hearing aids (Abbreviated Profile of Hearing Aid Benefit - APHAB). The study contributed to pre-qualification of 5 patients to implantation of bone conduction implant (5.49% of the respondents), 10 for a cochlear implant (10.99% of respondents) and 2 for hybrid implant (2,19% of the respondents).

Conclusion: Despite the deteriorating hearing loss in the elderly there are yet many other methods of treatment that can significantly improve the quality of life of those patients and enable them to continue their work.

Eth:-



JUVENES PRO MEDICINA

Łódź 2015

Session: Head and neck medicine

The removal of metallic foreign body from the orbit by endoscopic method through the maxillary sinus using neuronavigation

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Introduction: Authors present the case of 25 year old woman with metallic foreign body in the orbit. At 6 years of age patient was shot with the air rifle and ended up with right eyeball injury. The bullet stuck in the lower part of the apex of the orbit, just above the right maxillary sinus' superior wall. For 10 years, the woman has been unsuccessfully treated for complex partial and secondarily generalized seizures. The patient went through meningitis and encephalitis. In CT scan there was found a hypodense area in the left temporal lobe. The presence of the metallic foreign body made it impossible to perform head MRI.

Purpose: To indicate the usefulness of modern neurosurgical techniques to remove intraorbital foreign body.

Methods: In general anesthesia, in the supine position with head placed in the Mayfield's frame tilted rearward, surgeon cut the oral vestibule's mucosa on the right side above the canine fossa and opened the anterior wall of the maxillary sinus in the area of 1 cm in diameter. Location of a foreign body was indicated by using BrainLab® neuronavigation system. The mucosa of the upper posterosuperior wall of the maxillary sinus was removed. Using the Kerrison punch the inferior wall of the orbit was abolished in the area of 6 mm in diameter. Subsequently, orbital periosteum

and connective tissue were cut, then the bullet was removed in one piece. Space after the removed bullet was coagulated and sealed with tissue-glue-coated collagen sponge TachoSil®. The procedure was completed with suturing sublabial mucosa with several sutures. Wound healing occurred without complications.

Results: Bullet was successfully removed in one piece with the aid of neuronavigation system. Control head MRI confirmed the presence of ischemic area in the left temporal lobe.

Conclusion: The procedures of removing a foreign body from the orbit are associated with a high risk of damage to the anatomical structures, posing a potential threat to the health and life of the patient. In these cases, the use of neuronavigation system and choosing the best way to reach the target, including the use of endoscopy through the maxillary sinus, allows an efficient and safe operation within the orbit. The ability to choose the precise trajectory of access reduces surgical trauma and Surgery, emergency and intensive therapy time.

Eth: This paper is approved by Local Ethical Committee

Łódź 2015

Session: Head and neck medicine

PREDICTIVE VALUE OF LYMPH NODE BIOPSY IN ORAL CAVITY SQUAMOUS CELL CARCINOMA

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Introduction: Oral cavity squamous cell carcinoma (OCSCC) is a highly lethal, loco-regional disease of upper aerodigestive tract. The most important factor affecting prognosis and treatment modality for patients with OCSCC is status of cervical lymphatic tissue. If tumor metastasis are discovered in cervical lymph nodes, average 5-year survival rate is lower than 50%. If nodal metastasis are detected during clinical evaluation, therapeutic neck dissection is an essential part of the treatment, but there is present continuous debate how to manage patients with no clinical evidence of lymph node metastasis. Therefore sentinel lymph node biopsy (SLNB), based on idea that tumor cells spread from primary site to a single node or group of nodes before progressing to the remainder of the cervical lymphatic tissue, became an alternative or additional staging procedure. Though SLNB is still an invasive procedure, it gives less morbidity, prevents overtreatment and presents with better cost-effectiveness strategy then elective neck dissection, watchful waiting or genome profiling.

Purpose: The aim of this study is to evaluate usefulness of sentinel lymph node biopsy during OCSCC treatment and follow-up.

Methods: 45 patients had been treated in Department of Head and Neck Neoplasms Surgery, emergency and intensive therapy, Medical University of

Medical University of Łódź

Lodz for oral cavity squamous cell carcinoma (OCSCC) between 2006 and present day. Despite surgical resection of tumor, they underwent SLNB followed by postponed, uni- or bilateral neck dissection type I-III. Specimens obtained during surgeries were analyzed. Results of histopathological examination were compared with other data gathered during diagnostic and treatment procedures.

Results: In 6 patients, among all who had been operated because of OCSCC, the sentinel lymph node presented with positive result during histopathological examination, five of them was positive in CK reaction and one in standard HE stain. Patients with positive SLN underwent radical neck dissection. In all patients adjuvant radiotherapy has been administered. In one case, 12 months after treatment, nodal recurrence had been discovered during follow-up examination.

Conclusion: The sentinel lymph node biopsy seems to be a sensitive method in detection of neck metastasis in cT1-2N0 OCSCC. However SLNB lets to prevent from harmful surgical procedure and helps to raise cost-effectiveness status, certain potential limitations must be taken into consideration each time SLNB is considered.

Eth: This paper is approved by Local Ethical Committee

Session: Head and neck medicine

Orbital reconstruction using rapid prototyping technique method in comparison of traditional methods

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Introduction: Computerized tomography DICOM file can be relatively easily transformed to a virtual 3D model. With the help of additional software (Geomagic Studio, Geomagic Qualify, Geomagic Corp., Morrisville, USA; Mimics, 3D Systems Corp.) we are able to create the mirrored model of an undamaged orbit and on this basis produce an individual implant for the patient. Authors decided to apply individual implants, titanium mesh, titanium plates and hip bone graft to reconstruct orbital walls.

Purpose: The aim of this study was to present and compare functional results of individual reconstructions of orbital wall using titanium mesh bent on 3D model, manufacturing individual implants in milling and melting technology [Rapid Prototyping technique] with traditional methods of reconstruction of orbital walls such as titanium plates and iliac crest graft.

Methods: 95 consecutive patients affected by orbital wall fracture (70 males, 25 females, mean age 38,8) were treated in Department of Maxillofacial Surgery from 2010 to 2015. In the first group we used patient specific treatment by titanium mesh shaped on a 3D printed model made in ABS material of a mirrored intact orbit, UHMW-PE and zirconia implant dioxide by CAM milling individually manufactured (39 orbits). In the

second group traditional reconstruction using titanium plates, iliac crest graft (54 orbits) were performed. Using ANOVA test we have compared intraoperative bleeding, hemoglobin decrease, liquid infusion, surgery duration, hospitalization period, interoperative bleeding, age.

Results: Comparing intraoperative bleeding in Rapid Prototyping [RP] group there was lower bleeding ($p=0,017943$), there was no significant difference between hemoglobin decrease, liquid infusion, surgery duration, hospitalization period, in the two groups. We have proved that ODI [orbital destruction intensity scale] differed significantly [$p=0,0047$] in two groups. We have proved that there is no significant difference between ODI scale and intraoperative bleeding, hemoglobin decrease, age, weight, height, however, we found statistically difference between ODI and days of hospitalization, surgery duration, liquid infusion. Statistically significant difference we have proved between two groups comparing age.

Conclusions: This study of 5 years functional result assessment of pre-bent mesh and individual implants and other ways of treatment shows that RP technique reduce intraoperative bleeding. Moreover, we have proved that patients who underwent maxillofacial reconstructions with multiple fractures of orbits [high ODI scale] who were treated with RP techniques had shorter time of hospitalization, less time of surgery and liquid infusion, whereas, patients with lower ODI scale who were treated without Rapid Prototyping had longer hospitalization, higher surgery duration and liquid infusion.

Eth:

Session: Head and neck medicine

Hearing impairment prevalence in Polish Special Olympics competitors with intellectual disabilities.

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Introduction: People with intellectual disabilities are known to have frequent medical problems, among which hearing disfunction is one of the most interrupting everyday functioning. There are discovered many congenital conditions (such as Down syndrome), as well as inherited ones (such as infections or trauma), having influence on hearing quality. Intellectual disabilities and congenital disorders often occur together what results in higher prevalence of hearing impairement in this specific group.

Purpose: The aim of the study was to examine the hearing impairement prevalence, as well as the hygiene of external ear in population of Polish Special Olympics competitors.

Methods: During Special Olympics (Bydgoszcz 2014) 433 participants were examined. The screening examination consisted of: short questionnaire, otoscopic examination, and otoacoustic emission. Farther examination, performed when otoacoustic emission showed any pathology, consisted of tympanometry and screening tonal audiometry. In cases where pathology was confirmed, full pure tone audiometry was performed in separate room, by an experienced audiologist.

Results: Group of 433 people, age 4 years to 67 years (average 23,7years) were examined. 23 participants were unable to determine their age . The group consisted of 127 (29,3%) women and 306 (70,7%) men. Among the group, 358 (82,7%) competitors assessed their hearing as good, 32 (7,4%) as bad, 43 (9,9%) were unable to determine. In otoscopic examination 194 (44,8%) person had both external ear canals clean, 116 (26,8%) had one of the canals blocked by wax (in at least 50% of its lumen) and 123 (28,4%) both canals blocked. Otoacoustic emission was normal in 160 (37,0%) cases, invalid in one ear in 107 (24,7%) cases and invalid in both ears in 166 (38,3%) cases. 281 (64,9%) participants had tympanometry done, showing pathology in 103 (36,7%) cases in both ears and 56 (19,9%) in one ear. The screening tonal audiometry showed pathology in 59 (21,1%) of 280 cases (one was unable to examine). Full pure tone audiometry examination confirmed hearing impairment in 59 (13,6%) cases.

Conclusion: Hearing impairment is common pathology in patients with intellectual disabilities in Polish society. All doctors should focus more on teaching basic aspects of ear hygiene, as well as paying more attention to hearing problems, especially in this specific group of patients.

Eth:

Session: Head and neck medicine

Elongation of the Styloid Process – Eagle’s Syndrome – Case Reports of a Patients on Dialysis

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Introduction: Eagle syndrome or syndrome of prolonged styloid process of the temporal bone is a rare syndrome ,which cause is an extended styloid process and often concomitant an ossification stylohyoid ligaments. Patient typically reports to a doctor because of sudden severe pain in his ear, throat, floor of mouth the oral side of the neck and jaw angle around the lodge tonsil .

Purpose: Show two rarely case of patients with Eagle Syndrome. This pain occurs when you open your mouth, turn the head or swallow. Additional symptoms which are coexisting may be drooling, dysphagia, odynophagia, trismus, body sensation something in the throat. Pain symptoms occur suddenly and last from a few seconds to several minutes. The method of treatment Eagle Syndrome can be twofold and depends on presented type of Eagle Syndrome. Nonsurgical treatment methods such as injecting the lodge after palatal tonsil local anesthetic agents and steroids, are used in the classic type. Unfortunately, in most cases, the results are not satisfactory.

Methods: To the clinic recently came two patients presenting the above-mentioned symptoms of varying severity. The study revealed panoramic radiographs and CBCT much elongated styloid process.

Results: "56 year old man being treated for a pain and swelling on the left side of the face on heighti second and third molar . The patient is treated with immunosuppressants because of a kidney transplant . In a clinical study inflammation around the tooth 37, which was removed in the pocket of antibiotics and inflammation of the tooth 38, which had to be removed on the next visit. Despite performed surgeries, the patient is complaining of a pain and a trismus . The study revealed CBCT exacerbation of inflammation left temporo-mandibular joint and extended the styloid process syndrome .

A 65 year woman before the transplant. In a clinical study need to revise the endodontic treatment of teeth 31, 34 , or their extraction. In the photo OPG noted considerable length styloid process extending on the right to the angle of the mandible , and the left side to the middle branch of the mandible . After the additional interview , the patient is given signs in the front triangle of the neck."

Conclusions: Eagle syndrome is a rare syndrome that poses diagnostic problems due to the very characteristic symptoms , which include sore throat , Odynophagia ,headaches, foreign body sensation in the throat . In order to make the diagnosis should be performed CT , which shows elongated styloid process and is rise in the diagnosis.

Eth: This paper is approved by Local Ethical Committee.

Session: Head and neck medicine

Eye at gunpoint. Diagnostic and therapeutic issues in the treatment of a boy shot with an airgun in the eye.

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Introduction: Introduction: The cases of accidental airgun shootings among children are not uncommon. It should be taken into account that serious injuries may be sustained due to improper use of airguns. Also diagnostic and therapeutic issues ought to be considered.

Case report: A twelve year old boy was referred to the emergency department of the Wrocław University Clinical Hospital from the ophthalmological ward in Zgorzelec. He sustained a gunshot wound to the right eyeball. As a result of injuries he developed a centrally located transmural corneal wound, bleeding into the anterior chamber of the eye and impaired vision in the right eye. Visual perception was maintained at a level of the sense of light in central location and from the temporal side. The CT scan showed pellet located retrobulbarly, positioned on the inferior wall near the cone of the orbit and the optic nerve. The patient was transferred to the Department of Ophthalmology. Corneal wound was sutured. Until now, in the process of treatment four surgeries were performed, all under general anesthesia. The purpose of the two of them was to remove the pellet. The second of those two was performed in Białystok and turned out successful. Four months after the injury corneal sutures were removed and ophthalmic

examination was carried out. It showed atrophic lesions of the eyeball, the sense of light from the temporal side, hypotension in the right eyeball, ptosis of the upper eyelid. Further surgical treatment was retreated.

Conclusion: The analysed case is rather typical considering the age and sex of the patient. The trauma caused by the airgun has brought on permanent consequences for the patient's health. The procedures involving the removal of foreign bodies stuck in the orbit remain a challenge due to the difficult access, size and movability of the object in the adiposal body of the orbit.



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Session: Head and neck medicine

Isolated lymphomas of the head and neck region in patients treated in Department of Head and neck medicine and Laryngological Oncology Medical University of Lodz in 2014 year.

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Introduction: The most common lesions occurring in head and neck are inflammatory changes. Neoplastic ones are less common but also important problem. The most common cancer of this area is squamous cell carcinoma and it is what we often lead diagnostics towards. One of the rarest diagnoses is isolated non-Hodgkin lymphoma. Its incidence has been increasing in recent years. It should also be considered in the diagnosis of proliferative lesions of the head and neck region.

Purpose: Assessment of the patients with isolated lymphoma of the head and neck region treated in Department of Head and neck medicine and Laryngological Oncology Medical University of Lodz in 2014.

Methods: We analyzed the patients hospitalized during the last year (2014) in Department of Head and neck medicine and Laryngological Oncology Medical University of Lodz due to isolated lymphomas of the head and neck region.

Results: We analyzed 12 patients who were diagnosed with a tumor of the lymphatic system (respectively 11 are DLBCL and 1 is T-cell lymphoma), including 8 women and 4 men. The average age of the patients was 65 ± 18.7

people were above 60. The first complaints were feeling of obstruction in throat and dysphagia (4 people), nasal obstruction (3) and hearing impairment (2). The patients were divided in terms of location: neck (3), base of tongue (3), the nasopharynx (2), palatine tonsil (2), submandibular region (1), medial nasal concha (1), left maxillary sinus (1) (one patient had tumors in two locations: the nasopharynx and base of tongue). Among men the locations were the base of tongue, the nasopharynx and the maxillary sinus. Lymphoma in women was more often in the palatine tonsil and on the side of the neck. In the research group there were no significant changes in blood count. 7 patients had lymphadenopathy (5 single, including 2 unilateral and 3 bilateral; 3 in packages, including 1 unilateral and 1 bilateral). Basic histopathology wasn't enough to make a diagnosis. It was possible to diagnose all the patients on the basis of immunohistochemistry. In 10 patients a positive reaction for CD 20 indicating a B cell proliferation was observed. Among the examined people 2 women had other cancers (chronic lymphocytic leukemia and breast cancer). There was no family history of cancer.

Conclusion: In the diagnosis of head and neck tumors rare diagnoses such as lymphomas should be considered. Due to the lack of specific symptoms, isolated non-Hodgkin lymphomas may cause diagnostic problems and be confused with chronic sinusitis, tonsillitis and other neoplastic changes. Old age is the risk factor for isolated non-Hodgkin lymphomas. Pathomorphological diagnosis is difficult and requires confirmation using immunohistochemical methods. Diagnosis and treatment often requires multidisciplinary procedures.

Eth:

Session: Head and neck medicine

The comparative epidemiological analysis of facial skin lesions treated in department of Medical University of Lodz and Hospital in Lask

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Introduction: Skin cancer (melanoma and non-melanoma) is most common human neoplasm. Despite malignant melanoma, most of tumours are not very aggressive but according to anatomical area, even small lesion could influence aesthetics and function of face.

Purpose: The aim of the study was to analyse epidemiologic data of two groups of patients treated in University Clinic and small hospital in rural area.

Methods: Retrospective analysis was done. 80 patients from the University Hospital and 80 patients from Lask Hospital were included into the study. Demographic data as sex, age, place of living were retrospectively analysed. Aesthetic unit of face, way of treatment and outcome were noted as well.

Results: Age and sex distribution of the groups were nearly the same. There were no differences in histological types of tumours in both groups. According to treatment strategies free skin grafts were much often used in University Clinic and local flaps in Lask Hospital. Major surgeries in University Clinic and Lask Hospital were conducted in local anaesthesia, but monitoring of anaesthesiologist was more often in Lask. The main differences between groups were: place of living and size of tumour in time of admission.

Conclusion: Education and extended prophylaxis among people living in rural area is necessary and can help to avoid aesthetic and functional disturbances due to Surgery, emergency and intensive therapy of high diameter lesions.

Eth:-



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Łódź 2015

Session: Head and neck medicine

Epidemiology and treatment results of benign salivary gland tumors.

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Introduction: Nowadays, head and neck neoplasms constitute a major medical problem. Salivary glands tumors represent merely 3-10% of them. Even though are there relatively rare condition, their epidemiology and treatment results matter, due to their relation with smoking, which still is a popular habit.

Purpose: The aim of the study was to describe group of patients operated due to benign neoplasms of salivary glands.

Methods: Retrospective analysis of medical records of patients operated in Otiatry, Laryngology and Laryngological Oncology Department (Medical University of Lodz) due to benign tumors localized in salivary glands, in years 2013-2015. Including criteria was positive histopathological raport. 74 of patients was eglibled to the study.

Results: The average age was 57,28 years (SD=13,78, CI95% - from 54,09 to 60,48). Men were operated statistically significantly more frequent (p=0,00, male to female ratio=1,18). Women (average age: 61,18, SD=11,31) were significantly (p=0,02) older than men (average age: 53,7,

SD-14,79). The most common localization of pathological changes was parotid (93,24%), then sublingual salivary gland (5,41%). 2 - 4 cm tumors were reported the most frequently (54,05%), almost equally among those localized in parotid (55,07%) and sublingual salivary gland (50,00%). Only 1 case of facial nerve palsy after an operation was reported. Salivary glands USG was basic radiologic method: only 2,7% of patients didn't have this test (in these cases CT was imaging method). 57% of patients had only USG test, others had at least two: USG with CT or MRI. Data concerning on BCC result were available in 52,67% of patients: 78% of them were positive.

The most common histopathological type was Warthin tumor - 45,9%, then pleomorphic adenoma - 28,38%. Patients with Warthin tumor (average age: 61,0 years) were older then these with pleomorphic adenoma (50,71 years).

Conclusion: The formation of benign lesions in the salivary glands particularly affects people in late middle age and older. Parotid is more frequent location than submandibular gland. Ultrasound examination and the result of the BAC are valuable diagnostic tools in the diagnosis of salivary gland tumors. Modern methods of intraoperative monitoring of the facial nerve function play an important role in the prevention of complications, one of which is facial nerve palsy. High incidence of Warthin tumor recognition and higher average age in this group of patients is supported by participation in the pathogenesis of chronic acting factor. Considering predominance of men and demographic data on smoking over recent 50 years, this factor may be exposure to cigarette smoking

Eth:

Session: Head and neck medicine

Unusual complication of chronic otitis media - case report.

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Introduction: Chronic otitis media affects a large part of the population, however, severe complications are recorded with a frequency from 0,7% to 3,2%. On the one hand, extracranial complications such as: mastoiditis, labyrinthitis, inflammation of the petrous part of the temporal bone and facial nerve palsy, on the other hand intracranial, which include: meningitis, intracranial abscesses, epidural subarachnoidal, thrombosis of cerebral venous vessels and hydrocephalus are described.

Purpose: The aim of the study was to report the case of 40-year old patient with uncommon course of chronic otitis media.

Results: 40-year patient with long-term history of episodes of otitis media was admitted to Laryngology and Laryngological Oncology Department due to exacerbation of inflammation. Incision and drainage of abscess located in right preauricular area was conducted with antibiotic prophylaxis. On the third day after surgical intervention patient presented sudden swelling and pain of the right side of the neck (area limited by clavicle). CT of the neck revealed inflammatory process in the region of sternocleidomastoid muscle, probably an abscess. Patient was qualified to urgent surgical intervention.

Character of changes was found as corresponding to gas gangrene in histopathological report. Microbiological tests on purulence collected during the operation revealed *Staphylococcus epidermidis* MR. Broad spectrum antibiotic therapy and hyperbaric therapy were applied.

Conclusion: Gas gangrene of the neck complicates chronic otitis media rarely. Not only *Clostridium perfringens* infections can become a course of this pathologic condition. Phlegmon of the neck characterises with possibility of rapid (for several hours) course, which is the reason of importance of precise monitoring of the patients. Early diagnose and introduction of surgical treatment is crucial for further prognosis.

Eth:



JUVENES PRO MEDICINA

Łódź 2015

Head and neck medicine

Parapharyngeal anomalies of the carotid arteries in tonsillectomy – how can the aberrations of arterial course affect a routine Surgery, emergency and intensive therapy? A case report with the review of literature.

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Introduction: Tonsillectomy is a frequently performed otolaryngological Surgery, emergency and intensive therapy. It is characterised by a relatively low mortality rate, with 30% of deaths occurring due to the incision or trauma of the internal carotid artery or the external carotid artery and its branches. The haemorrhage occurs only in 1.46% of cases but it is the substantially large number of performed procedures what determines the threat. Despite proper preparation of the surgeon the aberrations of the course of carotid vessels, which occur in 10-56% of the population, may lower the distance to the tonsillar fossa and expose it to iatrogenic injury.

Purpose: Our work provides a description of a case of an 18-year old woman suffering from a massive haemorrhage, after having undergone the bilateral tonsillectomy, as well as its comparison with the existing literature on the subject. We attempt to summarise the current state of knowledge about the distance of the internal carotid artery from the selected anatomical

structures in the parapharyngeal space. With the revealed conclusions we try to estimate whether there are any risk groups in which performing the radiological imaging prior to tonsillectomy is essential.

Methods: Case report: Two weeks after the bilateral tonsillectomy, preceded by the diagnosis of the continuous pyogenic tonsillitis, the patient presented with pharyngeal bleeding, supplied multiple times through oral cavity. Five days later, the aggravation of her condition caused the patient's air transfer to a tertiary hospital, where the left external carotid artery and the left facial artery were embolised. After eighteen days she presented with the post-embolisation syndrome, with symptoms of severe neck pain and lockjaw. The AngioCT revealed the of course of the left external carotid artery only 3.2 mm from the tonsillar fossa in the place of injury. Data source: The review of literature published between 1933 and 2015. The articles were found through PubMed, ClinicalKey, UpToDate, Jama NETWORK and Scopus databases.

Results: One of the methods of preventing the complications is an accurate physical examination, defined in six points by one of the authors. According to the recently performed researches the distance between the internal carotid artery and the tonsillar fossa increases with age in children, whereas can significantly decrease with the ageing of adults. Moreover other studies allowed to define a scale of surgical risk, including internal carotid artery aberrations, which summarises our review.

Conclusion: The presented case and similar examples of post-tonsillectomy haemorrhages should remind to always keep in mind the possibility of severe consequences of routine procedures with low risk rate. The cost of the treatment was substantially larger than without complications. Despite an additional expense a radiological investigation, such as Doppler USG should be considered in cases of patients with risk factors of the carotid vessels anomalies.

Human science in medicine

The image of "Spanish flu" related with people famous for culture and politics who suffered from it in the outset of the Second Polish Republic, based on texts and information revealed in everyday press.

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Department: *Department History of Medicine, Pharmacy and Military Medicine*

Introduction: When in the late spring and the beginning of summer of 1918 first accidents of flu occurred, no one expected that it was the outbreak of the greatest influenza pandemic. Already called "Spanish flu", it spread as far as the area of Poland which was trying to release from partitions. Didn't it leave anyone, neither the poor, ordinary people nor the rich. It also experienced famous people of culture and politics. Some of them described illness in their diaries, letters or stories. It was the press that used to inform about the course of epidemic and methods of prevention and treatment. The vision of a terrible and frightening disease was created in the reader's eyes. The tragedy of the situation was emphasised by the reasons of the influenza which was a mystery in those days.

Purpose: The aim of this study was to outline the image of a "Spanish flu" experienced by famous people - representatives of Polish culture and politics of that period, based on their texts and the information released in press.

Methods: Research materials included works of literature and selected titles of everyday press. Descriptive, analytical and synthetic methods were used.

Results: As a result of a research, it was found out that in a group of people who suffered from “Spanish flu” among others was a pianist and a composer Karol Szymanowski, an artist and a politician Włodzimierz Tetmajer as well as General Kazimierz Sosnkowski whose young daughter died of this disease. Those people described their illness in letters and diaries. Jarosław Iwaszkiewicz mentioned “Spanish flu” in one of his stories. Texts used in this research include experiences and emotions of the authors which complete the image of influenza in an interesting way.

Conclusion: The study of illness of famous people of the Second Polish Republic has put a new light into an image of influenza.

Eth:-



JUVENES PRO MEDICINA

ŁÓDŹ 2015

Session: Human science in medicine

Supercentenarian study in Poland. Aspects and factors of longevity in Poland

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Introduction: Poland is a 38 Million country in the heart of Europe, where in the past 25 years there has been done a decisive step in economy, science and sociology. Development of medicine, combined with a moderate climate conducive fulfil the conditions for the phenomenon of longevity.

Purpose: The aim of the study is to bring the answer to the question, how long can the people truly live in Poland and to analyse the phenomenon of longevity in Poland in comparison to European field.

Methods: As Gerontology Research Group's Correspondent for Poland, I have documented the age of first Polish people, who beyond any doubt completed 110 years of life. Almost all of these people have reached that age in the past few years. In my research, I concentrated on genetic and environmental aspects, whether longevity is affected by the age of the parents, nutrition habits, number of children, duration of marriage, origin, attitude to sport and other.

Results: In comparison to Western Europe, much less people of Poland complete 110 years. The final age is also lower as I revealed, that only two

people in Poland reached 111 years of life. However, in the recent years 2012 and 2013 a record number of 110th birthdays was reported in Poland. In this respect , Poland dominates among the countries of Central and Eastern Europe. Longevity recordholder of Poland is Wanda Wierzchleyska of Warsaw, who reached 111 years 317 days of life. The first ever GRG-verified supercentenarian in Poland is Mrs. Aleksandra Dranka (1903-2014). The oldest ever verified Polish male is Dr. Alexander Imich from New York (1903-2014)

Conclusion: The improvement of the standard of living in Poland, awareness of health and medical care are responsible for the fact, that only in the past few years (2007-2013) 7 people in Poland reached 110 years of life. Healthy diet, active lifestyle and inner optimism are essential for maintaining health in old age. Nevertheless the most important is the genetic factor.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Human science in medicine

“Her Highness French disease, viz. her influence on mentally condition of rulers in Europe.”

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Introduction: Since the end of XV century syphilis has become one of more threatening disease in pristine Europe. A lack of effective therapy aided to come forward changes in central nervous system, which appear in natural course of "great pox", and mentally disorders proceeded from this. Preparations of mercury, which were then used, gave similar effect.

Purpose: The purpose of work is analysis the influence of French disease on dealing and personality of chosen European rulers and checking whether and how much was the importance of syphilis on theirs decisions, which were taken under the influence of disease, and what were consequences of them.

Methods: In work I applied methods typical for historical research. I studied publications about chosen sovereigns in pristine Europe at an angle of their behavior, which may testify to mentally disorders as a result of changes in central nervous system present in the course of syphilis.

Results: As a result of comparison of rulers, as to which sources say, that they suffered from French disease, with behavior of those on topic whose sources are silent in this range, it can be sum up, that syphilis could have an impact on their behavior and decisions.

Conclusion: Not all sovereigns with mentally disorders, which could equal to take controversial or even wrong decisions, suffered from syphilis. The behavior of some people was quite far from norm, and their level of decision-making left much to be desired, despite the fact that sources do not give any information about their suffering from syphilis. At the rulers, who had French disease and showed mentally disorders in all probability came to their as a result of damage CSN by disease. They were often treated with harmful to CNS preparations of mercury.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Human science in medicine

Acute appendicitis, the development of methods of treatment

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Introduction: Acute appendicitis is a condition in which you must quickly decide how to therapeutic intervention. The choice of treatment varies between centers, often depends on the skills and experience of the operator. The significance of the problem by the fact that appendicitis is one of the most common surgical diseases (with the risk estimated at more than 7%).

Purpose: The aim of this study is to analyze the changes introduced in the approach to patients with appendicitis over the centuries. Assessment of the risk of mortality and complications after appendectomy Surgery, emergency and intensive therapy performed with classical and laparoscopic access and associated with conservative treatment. Moreover, the arguments will be presented for the selection of a particular method in order to obtain the best possible results of the treatment process taking into account the good of the patient.

Methods: In preparation methods were used in the quantitative and qualitative analysis of written and iconographic sources.

Results: Approach to appendicitis completely changed with the development of medicine. From Hippocrates allowing in such case, only conservative treatment by the fathers of contemporary Surgery, emergency and intensive therapy operating quickly, with open access to minimally

invasive techniques supporters operate the proponents of each appendix laparoscopic methods, and finally, more and more often to the promoters of robotic Surgery, emergency and intensive therapy who believe their machines to be ideal for this type of solving this type of problems.

Conclusion: Due to the higher risk of postoperative complications related to access classic (by laparotomy) performing laparoscopic Surgery, emergency and intensive therapy is now standard. The disadvantage is the need for laparoscopic surgeon better preparation, laparoscopy is judged as being more difficult to achieve. Progressive robotics concerns also appendectomy Surgery, emergency and intensive therapy, the use of the most modern equipment can turn out to be another milestone in the development of treatment of appendicitis.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Human science in medicine

The enemy hidden on the canvas, or in search of breast cancer in painting

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Introduction: Breast cancer is the most common malignant tumour among women. Although the disease is one of the civilization problems most publicized by the media today, it has been known for centuries.

Purpose: The aim of the study was to reach the first historical sources describing breast cancer, to identify individuals with this disease and which have been shown in the paintings, and to determine which symptoms of a tumor are illustrated. The aim was also to identify the differences in the image of breast cancer in the past and today, and their explanation

Methods: The methods typical of historical and medical research were applied. The object of analysis were paintings by Raphael Santi, Paul Peter Rubens, an unknown Renaissance author, and Rembrandt. The symptoms of breast cancer were sought in the source materials from before the 18th century.

Results: The earliest known cases of breast cancer were found in ancient Egypt. The materials assembled indicate that breast cancer was an illness known to people in those times. Numerous traces of the phenomenon found in painting come from the periods of the Renaissance and Baroque. The symptoms of breast cancer such as general changes in the breast (lumps,

changes in shape and size), changes in the nipple (retraction, discharge), skin changes (retraction, changes in colour, ulceration, peau d'orange), enlarged lymph nodes, and arm swelling are identical with the symptoms observed today. Since the beginning of civilisation the only thing that has changed, apart from the disease's frequency, was the way women suffering from breast cancer perceive the disease.

Conclusion: In former times, breast cancer was only one of many diseases the humanity was afflicted by. Today, when other diseases - especially communicable diseases have been eradicated, recognition of breast cancer does not only come down to a diagnosis, but it also becomes some kind of social stigma. Why is it that we – people of the age of development – believe that our victory over other illnesses entitles us to stigmatize women who suffer from breast cancer?

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Human science in medicine

The issue of research methodology in historical and medical sciences - the problem of interdisciplinarity.

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Introduction: Nowadays, interdisciplinary research is becoming more popular. Many researchers have to face this problem. The specificity of the test procedures, across the various fields, differs from each other. There are ranges of research that are difficult to classify into one cognitive methods. As a PhD student of history at the University of Lodz, who has been writing a report in the history of medicine in the military health care in the years 1918-1939, I have encountered such a problem. Status of medicine in my research method humanistic. I have decided to collect my thoughts and experiences in the field of learning and research and present them, as a single text in the form of a scientific paper.

Purpose: By the term research methodology I understand the science of measurement method occurring phenomena, which the researcher wants to measure. It is a certain set of rules on how to study, who to examine, and where to examin. The aim of the research is to develop a methodology for better and better ways of measuring / testing phenomena and the ongoing improvement. The better method the more accurate test results will be obtained. The key to a reliable measurement of the phenomenon is the selection of appropriate research methods / techniques of measurement. Each branch of science has developed and are developing their own research methods, in order to best measure the phenomena that they are interested in.

The purpose of my paper is to present, the differences and the similarities in medical science research methodology and historical sciences. To show the "human face of medicine". I want to show you how : we historians perceive problems in medicine (medical history), and how we deal with science, which is considered not to be a humanistic studies. Two seemingly different environments but having a lot in common.

Methods: My paper will be based primarily on published sources, publicly available. Monographs and scientific articles. I function between two worlds, I would like to share with a larger audience my personal experiences. Below I've included a bibliography, to which I have referred:

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5. Wiesław Jędrychowski, Zasady planowania i prowadzenia badań naukowych w medycynie, Kraków 2004 r.
6. Tomasz Rzepiński, Wyjaśnienie i rewizja wiedzy w medycynie. Od modeli eksperymentalnych do badań klinicznych, Poznań 2013 r.
7. Wiktor Werner, Wprowadzenie do historii, Warszawa 2012 r.
8. Dariusz Radomski, Antoni Grzanka , Metodologia badań naukowych w medycynie, Poznań 2011 r.
9. Józef Pieter, Ogólna metodologia pracy naukowej, Ossolineum, Wrocław 1967 r.

Results: 1. Trying to compare methods and functions of science.

2. The reference to the issue of research in these sciences.

3. Objectives of the work of a doctor, a historian goals.

4. Discussion of the research objectives in \ the disciplines.

5. Cycle stages of the research in medicine and history.

6. Discussion of the various research methods attempt to compare methods: historical - comparative, statistical, monographic, personal documents, public opinion polls.

I have mentioned a number of methods which will show both similarities and differences between history and medicine. The most common ground in which they have both come together is undoubtedly the history of medicine. However, both a historian and a doctor will approach it from a different point of view. Sources on which they work, their research methods will not differ (talking about the history of medicine), but both goals that researchers will want to achieve will be different.

Conclusion: Thus, to sum up, I believe that a historian of medicine and a doctor of medicine dealing with the history have many common methodological strategies, which can be mutually supportive. Together, it will be easier for them to cope with the reconstruction of the past. Its study, from many perspectives, will contribute to a better knowledge of the truth. In my work, I will relate only to the most important issues relating to the methodology of science, by attempting to compare the history of science and medicine. I believe that the blurring of science, forces the scientists to work in different areas.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Human science in medicine

Legal aspects of human procreation – selected issues.

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Introduction: Contraception is a widely discussed topic in the media all over the world. Very important global phenomenon is the fact that the age of sexual initiation lowers gradually. Government is obliged to provide free access to methods that control conscious procreation, access to appropriate health services and education in this area to everyone. We should note that the only contraceptive agent that is freely available without restriction is a male condom (also sold outside pharmacies). The rest of contraceptives require permissions, such as a recipe written out by the physicians. It goes in contradiction to the well-established principle in the international arena of human rights saying that access to family planning methods should include the easy access to the contraceptives, that are appropriate for particular persons.

Purpose: The aim of the study is to present the legal aspects of selected issues of human procreation, considered in the context of the right to life and the right to individual protection of life and health.

Methods: The study is based on the analysis of normative legal acts considering human rights and medical knowledge about contraceptives.

Results: There are still many irregularities and inconsistencies in the rights of control over fertility and sexuality in relation to human rights provided by the Government and other organs. The visit to the gynecologist is essential to prevent the consequences associated with the early sexual activity and should be available to every girl and woman. In girls before the age of 18 years conducting gynecological examination, diagnostic and therapeutic procedures (including the prescription of contraceptives) requires the consent of the legal representative what causes definitely not enough girls decide to go to a gynecologist thereby limiting access and control over their fertility and health.

Conclusion: Although in most countries, including Poland, the age of sexual initiation lowers gradually - availability of contraceptives and the level of sexual education is still similar and hasn't changed for many years.

Inappropriate use of contraceptives by young carries serious health consequences.

Contraceptives are still not enough available to young people.

Eth:-

Session: Human science in medicine

Breast lipomodelling - 122 years in use.

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Introduction: Breast augmentation is one of the most commonly performed procedures in the field of plastic Surgery, emergency and intensive therapy. Own fat grafting to the breast enlargement and sculpt is a rapidly growing method worth of knowledge due to the increasing use. But this is not a new method, first described in breast fat graft Neuber did in 1883. The demand for plastic Surgery, emergency and intensive therapy is breast cancer treatment is often a consequence of changes in the mammary gland, should therefore be regarded as one of the elements of care for patients of oncology.

Purpose: The aim of the work is to discuss the history of their own fat transplantation methods in plastic Surgery, emergency and intensive therapy breast augmentation and remodeling and analysis of the possible effects of the treatment to obtain the use of improved methods and equipment.

Methods: The study was based on the available literature on the subject. I analyzed the results obtained in women by global centers to determine the most favorable treatment parameters.

Results: Transplantation of fragments of fat thickness greater than 2 mm is associated with an increased chance for rejection of the transplanted tissue. Fat grafting must be done in small portions. It is not recommended

disposable breast augmentation for more than 20% due to the growing pressure and its stretch, it causes rejection of transplanted fragments. Originally used free fat grafts were associated with numerous complications and low efficiency. Injections developed liposuction fat derived from significantly reduced the number of complications and easier to obtain good results Surgery, emergency and intensive therapy. However, it was the introduction of external expander BRAVA system allowed for a single implantation of large volumes of fat with good effects.

Conclusion: Changes in surgical techniques and market BRAVA system meant that autologous fat have become an increasingly popular method because of the effects and safety. Due to the possibility of correct implementation of avascular (nourished only by continuity) adipose tissue grafts with a thickness of only a few millimeters, it is necessary to move a number of transplants in breast remodelowanej precinct. The smaller the (percentage of the original breast cancer) transplanted piece of fat, the better is its implementation.

Eth:-

Łódź 2015

Session: Human science in medicine

Epidemic of hemorrhagic fever - epidemiology and cultural factors

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Introduction: During the last epidemic of Ebola virus led to the death of several thousand people in Africa. Finding effective methods of prevention and treatment has become the target of a large group of professionals around the world. Difficulties and mastery of the epidemic result not only of the biology of the disease itself, but also the culture of the region affected by the epidemic.

Purpose: The aim of this study is to analyze the differences and similarities between epidemics in terms of the occurrence, duration, morbidity, mortality, symptoms and methods of prophylaxis and treatment, taking into account cultural factors.

Methods: The study used epidemiological data available on the epidemic of 1976, research papers, eyewitness accounts and press releases. In the paper the method of quantitative and qualitative analysis.

Results: EVD last epidemic was in the number of cases and the duration of the most dangerous of all the existing ones. Previous outbreaks characterized by high mortality. The last epidemic of high mortality occurred at the beginning of its term, the passage of time has been shrinking. In a measure of the duration of the epidemic, so did the clinical picture of the disease - with the passage of time, more frequent cases

without the characteristic symptoms of bleeding. As in previous important role in the transmission behavior of the virus play an African communities. During the last epidemic There have been proposals pharmacological treatment, but to a limited number of patients who used the new formulation (ZMapp) can not at this stage sufficiently the effectiveness of this method.

Conclusion: To fight the epidemic affects many cultural factors, such as local beliefs and shamanic medicine, often standing in conflict with Western medicine. The basis for the fight against the epidemic should be prevention and education population, rapid response to the threat of local authorities and effective method



JUVENES PRO MEDICINA

Łódź 2015

Internal Medicine

Sexual dimorphism of thyroid susceptibility to experimentally-induced oxidative damage.

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Introduction: Reactive oxygen species (ROS) participate in numerous physiological processes. However, being in excess, they are potentially very dangerous and can damage macromolecules, such as DNA, lipids and proteins. Oxidative damage to membrane lipids is called lipid peroxidation. The most basic reaction of oxidative stress is Fenton reaction ($\text{Fe}^{2+} + \text{H}_2\text{O}_2 \rightarrow \text{Fe}^{3+} + \cdot\text{OH} + \text{OH}^-$). Both Fenton reaction substrates are normally present in cells and possess important physiological roles, e.g. they are essential for thyroid hormone synthesis. Thus, under certain conditions the thyroid gland may be exposed to excessive amounts of H_2O_2 and Fe^{2+} , creating favorable conditions for the increased oxidative damage. Thyroid diseases, such as autoimmune disease and cancer, are more prevalent in women than in men. The mechanism of this dimorphism has been recently attributed to a higher level of oxidative stress in female thyroid. Indeed, higher production of ROS, H_2O_2 included, has been confirmed in female thyroid, suggesting its lower sensitivity to external ROS.

Purpose: The aim of the study was to evaluate if susceptibility of thyroid membrane lipids to oxidative damage caused by Fenton reaction substrates differs between females and males.

Methods: Porcine thyroids were collected from 12 females and 12 males at a slaughter-house. Thyroid homogenates were incubated in the presence of Fenton reaction substrates: Experiment I – H₂O₂ (10, 5.0, 1.0, 0.5, 0.1 mM); Experiment II – FeSO₄ (300, 150, 75, 30, 15 μM); Experiment III – FeSO₄ (30 μM) + H₂O₂ (10, 5.0, 1.0, 0.5, 0.1 mM); Experiment IV – H₂O₂ (0.5 mM) + FeSO₄ (300, 150, 75, 30, 15 μM). Concentration of malondialdehyde+4-hydroxyalkenals (MDA+4-HDA) was measured spectrophotometrically, as an index of lipid peroxidation

Results: The susceptibility of female and male thyroids to experimentally-induced oxidative damage was not the same. H₂O₂, used separately, did not affect lipid peroxidation either in female or in male thyroid. Iron, used in its highest concentration of 300 μM, increased lipid peroxidation in female thyroids, but it did not cause any changes in male thyroids. When Fe²⁺ (30 μM) was used together with different concentrations of H₂O₂, no response was observed in female thyroids, but the level of lipid peroxidation increased significantly in male thyroids for H₂O₂ concentrations ≥0.5 mM. When H₂O₂ (0.5 mM) was used together with different concentrations of Fe²⁺, effects observed in female and male thyroids were similar, i.e. the level of lipid peroxidation increased with clear Fe²⁺ concentration-dependent effect (significant for concentrations ≥75 μM).

Conclusion: When compared to male porcine thyroid, female thyroid seems to be less susceptible to external H₂O₂. Comparing to H₂O₂, exogenous Fe²⁺ seems to be a stronger agent in damaging effects to thyroid membrane lipids, especially in females

Eth:

Session: Internal Medicine

Long-term quality of life in the living liver donors.

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Introduction: Living donor liver transplantation (LDLT) is an opportunity for patient with end-stage liver disease. Due to the shortage of cadaveric organs, this method is becoming more popular worldwide. Unlike the cadaveric transplantation, in LDLT two patients are undergoing the Surgery, emergency and intensive therapy. Therefore, we must consider the advantages and disadvantages of this method for both sides. In Poland, LDLT is performed only in adult-to-child sequence. However, data regarding quality of life of living liver donors are scanty.

Purpose: The aim of this study was to evaluate the long-term quality of life in living liver donors, the influence of this procedure on their professional, social and physical activity. As first in Poland, we also focused on their mental health.

Methods: Forty six liver donors at median age of 37,5 years (range 25-54 years old), who underwent the operation for LDLT in years 1999-2012 in Department of General, Transplant and Liver Surgery, emergency and intensive therapy of Medical University of Warsaw, were interviewed at a median time of 83 1/3 months after donation (range 16-169 months). The

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analyzed cohort consisted of 28 (60,9%) females and 18 (39,1%) males, majority of donors were parents of the recipient (71,7%). They were asked to respond the general questions about their relationship with the recipient, family situation and fill the generic Short Form (36) Health Survey (SF-36), the Patient Health Questionnaire 9 (PHQ9) and questionnaire of physical activity (IPAQ), all the tools with Polish validation. We compared the results of SF-36 measure in analyzed and the control group of healthy individuals (n=44) using Kolmogorov-Smirnov and the Wilcoxon signed-rank test.

Results: The Physical Component Summary (PCS) score of SF-36 questionnaire was significantly lower in comparison to the results of healthy Polish volunteers ($P < 0.01$). The other SF-36 domains were comparable in both groups. In 16 patients PHQ9 survey revealed mood disturbance, required further investigation. IPAQ showed that in as many as in 40 patients their physical activity was below 600 METs, which was lower than population norm.

Conclusion: There was no significant difference in mental status between donors after LDLT and healthy individuals. Liver donation had slight impact on donor social activity. Donors are much less physically active than the general population and physical domains of SF-36 tool were mostly impaired. The SF-36 and IPAQ seem to be helpful and reliable in the holistic care of living donors; the role of PHQ9 survey required further studies.

Eth:

Session: Internal Medicine

The assessment of bone densitometry results in patients treated with denosumab and ibandronate.

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Introduction: Osteoporosis is a common disease which leads to enhanced bone fragility and consequent increase in fracture risk. Spine/hip dual energy X-Ray absorptiometry measurement (DXA) is the diagnostic standard for osteoporosis diagnosis. Denosumab and ibandronate are drugs used in osteoporosis treatment. The improvement of bone mass density (BMD) in patients parenterally treated with denosumab/ibandronate is rather unknown.

Purpose: The aim of our study was to assess the improvement of bone mass density (BMD) in patients treated with denosumab and ibandronate.

Methods: The study group consisted of 42 patients aged 21-84 (average 68,7y) treated with denosumab (30 patients) and ibandronate (12 patients). In the beginning bone mass density (BMD) was assessed using dual energy X-Ray absorptiometry measurement (DXA). After one and two years of treatment it was assessed again. Moreover we collected biochemical results: calcium, phosphorus, 1,25(OH)₂D, parathormone and data about presence of fractures, before and after parenteral treatment. We completed the database with all this parameters.

Results: In the group treated parenterally with denosumab the mean spine (L4-L5 segment) body mass density was $0,829 \pm 0,097$, total femur- $0,745 \pm 0,066$. In the course of denosumab administration, after one-year of treatment lumbar spine BMD was $0,857 \pm 0,112$, total femur- $0,759 \pm 0,07$.

Although, there were not statistically significant differences in body mass density, neither after one year nor after two years of treatment with denosumab. In the group treated parenterally with ibandronate the mean spine (L4-L5 segment) body mass density was $0,812 \pm 0,084$, total femur- $0,703 \pm 0,072$. After one-year of treatment spine BMD was $0,834 \pm 0,049$, total femur $-0,731 \pm 0,067$. The differences in body mass density were not statistically significant, neither after one year nor after two years of treatment with ibandronate. Before treatment with denosumab the fractures were present in 60 % of the patients while the fractures were present in 33,3% in patients treated with ibandronate and within the two years of the treatment none of the patients declared a new fracture.

Conclusion: Our study showed no significant changes in the results of bone mass density (BMD) in patients treated with ibandronate and denosumab. This may be due to prior oral therapy with bisphosphonates and calcium. Although we did not get a spectacular results after the treatment, it is important to highlight on the fact that the patients' conditions have not deteriorated. During treatment there was no pathological fractures, so if there are any contraindications for the therapy of oral medications, injections of ibandronate and denosumab are justified.

Eth: This paper is approved by Local Ethical Committee.

Session: Internal Medicine

Evaluation of the safety and course during immunotherapy against Hymenoptera venom allergy in real life.

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Introduction: Immunotherapy (VIT) is widely accepted and safe first line treatment for patients being allergic to Hymenoptera venom and the way how we can save their lives in case of stinging.

Purpose: The aim of this study was retrospectively analyse the group of patients who underwent an immunotherapy against bee and wasp venom with the primary endpoint to evaluate safety and the adherence of this method.

Methods: Medical histories of 180 patients, including 146 allergic to wasp venom and 34 allergic to bee venom were analyzed, to evaluate following criteria: sex, symptoms after stings before and during VIT, adverse reactions to the VIT, levels of sIgE, duration of treatment and total dose of the vaccines.

Results: Fifty subjects undergoing immunotherapy to wasp venom (34%) and 15 patients (44%) on bee venom VIT, experienced adverse reactions during VIT. Most of the side effects were local and were reported in 34(68%) patients allergic to the wasp venom and 7(47%) patients allergic to

the bee venom. Ten patients allergic to bee venom and 38 allergic to wasp venom were stung during VIT. Most of them didn't report any reaction or reported only mild immediate local reactions. The average sIgE concentration after completed VIT decreased by 3,78U/ml for wasp-allergic patients and 4,18U/ml for bee-allergic patients.

Conclusion: VIT is not a method without any side effects, however most of the adverse reactions are local. Analysis of the symptoms after stings during VIT proves that most of patients didn't report any reaction or reported only mild local reactions. Analysis of the values of sIgE proves sIgE average reduction after VIT.

Eth:



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Łódź 2015

Session: Internal Medicine

The Vulnerable Elders Survey-13 (VES-13) – a screening tool for geriatric patients

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Introduction: Population of the world, especially in Europe, is ageing very fast. Health services need tools that will help an appropriate diagnosis and classification of patient to the proper medical treatment. In the current literature there are relatively few data about the Vulnerable Elders Survey (VES-13) scale, a screening tool for geriatric patients, and its relationship to other parameters of seniors' health.

Purpose: The aim of this study was to compare the value of the VES-13 with other indicators that describe the physical and mental state of patients: Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL), Mini-Mental State Examination (MMSE), Geriatric Depression Scale (GDS) and Clock Drawing Test (CDT).

Methods: The study included 807 older people (over 60 years, mean age 80.5±8.3 years, 593 female) who were hospitalized in the Geriatric University Clinic, Central Veterans' Hospital in Lodz between 2012-2014. The following tests were conducted: VES-13, ADL, IADL, MMSE, GDS and CDT. Statistical analysis was carried out using Statistica 12 software.

Results: Mean score of VES-13 was 6.29 ± 2.67 , mean score of ADL was 4.73 ± 1.91 , mean score of IADL was 5.37 ± 2.99 , mean score of MMSE was 22.72 ± 7.55 , mean score of GDS was 5.23 ± 3.47 , and mean score of CDT was 3.4 ± 2.87 . Women had higher IADL and GDS scores. Very high statistical correlations between the results of VES 13 and other measures of functional and cognitive functioning were found- with age ($r=0,59$), with ADL ($r=-0,63$), with IADL ($r= -0,71$), with MMSE ($r=-0,57$), with GDS ($r=0,42$), and with CDT ($r= -0,47$). Those associations were similar in women and men.

Conclusion: VES 13 is a very useful in medical practice. Very high correlations with other measures of Comprehensive Geriatric Assessment makes it a valuable screening tool for geriatric patients.

Eth:



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Łódź 2015

Session: Internal Medicine

STOP BANG as a new diagnostic tool for obstructive sleep apnea syndrome

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Introduction: Obstructive sleep apnea syndrome (OSA) is characterized by repeated interruption of ventilation during sleep due to pharyngeal airway closure. OSA is a risk factor for hypertension, coronary vascular disease and stroke. Polysomnography is considered the gold standard in OSA diagnostics. Unfortunately, polysomnography is a costly procedure of limited availability. Thus, it seems reasonable to assess individual patient risk for OSA to prioritize its use.

Purpose: This study was designed to assess diagnostic value in terms of sensitivity and specificity of a combination of signs and symptoms - STOP-BANG - in the setting of a sleep laboratory.

Methods: A database for this retrospective study was created from data of 1171 patients of Sleep and Respiratory Disorders Centre. The study included people aged from 19 to 87 years, 271 women (23.1%) and 900 men (76.9%). All the patients were referred due to complaints including witnessed apneas (72.5%), excessive daytime sleepiness (32.7%), unrefreshing sleep (16.7%) and snoring (78.6%). We analysed data of the patients who underwent polysomnography in the period from 1st January 2009 to 30th July 2011. The sleep study lasted about 8 hours and has been carried out on two devices: Alice 4 (54.6%) and Jaeger (45.4%). Adults referred for diagnostic polysomnography answered four STOP

questions (yes or no): S - “Do you Snore loudly (louder than talking or loud enough to be heard through closed doors)”, T - “Do you often feel Tired, fatigued, or sleepy during daytime?”, O - “Has anyone Observed you stop breathing during your sleep?” and P - “Do you have or are you being treated for high blood Pressure?” BANG symptoms were assessed by physician: body mass index BMI (weight and height), Age, Neck circumference, and Gender. The second questionnaire that we analysed was STOP* BANG, (P* - the P question was exchanged for the measurement of blood pressure; if higher than 140/90 at least once out of 3 measurements. Patients received 1 point for any „yes” in the questionnaire (8 points was the maximum score). The cut-off of 3 or more points was applied for the analysis as a positive test result.

Results: The sensitivity of the STOP-BANG measured for an apnea/hypopnea index (AHI, events per hour of sleep) ≥ 5 was 95.8% and corresponding negative predictive values was 58.7%, while specificity was relatively low (19.9%). Similar results were obtained for STOP*- BANG where sensitivity was 97.1% with corresponding negative predictive value of 56.7% and specificity of 12.5%.

For N=1133 subjects sleeping on back (at least 0.5 h) the sensitivity of the STOP*-BANG measured for an apnea/hypopnea index on back (AHI back) ≥ 5 was 96.6% respectively, corresponding negative predictive value was 21.4% and specificity 5.3%.

For N=1060 subjects sleeping on one or two sides (at least 0.5 h) the sensitivity of the STOP*-BANG measured for an apnea/hypopnea index on side (AHI side) ≥ 5 was 98.9% respectively, corresponding negative predictive value was 91.1%, specificity 8.6%.

The STOP- BANG and STOP*-BANG corrected scores showed essentially equivalent test characteristics against polysomnography.

Conclusion: The STOP-BANG appears to be useful test in patients referred with presumptive diagnosis of OSA. Negative results with high probability help to identify individuals with low probability of OSA in the lateral sleeping position and may thereby prove useful in identification of patients who would benefit from positional treatment before polysomnography based diagnosis. Thus, due to high

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ABSTRACT BOOK

sensitivity STOP-BANG has screening potential and excludes OSA in the lateral sleeping position.

Eth: This paper is approved by Local Ethical Committee.



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Session: Internal Medicine

Elevated level of creatine kinase (CK) as the sole indicator of probable encephalitis.

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Introduction: Fever of unknown origin (FUO) is a clinical syndrome caused by various factors, which may present many diagnostic difficulties. It is characterized by recurrent fever greater than 38.3°C and lasts for several weeks. Standard diagnostic tests do not enable doctors to discover the cause of the elevated temperature in FUO. Etiology may include: infections, autoimmune diseases, cancer, or medications. Sometimes even the abnormalities in a single test may direct a physician to a diagnosis.

Purpose: The aim of this paper was to present an interesting and instructive case of fever of unknown origin.

Methods: Patient's hospital records from Department of Internal Medicine of Medical University of Lublin were retrospectively reviewed.

Medical University of Łódź

Results: 31 years old patient has come to the regional hospital because of vomiting and fever of 38.5°C, which persisted for three days. Physical examination showed a slight dehydration (understandable, given the abundant vomiting). Basic laboratory tests available in the local hospital proved no abnormalities. Despite the lack of inflammatory markers antibiotics were administered and expanded diagnostic imaging examinations: X-ray, ultrasound, CT, MRI, and gastroscopy were conducted. Additionally, a lumbar puncture was made and the patient was neurologically consulted. Those tests also did not show any abnormalities that would have explained patient's clinical condition. Because of the still persisting symptoms and no further diagnostic capabilities after 10 days of stay the patient was transferred to the Department of Internal Medicine of Medical University of Lublin. Extended studies showed that the only significant deviation was an increase in the level of creatine kinase. Fluids and anti-emetics were administered. During his stay in the Department patient's condition improved spontaneously. Vomiting and fever subsided and CK level returned to normal. After 13 days of hospitalization patient was discharged home.

Conclusion: Despite of carrying out extended diagnostics, the only test that showed an abnormality was the level of CK. That increase was not connected with any muscular symptoms. This result, together with clinical symptoms may indicate an ongoing inflammation in the central nervous system, most likely of viral etiology. Confirmation of this assumption would involve the implementation of serological tests. Also, the dynamics of changes in the clinical picture pointed to an inflammatory factor that has not been captured in the tests. Diagnostic capabilities incredibly widened over the last 25 years. This case is the best example of that the medicine, in spite of technological progress, is still a great challenge for the physician and further holds many secrets.

Eth:

Session: Internal Medicine

Body mass changes after kidney transplantation and their impact on the graft function.

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Introduction: Body mass index (BMI) changes following kidney transplantation (KTx). It may be a natural consequence of improvement in kidney function, physical activity and appetite and may also be due to the use of corticosteroids as a part of immunosuppression regimen. BMI is strongly associated with outcomes in patients after KTx.

Purpose: To evaluate the changes in BMI in long term after KTx and their impact on the graft function.

Methods: The measurements of body mass, height (BMI expressed as kilograms per metre squared); glomerular filtration rate (eGFR by MDRD formula) and immunosuppression regimen were assessed in 91 kidney transplant recipients (37 F; 54 M). All KTx patients were treated with the steroids. The anthropometric parameters before KTx were collected from the medical charts. BMI values were further categorized into 4 categories:

low <18.5 kg/m², normal 18-24.9 kg/m², overweight 25-29.9 kg/m² and obesity over 30 kg/m².

Results: The mean age of KTx recipients was 49.3 ± 12.4 years, they were 3.4 ± 2.5 years after KTx. Before KTx mean weight, and BMI were respectively: 72.6 ± 14.9 kg, 25 ± 4.2 kg/m²; and in follow up: 76.8 ± 15.0 kg, 26.9 ± 4.7 kg/m². The patients showed an increase in BMI 1.9 ± 3.0 kg/m² $p < 0.05$. In follow up only one patients had BMI below 18.5 kg/m², before KTX 4 patients; 38% had normal BMI (mean eGFR 55.3 ± 15.4 ml/min), before KTX 50%; 34% were overweight (mean eGFR 53.7 ± 16.3 ml/min), before KTX 32%; 26% were obese (mean eGFR 47.9 ± 20.3 ml/min), before 15%. Mean eGFR in follow up was 53.7 ± 16.5 ml/min. In recipients who gained BMI mean eGFR was 55.2 ± 15.9 ml/min; in no BMI change 51.2 ± 22.9 ml/min and in decreased body mass 51.4 ± 13.9 ml/min;. There was a significant correlation between pre KTx BMI and follow-up eGFR ($r = -0.29$; $p < 0.0058$). In patients with low BMI before KTx mean BMI increased by 5.0 ± 4.8 kg/m² and mean eGFR after KTx was 69.4 ± 5.5 ml/min, in patients with pre-KTx normal weight BMI increased by 1.7 ± 2.4 kg/m² and mean eGFR was 57.6 ± 16.8 ml/min; in overweight group BMI increased by 1.3 ± 3.3 kg/m² and mean eGFR was 49.0 ± 12.1 ml/min; among obese pre- KTx patients BMI increased by 0.8 ± 3.1 kg/m² and mean eGFR was 48.0 ± 20.3 ml/min. There were no statistically significant difference in mean eGFR and BMI gains in patients with and without diabetes and between treated with tacrolimus vs with cyclosporine.

Mean BMI in patients with eGFR >60 ml/min after KTx ($n=30$) increased by 2.0 ± 2.8 kg/m²; with eGFR 30-60 ml/min ($n=55$) increased by 1.4 ± 3.1 kg/m² and in patients with eGFR < 30 ml/min ($n=6$) increased by 0.4 ± 1.5 kg/m².

Conclusion: Patients after KTx showed an increase of BMI. Patients with normal pre- KTx BMI have better graft function. BMI increases more in

patients with better graft function. Diabetes and the type of calcineurin inhibitor have not affect on BMI changes after KTx.

Eth: This paper is approved by Local Ethical Committee.



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Session: Internal Medicine

Drug hypersensitivity among patients referred to allergy clinic.

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Introduction: According to the World Health Organization even more than 10% of hospitalizations is caused by side effects to drugs and 6-10% of all side effects are allergic reactions. Hypersensitivity reaction represents type B of adverse drug reactions and are usually unpredictable, they causes objectively reproducible symptoms or signs, initiated by exposure to a defined stimulus that is tolerated by normal subjects.

Purpose: The aim of the study was to evaluate the profile of patients referred to the clinic due to hypersensitivity reactions to different groups of drugs.

Methods: The study included 237 patients, aged 9-85 years (mean age: 51.35 ± 16.04 , 191 women and 46 men), selected from the database of patients admitted to the Department of Immunology, Rheumatology and Allergy between 2010-2014. Patients were selected based on ICD10 codes: Z88 (allergy to drugs), T36 (Poisoning by, adverse effect of and underdosing of systemic antibiotics), T39 (Poisoning by, adverse effect of and underdosing of nonopioid analgesics, antipyretics and antirheumatics), T78.4 (unspecified allergy), T88.6 (Anaphylactic shock due to adverse effect of correct drug or medicament properly administered), T88.7 (Unspecified adverse effect of drug or medicament) and L27.0 (Generalized

skin eruption due to drugs and medicaments). The causative drugs and pattern of hypersensitivity reaction were analysed.

Results: In total 428 drug hypersensitivity reactions were reported by patients and the mean number of reactions per patient was 1.81. Hypersensitivity to NSAIDs was reported in 164 subjects (69.20%), to antibiotics - in 62 subjects (26.16%), and 20 subjects (8.44%) had experienced hypersensitivity to dental anaesthetics. Of the 164 cases of hypersensitivity to NSAIDs, 70 cases reported cross-reactions with other NSAIDs, 78 cases involved a single NSAID-induced hypersensitivity and 16 patients with known hypersensitivity to NSAIDs also demonstrated hypersensitivity to antibiotics. In patients with history of cross-reactions with other NSAIDs hypersensitivity was manifested by: bronchospasm in 13 cases, urticaria/angioedema in 20 cases, erythema in 5 cases; mixed reactions were observed in 32 patients. In the group of patients with single NSAID-induced hypersensitivity the most frequently reported symptoms were: urticaria/angioedema in 29 cases and bronchospasm in 19 cases; mixed reactions were observed in 26 cases.

Conclusion: We have documented that hypersensitivity to NSAIDs is the prevailing type of drug hypersensitivity among patients referred to allergy clinic. Drug hypersensitivity may deprive patients of proper drug therapy.

Session: Internal Medicine

Hymenoptera venom hypersensitivity- factors influencing commencement of allergen specific immunotherapy.

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Introduction: Hymenoptera venom allergy is a common cause of anaphylaxis and may be even fatal. In Europe the prevalence of systemic anaphylactic sting reactions is estimated at 0.3%-7.5%. Detection of IgE antibodies specific to venoms by skin tests and/or by immunoassay in serum is crucial for the diagnosis. Presence of IgE-mediated bee or wasp allergy and a severe systemic reaction to a bee or wasp sting is main indication for venom immunotherapy (VIT) which remains the only specific treatment. Some patients qualified for immunotherapy do not give written informed consent for the procedure. The reasons behind not consenting to VIT are poorly studied.

Purpose: This study is aimed at analysis of factors influencing the decision on initiation of VIT in patients with history of severe allergic reaction.

Methods: The study group consisted of 135 women and 87 men (mean age: 46.4 ± 16.7 years, range: 8-81) with hypersensitivity reactions to hymenoptera venom recruited from allergy clinic . In all patients, demographic characteristics and venom-specific IgE in serum were

analyzed. Systemic reactions were classified according to the Mueller scale. Statistical analyses were carried out using Statistica 12.0 (Statsoft Inc.).

Results: One hundred sixty eight patients (75.7%) had history of systemic reaction, 51 patients (23.0%) had history of large local reaction and 3 patients had toxic reactions. Among patients with systemic reaction 42 (18.9%) had grade I, 23 (10.4%) had grade II, 47 (21.2%) had grade III and 55 (24.8%) had grade IV symptoms, according to the Mueller scale. An IgE-mediated mechanism of venom hypersensitivity was confirmed by skin tests or/and serum specific IgE measurements in 176 (79.3%) patients.

Out of 176 (79.3%) patients with confirmed allergy (29 sensitized to bee venom and 147 to wasp venom) VIT was initially considered by a physician for 100 patients (45.0%), but eventually 12 patients were disqualified due to contraindications. The most common contraindications were autoimmune diseases (5 cases) and significant cardiovascular diseases (4 cases). Out of 88 patients to whom the VIT was offered as a therapeutic option 35 (39.8%) patients did not consent and finally VIT was undertaken in 53 of eligible patients. VIT was stopped prematurely in 6 patients because of exacerbation of cardiovascular diseases (2 cases), by self-choice (2 cases), due to the diagnosis of autoimmune disease (1 case) and serious adverse reactions during the build-up phase of VIT (1 case).

Conclusion: Less than half of patients with hypersensitivity reactions to hymenoptera venom fulfill criteria for VIT and high rate of patients qualified to immunotherapy do not consent to the procedure. This study emphasizes the role of education of patients about safety and efficacy of venom immunotherapy which remains the only causative treatment preventing potentially life-threatening allergic reactions.

Eth:

Session: Internal Medicine

Influence of cold exposure on central and peripheral blood pressure in patients with chronic kidney disease

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Introduction: Patients with advanced chronic kidney disease (CKD) are at very high risk of cardiovascular disease. Acute exposure to low temperature may trigger a cardiovascular response through its modulation of central hemodynamics and arterial elasticity. Such phenomenon has been recently studied in elderly hypertensive patients but little is still known about cold-induced changes in the cardiovascular system in CKD.

Purpose: To evaluate the influence of cold exposure on central and peripheral blood pressure in patients with chronic kidney disease.

Methods: The study group comprised 7 patients (2M, 5F, mean age 59.3 ± 9.4 years) with CKD stage 3-4 and arterial hypertension (AH). Control group included 9 healthy control subjects (1M, 8F, mean age 55.3 ± 9.8 years). The patients with obesity, end-stage or dialysis-dependent CKD, poorly controlled AH, age <30 or >60 years and severe heart or liver failure and diabetes mellitus were excluded. All patients underwent two recordings with applanation tonometry (SphygmoCor, AtCor Medical Pty Ltd, Sydney,

Australia) - the first immediately after 10-minute exposure to -10 degree Celsius in the cryogenic chamber at the Technical University of Lodz and the second after at least 7 days in ambient temperature without acute exposures to cold. Peripheral blood pressure (PBP), central blood pressure in ascending aorta (CBP), pulse pressure (PP), augmentation pressure (AG) and index (AI), pressure-time index (PTI), end-systolic pressure and subendocardial viability (Buckberg ratio) were measured. The study protocol was approved by the local ethics committee.

Results: In CKD patients both peripheral and central systolic BP were significantly higher when measured in Cryo Chamber than in ambient temperature (146.9 ± 19.8 mmHg vs. 129.1 ± 10.4 mmHg; $p=0.018$ and 134.3 ± 16.9 mmHg vs. 118.4 ± 12.5 mmHg; $p=0.009$, respectively). That difference was not observed in the control group. There were no significant differences in peripheral and central diastolic BP induced by cold in both groups. Cold exposure did not cause any significant difference in radial and central PP in both groups. AG in CKD patients in cold and ambient temperature were 17.0 ± 8.3 mmHg and 11.7 ± 8.4 mmHg, respectively ($p=0.114$), also AI measurements did not reveal significant differences ($31.1 \pm 7.0\%$ and $28.7 \pm 9.1\%$, $p=0.33$). Cold significantly increased diastolic PTI only in CKD group (3565.1 ± 510.5 mmHg/s per min in cold and 2948.3 ± 474.8 mmHg/s per min in ambient temperature; $p=0.018$). End-systolic pressure was significantly higher in cold conditions than in ambient temperature in patients with CKD (123.9 ± 10.7 mmHg and 112.0 ± 9.7 mmHg, respectively, $p=0.009$). In ambient temperature Buckberg index was significantly lower in CKD group than in controls ($126.3 \pm 25.5\%$ and $161.8 \pm 19.4\%$, respectively, $p=0.007$). Cold exposure had no effect on that parameter.

Conclusions : Central and peripheral hemodynamic effects of acute cold exposure may be augmented in the presence of impaired kidney function.

Session: Internal Medicine

Factors determining prescription medication borrowing and sharing among patients with chronic kidney disease

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Introduction: Prescription medication and sharing is a common but poorly understood behavior that may lead to detrimental health outcomes including adverse drug reactions and ineffective therapy due to incorrect dosage or regimen. Patients with chronic kidney disease (CKD) who undergo routine hemodialysis provide a unique model to study such behaviors. During repeated hemodialysis sessions the patient have regular contacts with specialized medical personnel and are frequently informed about increased risk of drug side-effects related to their disease. We hypothesized that it may decrease the need for borrowing and sharing prescription medication in this group in contrast to non-dialyzed patients with CKD.

Purpose: The aim of the study was to compare the patterns and factors determining borrowing and sharing prescription medications among adult patients with end-stage renal disease who are on chronic dialysis to non-dialysis CKD patients and subjects without CKD.

Methods: 304 patients (153 M and 151 F, aged 18-85 years) were studied, including chronic hemodialysis patients (HD) (n=222), non-hemodialysis CKD patients (NH) (n=82) and 102 reference subjects (C) with normal kidney function. Prescription medication sharing and borrowing practices

were compared between the three groups based on a standardized questionnaire (50 items). The categorical responses were analyzed through Chi-square test and multiple regression analysis.

Results: 12% (n=27) of HD patients shared medications compared to 11% (n=9) NH, and 21% (n=21) C (p=0.09). 8% (n=17), 10% (n=8) and 23% (n=23) respectively borrowed medications (p=0.0005). More men than women borrowed medications (54% vs 46%). More women than men shared medications (58% vs 42%; p=0.49). 63% patients who shared vs 53% patients who did not share (p=0.16) and 79% patients who borrowed vs 51% who did not borrow prescription medications (p=0.0002) were not satisfied with their financial situation. 89% patients who borrowed vs 98% patients who did not borrow (p=0.003) and 95% who shared vs 97% patients who did not share (p=0.38) prescription medications had their own general practitioner. Over-the-counter medications were taken by 51% patients who shared vs 58% patients who did not share and by 54% patients who borrowed vs 57% patients who did not borrow prescription medications. 65% patients who shared vs 43% patients who did not share (p=0.0017) and 65% patients who borrowed vs 43% patients who did not borrow (p=0.004) prescription medications admit searching for medical information in the Internet (sought Dr. Google's advice).

Conclusion: Prescription medication borrowing and sharing is a common behaviour mostly among non-hemodialysis patients and healthy subjects as compared to hemodialysis patients. Such factors as sex, education, financial situation and chronic comorbid conditions may affect the patterns of borrowing and sharing prescription medications.

Eth: This paper is approved by Local Ethical Committee.

Session: Internal Medicine

A case report of a patient with blue rubber nevus syndrome presenting with severe gastrointestinal bleeding.

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Introduction: Blue rubber bleb nevus syndrome (BRBNS) is a rare vascular disorder consisting of numerous vessel malformations. Multifocal venous abnormalities are most prominent in the skin and gastrointestinal tract (GIT), but may affect other organs. Although several hypotheses have been proposed, the cause of the disease still remains unknown, which combined with the extent of pathology effectively limits causal treatment. Due to potential severe GIT bleeding, which can be fatal, patients with BRBNS should receive profound medical attention.

Purpose: We aimed at presenting a case report of a patient with severe GIT bleeding suffering from this syndrome. Additionally, our aim was to emphasize possible concomitant disorders, potential risks and death mechanisms in affected patients.

Methods: The patient is a 52-year old male, admitted to the Department of Gastroenterology, Medical University of Lodz, in April 2014 because of

melena not accompanied by gastric pain. The ailments continued for five days preceding hospitalization. On admission, he complained of dizziness, excessive fatigue and stenocardial pain accompanied by physical exertion. Apart from a skin hemangioma located in the area of left scapula, skin pallor, tachycardia and hypotension were found on physical examination. For 3 years, the patient had been treated for hypertension, since then on cardioprotective dose of aminosalicylic acid and recently he also received Diclofenac for severe back

Results: During hospitalization several diagnostic tests were performed including abdominal USG, gastro- and colonoscopy, none of which revealed any abnormalities. Laboratory tests unambiguously showed severe anemia (Hgb 6,2g/dl, RBC 2,15x10⁶/μl), low serum iron (28μg/dl) and elevated

D-dimer concentration (2804ng/ml). After receiving essential treatment the patient was discharged and scheduled for a capsule endoscopy. The exam showed multiple nodules with intensified vascular pattern typical for varices in jejunum. Successive diagnosis led to revelation of a hemangioma in the body of L1 vertebra. Further imaging studies of abdomen orientated diagnosis towards lymphoma which consequently ended with laparoscopy with mesenteric lymph node examination, which showed venous malformation around otherwise normal lymph nodes.

Conclusion: All of the performed diagnostic exams led to associate patient's GIT bleeding with a rare BRBNS. Presumably taking non-steroid anti-inflammatory drugs triggered the symptoms in the presented patient. A successful therapy is still to be developed, which limits actions to relieving symptoms, patient education to avoid the risk factors for potential complications and regular medical examination.

Eth:

Session: Internal Medicine

H2O2 concentration in exhaled breath condensate does not differ between maintenance hemodialysis patients, kidney transplant recipients and healthy controls unless adjusted for DLCO: a preliminary study.

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Introduction: Hydrogen peroxide (H₂O₂) can be a noxious oxidant. Maintenance hemodialysis (HD) patients presented with impaired lung function and excessive H₂O₂ exhalation if dialyzed with non-biocompatible, cuprophane membranes. There is no data of H₂O₂ exhalation and lung function in HD patients dialyzed with common, medium-biocompatible cellulose triacetate (CTA) membranes and in kidney transplant (KTx) recipients.

Purpose: The aim of the study was to determine the H₂O₂ concentration ([H₂O₂]) in exhaled breath condensate (EBC) and diffusing capacity of the lung for carbon monoxide (DLCO) in HD patients dialyzed with CTA membranes and in KTx recipients.

Methods: Study included 11 non-smoking, clinically stable HD patients (age 61.6 ± 11, BMI 27.2 ± 4.4), 14 KTx recipients (age 49.2 ± 10.9, BMI 25.6 ± 3.6), and 18 healthy controls (age 42.1 ± 9.1, BMI 25.1 ± 3.0). EBC was collected with Liebig tube cooler from 250 L of expired air and

weighed. [H₂O₂] in EBC was assessed with Brooks's method. DLCO was measured and corrected for blood hemoglobin concentration (DLCOc).

Results: [H₂O₂] in EBC did not differ among groups reaching 1.46 ± 0.36 , 1.47 ± 0.52 , 1.65 ± 0.43 $\mu\text{mol/L}$ in HD, KTx patients and controls, respectively. Healthy subjects produced 22% higher mass of EBC (2.22 g) than HD patients ($p < 0.02$), which became indifferent after adjustment to DLCOc. Adjustment of [H₂O₂] to DLCOc ([H₂O₂]/DLCOc) disclosed 21% higher [H₂O₂]/DLCOc in HD patients than in controls ($p < 0.05$). Percent of predicted DLCOc of HD patients was 18% lower than in controls ($p < 0.05$).

Conclusion: CTA membranes, compared to cuprophane, provide improvement in dialysis biocompatibility and reduction of oxidative stress measured with H₂O₂ exhalation. On the other hand increased [H₂O₂]/DLCOc in HD patients accompanied by worse lung function suggests the presence of moderate, chronic dialysis-related inflammatory response affecting lungs. Considering [H₂O₂]/DLCOc, KTx patients appear to be at lower risk of oxidative lung damage than HD patients.

Eth: This paper is approved by Local Ethical Committee.

Session: Internal Medicine

PancreApp: early results of clinical trial.

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JUVENES PRO MEDICINA

ŁÓDŹ 2015

Introduction: Medical nutrition therapy has a pivotal role in the management of chronic gastrointestinal disorders, like chronic pancreatitis, inflammatory bowel diseases (Leśniowski-Crohn's disease and ulcerative colitis) or irritable bowel syndrome. Individualized diet can increase fettleand improve the compliance of patients suffering from chronic gastrointestinal disorders. Diet-related patterns are also being constantly searched in inflammatory bowel diseases or irritable bowel syndrome. This is driven by the fact that etiology of these diseases is still unclear.

Purpose: The aim of this study is to evaluate previously proposed solution which purpose is to support patients' self-control and adjust diet to the best possible fettle based on individualized machine learning model.

Methods: Since October of 2014 this project is financed by Polish Ministry of Science and Education as a grant for student researchers. We enroll adult patients-volunteers with chronic pancreatitis, inflammatory bowel diseases (Leśniowski-Crohn's disease and ulcerative colitis) or irritable bowel syndrome. Enrolled patients are being randomly divided into control and experimental group; and then are using application for 3 following weeks. Experimental group is able to use prediction model, while control group can use PancreApp only as a simple diet diary. At the beginning and the end of the trial we are measuring patients' basic physical parameters and PHQ-9 score (assess depression that may affect compliance).

Results: To this day, 21 out of 100 patients (planned) have been enrolled in to the trial, while 10 of them have finished it. However, only 4 patients completed the trial successfully. In preliminary analysis we have noted that 95% confidence interval of regression almost contains the line of ideal prediction. The root mean squared error was equal to 0.80, while Spearman's correlation coefficient between predicted and real values was equal to 0.87 ($p=0.000$). It is also remarkable that not even one patient have chosen Android device so far (even if they have such an opportunity), suggesting that personal computers are more approachable at complex data entry. Current compliance is in expected range, as all patients (qualified so far) are in remission state.

Conclusion: Early results of the trial show promising properties of Shepards' method applied for prediction of fettle in chronic gastroenterological disorders. PancreApp seems to be intuitive enough for usage.

Eth:

Session: Internal Medicine

The relation of natriuresis to circadian blood pressure profiles in patients with chronic kidney disease and kidney transplant recipients.

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Introduction: Optimal blood pressure (BP) fluctuates over a 24-hour sleep-wake cycle, with values falling at night by 10% to 20%. There are different patterns of disturbed circadian rhythm of BP, i.e. abnormal nocturnal fall pressure known as “non-dipping” or nighttime increase of BP “reverse dipping”. Non-dipper or reverse dipper status is more prevalent in patients with chronic kidney disease (CKD). Diminished renal capacity to excrete sodium may result in nocturnal BP elevation in order to enhance pressure natriuresis to compensate for impaired daytime natriuresis. We hypothesized that kidney transplantation (KTx) that restores glomerular filtration should normalize circadian BP profile.

Purpose: The aim of the study was to assess and compare natriuresis and circadian BP profiles of patients at different stages of CKD and KTx recipients.

Methods: Study group consisted of 55 patients with stable graft or kidney function: 12 with CKD 2 and 3a (8M, 4F; mean age 62 ± 10 years), 12 in stage 3b (6M, 6F; mean age 69 ± 11 years), 17 in stage 4 and 5 non-dialyzed (5M, 12F, mean age 71 ± 9 years) and 14 patients after KTx (8M, 6F; mean age 53 ± 10 years, mean time after KTx 5.1 ± 4.7 years). Blood pressure was monitored noninvasively for 24 hours (BR-102plus ABPM system, Schiller), every 15 min. from 7 a.m. to 10 p.m. and every 30 min. from 10 p.m. to 7 a.m. Urinary samples were collected during the daytime and nighttime to measure natriuresis.

Results: Mean 24h systolic blood pressure (SBP) was lower in KTx recipients than in CKD at all stages (130 vs. 141 mmHg; $p < 0.001$) however diastolic blood pressure (DBP) values were comparable. During awake period SBP values were 130 mmHg after KTx vs. 138 mmHg in CKD patients with $eGFR > 45$ ml/min. ($p = 0.07$); 139 mmHg in 3b CKD; 145 mmHg in stage 4-5 ($p < 0.05$). Nighttime mean BP was lowest in CKD patients with $eGFR > 45$ ml/min (126/68 mmHg vs. KTx 130/75 mmHg; $p = 0.005$). The prevalence of dipper status was also highest in CKD patients with $eGFR > 45$ ml/min. 50% vs. 8.3% (CKD 3b), 0% (CKD 4-5) and 7.1% (KTx) ($p < 0.01$), whereas reverse status was the rarest, found in 8.3% vs. 25%, 71% and 42.8% of patients, respectively ($p < 0.01$). Night/day mean arterial pressure (MAP) ratios correlated inversely with $eGFR$ in CKD ($r = -0.49$ $p = 0.001$) but not in KTx patients and positively with night to day natriuresis ratios in both groups (CKD $r = 0.91$ $p < 0.01$; KTx $r = 0.63$ $p = 0.016$). The dipping profile was present only in KTx patients with $eGFR > 60$ ml/min. (25%), whereas reverse dipping profile only in those with $eGFR < 60$ ml/min. (60%). More than half CKD patients were taking at least 4 antihypertensive medications. In contrast 64% of KTx recipients were receiving no more than 3 antihypertensive drugs to control BP.

Conclusion: Kidney transplantation improves blood pressure control and reduces a number of antihypertensive drugs used. Normal circadian rhythm could be restored only in the transplant patients with well-functioning renal graft ($eGFR > 60$ ml/min.).

Eth: This paper is approved by Local Ethical Committee.

Session: Internal Medicine

Untypical course of acute pancreatitis: clinical case series.

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Introduction: Acute pancreatitis (AP) may be a life-threatening disease with high morbidity and mortality rates. AP is characterized by destructive inflammatory process of pancreas tissue through the activation of pancreatic acinar cells as a result of being triggered by various factors. The symptomatology is extremely broad, most common symptoms and signs include: severe epigastric pain (upper abdominal pain) radiating to the back in 50% cases, peritonitis, nausea, vomiting, and fever. However, common symptoms are not always present and simple abdominal pain may be the sole presentation.

Purpose: The diagnosis of AP is largely a clinical one based on physical signs and symptoms as well as serum levels of pancreatic enzymes. The aim of our study was to present three cases of patients with severe AP, who presented with unspecific symptoms and signs, as well as the unclear causative factor leading to diagnostic and therapeutic difficulties during the course of the disease.

Methods: The study was conducted at the Department of Gastroenterology, Medical University of Lodz from December 2014 to March 2015. The data of the presented patients were retrieved retrospectively from the hospital medical records and described the clinical presentation, past medical history, laboratory test results, and imaging examinations.

Results: The study comprised the analysis of three patients medical record, suffered from severe AP. However, AP clinical presentation in these patients and the etiology of the disease were unclear. In all patients laboratory results and abdominal ultrasound examinations were not specific for AP. In two patients serum amylase levels were normal, in one lipase level also wasn't increased, one patient presented with consequences of deep anemia. Only abdominal computer tomography (CT) enabled to confirm the diagnosis in all cases. CT scans revealed extra-pancreatic inflammatory infiltration of fat tissue in two of the patients and enlargement of pancreas in all cases.

Conclusion: AP is an unpredictable disease with high severe complication and morbidity rates. Many cases are diagnosed clinically, and etiology is rather easy to establish. However rare cases with non-specific laboratory results prove that radiology imaging plays an important role in confirming AP diagnosis in doubtful cases, it also helps in evaluating severity, identifying, monitoring, and managing complications.

Eth:

of treatment.

Eth:-

Neurology and Neurosurgery

Endocrine complications in 7-years old child treated with diffuse medulloblastoma - Case Report

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Introduction: Medulloblastoma is the most common malignant brain tumor in children, with the incidence of 0,5/100 000. It typically occurs in children under 10 years old, but they also rarely emerge in adults. It originates in posterior cranial fossa, in vermis of the cerebellum and projects into the 4th ventricle. Medulloblastoma spreads through cerebrospinal fluid in subarachnoid space. It is characterized by headaches, vomiting in the mornings (due to increased intracranial pressure) and wide-based gait. In diagnostics we perform CT or MRI scans and 14 days after Surgery, emergency and intensive therapy a lumbar puncture as a review of metastasis involving spinal cord. The treatment protocol of medulloblastoma involves Surgery, emergency and intensive therapy, chemotherapy and radiotherapy. Overall 5 year survival rate for the average-risk groups estimates around 70% and 60% for high-risk groups.

Purpose: Evaluation of the treatment complications based on the medical records.

Methods: The analysis of medical record of the treatment during 1999-2006 was made.

Results: We present a case of 7-years old girl with medulloblastoma disseminated in spinal canal. Patient underwent suboccipital craniotomy and Medos shunt valve implantation. After surgical treatment the SIOP trial: combined chemotherapy and following high-dose radiotherapy was performed. In last computered tomography recurrence of the tumor was not noticed. Patient remained in endocrinological monitoring because of height velocity as a result of hypopituitarism.

Conclusion: Applied treatment allows achieving remission in high-risk patient. The therapy produces significant endocrinological effects.

Eth: -



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Łódź 2015

Session: Neurology and Neurosurgery

Devic syndrome in young patient

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Introduction: Neuromyelitis optica (NMO), or Devic syndrome is a rare type of inflammatory demyelinating condition that affects the optic nerve and the spinal cord. It is currently considered as autoimmune disease associated with autoantibodies to aquaporin-4 (AQP4). NMO often coexists with systemic autoimmune diseases such as lupus erythematosus (SLE), antiphospholipid antibody syndrome (APLS) or Sjogren's Syndrome. According to the Mayo Clinic recommendations essential for diagnosis of Devic's Syndrome are: inflammation of spinal cord and optic nerve, aquaporin-4 antibodies, MRI changes in spinal cord as well as changes in brain which are non-diagnostic for SM.

Purpose: Case report

Methods: Case report

Results: 15 year old girl was admitted in February 2015 to the Department of Pediatric Neurology, University Children's Hospital in Lublin. She was previously hospitalized in Sandomierz due to the severe backache and urine

retention. Then she stayed in hospital in Rzeszów as she became blind in the left eye. The examination of visual potential proved optic neuropathy of the left eye. At hospital admission the girl was in moderate health state and lying position. Physical examination showed the weakening of muscular strength and tone in lower limbs. An hour after admission the patient informed about sight problems in the right eye, which developed into almost complete blindness. Inflammatory changes characteristic for Devic syndrome were visible after magnetic resonance imaging of the spine. The treatment included: Solu-Medrol, plasmapheresis, immunoglobulins. As a result, patient's clinical state improved. Further examination of visual potential proved advanced demyelination in the right optic nerve and confirmed optic neuropathy of the left eye. Medical investigation demonstrated high level of anti aquaporin-4 immunoglobulin.

Conclusion: Devic syndrome is a rare autoimmune disorder, with occurrence 1 - 9 : 100 000, that is why we would like to present a case of 15 year old girl with NMO. A definitive diagnosis of a demyelinating disease cannot be reached by imaging scans alone. Patient's history, physical examination and immunological tests, used to detect antibodies directly connected with the pathology of the central nervous system, are also essential to the diagnostic process. Plasmapheresis and corticosteroid treatments led to the improvement of both patients' neurological state in terms of sensory and motor functions.

Eth: -

Session: Neurology and Neurosurgery

Utility of the corpus callosum index in patients with multiple sclerosis

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Introduction: In the course of multiple sclerosis (MS) there occurs a multi-phased and multifocal demyelinating damage of the central nervous system, mainly in the white matter.

Purpose: The aim of this study was to assess the MRI morphology of the corpus callosum (CC), the largest white matter structure in the brain, with the analysis of the corpus callosum index (CCI) as a potential radiological indicator of MS.

Methods: We analyzed MR images of 39 patients with diagnosed MS (31 women, 8 men, mean age 36.3 years) and physiological MR images of 18 people without MS (13 women, 5 men, mean age 30.4 years). Based on sagittal section in the T2-weighted sequence, CCI was determined as the ratio of the sum of the width of the genu, trunk and splenium of the CC to the largest anterior-posterior dimension. CCI values were compared between the study group and the control group, and were related to age and

degree of disability of patients, based on the Expanded Disability Status Scale (EDSS).

Results: The mean value of the CCI was significantly lower in patients compared with controls (0.38 ± 0.06 vs. 0.41 ± 0.04 ; $p < 0.05$). Also the thickness values of the genu and trunk of the CC were significantly lower in patient group. It was found that CCI correlation with age is statistically significant but weak in both groups ($r = -0.14$ vs. -0.26). In patients the CCI and the thickness of the CC trunk and genu showed a significant correlation with the EDSS score ($r < -0.3$, $p < 0.05$).

Conclusion: The size of the corpus callosum of patients with MS was significantly lower compared with an age-appropriate control group, suggesting loss of white matter in the course of the disease. CCI may be a useful indicator in assessing the radiological severity of the disease.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Neurology and Neurosurgery

Quality of sleep in multiple sclerosis patients

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Introduction: Sleep quality of patients with multiple sclerosis (MS) has received little research attention in spite of its probable effect on patients' quality of life.

Purpose: The objectives of this study were to analyze the pervasiveness of sleep disturbances and its relation to the use of medication in MS therapy.

Methods: A total of 99 MS patients and 106 sex-matched controls were enrolled in this study. Participants were asked to fill out reliable Polish version of Pittsburgh Sleep Questionnaire (PSQI). Medications used in treatment of MS were registered. To distinct good (≤ 5) from poor sleepers (>5) there was used the global PSQI.

Results: MS patients reported a higher mean global PSQI score than controls (6 vs 4 points, $p < 0,001$), and percent of poor sleepers in the MS patients group compared to the controls (72,73% vs 44,34% $p = 0.001$). Analyses showed that treatment with interferon beta 1b was associated with poor sleep among MS patients in comparison to the control group (6 vs 4 points, $p < 0,001$).

Conclusion: Poor sleep quality is a common complaint in MS patients. Treatment with interferon beta 1b is strongly connected with the quality of sleep in this group of patients.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Neurology and Neurosurgery

Assessment of morning headache as an obstructive sleep apnea symptom

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Introduction: Morning headache is considered to be an obstructive sleep apnea syndrome (OSAS) symptom. Despite being not as common as excessive daytime sleepiness and or unrefreshing sleep, it can similarly impair everyday activities. Its pathophysiology is hypothesized to be linked to decreased brain oxygenation at night due to episodes of apnea and hypopnea.

Purpose: We decided to verify prevalence of morning headaches and whether they are associated with polysomnographic and clinical indices of OSAS severity.

Methods: We collected clinical and polysomnographic data on 1181 patients from Sleep and Respiratory Disorders Centre outpatient registry. All patients were referred to the centre due to the presumptive diagnosis of OSAS based on the aforementioned typical symptoms. All patients underwent nocturnal diagnostic polysomnography. Clinical (from patients' charts) and polysomnographic variables were used to create a database. Patients with information regarding frequency of morning headaches on semi-quantitative scale: 0: at all, 1: 1-3/month, 2: 1-2/week, 3: 3-5/week, 4:

6-7/week, were eligible for further analysis (n=1169). Arbitrary, cutoff of 2 on the scale was considered as clinically significant occurrence of morning headaches. Other variables of interest included: apnea-hypopnea index (AHI), mean oxygen blood saturation (SatO₂), age, body mass index (BMI). Statistical analysis comprised Pearson Chi-square test, U Mann-Whitney test and logistic regression model construction.

Results: Morning headaches were reported by 28.91% of patients (n=338) and more commonly by women than men (38.49% vs 25.74%, p<0.001). AHI was higher among patients without than with morning headaches (mean 28.40 vs 24.40, p<0.01), but no statistically significant difference in mean SatO₂, age nor BMI was observed. In logistic regression model morning headache was predicted by female sex (OR 1.74, 95%CI 1.28-2.36, p<0.001), history of hypertension (OR 1.59, 95%CI 1.19-2.13, p<0.01), rise in BMI by every 1kg/m² (OR 1.03, 95%CI 1.01-1.05, p<0.05) and decrease in AHI by every 1/h (OR 0.99, 95%CI 0.98-0.99, p<0.01). Smoking, mean SatO₂ and age were not proven to predict morning headaches in studied group.

Conclusion: In spite of high prevalence of morning headaches complaints in the investigated population, they may not be associated with OSAS. More detailed information on the headache, including its duration, frequency, character and intensity, might be required if it is considered as an OSAS symptom.

Eth: This paper is approved by Local Ethical Committee.

Session: Neurology and Neurosurgery

What are the real shapes of brain tumours? Geodesic Active Contours and Region Competition methods applied for semi-automated image segmentation of subependymal giant cell astrocytomas and brainstem gliomas.

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Introduction: Subependymal giant cell astrocytomas (SEGA) are brain tumors of childhood that are associated with tuberous sclerosis complex (TSC). SEGAs may lead to obstructive hydrocephalus by compressing the ventricular system. SEGA volume is measured by approximating their shape to an ellipsoid which may result in overestimation of the tumor's size.

Purpose: The aim of this study was to compare manually measured (by radiologists) volume of tumors with a novel semi-automated pixel clustering image segmentation using geodesic active contours and region competition methods.

Methods: Firstly, the volume of tumours was calculated using dimensions reported by a radiology specialist under clinically-applied assumption of ellipsoid . The proprietary software was written in C# .NET programming language, however, source code of ITK-SNAP and VTK framework was used. After the images were clustered, active contour evolution (using the feature image based on region competition was performed) until the distinguished volume of the tumour was constant. Lastly, statistical analysis

was performed. As SEGAs are classically considered as a tumours of good contrast enhancement, we tested the method also on several brainstem gliomas.

Results: The study material consisted of 35 SEGA tumours found on axial 3D T1-weighted GRE sequences (with contrast) of patients with TSC. Computer assisted measurements achieved voxel spacing (resolution) equal to 0.000238 cm³. Mean volume of segmented tumours was equal to 1.112±0.928 cm³ vs. 1.263±0.908 cm³ determined by radiologists. Paired t-test have shown that difference between these two methods was statistically significant ($p = 0.043$); therefore computerized methods have shown lower results. Prospectively, results from both methods were strongly, linearly correlated ($r = 0.89$, $p < 0.001$), while root mean square error was equal to 0.892. Bland–Altman regression plot showed 97% of computer-assisted tumor volume measurements to lie within 95% Confidence Interval for values measured by the radiologist, confirming a lack of bias and agreement of the methods. Additionally, analysis of brainstem gliomas has shown that the method can also be applied in different tumours, however, more clusters have to be summed up in order to achieve appropriate results.

Conclusion: The ellipsoid approximation used by the radiologist makes manually determined volume of SEGA tumours overestimated. In order to improve the accuracy of oncological follow-up of SEGAs the application computer-assisted methods should be considered, particularly when using high-resolution MRI scanners. This method can be also successfully applied for different types of tumours, therefore further research is justified.

Eth: -

Session: Neurology and Neurosurgery

Evaluation of usability of the device to clinical assessment of lumbar disc herniation treatment by measuring the degree of the foot paresis

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Introduction: Lower limb paresis is one of the most common symptoms that occurs in the course of spine diseases. Upward trend of number of patients and development of treatment methods sets new goals to doctors. These include capacity to objectify and control of the therapy results. The aim of lumbar disc herniation Surgery, emergency and intensive therapy is to prevent fixation of neurological deficit in the range of lower limb. Imperfection and subjectivity already in the examination methods and scales, prompted us to undertake exploration way that would assess quantitatively the degree of paresis before and after the discopathy Surgery, emergency and intensive therapy. On these assumptions we created a device designed in our Department.

Purpose: Aim of the study is to estimate the use of the device in pre- and postoperative evaluation of the foot paresis degree in the course of lumbar discopathy.

Methods: The study included 35 patients previously enrolled to the lumbar disc herniation Surgery, emergency and intensive therapy. The device was used to measuring torques and tilting angles in the ankle joint in the direction of plantar and dorsal flexion. The study was performed one day prior and one day after Surgery, emergency and intensive therapy.

Results: Studies have demonstrated the efficacy of the device to objectify the assessment of treatment of the foot paresis in the course of the lumbar discopathy. Mathematical analysis of the quantitative results confirm the excellent accuracy even minor swings angle values and torques in patients with advanced paresis. These results are then translated on the charts that allow clearly analyze the effectiveness of treatment in all patients.

Conclusion: The clinical use of the device and possibility of digital recording of each patient study allow for objective and long-term assessment of the foot paresis treatment in patients with lumbar disc herniation. This also creates an opportunity to monitor the postoperative follow-up as well as subsequent rehabilitation.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Oncology and Hematology

Assessment of ABCB1 gene promoter region polymorphism in tissues obtained from gastric cancer patients

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Introduction: Uterine leiomyosarcoma (uLMS) is a very rare, aggressive malignant neoplasm with a poor prognosis and high incidence of recurrence and metastases. The most common metastatic sites of uLMS include the peritoneal cavity, lungs and liver. Cardiac or cerebral involvement is extremely rare; their synchronous occurrence in one patient is exceptional.

Purpose: -

Methods: -

Results: In this study we present a case of a 51-year old female diagnosed with uLMS, which metastasized to the lungs, subcutaneous tissue, brain and heart. The patient was first diagnosed with uterine leiomyoma and subsequently underwent a subtotal hysterectomy. The pathology revealed epithelioid leiomyosarcoma G3. Subsequently, the patient received 6 cycles of chemotherapy – ADM scheme (Doxorubicin) and was discharged home in good condition. Ten months later, a chest x-ray followed by a needle aspiration biopsy revealed lung metastases. Simultaneously, metastases in subcutaneous tissue were diagnosed, also by FNAB. Consequently, a second course of chemotherapy – AP1 scheme (Doxorubicin + Cisplatin) was

implemented. After 3 cycles the scheme was changed to GEMZAR (Gemcitabine) as progression of the lung metastases was observed. After the third cycle, the patient presented with heart palpitations and decreased tolerance of effort. An ECHO was performed and revealed a chronic left-sided heart failure – most likely a side effect of chemotherapy- and a tumor in the wall of the left atrium. Unfortunately, the third course of chemotherapy proved ineffective and the treatment was discontinued. At the follow-up visit, the patient presented with neurological disorders. Computed tomography of the brain revealed multiple cerebral and cerebellar metastases. During this time, the patient reported pain and swelling of the right ankle. Computed tomography confirmed the presence of the metastasis between the right tibia and fibula. The patient underwent a palliative radiotherapy of the brain and crural region and was referred to palliative care in fair **condition**.

Conclusion: ULMS is a very rare and highly aggressive malignancy and there is still little data published on this subject. A greater knowledge of the possible metastatic sites and their uncommon coincidence should make the clinicians more aware and result in a better and quicker diagnostic process. This case shows that the currently available treatment is ineffective, therefore, a further research on this matter should be performed.

Eth: -

Session: Oncology and Hematology

Does antifungal therapy with the use of azoles aggravate the neurotoxicity associated with Vinca alkaloids administration? - retrospective analysis of treatment side effects in pediatric oncological patients

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Introduction: Chemotherapy of pediatric oncological patients often leads to profound neutropenia and immunosuppression. Invasive fungal infections (IFI) are life-threatening complications which accompany systemic treatment of neoplasms. It explains the frequent use of antifungal agents in pediatric oncology. Azoles are one of the most effective groups of antifungal drugs. However they may interact with other **pharmacological agents**.

Purpose: The purpose of the study is to assess the influence of azole therapy on severity of neurotoxicity of Vinca alkaloids in pediatric oncological patients treated in Department of Pediatric, Oncology, Hematology **and Diabetology in Łódź**.

Methods: Retrospective analysis of medical documentation of 318 children who were treated due to neoplastic disease diagnosed between 2010 and 2014.

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Results: From the cohort of 318 patients we selected 152 patients who received chemotherapy with use of Vinca alkaloids. Patients with CNS tumor were excluded from the analysis of neuropathy. We found that 50 (32,9%) patients developed neuropathy. From this 30 cases (60%) were peripheral neuropathies and 20 (40%) were central neuropathies. 13 (26%) neuropathies were observed in patients who received additional azole treatment.

Conclusion: Our preliminary results suggest that the simultaneous use of azoles and Vinca alkaloids might be an important, very often underestimated, risk factor of neurotoxicity.

Eth: -



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Session: Oncology and Hematology

Abnormal morphology in acute leukaemia

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Introduction: Acute lymphoblastic leukemia (ALL) is the most common malignancy diagnosed in children, representing 23% of all pediatric cancers. About 75% of children with diagnosed leukemia have ALL. Morbidity in Poland is about 35,4 per 1 mln people. It most often occurs in children ages 2 to 5, is ten times frequent than in 19 years old adolescent and affects slightly more boys than girls.

Purpose: To analyze prevalence of anemia, thrombocytopenia, leukopenia in children with ALL at onset of leukemia, and their severity and to determine how presented parameters correlated with prognosis identifying if the presence and amount of blasts in the blood at the time of diagnosis affects prognosis.

Methods: Retrospective analysis of 100 patients Medical University of Lodz, who have been diagnosed with acute lymphoblastic leukemia between 2008 and 2014. We evaluated the peripheral blood count at the moment of the ALL diagnosis. We check the child's age at diagnosis, and deaths.

Results: 26% of the study group represented standard-risk patients, 53% - intermediate- risk, and 21% of high-risk. Anemia was detected in 52% of children, leukopenia - 22%, thrombocytopenia - 79%. Average number of platelets in the peripheral blood was as follows: SR - 90.23, IR - 87.99, HR - 75.81 The highest content of hemoglobin in the blood was observed in the high risk group (mean: 7.87), while the lowest - in the standard risk group (mean: 7.0). The percentages of blasts in the peripheral blood samples of the particular risk groups were as follows: SR - 29%, IR - 57%, HR - 63%. However, in seven cases there was not detected the presence of blasts in the blood sample. Regarding the central nervous system involvement the percentages were : CNS1 - 83% of children, CNS2 - 13%, and CNS3 - 4%. The average age of the children who died (12 people) was 9.29 years. Anemia was detected in 5 of them, leukopenia - in 1, thrombocytopenia - in 11. Average contents of blasts in the blood of these patients was 66%.

Conclusion: Resolution of majority parameters in the peripheral blood morphology was expected and compatible with obligatory medical knowledge. Children with the age of 6 and younger had better prognosis than older children The lower level of blast cells in peripheral blood might be a good prognostic parameter because these patients have been cured easily. The lack of blast cells In peripheral blood might represent a good prognostic parameter because all patients with such level of blasts have been cured. Patients with anemia at the time of diagnosis had better prognosis than the others patients. Therefore anemia might be a good prognostic parameter. Patients with higher leukocytosis had worse prognosis than the others patients. Patients with lower level of thrombocytes had worse prognosis than the others.

Eth: -

Session: Oncology and Hematology

The incidence, characteristics of, and main risk factors for infections after auto- and allogeneic hematopoietic stem cell transplantation.

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Introduction: Infections (Inf) are frequently observed after both auto- and allogeneic stem cell transplantation (HSCT), being the main cause of morbidity in this group of patients (pts). Most common sources of infection are the normal gastrointestinal flora and vascular devices.

Purpose: Evaluation of the incidence, characteristics of, and main risk factors for infections after HSCT.

Methods: A retrospective analysis of 82 adult pts with auto- and allo HSCT treated in the Department of Hematology, Lodz in 2013-2014 was performed.

Results: Eighty two pts after HSCT with median (Me) age of 56 (15-65) were included in the study. Seventy three pts received auto- and nine pts received allo-HSCT. The reason for HSCT was acute leukemia (AL; n=9), lymphoma (LM; n=13), multiple myeloma (MM; n=60) and anaplastic anemia (AA; n=1). All incidents of Inf were diagnosed in pre-engraftment phase. All pts engrafted. Me time to engraftment (TE) was 13 (10-30) days. TE was significantly longer in the allo-HSCT (Me 17, 13-30) than in auto-HSCT group (Me 13, 10-26; p=0,009). All pts received antibacterial (fluoroquinolones), -fungal (azoles) and -viral (acyclovir) prophylaxis. The overall incidence of infectious complications was 81,7%, including bacterial (n=66; 97%), fungal (n=16; 23,5%) and viral Inf (n=3; 4,4%). 16 pts suffered from both bacterial and fungal Inf. Bloodstream Inf was most

common among bacterial Inf. Microbiological diagnosis was confirmed in 53,6% of pts. In 14,6% of pts, more than one pathogen was discovered. The incidence of Gram positive (G+) Inf was the highest. Among G(+) pathogens, *S. epidermidis* was most common (41,9%). *E. Coli* was most common among G(-) bacteria (52,9 %). The probability of Inf was higher in alloHSCT group comparing to autoHSCT (100% vs. 79,5%), however the difference hasn't reached statistical significance ($p=0,12$). Preliminary diagnosis was the only factor associated with significantly higher incidence of bacterial Inf. Highest incidence of Inf was observed in AL pts (100%) and the lowest in MM pts (73%; $p=0,043$). In 4,4% pts the Inf led to death.

Conclusion: Present results suggest that Inf are still a frequent complication after HSCT. Inf were diagnosed mainly in the pre-engraftment phase. G(+) accounted for the majority of isolates, and *S. epidermidis* was most frequent among G(+). Highrisk disease status at HSCT was identified as a risk factor for the development of pre-engraftment Inf. These findings may be useful for deciding upon empiric antibacterial treatment for HSCT recipients.

Eth: -

Łódź 2015

Session: Oncology and Hematology

The awareness of testicular cancer among males in the Lubelskie Region

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Introduction: Testicular cancer is a relatively rare tumor type accounting for 1% of malignancies in men. However, it is the most common cancer among young men from 15 to 35 years of age. The detection of most types of testicular cancer is relatively simple owing to systematical testicular self-examination. In early stage testicular cancer can be completely cured in more than 96% of men.

Purpose: The aim of the study is to evaluate the knowledge about testicular cancer and testicular self-examination among males in the Lubelskie Region.

Methods: The study was conducted in January and February 2015 using a standardized interview. The study involved 129 men between 17 and 38 years of age. The author's interview questionnaire was the research tool. It included 19 questions, both single choice and multiple choice. The obtained results were ordered and calculated.

Results: The results show that every four respondent estimates his own knowledge about testicular cancer as 0 in scale from 0 to 5 and only 7% value their knowledge as 5. Unfortunately, the main source of knowledge is the Internet, although more than a half of respondents would like to gain it from the general practitioner. About 83% of respondents have never learnt the testicular self-examination and 60% have never practiced it. Most of respondents are not aware that they are in the risk group which contains people under 40. Almost half of the respondents consider the issue of testicular cancer as embarrassing. Orchiectomy would lead to the feeling of discomfort in opinion of 73% respondents, but only in 5% of cases would cause sexual abstinence.

Conclusion: The knowledge about the testicular cancer among young men is insufficient, resulting in lack of prevention. The role of general practitioners is too low, despite the fact that most males consider them as the most reliable source of the information. The little awareness in this field is the main reason of lack of regular testicular self-examination. Taking into consideration that there are respondents who have never heard about possibility to examine themselves and the frequency of testicular cancer is increasing, the education of young people is necessary.

Eth: -

Session: Oncology and Hematology

Pediatric soft tissue sarcomas – survival and data-mining analysis.

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Introduction: Pediatric soft tissue sarcomas are malignant tumours of the connective tissues. They account for 7% of all childhood tumors. Certain factors may contribute to the clinical outcome of treatment.

Purpose: The aim of the study was to evaluate clinical parameters associated with worse prognosis of the disease at the initial diagnosis of children with soft tissue sarcomas.

Methods: A retrospective analysis of discharge reports after the diagnosis of soft tissue sarcomas during the period from 2007 to 2014 at the Department of Pediatrics, Oncology, Hematology and Diabetology at the Medical University of Lodz, Poland was conducted. Clinical and laboratory features available in reports were parametrised in order to perform survival and data-mining analysis. Features were subsequently reduced using criteria of 50% completeness and then analysed using wrapper and filter methods. Only patients with follow up longer than 120 days were included.

Results: We enrolled 34 patients with soft tissue sarcomas and described them with 172 features. The probability of 5-year survival was equal to 71.9%. The criterion of completeness excluded 103 features. The remaining

69 features were analysed using symmetrical uncertainty ranking filter. Results of this analysis have shown a great significance of the level of LDH (index of 0.26214) and the percentage of trompoetic cells in myelograms (PTCM, index of 0.14275) at the primary diagnosis. J48 pruned tree model emphasised more precisely that PTCM greater than 0.4% and the LDH level greater than 355 U/l at the primary diagnosis was noted among 94.1176% (model's accuracy) of patients with bad outcome. Although the difference of LDH level between patients with bad outcome and survivors was statistically insignificant ($p=0.185$), the difference of urea level between those two groups was statistically significant ($p=0.033$). However, the elevation of creatinine level was statistically insignificant ($p=0.64$).

Conclusions: PTCM, LDH level and urea level at the primary diagnosis in patients with soft tissue sarcomas could be significant for the prognosis of the outcome of treatment. The doctors should pay attention to patients with the LDH level greater than 355 U/l at the primary diagnosis since all patients performing this feature presented bad outcome.

Eth: This paper is approved by Local Ethical Committee. Łódź 2015

Session: Oncology and Hematology

Assessment of ABCB1 gene promoter region polymorphism in tissues obtained from gastric cancer patients

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Introduction: Gastric cancer is one of the most common malignant neoplasms and is one of the main causes of premature death due to cancer in the world. This cancer is mainly formed in the inflamed mucosa. Several factors (both genetic and environmental) could be the cause of this process, an important role is also attributed to *Helicobacter pylori* infection. The severe inflammatory response eventually turns into a chronic response. Persistent inflammation leads to a complete loss of the mucosa and the formation of metaplastic changes. This leads to the development of dysplasia and furthermore to invasive cancer of the stomach. ABC protein superfamily is the most important group of transmembrane transporters. ABCB1 gene encodes glycoprotein-P. P-gp is an ATP-dependent membrane pump and is involved in the transport of many substances, including immunosuppressive and anti-inflammatory agents. P-glycoprotein likely acts as a "molecular vacuum" actively expelling xenobiotics outside the cells. Fulfills thus protective function, preventing the accumulation of harmful substances and waste products. Reduced concentration of this protein can lead to accumulation of toxic compounds in the cell and in the

result increase the risk of many diseases development. We suspect that the investigated T-129C polymorphism may affect the expression of the ABCB1 gene and the P-gp level, and therefore potentially increase the risk of stomach cancer development.

Purpose: The aim of this study was to evaluate the frequency of genotypes and alleles of ABCB1 polymorphism at position -129 in the group of healthy subjects and in patients with gastric cancer. Further, to compare the frequency of the alleles and genotypes in both groups.

Methods: Material used for research were 20 gastric mucosal sections taken during partial or total gastric resection from patients diagnosed with gastric cancer. The control group consisted of 67 healthy volunteers. Within the control group peripheral blood was applied. Using the PCR-RFLP (polymerase chain reaction-restriction fragment length polymorphism) method the T-129C polymorphism of ABCB1 gene was determined. The flow of work: DNA isolation, the PCR (Polymerase Chain Reaction) – qualitative assessment, agarose gel electrophoresis – to visualize the product, digestion of PCR products with enzyme (RFLP), agarose gel electrophoresis – to see the results of enzyme digestion.

Results: Preliminary analysis showed no significant differences in the frequencies of genotypes and allele C in healthy individuals and in the group of patients suffering from gastric cancer.

Conclusion: It can be assumed that the investigated polymorphism is not related to an increased risk of gastric cancer development and its stage.

Eth: This paper is approved by Local Ethical Committee.

Session: Oncology and Hematology

Analysis of early life-threatening complications and mortality in children and adolescents undergoing allogeneic hematopoietic stem cell transplantation

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Introduction: Allogeneic hematopoietic stem cell transplant (allo-SCT) is a treatment method of cancer, bone marrow failure resistant to standard therapy and immune or metabolic disorders. This procedure has high risk of life-threatening complications. The aim of the study was analysis of severe complications and treatment related mortality (TRM) in early period post allo-SCT.

Purpose: Aim of the study was analysis of severe complications and early treatment related mortality (TRM) and checking if improving diagnostics methods and prophylaxis of infections had an influence on frequency of their occurring. Aim of the study was analysis of severe complications and early treatment related mortality (TRM) and checking if improving diagnostics methods and prophylaxis of infections had an influence on frequency of their occurring.

Methods: Medical records of 526 patients aged from 1month to 21ys (median 9.4ys) , who underwent first procedure of allo-SCT in Department of Pediatric STC, Hematology and Oncology in Wrocław during periods: Jan.2002-Dec.2006 (group I, 231 patients) and Jan.2007-Mar.2014(group II, 294 patients) were analyzed. Since 2007 range of diagnostics (regular

determination of EBV, ADV, BKV by quantitative method of PCR, and fungal antigens) and infection prophylaxis (antifungal drugs including Aspergillus spp. and Ciprofloxacin for cystitis induced by reactivation of BKV) were expanded. Frequency of early severe complications (until day 180) such as: organ damage, infections, acute graft versus host disease (GvHD) and TRM were evaluated depending on type of stem cell donor (MSD vs alternative donor , including MD and MMD).

Results: Early life-threatening complications in group I and group II were as follow: Fever of unknown origin(FUO) 64,9%vs63% (p=0.59), severe toxic mucositis 47,2%vs47% (p=0.95), bacterial infection32,5% vs 21,8%(p=0,013), fungal infections 21%vs14,5%(p=0,06),BKV induced haemorrhagic cystitis(HC)25,5%vs15,3% (p=0,0046),CMV infection 28%vs36,1% (p=0.0428),VOD 9,5%vs7,1%(p=0.3234), neurological disorders 17,8%vs15,3%(p=0.45), severe aGvHD 22%vs24,1% (p=0.334) , respiratory failure 23,8%vs12,7%(p=0,0016), EBV-PTLD 6,1%vs6,5%(p=0.88), TRM 19,9%vs17,7% (p=0.67). After MSD transplantation major TRM causes in in group I and II were: sepsis 37,5%vs18,2%, aGvHD 12,5%vs18,2%, viral infections 12,5%vs9% neurological disorders 12,5%vs9%, VOD 0%vs27,3%, MOF 0%vs18,2% HC 12,5%vs0%(p=0.2). Post transplantation from alternative donor, major causes of TRM in group I and II were as follow: aGvHD 7,8%%vs39% (p=0.0012), sepsis 26,4%vs21,9%, MOF 13,5%vs19,5%, viral infections 18,4%vs7,3% (p=0.05), VOD 5,2%vs2,4%, rejection 7,8%vs0% (p=0.06), fungal infections 0%vs4,9%.

Conclusion: Extended prophylaxis significantly decreased frequency of HC and systemic fungal infections. Regular EBV diagnostics had no influence on occurring of EBV-PTLD. Despite decrease in frequency of life-threatening complications no TRM decrease was noticed. Only the causes of death structure has changed. As aGvHD is actually major cause of TRM in early period after allo-SCT it would be expedient to extend early diagnostic including monitoring of plasma GvHD biomarkers.

Eth: -

Session: Oncology and Hematology

Assessment of IL-4 in patients with different stages of chronic lymphocytic leukemia

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Introduction: Chronic lymphocytic leukemia (CLL) is a neoplastic disease characterized by clonal proliferation and accumulation of morphologically mature, albeit functionally impaired, monoclonal B lymphocytes in lymphoid tissue, peripheral blood, bone marrow, spleen and, rarer, in other organs. Interleukin 4, which is a pleiotropic cytokine, produced by the activated lymphocytes T, in CLL influences the survival of the leukemic B cells.

Purpose: An assessment of IL-4 concentration in the plasma and the percentage of lymphocytes with intracellular expression of that cytokine in patients with CLL depending on selected clinical and laboratory parameters.

Methods: The studies contained samples of peripheral blood obtained taken from 110 untreated patients with chronic lymphocytic leukemia (51 women and 59 men). Mean patient age was 63.27 ± 9.73 . The control group was comprised of 40 healthy subjects (16 women and 24 men) at the age of 64.50 ± 7.15 . Immediately after collection, the samples were used for immunophenotyping of lymphocytes with the flow cytometry method and

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the determination of IL-4 levels with the ELISA method. All the calculations were carried out with Statistica 10 package, with the level of significance set at $P < 0.05$.

Results: Patients who were in the stage II-IV of CLL according to the Rai classification, had significantly higher absolute number of CD3+CD4+ T lymphocytes with intracellular expression of IL-4 than those in the stage 0-I ($P=0.0011$), and in the control group ($P=0.0005$). Similar results were obtained regarding the absolute number of CD3+CD8+ T lymphocytes with intracellular IL-4 expression ($P=0.0047$; $P=0.0006$, respectively) as well as the absolute number of CD5+CD19+ B cells with intracellular IL-4 expression ($P=0.0005$; $P=0.0007$, respectively). Patients with advanced stages of CLL were characterized also by significantly higher levels of IL-4 in plasma than the patients with stage 0-I and the control group ($P=0.0013$; $P=0.0002$, respectively).

Conclusion: Our study revealed that an increased production of IL-4 occurs in CLL patients in advanced stages. Probably elevated levels of this cytokine are responsible for increased proliferation and differentiation of B cells, and for impaired immune response of T cells in the course of CLL.

Eth: This paper is approved by Local Ethical Committee., This work is a part of the doctoral thesis.

Session: Oncology and Hematology

Mean platelet volume as a possible biomarker of tumor progression in the rectal cancer

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Introduction: Rectal cancer is a major cause of death and an early diagnosis is crucial in decreasing mortality. Previous studies found relation between chronic inflammation and increased risk of rectal cancer. It was shown that mean platelet volume (MPV) level might be a marker of subclinical inflammatory process in gastrointestinal tract.

Purpose: The aim of the study was to determinate whether MPV could be a useful biomarker of tumor progression in the rectal cancer.

Methods: 57 patients with rectal cancer who underwent surgical resection of tumor were enrolled in this retrospective study. The control group consisted of 29 healthy subjects. Patients with other comorbidities were excluded from the study. The association between MPV, tumor stage and clinical status was assessed.

Results: Pre-operative MPV level was significantly lower in rectal cancer than healthy individuals ($10.76 \pm 0.78 \text{ fL}$ vs. $11.28 \pm 0.79 \text{ fL}$; $p=0.004$). Receiver-operating characteristic curve analysis suggested 11.7 as the cut-off value for MPV (sensitivity=91%, specificity=35%). Surgical resection of tumor resulted in the increase of the MPV level with statistical significance (10.96 ± 0.96 vs. 10.77 ± 0.77 ; $p=0.01$). No relationship was found between the post-operative MPV level in cancer patients and control subjects.

Conclusion: MPV level may be potentially useful and easily available biomarker for monitoring the subclinical inflammation related to rectal cancer and predicting tumor progression.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Orthopedics

Injuries of Crossfit athletes in Polish population

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Introduction: Created in 2005, CrossFit is a strength and conditioning training program consisting mainly of a mix of aerobic exercise, gymnastics (body weight exercises) and Olympic weight lifting. With increasing popularity of this sport, there has been a rise in the number of participants of various ages. However, the risks of injuries, occurring in CrossFit workouts have not been reported.

Purpose: To describe the rate and profile of injuries, which have had occurred during CrossFit Workouts.

Methods: Surveys collected during Crossfit competition, which took place on the 28th of February 2015 in Bydgoszcz, Poland. Injury rates and risk factors were assessed via regression analysis.

Results: There were 62 competitors who filled the survey (18 women and 44 men) with average age of 28 years. 85% trained other sports on regular basis before they started Crossfit training. Mean time of training Crossfit was 19,26 month and median training frequency was 5,19 training per week. 27,4 % reported at least one injury from Crossfit training, that caused minimum 7 days pause. There were 28 injuries reported, 0,45 for one athlete. There were no statistically significant associations between sex, weight, height, BMI, time of Crossfit training, week frequency of training, and appearance of injury.

Conclusion: Our data shows that Crossfit is an extreme type of training with risk of serious injury higher than other sports. Crossfit coaches should focus on improvement of athletes' technique to prevent serious injuries. The results encourage to extend the study on larger group of Crossfitters.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Orthopedics

Analysis of psychophysical condition of patients after knee injury.

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Introduction: In the recent years there has been a considerable increase in the knee injuries among athletes, as well as an ordinary people. In conjunction with this growing number, a group of researchers from the country's leading centers of orthopedics and rehabilitation decided to analyze the psychophysical aftermaths of knee trauma. Significant number of studies evaluating the outcomes of knee injuries indicate the pain and sleeping disorders as the main problem. The sports activity is also affected. The data on this issue, however, are still inconclusive. Furthermore, the studies do not include the other aspects of human's everyday life, such as sexual activity, chronic diseases, diet and addictions. Moreover, the correlation between all of these factors have never been observed yet.

Purpose: The aim of the study was to analyze the data concerning psychophysical results of knee injuries among the patients of two biggest orthopedic clinics in Łódź.

Methods: The following patients' data were collected: age, time of injury, pain, intake of painkillers, sleep, sexual activity, chronic diseases, diet, stimulants and sports activity. These information was gathered in a two- and four-week follow-ups after the injury. Furthermore, the study includes the data concerning the patients history before the trauma. The presented data is

gathered from February 2015 up to March 2015. A group of 20 patients has agreed to participate in this prospective study. This research is a form of pilot study and it is believed to develop in forthcoming future.

Results: The initial results show that the most common problem (90%) after knee injury is persisting up to 4 weeks pain which requires increased doses of painkillers. The second main problem (78%) is insomnia and sleep disturbances. The injuries reduces patients' physical activity for about 70%. Finally, initial study provided collocation between the sleeping disorders and diet with stimulants – deteriorations among these fields occur in most (80%) of the same patients.

Conclusion: In conclusion, the knee injuries have plenty of consequences in patients' everyday activity. Moreover, exacerbation of some specific factors might have an influence on future physiotherapy and recovery. However, our research is still ongoing and we are looking forward to the latest data from April and May 2015.

Eth: This paper is approved by Local Ethical Committee. Łódź 2015

Session: Orthopedics

Analysis of injuries in professional volleyball players during two years time.

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Introduction: In recent years there has been considerable interest in volleyball by both experts and sport fans, as well as ordinary people. With increasing popularity of this sport, a group of researchers from the country's leading centers of orthopedics and rehabilitation decided to analyze the types of injuries occurring in this discipline. Significant number of studies evaluating the incidence of injuries indicate the ankle as the most exposed part of human body. The shoulder, knee, elbow and whole hand are also affected. The data on this issue, however, are still inconclusive. Furthermore, the studies do not specify the nature, frequency, and correlation with other factors of the injuries.

Purpose: The aim of the study was to analyze the data concerning injuries among professional volleyball players (both women and men) from the clubs of Polish Premier Leagues during season 2014/2015. The following aim is comparison between the previous and ongoing season.

Methods: The following players' data were collected: age, years of professional training, position, the circumstances of the injuries including the time of the accident, training load, field situation, the type of injury and

form of treatment. The presented data is gathered from September 2013 up to March 2015. A group of 104 players agreed to participate in this prospective study. There was 80 players from women league and 200 players from men league.

Results: The initial results show that the most common injury in volleyball is muscle tear (35,7%) followed by knee, shoulder and hand, which represent the similar proportion of nearly 15%. Among all accidents, 10% happened during the league matches, the rest occurred during the training. The injuries arose similarly from three main volleyball field skills: block, defense, attack. Finally, study provided collocation between the type of surface and the risk of contusion – most of them (80%) occurred on parquet.

Conclusion: In conclusion, the volleyball players are mostly exposed to muscle tearing, which is related to the type of activities during not only the match, but also training. Moreover, the type of surface on which the matches and trainings are performed, might highly affect the health of the players. However, our research is still ongoing and we are looking forward to the latest data from the end of season 2014/2015. Łódź 2015

Eth: This paper is approved by Local Ethical Committee.

Session: Orthopedics

Radiological evaluation of carpal angles in population of Lodz region.

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Introduction: The wrist is one of the most precise connections in the musculoskeletal system. Its shape and structure allows for significant ease of movements. Together with hand, the wrist forms the prehensile organ, which is necessary for taking everyday activities, as well as many highly specific and precise movements. Due to the complex structure and a multitude of bones from which the wrist happens, damage assessments in X-ray is not easy. In conjunction with this, a group of researchers from the country's leading centers of hand Surgery, emergency and intensive therapy decided to analyze the radiological measurements of wrist in population of Łódź region. Significant number of studies evaluating the carpal angles in the X-rays focus only on one factor or sign. The data on this issue, however, are still inconclusive. Furthermore, the studies have not been performed on a group of patients from a region of one million inhabitants. Moreover, the correlation between all of these factors have never been observed yet.

Purpose: The aim of the study was to analyze the measurements from X-ray projections of wrist among the patients of the hand Surgery, emergency and intensive therapy clinic in Łódź.

Methods: The following patients' data were evaluated: in anteroposterior projection ulnar variance, radial inclination, radiocarpal angle, carpal height ratio and radial height. In lateral view of X-ray palmar tilt, scapholunate and capitulunate angle were analysed. The presented data is gathered from January 2007 up to March 2015. A group of 10 patients with X-ray of healthy hand was selected. In this group 6 were right hands and 4 left hands. The study is retrospective, however the research is a form of pilot study and it is hoped to develop in forthcoming future.

Results: The initial results show that the most common (70%) of ulnar variance in evaluated population is ulnar minus. Radial inclination angle diversify from 15° to 27°. Furthermore, the variety of radiocarpal angle is far from generally accepted 14-16 degrees and is 12-19 degrees. Finally, initial study provided that 80% of patients have correct (30-60°) scapholunate angle.

Conclusion: In conclusion, the diversity in wrist measurements of does not strikingly differentiate from scientifically approved standards. Although, the variations demonstrated in the research might influence on the frequency and the severity of the wrist injuries. However, our research is still ongoing and we are looking forward to the latest data from April and May 2015.

Eth: This paper is approved by Local Ethical Committee.

Session: Orthopedics

Incidence of longboarding injuries in Polish population

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Introduction: Longboarding is a sport similar to skateboarding, however besides tricks descended from skateboarding longboard riders can rush down the steep hill up to 130 km per hour because of the characteristics of the boards. Downhill longboarding is a gravity-powered activity with increasing popularity among younger people. Considering high risk of injuries, the goal of the study was to evaluate epidemiology of injuries among group of Polish longboarders.

Purpose: Characterize epidemiology of sport-related injuries in Polish longboarders, improve injury prevention programs, and facilitate management of longboarding injuries

Methods: We conducted an internet survey among Polish longboard community through websites focused on longboarding comprising questions from 3 areas: general information (gender, age); longboarding experience (time span of riding, performed styles, foot placement on the board); previous injuries due to longboarding (type of trauma and its localization,

applied treatment, lasting consequences and worn protectors). Riders answered mainly multichotomous questions but could describe injuries with their own words. In the section concerning protectors we attempted to assess how many longboarders ride with guards, which body area is the most protected and what is guards inefficacy. Survey lasted from August 8. 2013 to September 2. 2013

Results: Ninety five riders sustained 404 injuries: 320 minor, 38 moderate and 45 sever. Experienced longboarders performed more often downhill and sliding styles, that were associated with higher rate of trauma ($p=0.012$ and $p=0.001$, respectively). Injured riders were also older (23,4 years old vs. 20 year old in uninjured riders; $p=0.0217$). Seventy-three riders did not protect injured part of body and 22 longboarders sustained trauma instead of using guards. There were no statistically significant differences between other factors.

Conclusion: We have shown that longboarding is associated with high rate of injuries then other gravity sports that often require medical attention and can cause long lasting health impairment. We also proved that longboarders are more precautionary then other skate athletes. Older age, performing downhill and/or sliding techniques are factors that increase the risk of sustaining trauma.

Eth: This paper is approved by Local Ethical Committee.

Session: Orthopedics

Fracture of the os triquetrum - case report and review of the literature

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Introduction: Fractures of the os triquetrum are the second most common fractures in wrist area after fractures of the os scaphoid. Commonly these fractures are hard to diagnose on X-ray or misdiagnosed as calcification after previous fractures. Our case report describe isolated fracture of the os triquetrum with many fracture parts. We compared our treatment with other papers describing similar cases and did a review of the literature.

Purpose: To evaluate need for Surgery, emergency and intensive therapy treatment in fractures of the os triquetrum.

Methods: Patients' history and review of literature. Patient fell on ground on outstretched left hand. The post accident X-ray showed pathological bone structures described as calcifications in soft tissue around the wrist after previous injuries. After 2 days CT was conducted and revealed fracture of the os triquetrum with chip disunited on 4 parts, dislocated dorsally for 3-4 mm. We treated the fracture with short cast and bipolar magnetic field. After 3,5 week we removed the cast, changed it for orthosis and started intensive rehabilitation.

Results: 6 Months after accident patient recovered with no pain and full movement range. CT results showed no pathological structures and full symphysis in fracture site.

Conclusion: It is very difficult to correctly diagnose triquetrum fracture only by wrist X-ray. Standard PA and lateral shot can be insufficient, because the scaphoid and pisiform bones can mask the triquetrum. The 45 degree oblique shot should be considered as the part of standard procedure in wrist fractures. Many authors recommended Surgery, emergency and intensive therapy techniques in wrist fractures, like Herberts screws or Kirchners wires. The patient came back to full wrist movement and grip strength in 6 months after injury, therefore our case shows that there is not always need for invasive treatment.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Orthopedics

Self-assessment of the patients after TKA

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Introduction: Osteoarthritis(OA) of the knee is one of the most common diseases that lead to functional and clinical disability among adults. The treatment of choice in advanced OA is total knee arthroplasty(TKA).

Purpose: The aim of the study is to assess the quality of life based on self-assessment questionnaire of the patients after TKA.

Methods: This prospective study was performed on 29 patients in the mean age of 67,62 (range from 55 to 82yo). The study group included 8 women and 21 men. Self-assessment was evaluated by the self made questionnaire based on Quality of life SF-36 questionnaire. The minimum follow up was 2 years.

Results: Patients reported improvements in all aspects of quality of live including emotional status, pain and functional abilities. Nine out of twelve patients discharged using walking support after TKA. One of the analysis has shown that amongst 29 patients who complained of severe or very severe pain before the Surgery, emergency and intensive therapy only one patient reported lack of improvement in that matter after TKA but 8 admitted to never fell pain, 14 - incidentally, 3 - rarely and 1 from time to time. Significantly all but one patient would agree to have this operation performed again.

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Conclusion: Due to high patients satisfaction because of reducement of pain and improvement in various qualities of live TKA is highly recommended in advanced stages of OA.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Pediatrics

Comparison between initial and final diagnosis of pneumonia in group of hospitalized children

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Introduction: Anamnesis, physical examination and laboratory tests are needed to diagnose pneumonia. One of the most important of diagnosing method is chest radiograph because auscultation of the lungs is inadequate to make the best diagnosis.

Purpose: Comparison between initial and final diagnosis of pneumonia in group of hospitalized children.

Methods: The material of our study was data included in hospital report cards of children hospitalized because of pneumonia. Data was analyzed with Statistica 10.0 (Ch² Pearsona Test).

Results: Initial diagnosis of pneumonia before hospitalization concerned 86 children (right-sided – 3, left-sided – 3, both-sided – 5, bronchial pneumonia – 13, unspecified pneumonia – 5, suspicion of pneumonia - 21). X-ray chest

photo of 133 children confirmed diagnosis of pneumonia in 88% of patients (117 children): pneumonia – 86 children (86,9%), bronchial pneumonia – 10 children (76,9%), suspicion of pneumonia was bore out in 100% of cases.

Initial diagnosis was in accordance with final diagnosis in group of 8 children with bronchial pneumonia (61,5%), 75 children with pneumonia (87,2%), 2 children with left-sided pneumonia (87,2%), 4 children with unspecified pneumonia (80%). 100% accuracy of initial and final diagnosis was observed when patient suffered from both-sided pneumonia and right-sided pneumonia (2 and 3 children).

Conclusion: Initial diagnosis could be different from final diagnosis. Diagnostic tests which were made during hospitalization help to improve diagnosis. Initial diagnosis was in accordance with final diagnosis in more cases.

Eth: This paper is approved by Local Ethical Committee.

JUVENES PRO MEDICINA
Łódź 2015

Session: Pediatrics

Investigating the laboratory abnormalities among children with tuberous sclerosis complex treated with mammalian target of rapamycin inhibitor.

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Introduction: Tuberous sclerosis complex (TSC) is a rare, genetic disease characterized by multisystemic manifestations including subependymal giant cell astrocytomas (SEGA) and angiomyolipomas (AMLs). The mammalian target of rapamycin inhibitor (everolimus) is recommended for patients with TSC and inoperable, increasing SEGA or renal (AMLs) at risk of complications, but not requiring immediate surgery. However, adverse events (AEs), in those laboratory abnormalities related to everolimus therapy are commonly recorded.

Purpose: The aim of this study was to identify risk factors of AEs during everolimus administration in pediatric patients with TSC and to evaluate the magnitude, dynamism and direction of laboratory abnormalities particularly affecting complete blood count and biochemical parameters.

Methods: We analyzed data of 16 patients with TSC treated with everolimus in the Department of Pediatrics, Oncology, Hematology &

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Diabetology, Medical University of Lodz from 11.2011 to 01.2015. The following risk factors were evaluated: age at initiating therapy, sex, BMI-SDS, starting everolimus dose, daily everolimus dose/kg, daily everolimus dose/m², cumulative everolimus dose/kg, cumulative everolimus dose/m². The significance of various prognostic factors and their correlation with detected abnormalities were analyzed using the Mann-Whitney U test and Spearman's rank correlation coefficient.

Results: Study group consisted of 10 boys and 6 girls. The mean age of patients at the treatment beginning was 11.44 years (ranged 2- 18 years). The most common abnormalities were: mean corpuscular hemoglobin (MCH) (69%) and mean corpuscular volume (MCV) (56%) both characterized by the decreasing trend. The mean time from therapy beginning to first detected abnormality was 2.1 months. The complications in erythrocytic series presence were significantly associated with higher: total cumulative everolimus dose ($p=0.002$), cumulative everolimus dose/kg ($p=0.002$), cumulative everolimus dose/m² ($p=0.002$), whereas lower pre-treatment neutrophil count ($p=0.017$), starting everolimus dose/m² ($p=0.023$) and lower pre-treatment triglycerides concentration ($p=0.043$) were established in patients without this abnormalities. The time from the initiation of therapy to first detected abnormality positively correlated with: cumulative everolimus dose/m² ($r=0.947$, $p=0.00001$), total cumulative everolimus dose ($r=0.937$, $p=0.00002$), cumulative everolimus dose/kg ($r=0.882$, $p=0.0003$), cumulative everolimus doses/m² ($r=0.748$, $p=0.008$), daily everolimus dose received 2 weeks before ($r=0.733$, $p=0.01$). However, shortening of that time was substantially related to elevated eosinophil count ($r=-0.599$, $p=0.05$) and percent of eosinophil count ($r=-0.667$, $p=0.025$).

Conclusion: Everolimus administration in children and adolescent with TSC could induce various in range and severity complications, while still remaining promising treatment method alternative to surgery.

Eth: This paper is approved by Local Ethical Committee.

Session: Pediatrics

Idiopathic acute transverse myelitis in young patient.

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Introduction: Acute transverse myelitis (ATM) is a neurological inflammatory disease which affects the spinal cord. Signs and symptoms include weakness of the limbs, deficits in sensation and dysfunction of the autonomic nervous system. The disease is correlated mainly with post-infectious disorders, systemic inflammatory autoimmune disorders and paraneoplastic syndromes. It can also be associated with multiple sclerosis (MS), Devic syndrome (NMO), acute disseminated encephalomyelitis (ADEM), thrombosis of spinal arteries, vasculitis secondary to heroin abuse, spinal arteriovenous malformations. For about 10 percent of patients it is difficult to find out the possible cause of ATM and then it has an idiopathic character.

Purpose: Case report

Methods: Case report

Results: 15 year old boy was admitted in February 2015 to the Department of Pediatric Neurology, University Children's Hospital in Lublin because of sudden urine retention. He was previously hospitalized in the Department of Pediatric Surgery, emergency and intensive therapy where changes in urethra

and bladder were excluded after cystoscopy. The boy was catheterized. The neurological examination revealed sensory symptoms in Th 5 – Th 10 segment, absence of abdominal reflexes, increased reflexes in lower limbs and Babinski sign. Magnetic resonance imaging of the spine in T2-dependent fields detected multiple hydroptic and inflammatory areas in spinal core, unchanged by post-contrast enhancement. Rheumatological disorders were excluded. Examination of cerebrospinal fluid proved modest lymphocytosis without the evidence of intrathecal synthesis of immunoglobulins.

The treatment included five pulse methylprednisolone, which resulted in the improvement of patient's **clinical state and proper excretion after removal of Foley catheter.**

Conclusion: ATM can occur as an isolated inflammatory disorder, or as part of a multifocal central nervous system demyelinating disease, such as acute disseminated encephalomyelitis (ADEM), multiple sclerosis (MS) or neuromyelitis optica (NMO). All patients underwent extensive evaluations to investigate for infectious and connective tissue disorders. Diagnosis of ATM is usually made from a combination of clinical features, neuroimaging, cerebrospinal fluid (CSF) examination and other laboratory findings. Contrast-enhanced magnetic resonance imaging plays crucial role in the imaging diagnosis. However, idiopathic nature is a diagnosis of exclusion and other causes need to be excluded.

Eth:

Session: Pediatrics

Whether pathogen inactivated method (Mirasol System) affects effectiveness of platelet concentrates transfusions?

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Introduction: One of the key issues concerning frequent in Pediatric Hematology Oncology transfusion of Platelet Concentrates (PCs) is the safety and the effectiveness of transfusion. In recent years, a new method for the inactivation of pathogens in PCs, Mirasol System was introduced. This method relies on the associated application of riboflavin and UV radiation to inactivate bacteria, protozoa and viruses in the PCs. Relatively there is little known about the impact of this approach on the effectiveness of transfusion.

Purpose: Comparison of the efficacy of inactivated PCs transfusions to PCs without inactivation in patients treated in Pediatric Oncology Unit.

Methods: A retrospective analysis of the medical records of 98 patients aged 2 months to 20 years treated in the Clinic of Pediatrics, Hematology, Oncology and Diabetology due to a cancer in the period: 01.2012-03.2015 was performed. Inactivated PCs received 21 patients (26 transfusions), while not inactivated PCs - 77 patients (77 transfusions). Effectiveness was assessed by a revised PCs transfusion designation CCI increase rate (corrected count increment) and the incidence of adverse reactions

following PC transfusions. Effective transfusions are those where the CCI is more than 10,000.

Results: Ineffective PCs transfusions were observed in 4/26 (15,38 %) of inactivated PCs and in 10/77 (12,98%) of the PCs without inactivation. The mean value of the CCI for inactivated PCs was 27465,18 vs. 28642,96 for PCs without inactivation ($p = 0.09$). In the group of PCs obtained by apheresis the average CCI for inactivated PCs was 22932,61 vs. 22511,51 for PCs without inactivation ($p = 0.8$). Adverse reactions following transfusion were observed in 1/26 transfusions of inactivated PCs and in 4/77 transfusions of PCs without inactivation. They were allergic reactions with a benign course, fever, abdominal pain, nausea and vomiting. There was no infection associated with a transfusion of PCs in both rated groups.

Conclusion: Our research shows that the process of inactivation with the use of riboflavin (Mirasol System) do not affect the effectiveness of the PCs transfusions in patients treated for cancer.

Eth:

Łódź 2015

Session: Pediatrics

The methacholine challenge testing in children with post-exercise symptoms.

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Introduction: Exercise-induced bronchoconstriction occurs in a large proportion of children with asthma.

Purpose: To compare the predictive value of methacholine challenge (MCCT) and exercise treadmill challenge (ETC) for detecting asthma in children with post-exercise symptoms.

Methods: This was a prospective study. We included children aged 10-18 with post exercise symptoms. During asthma diagnosis they had methacholine test and exercise treadmill challenge done. There were 2 study visits. All subjects underwent ECT at visit 1 and a week later MCCT.

Results: We included 101 children; 62.9% had a history of atopy, asthma was confirmed in 43.6%. The sensitivity and specificity for MCCT was 90.9% and 82.5% respectively, along with positive predictive value at 80.0% and negative predictive value at 92.2%, whereas for ECT, the respective values came to 77.3%, 68.4%, 65.4% and 79.6%. Positive MCCT had significantly higher sensitivity and higher positive predicative value in the diagnosis of asthma in children with post exercise symptoms

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compared to 10% fall in FEV1 in ECT ($P = 0.034$). Measurement of MCCT during asthma diagnosis allowed to confirm asthma in additional 24.3% children with exercise-induced symptoms. With a cut-off level at 17% of FVE1 for ECT we reduced the discrepancy and attained reasonable values of sensitivity, specificity, PPV and NPV: 61.0%, 77.1%, 69.4% and 69.8%, respectively.

Conclusion: A large number of school children with asthma and post exercise symptoms could have a positive MCCT with a negative ECT. Untreated asthma in children with EIB could cause them to be discharged from physical education classes.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Pediatrics

The frequency of achieving metabolic control in pediatric patients with type 1 diabetes mellitus

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Introduction: Childhood and adolescence is a period during which intensive education and treatment may prevent or delay the onset and progression of diabetes complications in later adult life. Improvement in glycemic control will reduce the risk of onset and progression of diabetes vascular complications. In addition to glucose control, hypertension, dyslipidemia, and obesity increase risk for future vascular disease. Polish Diabetes Association (PTD) have established targets for HbA1c, blood pressure (BP), lipids, and BMI for youth with type 1 diabetes.

Purpose: The aim of the study was to evaluate achievement of metabolic control in children and teenagers according to PTD recommendations. Our focus was also on those patients who did not fully satisfy the criteria. We looked into which requirement was hardest to meet and assessed the general extent of metabolic management.

Methods: We retrospectively analyzed medical records of 463 patients (273 boys – 58.96%) younger than 18 years old with type 1 diabetes duration longer than 1 year hospitalized in Department of Diabetology in the University Clinical Hospital nr 4 between 2010 and 2014 year.

309 (66.74%) patients were treated with continuous subcutaneous insulin infusion (CSII) and 154 (33.26%) with multiple daily injections of insulin (MDI). The mean age of patients was 14.5 ± 3 years (varying from 6.5 to 18.0 years) and the mean time of treatment was 6.6 ± 3.6 years (1 – 17.5 years).

We analyzed the following standards of diabetes control: body mass index (BMI < 90pc) blood pressure (BP < 90pc), glycated hemoglobin (HbA1C \leq 6,5%), triglycerides (TG < 100 mg/dl), high-density lipoproteins (HDL > 40 mg/dl) and low-density lipoproteins (LDL < 100 mg/dl) according to the guidelines of the Polish Diabetes of 2014.

91 children lacked data concerning blood pressure – these samples were excluded from full metabolic control and BP control count.

Results: Mean HbA1c was 7.8 ± 1.64 . Only 93 children (20%) crossed the threshold for HbA1C proving it the most challenging factor. Second came the blood pressure and LDL, with respectively 251 (67.47%) and 322 (69.55%) positive scores. 372 (80.35%) patients met requirements for BMI, 381 (82.29%) for TG and 452 (97.62%) for HDL.

Full metabolic control was achieved by 43 patients (10.44%).

Conclusion: Only 1 in 10 children with DMT1 achieve complete metabolic control. The required HbA1C target is hardest to meet. A substantial number of patients did not meet the blood pressure, BMI and lipid targets and the frequency of abnormalities for these vascular disease factors is concerning. This analysis suggests we need to improve strategies for care to prevent future complications of diabetes.

Eth:

Session: Pediatrics

Wolff- Parkinson -White Syndrome – history of patients hospitalized in the Department of Pediatric Cardiology and Rheumatology in the years 2008-2014.

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Introduction: The essence of pre- excitation syndrome is a presence of additional pathway in heart leading to a faster ventricular excitation, which can result in serious consequences, ranging from supraventricular tachycardia to a sudden cardiac death. Wolff - Parkinson-White (WPW) syndrome is most common and occurs in 2/ 1000 people. Since the WPW syndrome becomes a more frequently detected disease in the pediatric population, it is important for every pediatrician to recognize the symptoms and typical ECG features. Therapeutic treatment includes pharmacotherapy and surgical destruction of the accessory pathway known as ablation.

Purpose: To describe the mode of presentation, clinical course and treatment of pediatric patients with the WPW syndrome hospitalized in the Department of Pediatric Cardiology and Rheumatology in years 2008-2014.

Methods: Retrospective clinical data collected over a period of 6 years from 42 children (62 % male; mean age 10,3 years; range from infants to 17 years) hospitalized with the WPW syndrome. During the study we took into account a 12-lead ECG, a 24-hour Holter ECG, echocardiography and a cycloergometric exercise test using the James protocol. We also analyzed symptoms associated with the diagnosis and their duration, presence of

supraventricular tachycardia, the type of WPW syndrome and methods of treatment, as well as their effectiveness.

Results: In ECG besides the typical features of pre-excitation (e.g., delta wave on the ascending arm of the QRS complex) the most common abnormality found was left axis deviation (33,3%). In the 24-hour Holter ECG the most frequently detected disorders were premature ventricular beats recorded in 15 children (35,7%) and premature atrial contractions which occurred in 14 children (33,3%). Moreover 10 children (23,8%) had intermittent type of the WPW syndrome. In echocardiography structural heart defects were detected in 4 children (9,5%). Cycloergometric exercise test was positive in 4 children (9,3%). Mean duration of the symptoms before the diagnosis equaled 3,8 years. The most common initial symptom were heart palpitations, which occurred in 16 children (38,1%). In 9 children (21,4%), the first symptom was supraventricular tachycardia. 9 children (21,4%) were asymptomatic. 40,5% of children needed antiarrhythmic therapy, while 45,2% had accessory pathways ablated.

Conclusion:

1. In the study group, the most common symptom of pre-excitation were heart palpitations.
2. In patients with pre-excitation syndrome, there is a high risk of occurrence of supraventricular tachycardia.
3. In one-fifth of the patients pre-excitation was detected based on incidentally made ECG recording.
4. For the majority of older children with pre-excitation syndrome ablation of the accessory pathway was a recommended treatment. In younger children according to standards, preventive pharmacological treatment was applied for 6 to 12 months.

Session: Pediatrics

Evaluation of the knowledge about vitamin D and its supplementation during the pregnancy and in newborns and infants

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Introduction: Recent researches have reported on high prevalence of vitamin D deficiency in European populations, that may cause not only rickets and osteomalacia, but also increase in incidence of immunological disorders or cancer – pleiotropic effect of vitamin D. Due to the significant functions of vitamin D and serious effects of its deficiency new recommendations on its supplementation have been made. It is suggested that pregnant women should take 1500 – 2000 IU of vitamin D every day from early pregnancy and have levels of 25(OH)D checked.

Purpose: Appraisal of the knowledge about vitamin D among mothers of the children hospitalized in Paediatric Propedeutics and Bone Metabolism Diseases Clinic. Analysis of the vitamin supplementation during pregnancy and in newborns and infants in accordance with the latest recommendations. It is also planned to check 25(OH)D levels of children with positive history.

Methods: A survey among mothers of patients aged 1 to 48 weeks hospitalized in Paediatric Propedeutics and Bone Metabolism Diseases Clinic in 2015. The reasons for hospitalizations were other than calcium-phosphorus administration or bone metabolism disorders. The questionnaire is comprised of two parts. The first includes general information whereas the second part consists of 14 close-ended questions completed with open-ended questions.

Results: These are preliminary results. The group consists of mothers aged 20-37, 59% with higher education. Mean age of the hospitalized children was 6,7 weeks. Only 5 women had been informed about necessity of vitamin D supplementation, 4 of them confirmed taking the vitamin during pregnancy, but really only 1 of them had been taking supplements that consisted vitamin D (200 IU). Every respondent had been taking minerals, elements and vitamins designed for pregnant women, but only 5 of the women had been taking supplements that contained vitamin D (maximum 400IU) – non in the recommended dose. Questioned mothers were well informed about vitamin D supplementation for children (usually by their GP) and have been giving the vitamin their infants in prophylactic doses.

Conclusion: Despite the general education, the knowledge about vitamin D and its supplementation during pregnancy among the mothers was meager. The lack of information from the gynecologists was the main reason for wrong supplementation. It seems to be more important for mothers to care about their infants after the birth than during the fetal life. Better education about the effects of vitamin D deficiency in pregnancy from gynecologists or midwives is essential to counteract vitamin D deficiency in children.

Eth:

Session: Pediatrics

Respiratory tract infections in children aged three to six – a burning problem from the parents' viewpoint

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Introduction: Respiratory tract infections are the most frequent reason for ambulatory visits at primary care physicians (PCPs) of children aged three to six. Most of these infections are viral, but some are bacterial or mixed. Currently, bacterial resistance to antibiotics becomes an alarming problem. Huge fluctuation of symptoms and rapid infection progress in children of this age are the factors that may lead to overuse of antibiotic therapy. Consequently, good cooperation between PCPs and parents, as well as parents' education may protect children from antibiotic misuse.

Purpose: The aim of our study was to evaluate parents' knowledge about respiratory tract infections and their treatment in children aged three to six and to investigate parents' compliance in administering antibiotic therapy to their children.

Methods: The questionnaire survey was carried out in the group of 110 parents from Lodz region (central Poland). The questions concerned basic knowledge about antibiotic spectrum of activity and their use in respiratory tract infections in children. Questions also regarded the details of parents' attitude to infection treatment, including compliance with PCP's recommendations.

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Results: Our findings show that not even half of respondents are aware that viruses are the most common reason of respiratory tract infections. Moreover, there is a group of parents (less than 20%) who believe that antibiotics are effective against viruses. Fortunately, approximately 95% of respondents know that frequent usage of antibiotics may exert adverse effects in children. About 15% of respondents admit having terminated antibiotic therapy earlier than PCPs' recommendations, with resolution of symptoms and side effects being the most frequent causes of such decisions, but not all of them have informed their PCPs about noncompliance. About 80% of respondents have never administered antibiotic to their children without doctor's consultation. Almost all respondents never or rarely insist on their PCPs to prescribe antibiotic therapy for their children. Surprisingly, about 25% of parents declared having not administered antibiotics to their children in situations where they were recommended by PCP.

Conclusion:

Parents' knowledge about etiology of infections and antibiotic use is not sufficient, which constitutes an important factor leading to noncompliance.

Proper education of parents about antibiotic mechanism of action and spectrum of activity could persuade them to comply with doctors' recommendations.

Session: Pediatrics

Frequency and ways of childhood asthma therapy in Chorzow – epidemiological study

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Introduction: Asthma is the most frequent chronic disease in children. Proper therapy ensure full symptom control, that is why adequate choice of prescribed medicine is crucial.

Purpose: The aim of the study was to assess prevalence of asthma, frequency of treated as well as to asses choices of therapeutic regimens.

Methods: Population based survey was performed in town of Chorzów using standard questionnaire in a randomly selected group of 2032 children in the age from 5 to 15. Questionairre was complited by parents.

Results: Diagnosed asthma was reported in 255 (12,6%) children. In 44.3% of children with asthma during last 12 months occurred at least one respiratory symptom like: wheezing-38,0% , dry cough attacks - 16,9%) and respiratory symptoms after the exercises - 38,1%.

Any pharmacological therapy received 65.8% of children with asthma. In group of asthmatic children with present respiratory symptoms therapy was applied in 89,2% of them.

Children were treated by: inhaled glucocorticosteroids – 46,3%, antileucotriens – 31,7%, short-acting beta2-agonists (SABA) - 26,2%, antihistamines – 26,2%, long-acting beta2-agonists (LABA) – 9,7%, systemic glucocorticosteroids – 0,4%, theophylline – 0,4%.

Among treated by LABA only 2% had not inhaled glucocorticosteroids.

Conclusion: Almost half of children with diagnosed asthma suffer from respiratory symptoms and over 10% of them do not receive any treatment.

Eth:



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Łódź 2015

Session: Pediatrics

The 5 year old girl with HYPOPHOSPHATEMIC RICKETS – case report.

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Introduction: Hypophosphatemic rickets (HR) is a group of rare disorders caused by excessive renal phosphate wasting. The dominant form of HR is X-linked HR (XLHR), which is caused by mutation in the phosphate-regulating endopeptidase gene PHEX. There is also autosomal dominant form of HR caused by mutation in FGF23 gene or rare autosomal recessive form caused by mutation in DMP1 gene. The phenotype can vary from very delicate to severe bone disease. The dominant symptom is usually bowing of lower limbs.

Purpose: The aim of the study is to present the clinical and genetic picture of 5-year old girl with hypophosphatemic rickets.

Methods: The birth history is normal. Target height calculated due to parental height is 152.5 cm.

In the child's father due to typical malformations of skeleton and biochemical tests the hypophosphatemic rickets was recognized in childhood.

In the age of 1 year after the girl started to walk the bowing of legs was observed.

In the age of 2 years she was referred to the Department of Pediatric Endocrinology and Rheumatology in Poznan.

On admission short stature (height 75 cm, htSDS= - 4.4), severe bowing of legs and wadding gait were observed.

Due to clinical picture, and biochemical testing (hypophosphatemia, increased loss of phosphorus with urine, increased alkaline phosphatase) hypophosphatemic rickets was recognized.

Results: In the patient the FGF23 gene was analysed by polymerase chain reaction (PCR) and direct sequencing. The analysis of the FGF23 gene revealed the presence of one polymorphism c.C716>T, p.T239M.

The analog of vitamin D and phosphorus supplementation therapy was started.

Now at the age of 5 improvement of skeleton deformations and biochemical tests are observed.

Conclusion: Early starting of vitamin d and phosphorus supplementation therapy is very effective, safe for patients and helps to reduce progression of bone deformations.

Genetic diagnosis is very important to confirm clinical suspicion of hypophosphatemic rickets not only for proper treatment but also for genetic counseling.

Eth:

Session: Pediatrics

Don't we perform voiding cystourethrography in children too often?

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Introduction: Vesicoureteral reflux (VUR) is one of the factors known to predispose children to renal damage. Voiding cystourethrography (VCUG) is an imaging study commonly used to confirm and grade VUR. Recurrent urinary tract infections (UTI), miction disturbances and renal defects found in ultrasonography (USG) are usual indications for this procedure.

Purpose: The aim of the study was to assess the prevalence of VUR in children who had undergone VCUG depending on the indication.

Methods: Retrospective analysis included 4318 Patients (1958 M and 2360 F) aged mean 4 ± 4.94 years old who underwent VCUG in Paediatric Nephrology Department and outpatient clinic in years 2003 – 2014. Patients' medical charts were analysed to determine their indication for VCUG. Inclusion criteria were children and adolescents aged 0 – 18 years old who underwent VCUG. Exclusion criteria were patients with neurogenic bladder, myelomeningocele, posterior ureteral valve and other complex urinary tract defects.

Patients were divided into three groups based on indication: group 1 – recurrent UTI, group 2– renal defects in USG, group 3– miction disturbances.

Statistical analysis was performed using Statistica 10.0 software. The comparison between the groups was done with the Chi-square test for categorical variables.

Results: In the examined group of 4318 patients reflux was confirmed in 923 patients (21,4%) (1275 reflux units: 565 – right, 710 – left). Girls were suspected for reflux more frequently than boys (2360 v. 1958) and the reflux was confirmed significantly more often. Particularly in our patients reflux of 1st grade was found in 310 children, 2nd in 482, 3rd in 250, 4th in 142 and 5th in 91 respectively. Among all units 738 (57.88%) were passive and 537 (42.11%) - active. In group 1 reflux was found in 442/1901 (23,3% of patients), in group 2 322/1346 (23,9%) and in group 3 158/1071 (14,8%), respectively. Chi square test revealed significantly lower prevalence of positive VCUG in children with miction disturbances when compared to other groups.

Conclusion: Vesicoureteral refluxes were confirmed in over 20% of children with renal abnormalities in USG or after an incident of UTI, suggesting the need for voiding cystography examination in these children. Indications for voiding cystography in children with miction disturbances should be limited.

Eth:

Session: Pediatrics

Which of the formulas used for GFR assessment correlates best with creatinine clearance?

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Introduction: Inulin clearance is known to be a golden standard for GFR determination. However, its practical limitations create the need for other methods of GFR estimation. Creatinine clearance (CrCl), original Schwartz, updated Schwartz and Counahan-Barrat formulas are most commonly used in clinical practice.

Purpose: This study aimed to evaluate the accuracy of approved pediatric GFR estimation formulas.

Methods: The study group included 1291 Polish children (766 boys and 525 girls), with a mean age of 14.75 (± 3.71), hospitalized in years 2003 – 2015. Inclusion criteria were patients from 2nd year of age to 19.5 years old, toilet trained or catheterized, with CrCl values obtained through 24 hour urine collection. Patients with CrCl < 60 mL/min were excluded. Patient data, including age, gender, height, SCr (measured enzymatically) and CrCl from 24 hour urine collection, was retrospectively obtained. The patients were grouped depending on age: 1st group below 6 years old, 2nd group between 6 and 12 years old and 3rd group from 12 to 19.5 years old. GFR values were calculated using original Schwartz formula (OS), updated Schwartz

formula (US) and Counahan-Barratt equation (CB). The calculated GFR results in the different age groups were correlated to CrCl using Spearman's test. Statistica 10 software was used for all calculations.

Results: Of all 1291 patients, median SCr was 0.63 (0.20-1.00) mg/dL, median CrCl 113.75 (70.00-287.04) mL/min, median calculated GFR: OS 158.13 (89.74-348.87) mL/min, US 107.63 (65.99-255.88) mL/min, CB 112.06 (68.71-266.41) mL/min. For all patients, statistically significant correlation was only found between OS GFR and CrCl ($R = 0.16$, $p = <0.05$). In 1st group, positive correlation was found between CrCl and OS GFR ($R = 0.20$, $p = <0.05$). In 2nd group, positive correlation was found between CrCl and OS GFR ($R = 0.25$, $p = <0.05$), US GFR ($R = 0.06$, $p = <0.05$), and CB GFR ($R = 0.06$, $p = <0.05$). In 3rd group, positive correlation was found between CrCl and OS GFR ($R = 0.23$, $p = <0.05$), US GFR ($R = 0.23$, $p = <0.05$), and CB GFR ($R = 0.23$, $p = <0.05$).

Conclusion: Our study suggests that the US formula and the CB equation might not properly reflect the correct GFR among the younger children of the pediatric population.

Eth:

Psychiatry and Psychology

Psychoactive substances - awareness of university students about drugs and drug addiction

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Introduction: Psychoactive substances have always been associated with human culture. Their use was characterized by a high diversity over the centuries: from the support of religious rituals by intoxication of social elites to relax until spread in today's society. Scientific research shown many negative health effects of psychoactive substances, which resulted in worldwide recognition of many of these substances illegal. According to the report of the World Health Organization (WHO Drug Report 2014) in the last year from 162 to 324 million people used illegal psychoactive substances, it is 3.5% - 7% of the population, an average of 5.3%. Addiction concerns 16-39 million (0.3-0.9%). Per year in Poland 1.9-2.3 million (5-6%) people use psychoactive substances, addicted is 100-125 thousands of people (0,26-0,32%). Every year, there has been a 99 000 - 253 000 deaths due to use of psychoactive substance. Every year the number of new synthetic psychoactive substances, so-called "Designer drugs" increases. According to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 81 new substances were introduced in 2013. It's about 29 more than in 2011 and up to 67 more than in 2008. Most people using the so-called. designer drugs were found in the UK (22.9%) and Poland (16.9%). Unfortunately, many of the newly introduced to the market

substances may have heterogeneous effects. Intoxication with these products represent a significant diagnostic and therapeutic problem for health care. Therefore, the students of medical science as future employees of hospitals, clinics, health centers, etc., should have a considerable knowledge about psychoactive substances and a high awareness of the dangers of addiction.

Purpose: The aim of the study was to assess the awareness of medical students to the phenomenon of drug addiction, in the context of their future role in the prevention and therapeutic structures.

Methods: Studies were conducted using the original evaluation questionnaire prepared by the members of Student Research Society at the Department of Biology and Medical Parasitology (Medical University, Lodz). The questions were related to the students attitude towards drug addition, their knowledge of legal aspects of addiction as well as the usage of psychoactive substances among population of medical students. The data obtained were analysed statistically.

Results: 493 of students of faculties: medicine, military medicine, dentistry, paramedics, nursing, obstetrics, laboratory medicine, pharmacy and public health participated in the questionnaire. A part of students admitted to addictions giving computer, coffee and sweets as most common cause. 24.7% of respondents at least once used psychoactive substances. Unfortunately, up to 65.6% of the respondents said they know of people who use illegal drugs. Most of the respondents could not identify the institution that deals with the prevention of drug addiction. The most frequently mentioned by the students organization was MONAR, and the answers, which would seem the obvious, such as police or healthcare professional were sporadic. Only 18.6% of respondents admitted to smoking tobacco, while 86.4% supported a ban on smoking in public places.

Conclusion: The presence of people taking psychoactive substances in the surrounding of students surveyed indicate a high prevalence of intoxicating compounds. Unfortunately, except for a positive attitude towards prohibition on smoking tobacco, students' awareness about the risks and possibilities to get help is

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ABSTRACT BOOK

very low, which is crucial in the context of the role of health professionals in the prevention and treatment of drug addiction.



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Łódź 2015

Changes in C-reactive protein levels in anxiety disorders with a particular focus on children

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Introduction: Human C-reactive protein (CRP) belongs to a group of acute phase proteins. CRP is synthesized by hepatocytes and is a part of the human serum. It was proven the relationship between anxiety and SLE, psoriatic arthritis and primary Sjögren's syndrome. In prospective analyses, higher CRP levels predicted increase of morbidity rate for metabolic and autoimmune diseases may begin in childhood and depend, in part, on a long-term emotional functioning.

Purpose: The aim of the study is to test the relations between CRP and anxiety disorder due to levels of blood parameters in children.

Methods: Subjects were 113 psychiatry young patients (65 girls and 48 boys) suffering from anxiety disorders with a prevalence of social and separation anxiety. The average age was 15,67 (ranging from 4 to 21). Most of the patients were even unable to attend classes. Blood samples, patients' interviews were taken into an analysis. The parameters taken into consideration were as following: total cholesterol ,LDL, HDL, TG, glucose levels with CRP (measured using immunoturbidimetric method).

Results: In 5,3% of the entire group there was a significant raise in the CRP level (17% of that group- boys, 73% - girls) There is a correlation between CRP levels and HDL, glucose and body weight lower than 0,05; 0.03486, 0.01102, 0.01826 p-value respectively.

Conclusion: CRP level in anxiety disorders in children is independent both of gender and place of residence. CRP levels were higher in the presence of lower level HDL, higher level of glucose and body weight. The rest of the correlation do not show any statistically significant relationship. The CRP level in anxiety disorders is not enough relevant and shouldn't be considered as crucial in diagnostics.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Psychiatry and Psychology

Life with acne - psychological aspects of being a dermatological patient

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Introduction: Acne vulgaris is a common problem in adolescents. Confrontation with the demanding requirements of gaining peer acceptance seems to be difficult and frustrating for young people suffering from skin diseases. Therefore appearance turned out to be a more complex issue than just a symptom of vanity and superficiality. Acne signs may cause poor self-esteem and result in depression and other psychological problems. It may also affect patients who have been unsuccessfully treated for this disease after puberty. Exogenic factors such as stress may deteriorate condition of dermatological patients.

Purpose: The aim of this study was to estimate relationship between acne vulgaris and sufferer self-esteem to find out the influence of the disease on the quality of life and the way how they deal with stressful situations.

Methods: The study was carried out on 28 patients with acne vulgaris aged from 16 to 46 years recruited from allergological and dermatological clinics, Medical University of Lodz. The patients were evaluated by a demographic questionnaire, Self-efficacy test, STAI State-Trait Anxiety Inventory test and CISS Coping Inventory for Stressful Situations.

Results: 62,96% of the patients considered their illness as more severe than their doctors. In most cases the differences were significant. The results of tests didn't show any correlation between the age of patients and their

successfulness in dealing with problem. Almost 66,67% of patients declared that stress deteriorates symptoms of disease. Some of them (72,22%) claimed that stress has an influence on necessity of changing the treatment. Psychological tests shown the strong correlation between the rate in self-efficacy test and the strategy of coping with stressful situations among our patients. Chronic anxiety interferes with emotional and avoidant way of coping strategy. The patients with this type of response to stress evade social contacts and focus on their emotions.

Conclusion: To conclude, acne vulgaris has a great impact on sufferers' lives. It may influence self-esteem and also a type of response to stress.

Eth: This paper is approved by Local Ethical Committee.



JUVENES PRO MEDICINA

Łódź 2015

Session: Psychiatry and Psychology

Are we all night owls? Chronotype of medical students – preliminary results

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Introduction: Chronotype presents differences in parameters which concern the subjective circadian rhythm of the personal activity. The starting point in defining that is to determine individual preferences as to the optimum time of activity during the day and the intensity of feelings caused by circadian rhythm changes. According to psychology of individual differences, the characteristic of the circadian rhythm is a personality variable which is strongly biologically determined. The classic understanding of chronotype confines it to preferences for morning or evening activity.

Purpose: The aim of the study was to present the distribution of chronotype among medical students and its relationship with personality variables, depressive symptoms and quality of sleep.

Methods: The study group consisted of 71 fourth and fifth year students of medical faculty: 43 women and 28 men. The eligibility criterion for participation in the study was the informed consent. The following questionnaires were used for the measurement of each variable: Chronotype Questionnaire (comprising two dimensions: morningness-eveningness, ME, and amplitude, AM), Eysenck Personality Questionnaire - Revised (EPQ-R), Beck Depression Inventory (BDI), Pittsburgh Sleep Quality Index (PSQI)

and a socio-demographic data questionnaire. The collected data underwent statistical analysis. The distribution of variables was evaluated using the Shapiro-Wilk W test. Relationships between variables were assessed using the Spearman rank correlation test and logistic regression model. All analyses were performed in STATISTICA 12 PL.

Results: It was shown that in the ME scale the evening chronotype prevails in students group – it occurs in 62% of subjects (n=44), of whom nearly half present an extremely evening chronotype (n=20). Furthermore, the ME scale score is correlated with body mass index ($r=-0.40$, $p<0.05$) and PSQI score ($r=0.25$, $p<0.05$). Also, the score on the AM scale correlates moderately with neuroticism ($r=0.45$, $p<0.05$). On the basis of the PSQI, the poor quality of sleep was reported by as much as 43% (n = 31) of the students. Upon building the logistic regression model, taking into account both chronotype dimensions, it turned out that the poor sleep quality did not depend on chronotype, BMI, gender nor neuroticism. The only independent predictor of poor quality of sleep in this model was the BDI score of ≥ 10 , suggesting depressive symptoms (OR=11.00, 95% CI 1.14-126.36, $p<0.05$), which was reported by 15% (n=11) of the students.

Conclusion: Majority of the students of medical faculty may present an evening chronotype. Apart from chronotype amplitude being associated with neuroticism, no other relations between chronotype and EPQ-R personality dimensions were established. Based on correlations, chronotype can be associated with poor sleep quality, however only depressive symptoms were proven to be independent predictors.

Eth: This paper is approved by Local Ethical Committee.

Session: Psychiatry and Psychology

Antidepressant and hypnotic drug use among elderly patients from University of the 3rd Age in Łódź. Drugs and risk associated with their use.

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Introduction: Elderly are the group of patients of the high risk for adverse drug reactions and consequences of substance use. They have not only concomitant diseases, decreased or impaired liver and renal function, but are also prescribed many interacting drugs. Depression and sleep disturbances are very frequent in that group, affecting respectively 15-30% and 12-40% of people aged at least 65 years. However, it is worth to remember about secondary risks associated with commonly prescribed groups of antidepressive and hypnotic drugs, i.e. fractures, loss of concentration (benzodiazepines), metabolic syndrome (SSRIs).

Purpose: The aim of the study is to assess prevalence of antidepressant and hypnotic drug use and factors predisposing for the consequences.

Methods: We conducted the survey among people from University of the 3rd Age in Łódź, obtaining 212 properly filled questionnaires. Further, we arranged the meeting with patients who agreed to participate in the second part of examination.

Results: 40% (84/212) of respondents were taking antidepressant (41), hypnotic (62) or both types of drugs (19). However, only fifth of them were prescribed by specialist – psychiatrist or neurologist. 59% of administered

hypnotics were “Z-drugs” (zolpidem, zopiclon), taken either occasionally (39% of users) or every day (30% of users). Very popular were also benzodiazepines (17 individuals), SSRIs (10) and non-prescription drugs and herbs (27). The majority (78/84) of patients was suffering from at least one somatic illness, mainly cardiovascular (57) and rheumatic (44) diseases. Additionally, only third of them were living with the partner, which might indicate decreased standard of night and day adverse event surveillance.

Conclusion: Large part of patients is taking potentially risky substances without consulting specialists. Many prescription substances are taken chronically, constituting the pattern of chronic quasi-therapeutic abuse. Taking into the consideration the age and comorbid diseases of patients, the disadvantages of tapering off these drug outweigh possible health advantages. Thus, it is worth to recommend individualized, the most accurate treatment supported by non-pharmacological means with the regard on patients' environmental features.

Eth: This paper is approved by Local Ethical Committee.

Łódź 2015

Session: Psychiatry and Psychology

Recreational use of dextromethorphan – is there more to it than meets the eye?

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Introduction: Dextromethorphan (DXM) is widely used antitussive over-the-counter. Emerging studies show that it becomes also popular recreational drug, easily obtained as a substitution for illegal drugs and, prohibited by newer regulations, “legal highs”. In suprathreshold doses, the substance exerts psychoactive – dissociative effect, similar to psilocybin, lysergic acid (LSD) or ketamine use. The drug is popular in the group of young people and much information about its psychoactive effects is available on the Internet.

Purpose: Aim of the study is the assessment of social and psychological features of DXM users. Also, the symptoms of acute intoxication and the taken doses were reported in order to evaluate the course and possible tolerance.

Methods: Data on DXM poisoning in Łódź Voivodeship from 1st January 2011 to 1st March 2015 were obtained from Nofer Institute of Occupational Medicine, Łódź, Poland. Further, the analysis of psychological or psychiatric examination of patients was made

Results: 54% of 103 patients admission due to DXM poisoning were associated with recreational use of the drug. Average dose ranged from 5 up to 120 pills a 15 mg, with median dose 30 pills. 82% of poisoned patients

took the drug with alcohol (30 – 395 mg/dm³). 9% of patients had hallucinations; psychomotor retardation was observed in 43%; agitation – in 18% of patients. 43% were hospitalized earlier in psychiatric hospital. 32 patients had psychiatric/ psychological consultation due to acute poisoning associated with recreational drug use or chronic substance abuse. The majority of them were young adults (18-25 year old) – median age was 21,15 with SD 6,33. The taken doses of DXM were higher. Additionally, 10/32 had dual diagnosis, 8/32 was diagnosed with behavioral disorders due to multiple drug use (ICD 10: F19.2).

Conclusion: DXM intoxications associated with recreational use were observed mainly in the group of adolescents and young adults. Many of chronic users not only are addicted to other substances or drugs and alcohol, but also are diagnosed with psychiatric problems (such as personality disorders, depression). Moreover, chronic abusers develop tolerance and increase the amount of pills taken. In spite of the fact that this topic is occasionally raised in media, it seems that many doctors and parents are unaware of “Janus-faced” (deceitful) nature of the popular and effective substance available in the majority of anti-cold preparations.

Eth: This paper is approved by Local Ethical Committee.

Session: Psychiatry and Psychology

The main causes of intoxication among adolescents hospitalized in emergency department.

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Introduction: During adolescence there is increasing tendency of recreational or suicidal drug intoxication. This seems to be the reason of growing number of admissions to emergency department.

Purpose: The analysis of relationship between kind of ingested drugs, gender and month of hospitalization.

Methods: Retrospective review of 607 medical histories of patients hospitalized due to narcotic or harmful substances intoxication in the University Clinical Hospital No. 4 in Lodz. Inclusion criteria was age above 12 and date of hospitalization between 01.01.2011 and 31.12.2014.

Results: Average age of patients was $15,29 \pm 1,38$. Males make up 45% of research group. There was no difference in age between genders (females vs males – 15.0 and 15.66 respectively). The most frequent reason of poisoning was alcohol ingestion (47%), then: narcotics/hallucinogens (14%), psychotropic medications (11%) and agents primarily acting on smooth and skeletal muscles, mainly dextrometorphan (Acodin - 10%). The most of admissions to hospital were in December and the least in February. Every month significant predominance of admissions due to alcohol intoxication (from 36% to 67%) was observed except from December (28%) in which other causes had substantial contribution: narcotics/hallucinogens (18%), agents primarily acting on smooth and skeletal muscles (17%) and psychotropic medications (14%). There were no differences between

genders in alcohol poisoning frequency. Females were the main group of patients who ingested nonsteroidal anti-inflammatory drugs (84%), sedative-hypnotic drugs (95%) and agents primarily acting on smooth and skeletal muscles (Acodin) (83%). While the most of patients intoxicated by narcotics/hallucinogens constituted males (71%).

Conclusion: Among adolescents males as readily reach for alcohol as females which may be connected with cultural factors and relatively easy access. Males prefer narcotics/hallucinogens whereas females tend to intoxicate by nonsteroidal anti-inflammatory drugs, sedative-hypnotic drugs and dextrometorphan (Acodin).



JUVENES PRO MEDICINA

Łódź 2015

Public Health

The screening study on the influence of population in the place of living and smoking cigarettes on the level of carbon monoxide in exhaled air.

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Introduction: The poor quality of air is one of the most important reasons for increased carbon monoxide (CO) level in exhaled air. It is caused by enlarging car traffic and industrial activity. Even though the knowledge about high pollution in big towns, the influence of place of living on CO level in exhaled air has not been well studied yet.

Purpose: The aim of the study was to check the influence of place of living on the level of carbon monoxide in the exhaled air.

Methods: In this study, conducted in Cracow, Warsaw and Koźienice adult people were recruited. After filling the survey concerning place of living, smoking, family history and personal data, patients were enrolled to get examined the level of CO in exhaled air with Pico+ Smokerlyzertool. Generalized linear models with logit link for a binary response with interaction between explanatory data was performed to verify whether exceeding CO level of 4ppm depends on smoking and place of living.

Results: 505 patients were recruited, with an average age of 39.03 ± 17.89 years. The patients were divided into 4 groups based on the declaration of smoking cigarettes and place of living: "A" of 131 patients living in small towns (up to 500000 of citizens) or villages and not smoking cigarettes; "B" of 62 patients from small towns or villages and smoking cigarettes; "C" of 222 patients from big towns and being non-smokers; "D" of 91 patients from big towns and being non-smokers.

The average results of CO level in population of smokers differs according to place of living (B: 7.93 ± 6.24 ppm vs D: 11.96 ± 7.96 ppm; $p < 0,0001$), but the difference in non-smoking population is more expressed (A: $2,45 \pm 1,82$ ppm vs C: $5,41 \pm 2,63$ ppm; $p < 0,0001$). Created model has shown that people in the group "C" have odds ratio 15.10 (95% confidence interval: 7.29-31.29; $p < 0,0001$) for chance of exceeding CO level of 4ppm in comparison with people from the group "A".

Conclusion: In populations of non-smokers living in small town the median of level of CO doesn't exceed normal range (0-4ppm) and is significantly lower than in population living in big cities. These results show us that not only smoking cigarettes has influence on the level of CO in exhaled air, but also the place of living and the quality of air does.

Eth:

Session: Public Health

The prevalence of obesity, overweight and risk factors in group of students of universities in Łódź

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Introduction: Obesity is a complex disorder and has an enormous impact on the risk of appearance of health problems. There has been little research regarding obesity risk factors in a group of students in Poland.

Purpose: The aim of the study is to evaluate the prevalence of overweight, obesity and its risk factors among students of universities in Łódź. Particular attention was paid to occurrence of overweight in students.

Methods: Anonymous questionnaire surveys were conducted among 220 students from three different universities in Łódź: Technical University of Łódź (n=58), University of Łódź (n=78) and Medical University of Łódź (n=84). The study was conducted using a questionnaire, available in an electronic form, consisting of 20 questions relating to the lifestyle, diet and physical activity among surveyed students. The research was conducted by gender and university.

Results: In studied population average weight was $65.95 \text{ kg} \pm 15.62$ for women and $66.00 \text{ kg} \pm 15.67$ for men. Among the Technical University students obesity was present in 17/58. Among the University of Łódź students obesity was observed in 13/78 of the participants. Among the Medical

Medical University of Łódź

University students obesity was present in 13/84. Almost 70% of respondents (n=153) admitted occurrence of overweight in the family and only 30.46% of the students (n=67) admitted to following the principles of healthy nutrition. There were students (3.64%; n=8) that did not know any principles of healthy nutrition. Majority of respondents proclaimed eating irregularly (61%, n=134), snacking between meals (74%, n=162), frequent ingesting sweets (67%, n=150) and repeated consumption of fast-food products (28%, n=61). Surveyed students admitted to smoking cigarettes: 11.36% (n=25) of them less than a pack of cigarettes and 0.91% (n=2) of them a complete pack per day. The vast majority of the students (94.1%; n=207) reported alcohol consumption. Concerning physical activity, the vast majority of participants declared passive way of spending free time (75%, n=165) as preferred whereas only 21.36% (n=47) of students proclaimed not exercising whatsoever. More than 90% of students marked the most frequent reasons of obesity (lack of exercise, unhealthy nutrition) and consequences (cardiovascular diseases, diabetes, obesity in the future). Majority of respondents (64.10%, n=141) admitted that they only occasionally try to maintain a healthy lifestyle. Almost 20% of students (n=47) reported that they did not live healthily.

Łódź 2015

Conclusion: Despite the awareness of the most common causes of obesity among students, their lifestyle deviates from unreservedly healthy one. The lowest percentage of stoutness was observed in the Medical University population what may indicate that the medical knowledge has certain impact on students health.

Eth: This paper is approved by Local Ethical Committee.

Session: Public Health

Ebola- are we really afraid of infection

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Introduction: The Ebola virus infection has recently made the headlines in the mass media, due to the last epidemic in West Africa. Ebola arouses anxiety and fear among people, because it is associated with high mortality and there is neither effective medication nor vaccine.

Purpose: The aim of this study was to examine Polish society attitude to Ebola threat by means of decision-making about the hypothetical vaccination against this pathogen.

Methods: We examined 199 Polish people, 42 males and 157 females, with online questionnaire including 12 questions referring to responders' opinion on direct Ebola Haemorrhagic Fever threat to their lives, risk of infection in homeland and abroad countries embraced with outbreak, prophylactic vaccination prior to journey to Ebola endemic regions and when staying in Poland, vaccination in case of side effects, high cost and 50% effectiveness of vaccine and their participation in Ebola vaccine trial programme.

Results: The majority of responders were women (78.9%), aged 21-30 (53.3%), having a university degree (68.3%). The most people believe the Ebola virus infection as a threat to life (96.5%). However, they do not consider this as a real danger to people staying in the country (86.4%), but above all, to

those who are leaving for endemic areas (89.4%). Before going there 87.4% of respondents would be get vaccinated, in the case of staying in the country - only 16.1%. However the hand pain and fever as the side effects of the vaccination or the need to pay for the vaccine 350 PLN are obstacles to almost half of respondents (respectively 55.8% and 53.7%). If the vaccine efficacy would be 50% - it would not be standing in the way to vaccinate to 42.7%. Less than a third of respondents (31.7%) would agree to take part in research on the vaccine against the Ebola virus – among them pharmaceutical companies establish less confidence than non-profit international organization. The chi squared test rejects the null hypothesis on participation of the vaccination programme has no coincidence with education ($51,8 > 16,919$).

Conclusion: Polish society is aware that Ebola virus infection is dangerous to life, but it does not perceive it as a real threat for Poland. Polish people generally accept vaccination, but almost half of them would not get immunized if the vaccine against deadly disease was expensive, had side effects, or was not perfect – in fact they do not perceive Ebola as real threat. Sex and education have coincidence neither with positive nor with negative attitude on immunization with 50% effective, expensive vaccine inducing side effects. Being female or male has no influence on decision-making of participation in the vaccination trial programme while higher education significantly increases the percent of negative attitude.

Eth:

Session: Public Health

Addiction to smoking among Polish and other countries students

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Introduction: Cigarettes are the only one legally sold all around the world product, which has proven carcinogenic effect.

Purpose: Evaluate students' smoking habits, estimate addiction to cigarettes (Fagerstrom's test) and motivation to give up smoking (Schneider's test).

Methods: Anonymous survey was conducted among 228 students from Poland and 60 from other countries; 65,28% (n=188) female, 34,72% (n=100) male.

For statistical analysis program The Statistica10.0 was used.

Results: 17,11% (n=39) Polish students were smokers, 18,86% (n=43) former smokers. Statistically significant more Polish students of faculties other than medicine at medical university ($p=0,0306$) and those whose mothers have higher education ($p=0,01246$) were smokers. Highly addicted were 5,13% (n=2) and 79,49% (n=31) were strongly motivated to quit smoking.

26,67% (n=16) students from other countries were smokers, 23,33% (n=14) former smokers. Highly addicted were 6,25% (n=1) and 100% (n=16) were strongly motivated to quit smoking.

Conclusion: Quite a lot of students from Poland as well as from other countries are smokers or former smokers. Fortunately most of them are low addicted and highly motivated to quit smoking.

Eth:



JUVENES PRO MEDICINA

Łódź 2015

Session: Public Health

Might a simple kiss be harmful? The awareness of HPV infections in terms of head and neck neoplasm among young adults.

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Introduction: Human Papilloma Virus (HPV) is oncogenic virus. Commonly, HPV infection is known to be the cause of cervical cancer only, although it has been proved that HPV is responsible for many head and neck neoplasms. Prophylaxis is the best form of treatment, so popularization of the knowledge about the ways to prevent infection along with anti-HPV vaccines, seems to be crucial.

Purpose: The aim of the study was to investigate the awareness of young adults in terms of prophylaxis and oncological aftermaths of HPV infection.

Methods: A cross-sectional study of 503 respondents was based at author's questionnaire distributed via Internet. Additionally, authors have elaborated original HPV infections' Knowledge Score (HKS, calculated on the basis of questionnaire). Single and multiple choice questions were applied. Each correct answer was scored as +1 point, each incorrect as 0 points.

Results: Average age of respondents was 24,4 years (SD=3,7), with male to female ratio=0,74. Infectious potential of a kiss was recognized by 93,63% of

respondents. Almost 50% of them were aware of the existence of anti-HPV vaccine, and 55,38% of the fact, that HPV infection can lead to oncological consequences. Almost 3% answered that the forms of prevention does not exist. Average HKS score was 20,38 (SD=14,45), among women - 22,57 (SD=14,45) and men - 13,72 (SD=14,63). Among the respondents who origin in cities HKS was higher (21,14, SD=14,15) then among those who origin in villages (18,97, SD=15,57). Differences were observed according to the field of study: humanities (n=79) –average HKS=11,32 (SD=10,89), medical sciences (n=287) - average HKS=27,98 (SD=12,71), natural sciences (n=10) – average HKS=10,5 (SD=9,7), technical sciences (n=110) – average HKS=11,28 (SD=10,71).

The awareness of disease- casing potential of HPV infection was shown by 63% of respondents, 55,26% answered that it can cause neoplasms. Most of them referred to cervical cancer (34%), some mentioned also vaginal ca (10,53%), vulvar ca (9,54%) and anal ca (8,54%) and 25% of respondents linked HPV infection with all listed tumours.

Knowledge about vaccine existence was higher among women (59,37%) then men (37,55%). 35,41% of women (vs. 25,35% of men) claimed that only girls (not boys) should be vaccinated. The most popular source of knowledge about HPV were studies (45,7%), then biology lessons in high school (24,6%) and social campaigns (24,4%). Only 8% of women owe their knowledge about HPV to their gynecologist.

Conclusion: The awareness of risks connected with HPV infections among young adults is low. It seems to be legitimate to introduce actions which might result in increasing the level of knowledge about HPV in society. Moreover, the youth should be aware that a simple kiss may lead to major diseases and not only gynecological, but also laryngological aspect of oncological consequences should be expanded.

Eth:

Session: Public Health

Let us go (back) to the waters

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Introduction: The Interwar Period was a time of renewal of the Polish State. At that time a special attention was drawn to health issues, which were seen as the foundation of economic and military strength of the state. It was also in that period the spa treatment had its renaissance.

Purpose: The aim of this work was to investigate the popularity of spa treatment during the Interwar Period in Poland; to analyze scientific bases of this particular branch of medicine; to determine types of medical conditions treated with this method; and to name and describe unique characteristics of the leading spas of that period. The comparison of the Interwar Period spa treatment to the current health-resort treatment was also made.

Methods: The methods typical of historical and medical research were applied. The study involved 4,231 articles published in a total of 876 copies of „Polska Gazeta Lekarska” ("Polish Medical Paper") between 1922 and 1938, including 128 articles on spa treatment, all of which were analyzed in detail. What is more, recollections of the patients, and other historical sources were used.

Results: Spa treatment enjoyed great popularity in the Interwar Period Poland. At that time, a wide range of diseases was treated with this method. A lot of scientific works were published, whose main aim was to provide grounds for such treatment, but they were focused on the effects, and failed to accurately describe the exact operation mechanisms of the treatment. Krynica and Truskawiec were among the most often described health-resorts of that period. Today, the scientific bases of the influence of balneology and climactic treatment are better known, and the indications for treatment are similar, but the popularity of spas has declined.

Conclusion: The rebirth of the Polish state was accompanied by the rebirth of spa treatment. Nowadays, although we are more aware of the bases of this branch of medicine, and we appreciate the matter of the environment we live in, yet we have left spas only for people of advanced age. What makes the once popular spa treatment seem to be an underestimated type of therapy today? What is the reason for a decreasing recognition of the methods described above?

Eth:

Łódź 2015

Session: Public Health

European longevity 2015. Analysis of the European 110 + population.

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Introduction: Europe is one of the most developed regions of the world in terms of economic, social and medical. The effect of favorable balance of environmental factors is a large representation of the oldest age group of citizens 110 +.

Purpose: The aim of the work is to demonstrate what changes have occurred in the characterization of the phenomenon of longevity in the environment of Europe over the past few decades.

Methods: Tables developed by the American scientific organization Gerontology Research Group in the years 1990-2015. My research includes changes in the share of countries of origin, sex, race, and achieved average age of longest-lived in different years of research since the late 1960s until 2015. In statistics I also included Poland. As a result of the research, I was able to document the age of the first nine people in Poland who completed 110 years of life in recent history. Since 13 September 2013 I am GRG correspondent in Poland.

Results: The average age achieved by the oldest Europeans has increased from 109.1 (1950-1959) to 114.4 (2004-2014). Among the living people 110+ women are majority. In Europe, in terms of number of verified

supercentenarians, three countries are dominating: Italy (21.73 %), France (21.12 %), United Kingdom (18.24 %). Next are: Germany (8.51 %) and Spain (7.75 %). The life in a narrow community favors the longevity, so there has been cases of long-lived from overseas territories: Martinique, Guadeloupe, French Guiana. High share of immigrants for Germany (28.57 %) and Poland (50.00 %). The oldest European woman is Emma Morano-Martinuzzi from Italy (b.1899).

Conclusion: In recent years, the share of France and Italy has increased. The best regions for longevity are southern France and northern Italy. The sum of all favorable factors of longevity makes it common for people to achieve age over 110 in Europe. Also in Poland, in the recent years, survival until such an advanced age was confirmed.

Eth:



JUVENES PRO MEDICINA

Łódź 2015

Session: Public Health

DIETARY HABITS OF POLISH STUDENTS AND THEIR ATTITUDE TO BEING ON A DIET.

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Introduction: Proper diet is extremely important for human's wellbeing, physical and mental health. Both obesity and malnutrition can be extremely dangerous. Nowadays, some mass media create an unhealthy, skinny look as an ideal body image. In many cases, mental disorders and physical problems such as anemia, hormonal imbalance, decreased immunity are the results of choosing the wrong way to lose weight. During the study, the analysis of student's opinion about dieting and reasons to start a diet was made.

Purpose: The assessment of prevalence and safety of dieting among polish students. Determine what is the most common cause of the young people's decision to start dieting.

Methods: The study was conducted in March 2015 and involved 97 participants aged between 19 and 25. The main research method was the author's questionnaire. It included 32 questions, both single and multiple choice.

Results: 45,0% participants admit that that they had been on a diet at least once in their lifetime. 68,0% of them said that their diet was balanced. Apart from being on low-calorie diet, over half of them (61,0%) were doing additional physical exercises. Most of the young people have reasonable approach to dieting and eating: only 8,0% of them were using dietary pills and 2,0% said that they have induced vomiting at least once in their lifetime to lose weight. According to the 87,0% of participants health issues and their own desire to lose weight were the main causes of going on a diet.

Conclusion: Diet of most participants was balanced and they tried to lose weight using safe methods. Most of the students claim, that they made the decision to start a diet, because they felt the internal need. It means that young people are aware of the danger connected to unhealthy dieting. Most of the young individuals don't feel the need to look like "photoshopped" people from some magazine's covers to feel good.

Eth:

Session: Public Health

The assessment of the knowledge about immunization and attitude towards vaccination among young people.

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Łódź 2015

Introduction: Nowadays the discussion about legitimacy of vaccination is really popular. There are a lot of myths about side effects from vaccinations. The belief that people shouldn't be getting vaccinated, because the threat of complications exceeds expected benefits is getting more supporters every day. Parents of young children are the biggest group among them. During the study, the analysis of students' knowledge and beliefs about immunization was made.

Purpose: The assessment of students' awareness on the topic of immunization, the need for additional education about legitimacy of vaccination and young people's attitude towards vaccination.

Methods: The study was conducted in March 2015 and involved 202 participants aged between 16 and 20, currently living in Lublin province. The

main research method was the author's questionnaire. It included 19 questions, both single and multiple choice.

Results: 85,6% of the participants know why people are being vaccinated, almost the same number of the students (85,2%) think, that vaccinations are needed. Over 95,0% of the participants are planning to vaccinate their future children. Only every fifth student admits, that during classes at school, the topic of immunization was discussed, and 62,9% of them think, that young people need to know more about the matter of immunization and additional education should be provided at school. The results of the study show, that over a half of the participants (53,5%) think that vaccine protecting against hepatitis C exists and almost every fourth student said, that it is possible to get vaccinated against HIV. Over 80,0% of the students don't know what disease was declared eradicated due to the use of vaccinations.

Conclusion: Despite young people's good attitude towards vaccination, their knowledge about that matter is significantly low. Considering this fact, in future, they can be susceptible to unreliable information regarding legitimacy of immunization spread by some mass media. It can cause increase of the number of vaccinations' opponents. All of these may contribute to increase of prevalence of diseases, which occurred rarely until today.

Eth:

Session: Public Health

Pharmacotherapy of arterial hypertension and blood pressure control in rural and urban communities

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Introduction: Arterial hypertension (AH) is the major risk factor of cardiovascular mortality. Monotherapy can effectively reduce blood pressure (BP) in only a limited number of hypertensive patients thus most patients require the combination of at least two drugs to achieve BP control.

Purpose: The aim of the study was to compare the prevalence of AH, number and classes of antihypertensive medications used to achieve appropriate BP control in general practitioner (GP) offices serving rural (RP) or urban population (UP).

Methods: Consecutive medical records of 859 adult patients treated at two GP offices serving either rural (333F, 225M; mean age 50±19 years) or urban (175F, 126M; mean age 52±17 years) population were analyzed. Demographic, diagnosis of AH, three consecutive BP values, use of antihypertensive and lipid-lowering agents were collected from medical records. The prevalence of

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hypertension, variability of BP values and a number and classes of antihypertensive agents were analyzed. Office BP <140/90 mmHg was recognized as an adequate control in the patients treated for AH.

Results: AH was more often found in UP (38.5%, n=116) than in RP (30%, n=167) (p=0.01). Mean systolic BP was 134±16mmHg in RP vs 138±15mmHg in UP (p=0.03), diastolic BP was 79±8mmHg in RP vs 82±8mmHg in UP (p=0.0006). Adequate control of BP was achieved in 64% (n=107) in RP and 59% (n=68) in UP (p=0.35). An angiotensin-converting-enzyme inhibitors (ACEIs) were the most popular BP-lowering drugs in both populations (59%, n=98 in RP vs 54%, n=62 in UP; p=0.38) followed by diuretics (39%, n=65 in RP vs 49%; n=57 in UP; p=0.08) and β -adrenergic antagonists (47%; n=79 vs 34%; n=39; p=0.02). Calcium antagonists were used in RP by 14% (n=24) vs in UP 28% (n=32) p=0.006 and angiotensin 2 receptor antagonists (ARB) by 5% (n=9) in RP vs 23% (n=27) in UP (p=0.00001). Most AH patients were on monotherapy 34% (n=97), two antihypertensive drugs were used by 35% (n=100), three drugs by 17% (n=18) and four drugs by 4% (n=11) of patients. ACEI combination with diuretic was used in 23% (n=27) patients in UP and 25% (n=42) in RP. ACEI with β -blocker combination was prescribed to 26% (n=44) patients in RP and 19% (n=22) patients in UP. Thiazides were the most popular diuretics (35%, n=58 in RP vs 31%, n=36 in UP; p=0.52). Lipid profile was assessed in 17% (n=144) patients. LDL concentration was higher in RP than UP (127±36 vs 113±35 mg/dl p=0.0196).

Conclusion: General practitioners working in the urban areas treat a higher proportion of hypertensive patients in their offices than those serving mainly rural populations. ACEIs are the most popular antihypertensive drugs in both RP and UP. Target BP is not achieved in almost 40% of the patients regardless of their place of living.

Eth: This paper is approved by Local Ethical Committee.

Session: Public Health

What do we know about e-cigarettes?

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Introduction: Electronic cigarettes (e-cigarette, nicotine delivery devices) have gained a vast popularity among smokers as either a smoking cessation aid or cigarette consumption reduction. Electronic cigarettes are a battery powered device designed to look and feel like a tobacco cigarette. Although it contains no tobacco, it may or may not contain nicotine. Nicotine is delivered using a heating liquid consisting of a mixture of propylene glycol, glycerin, nicotine, and/or flavoring -rather than combustion. The long term effects of continual use of e-cigarettes are still unclear due to conflicting results of current studies.

Purpose: The aim was to review the available clinical trial findings on electronic cigarette in order to summarize current evidence-based data about e-cigarettes.

Methods: We systematically searched PubMed database for publications involving e-cigarette. Terms "e-cigarette*", "electronic cigarette*" and "nicotine delivery system*" were used. Search was limited to papers in English. Comments and letters to editor were excluded.

Results: Twenty one papers met the search criteria. The main findings are: e-cigarettes appear to generate less indoor pollution than normal cigarettes. They

may also increase readiness and confidence to quit regular cigarettes and decrease cigarette consumption. The levels of the toxicants in e-cigarettes are 9-450 times lower than in cigarette smoke. Moreover the amount of nicotine inhaled from electronic cigarette from fixed number of puffs is proven to be lower compared with smoking a conventional cigarette.

Conclusion: Electronic cigarettes are a promising alternative to regular smoking, however long-term health effects associated with their usage remain unknown. Due to this fact more investigations are needed to establish the definitive risks and benefits with e-cigarette use.

Eth:



JUVENES PRO MEDICINA

Łódź 2015

Session: Public Health

Critical analysis of “STOP NOP” association’s opinion pertaining to Euvax B® and Silgard® preparations.

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Introduction: Ogólnopolskie Stowarzyszenie Wiedzy o Szczepieniach „STOP NOP” (proper name) is the main organization that consociates polish opponents of vaccination – its members object to this process because of ethical and medical reasons. This work centres on second mentioned problem having regard to two vaccines. The “STOP NOP” frets about mercury-containing preservative (thimerosal) included in Euvax B®, which in their opinion is one of autism’s etiological factor. What is more, the association minds aluminum hydroxyphosphate sulfate used in Silgard® as adjuvant, that can be neurotoxic.

Purpose: The purpose of the work is critical analysis of association’s arguments against preventive vaccinations with mentioned preparations and to collate them with data assembled in compliance with EBM rules.

Methods: Qualitative analysis of references and statistical analysis of data pertaining to vaccine adverse events reported to VAERS system was used in this work.

Results: For now, examinations have not demonstrated connection between increasing amount of autism cases and using thimerosal as vaccine ingredient.

When this substance had been withdrawn, number of new instances have not decreased.

Harmful effects of any Silgard's® ingredient have not been proved, but duration of researches is too short to intimate it as certain.

Conclusion: Euvax B® and other thimerosal-containing vaccines have not been causing autism. Nevertheless, ceasing of using this substance can bring positive result decreasing fear the society of vaccine adverse events.

Because of short period of researches it is still too early to evaluate long-term effects of using Silgard® definitely.

Eth:



JUVENES PRO MEDICINA

Łódź 2015

Session: Public Health

The relationship between diet and lifestyle and body mass among adult high school teenagers.

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Introduction: An increasing incidence of metabolic diseases (mainly: diabetes, hypertension, atherosclerosis) is observed throughout the world. The predominant reason for this is obesity. The accumulation of fat tissue influences the development of cardiometabolic illnesses that lead to atherosclerosis and its consequences (e.g. myocardial infarction). As obesity progresses pathological changes occur with time in all systems and organs. Among obese people it is more common to observe lipid disorders. Obesity increases coronary heart disease risk, it also leads to circulatory and respiratory failure.

Diet and lifestyle have an enormous impact on the state of the health of an individual. An excess intake of calories with respect to requirements as well as limited physical activity may result in obesity and its consequences even at a young age.

Therefore an early identification of unfavorable changes in human body is vital in order to prevent further development of these alterations.

Purpose: The aim of the research is to evaluate the lifestyle of adult teenagers who learn at two high schools located in Łódź and to study the relationship between lifestyle and the state of the health of this group.

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Methods: The study relies on the survey on lifestyle, diet and physical activity that was conducted among adult teenagers (18-19 years old) who learn at high schools in Łódź. Physical examinations were also performed that included anthropometric measurements (body mass, height, waist circumference, hip circumference), blood pressure, calculation of BMI and WHR.

The survey was conducted on 58 individuals. 38 people of the group consented to physical examination. Individuals taking part in the research are 3rd class students at E.Szczaniecka IV LO (High School) in Łódź and at ks. bp Ignacy Krasicki XXX LO (High School) in Łódź.

Results: 82,8% of respondents perceived themselves as being active while 79,3% of the group takes part in physical education classes. The most common form of physical activity outside school was gym (34,5%) and fitness (22,3%). Alcohol was consumed by 65,5% of individuals taking part in the survey whereas 46,6% were addicted to cigarettes. Most of the respondents eat between 3 and 5 meals a day. Sweets were consumed more than 3 times a week by the majority of students whilst fast foods were eaten once or twice a week by 74,1% of respondents. Excess body weight was diagnosed in the case of 18,4% of adult teenagers and 2,7% of them were obese. Respondents that were overweight consumed less meals per day than individuals with normal body mass.

Conclusion: Excess body mass among teenagers is more and more concerning issue which scale has been expanding. It requires taking an effective preventive actions that diffuse a healthy lifestyle through the promotion of spending free time in an active way as well as elimination of bad habits among adult teenagers.

Eth:

Session: Public Health

The attitude of medicine and law students towards the use of marijuana

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Introduction: Marijuana is a popular recreational drug, considered by many to be equal or similar to alcohol and cigarettes. Studying both long and short-term effects of marijuana use on a large scale is very hard and the few studies attempted so far turned out mostly inconclusive.

Purpose: The aim of this study was to investigate the habits associated with marijuana use amongst medicine and law students and their attitude towards the drug.

Methods: Voluntary, anonymous questionnaire was published on various facebook boards and sent via email to medicine and law students from Poznań and Lublin. The results were compiled using STATISTICA 10 program.

Results: 812 students filled out the questionnaire, 306 male and 506 female. The average age of the participant in the study is 22. 396 are medicine students, 416 study law. 591 questionnaires were filled up in Poznań, 221 in Lublin. The average age of alcohol initiation in the group is 17 years. 390 Students

voted for marijuana legalisation, 283 were against, 139 do not have an opinion on the subject. 482 (54%) admitted to trying marijuana at least once, most of them (323) at home. 89 students, which is 11%, admit to smoking marijuana once a month or more. Most of them, 350, which is 59% claim that high mood, funny attitude, munchies and laziness are indicative of “safe” and desired marijuana high. 173 students claim marijuana is not dangerous at all while 393 think that it is equally safe (or dangerous) to alcohol and tobacco if used occasionally.

Conclusion: Almost half of the students questioned are for marijuana legalisation, even more have tried it and 11% are using it at least once a month. Those people may be more willing to try and use marijuana as a medicine as it already shows promise in relieving symptoms of many conditions better than commonly used drugs. The same trend amongst law students may facilitate such treatments by making marijuana more readily available, legal or at least decriminalised.

Eth:

JUVENES PRO MEDICINA

Łódź 2015

Session: Public Health

Comparison of in vitro antibacterial activity of garlic juice and tea tree oil against strains of *Staphylococcus aureus*.

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Introduction: *Staphylococcus aureus* is one of the most common cause both of nosocomial and community-acquired infectious. The increase in the rate of antibiotic resistance among *S. aureus* has been observed, and the antibiotic therapy of infections caused by this bacteria is challenging due to reduction of therapeutic options. Therefore, in vitro antibacterial activity of substances with natural origin such as: a garlic juice and tea tree oil have been tested in recent years.

Purpose: The aim of the study was to determine the in vitro antibacterial activities of garlic juice and tea tree oil solely and in synergism with antibiotics (clindamycin, tetracycline, gentamicin). Furthermore, we evaluated which substance: garlic juice or tea tree oil revealed greater in vitro antibacterial activity.

Methods: The study was performed on twenty strains of *S. aureus*. For biochemical identification of tested strains GP cards and Vitek 2 automated system were used. The in vitro antibacterial activity of garlic juice, and tea tree oil solely and in synergism with antibiotics (clindamycin, gentamicin, tetracycline) was conducted using the disk - diffusion method on Mueller-Hinton agar. Statistical analysis of all the results was conducted with Stata 13.1.

Results: Studies have shown that garlic juice and tea tree oil have revealed in vitro antibacterial activity against *S. aureus*. The average value of inhibition zone for garlic juice alone was 30,95 mm and for tea tree oil alone was 16,75 mm. The percentage of susceptible strains after using tea tree oil increased by 10% for clindamycin (70% susceptible strains to clindamycin vs. 80% susceptible strains to clindamycin with tea tree oil), 15% for tetracycline (85% vs. 100%), and 5% for gentamicin (90% vs. 95%). After using garlic juice the percentages of susceptible strains increased to 100% for all tested antibiotics. Values of inhibition zones for both garlic juice and tea tree oil alone and in combination with tested antibiotics differ statistically significant ($p < 0,05$). Additionally, statistically significant differences ($p < 0,05$) were observed between antibacterial activity of garlic juice with clindamycin, tetracycline, and gentamicin in comparison to tea tree oil with these antibiotics.

Conclusion: Both garlic juice and tea tree oil, have revealed in vitro antibacterial activity against *S. aureus*. Moreover, both substances increased the susceptibility of *S. aureus* to antibiotics, wherein garlic juice was more effective than tea tree oil.

Eth:

Surgery, emergency and intensive therapy

Perinatal factors and modes of ventilation in preterm neonates.

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Introduction: Approximately 10% of newborns may require assistance in breathing at birth. Substantial proportion of preterm infants continues to require ventilatory support afterwards. Various factors have been suggested to influence the type of ventilation in preterm infants.

Purpose: The purpose of this study was to analyze selected perinatal factors and the mode of ventilation used in preterm neonates.

Methods: A retrospective analysis based on medical records was performed. Data of preterm newborns born <32 weeks gestational age in years 2003, 2008 and 2013 and hospitalized in the neonatal intensive care unit of a tertiary perinatal center were collected and statistically analyzed.

Results: The study included 682 newborns. Conventional ventilation (CMV) was applied in 339 (50.37%) and non-invasive ventilation (NIV) in 289 (42.94%) infants. 45 (6.68%) neonates did not require any type of ventilatory support after birth. Mean birth weight in the CMV group was 1126.08 g whereas in the NIV group it was 1423.84 g. Lower gestational age ($p<0.001$) and lower birth weight ($p<0.001$) were associated with more frequent use of CMV. Gestational age correlated with total length of ventilation ($p<0.001$) - the lower the gestational age the longer the time of

ventilation. Prenatal corticosteroid therapy was associated with the mode of ventilation ($p=0.02$) as well as with total length of ventilation ($p=0.02$). It was observed that prenatal corticosteroids were used more frequently among NIV supported neonates (84.76% vs 81.08% in the CMV group, $p=0.02$). There was a significant correlation between administration of the exogenous surfactant ($p<0.001$) and the mode of ventilation. Surfactant was administered in 31.64% of invasively and in 8.07% of non-invasively ventilated neonates ($p<0.001$). Interestingly, single pregnancies were associated with longer period of ventilation ($p<0.001$). Mean total time of ventilation in single pregnancies was 16.82 days, whereas in multiple pregnancies 11.04 days. CMV as a primary support rate in single pregnancies was 53.11% and NIV was rate 41.28%, whereas in multiple pregnancies NIV rate was higher than this of CMV (46.89% vs 43.5%, $p=0.04$).

Conclusion: The majority of analyzed patients required CMV and its use was more common among the most premature infants. More mature patients can often be supported noninvasively. Prenatal steroids may increase the chance of successful application of NIV in the preterm neonates. NIV should be used whenever possible to reduce the risk of complications associated with CMV.

Eth:

Session: Surgery, emergency and intensive therapy

Dexmedetomidine as an alternative to opioid general anaesthesia in morbidly obese patients

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Introduction: Today's anaesthesiology faces the challenge of dealing with progressing morbid obesity throughout bariatric patients. This group is above prone to critical respiratory events (CRE) due to residual effects of drugs (e.g. opioids) used during the course of general anaesthesia (GA). Thus, there is a need to introduce alternative methods of GA. The novel concept suggests replacing opioid substances with non-opioid ones (e.g. clonidine, ketamine or dexmedetomidine), especially among elderly, obese or paediatric patients.

Purpose: A typical algorithm for GA includes an introduction of fentanyl (FNT), which has a respiratory depressant properties and is able to cause the CRE. What seems to be a solution to this problem is dexmedetomidine (DEX) –a non-opioid drug acting as an alpha-2 receptors' agonist in the brain. It has sedating and slightly analgesic features. Hence, it is used to sedate patients in the intensive care units. The purpose of this paper is to verify if DEX provides an adequate intraoperative analgesia.

Methods: 42 patients scheduled for laparoscopic gastric banding had been divided into two random groups: non-opioid and opioid GA. Prior to the procedure 100

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mcg of FNT and 200 mg of propofol, as an induction, were introduced intravenously (IV) in both groups. Afterwards, patients received DEX (IV) in a loading dose of 1 mcg/kg ('DEX group') or FNT (IV) in a dose of 5 mcg/kg ('FNT group'). The anaesthesia was being maintained with sevoflurane given in a mixture of air and oxygen. During the procedure patients were being monitored carefully. The comparison included fluctuations of haemodynamic parameters measured during the intubation and the drug usage. 33 patients were qualified to participate in further analysis based on statistic calculations.

Results: In the DEX group average use of propofol and FNT was 211.33 mg (2SD=172.2) and 0.1 mg (2SD=0.22), respectively, where in the FNT group the same substances were used in the average dose of 193.91 mg (2SD=102.6) and 0.21 mg (2SD=0.2).

Performed calculations have not revealed any statistically significant differences between DEX and FNT groups. Average changes in four parameters were analysed throughout every patients' intubation: systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial blood pressure (MAP), and heart rate (HR). The results are listed as follows ('d' –mean change in the parameter during an intubation, 'p' –probability of null hypothesis):

dSBP FNT – 11.6 mmHg, DEX – 0.43 mmHg (p=0.15);

dDBP FNT – 3.7 mmHg, DEX – 3.52 mmHg (p=0.98);

dMAP FNT – 8.6 mmHg, DEX – 1.43 mmHg (p=0.36);

dHR FNT – 2.0 bpm, DEX – (-0.80) bpm (p=0.30).

Conclusion: In GA, DEX can be considered as an equally effective alternative to opioids, appropriate for various patients, especially those morbidly obese. It is also worth to emphasise that the data suggest reduced haemodynamic changes in the DEX group. Also, it points out fewer undesired events in the postoperative period. These issues shall be addressed in the future trials.

Eth:

Session: Surgery, emergency and intensive therapy

Non-opioid anaesthesia with use of dexmedetomidine in a patient with myotonic dystrophy

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Introduction: Providing a successful anaesthesia to patients suffering from Steinert's syndrome (myotonic dystrophy, MD) constitutes a serious challenge. These difficulties are an implication of multiple disorders which may be related to respiratory, cardiac, and central nervous systems. A myotonic crisis can be induced by numerous factors including hypothermia, shivering, and mechanical or electrical stimulation. Patients with MD present high sensitivity to the usual anaesthetics such as volatile and paralyzing agents (both depolarizing and non-depolarizing). Opioids may induce muscle rigidity so it is recommended to omit them in the patients with this type of MD. Therefore, a choice of adequate drug with minimal risk of complication remains a serious problem.

Purpose: Due to hypersensitivity to opioids and increased susceptibility to intra- and postoperative complications it is recommended to introduce opioid-free anaesthesia (OFA), e.g. with use of dexmedetomidine (DEX). This method was supposed to maintain stability of vital parameters, and prevent from undesired events with irreversible effects.

Methods: A 31-year-old male patient was admitted to the surgical ward with cholelithiasis and qualified to the laparoscopic cholecystectomy. The Rapid Sequence Intubation (RSI) guidelines were being followed during the induction of general anaesthesia. The patient received intravenously (IV): propofol in a dose of 250 miligrams in continuous infusion, rocuronium in a dose of 20 miligrams, and DEX in a dose of 0.6 microgram/kilogram/hour. During the intubation cricoid pressure was being maintained. Except haemodynamic parameters, also patient's body temperature was being monitored carefully and corrected if needed. No opioids were introduced. Muscle relaxation was reversed by sugammadex. The anaesthesia lasted for one hour.

Results: The course of an anaesthesia and postoperative period were uneventful. The patient exited the operating theatre in a good medical state, with vitals within normal limits and fully regained consciousness.

Conclusion: Dexmedetomidine is effective and safe for moderately painful procedures in patients with the elevated risk of respiratory and cardiovascular failure. This substance provides adequate sedation level during surgeries of patients suffering from myotonic dystrophy.

This is the first case of OFA using DEX in patient with Steinert's syndrome described in the medical literature.

Eth:

Session: Surgery, emergency and intensive therapy

The Malone stoma and its modifications in the treatment of functional bowel disorders in children.

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Introduction: The antegrade colonic washout is one of the methods of therapeutic management in children with functional bowel disorders. The washouts are performed by the catheterisable channel that is created with the Malone technique or its modifications.

Purpose: The aim of the study was an assessment of the frequency and kind of complications that can develop after the Malone Surgery, emergency and intensive therapy or its modifications.

Methods: A retrospective analysis of the medical records of the children after the Malone procedure or its modifications. Indications, operative technique, complications and results of treatment were assessed.

Results: In years 2002-2015 49 patients underwent the Malone operation or its modifications.

The main causes of bowel disorders included: neurogenic disorders associated with spina bifida, Hirschprung's disease and imperforate anus. The age of the patients ranged from 3 weeks to 18 years. A vermiform appendix has been used in 35 cases. 5 times the catheterizable channel was

created laparoscopically. In 14 patients for the reason of lack of an appendix the channel was made of a cecal flap (1), small intestine (3) or the wall of the large intestine (Macedo technique-10 children). The early complications in the form of ileus occurred 4 times- in 3 cases a reimplantation of the stoma has been required. The late complications have been noticed in 17 children- 4 of them have been reoperated. In 10 patients a stenosis of an outer meatus of the channel has occurred and 6 of them resulted in complete atresia. Two cases of the leak has been reported but one of them has spontaneously recovered. One perforation of the gastrointestinal tract has occurred.

An improvement of the bowel function and a resignation from the enemas had been reported 4 times . In general 42 children out of this group presents a social continence.

Conclusion: Malone stoma is very beneficial therapeutic option for children with bowel dysfunction. In case of the lack of the vermiform appendix other part of an intestine can be successfully used. However the Malone technique seems to be the safest option- it has the lowest count of complications. Essential for the process of treatment is a correct qualification for the procedure based of the complete understanding both by the child and its parents.

Eth:-

Session: Surgery, emergency and intensive therapy

The diagnostic value of urodynamics

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Introduction: Urodynamics are a means of evaluating the pressure-flow relationship between the bladder and the urethra for the purpose of defining the functional status of the lower urinary tract. In recent years there has been a narrowing of the indications for urodynamic diagnosis. Its value is confirmed, inter alia, for patients with neurogenic bladder and severe symptoms of lower urinary tract after failure of treatment. But in the case of diagnosis of stress urinary incontinence in women or overactive bladder its importance could not be proven.

Purpose: The aim of the study was to analyze the clinical indications for the urodynamic testing performed in 2014 in one urodynamic clinic.

Methods: We retrospectively analyzed the results of urodynamics performed in 2014. Considered clinically significant were these, which have revealed the presence of dysfunction of the lower urinary tract impossible to assess in a different way and at the same time affecting the treatment procedure. Therefore, urodynamic studies of significance were neurogenic bladder and obstruction symptoms, insignificant - stress incontinence and overactive bladder.

Results: We analyzed a total of 194 studies performed in Medical University of Warsaw Urology Department, including 114 women and 80 men. In 107 cases (55.1%) testing was found to be insignificant. In this group, dominated by women, clinical diagnosis included: overactive bladder (87 patients) and urinary incontinence (51 patients).

Urodynamic study was found to be justified in the following clinical diagnosis: neurogenic bladder (22 patients) and obstruction symptoms (21 patients).

Conclusion: More than half of the performed tests did not provide new and important information for treatment planning. Due to the invasive nature of the study and the possible risk of urinary tract multidrug-resistant infection we should seek to narrow the indications for this type of research. This applies in particular patients with stress urinary incontinence and bladder syndrome (?) patients with overactive bladder. Selection of patients for complex urodynamic testing can be difficult, as the universally agreed criteria for complex testing do not exist.

Eth: This paper is approved by Local Ethical Committee.

Session: Surgery, emergency and intensive therapy

Anabolic steroid abuse causing pancreatic insulinoma

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Introduction: Anabolic steroid abuse is very common among bodybuilders and is related with a number of medical complications including tumorigenesis.

Purpose: Case report

Łódź 2015

Methods: Retrospective analysis

Results: A 29-year-old male bodybuilder with one year history of abusing large doses of anabolic steroids presented with several episodes of neuroglycopenia with concomitant loss of consciousness. Results of imaging studies (USG, MRI, EUS) showed smooth-demarcated, focal solid lesion of 2cm in diameter in the body of the pancreas. The patient was characterized by Whipple's triad (hyperinsulinemia accompanied by hypoglycemia and signs of symptoms resolving upon glucose administration). No other disturbances were observed. The patient was qualified for the surgical treatment. Intraoperatively, tumor enucleation was performed. Postoperative time was complicated by pancreatic fistula that required reoperation involving Roux-en-Y pancreaticojejunostomy. The

pathological examination revealed encapsulated benign neuroendocrine tumor. The patient has been followed up for 3 years and remained disease free.

Conclusion: Given the widespread use anabolic steroids among bodybuilder, another potentially life-threatening tumor is highlighted. Insulinoma has previously not been reported in athletes. Bodybuilders should be aware of the serious medical risks including neuroendocrine tumors.

Eth:



JUVENES PRO MEDICINA

Łódź 2015

Session: Surgery, emergency and intensive therapy

Overview of Emergency Department visits in Craniomaxillo-facial and Oncological Clinic UM in Lodz

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Introduction: Emergency Department of Craniomaxillo-facial Clinic provide a significant source of medical care for different types of head and neck trauma patients and cases of inflammations and abscesses within the head and neck region.

Purpose: To characterize patients admitted to the Emergency Department of Craniomaxillofacial Clinic and in case of head trauma patients to determine the severity of the injury with the use of FISS scale. Then, to assess the efficacy and utility of this scale in daily medical practice.

Methods: In this retrospective research we analysed 512 patients admitted to Cranio-maxillofacial Emergency Department in MU of Lodz between 01.01.2014-30.06.2014. Data concerning age, sex, cause of admission, in case of patients with trauma – place and circumstances of injury, alcohol consumption before the accident, localisation of fractures and wounds, concomitant injuries and damages within the CNS was collected.

Results: The study included 301 males and 211 females (mean age 44 ± 19). Most of them (234 cases) suffered from head and neck inflammations. The second most common cause of admission was head injury (43.2% of

patients). The most common cause of injury was assault. The mean FISS score in trauma patients equalled 3.5.

Conclusion: Males had higher overall rate visits than females. The most common reasons for admission were inflammations. FISS is easily calculated and a good predictor of the severity of maxillofacial injuries and of the treatment modalities.

Eth:-



JUVENES PRO MEDICINA

Łódź 2015

Session: Surgery, emergency and intensive therapy

Patients' knowledge about the prevention and treatment of the colorectal cancer

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Introduction: Colorectal cancer is one of the most treatable cancers if it is found early through screening. Patients' knowledge about the prevention and the treatment process of colorectal cancer is crucial both for the early diagnosis of the disease and the progress of treatment.

Purpose: The aim of this study was to assess patients' knowledge about the prophylaxis and treatment of the colorectal cancer.

Methods: Patients suffering from colorectal cancer admitted to the Department of General and Colorectal Surgery at the Medical University of Lodz between January 2015 and April 2015 were asked to complete a questionnaire regarding their family's medical history, factors contributing to the development of colorectal cancer, tests used for diagnosis and the process of treatment. The survey consisted of 42 closed questions with only one correct answer. We performed a statistical analysis of all the answers.

Results: 33 patients participated in our survey – 36% women and 64% men. 88% of patients were 50 years-old or older. 58% of surveyees had a family

history of carcinoma and 18% of them had a family history of colorectal cancer. Only 9% of the patients knew that some carcinomas may increase the risk of development of the colon cancer. While 36% are convinced that there is a relationship between colon cancer and all other carcinomas. 58% of patients know about the influence of diet on the colorectal cancer incidence. 33% would like to limit the amount of red meat they consume and 82% of patients thinks boiled meat is the healthiest. According to patients diet has a higher influence on colorectal cancer incidence than the occurrence of polypi. 42% of patients claimed they knew about the program of prevention of the colorectal cancer. All patients know colonoscopy may be used in the prophylaxis of the colorectal cancer but only 24% of patients had had colonoscopy before they suffered from the colorectal cancer. 9% of patients know fecal occult blood test might as a prophylaxis method. Only 12% of patients know how long they should remain under the care of their doctor.

Conclusion: Patients need more information about colorectal cancer, its risk factors, prevention and the process of treatment. Lack of the related knowledge about colorectal cancer may be one of the important factors contributing to the high incidence rate of colorectal cancer.

Eth:

Session: Surgery, emergency and intensive therapy

Damage Control - Case Report

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Introduction: Patients after a multiorgan trauma are in life-threatening condition. Hypothermia, acidosis and coagulopathy rise rapidly, which additionally reduces the survival rate to about 10%.

Damage control system is a strategy developed on the grounds of multiannual experience of military doctors treating such patients. The main goal is a priority of restoring physiology before anatomic reconstruction. It can be achieved through immediate haemorrhage control, wound decontamination and temporary closure of operation area for a time needed to restore homeostasis. Reoperations are performed in order to finally treat that trauma only after achieving this state.

Using the Damage Control procedure can reduce mortality by 50%.

Purpose: Authors would like to present and compare two patients who sustained trauma and were in life-threatening condition. In one case, Damage Control strategy was used, in the second one, traditional procedures were applied.

Methods: The first patient was shot in the right upper limb, which has resulted in crushing of middle 1/5 of the humerus. The limb was amputated in a life saving Surgery, emergency and intensive therapy.

Results: The second patient was transported to the ER with a gunshot wound perforating peritoneal and right pleural cavity in very severe condition. Pleurocentesis and peritoneal drainage were applied. Due to patient's worsening condition, he was transferred to the OR, where laparotomy was performed. Despite the attempt to stop the haemorrhage, PEA occurred. Resuscitation was ineffectual – the patient died.

Conclusion: Referring to the cases presented above, we would like to present goals and principles of the damage control strategy and emphasise its importance and advantages in treatment of patients in life-threatening conditions.

Eth: -



JUVENES PRO MEDICINA

Łódź 2015

Session: Surgery, emergency and intensive therapy

Management of acute diverticulitis – a challenge to the surgeon.

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Introduction: Diverticulosis is the condition of having diverticula in the colon, which are outpocketings of the colonic mucosa and submucosa through weaknesses of muscle layers in the colon wall. The most common presentation is uncomplicated acute diverticulitis that can be managed conservatively with bowel rest and antibiotics. However, some patients will present with diverticular abscesses or purulent or faeculent peritonitis due to perforated diverticular disease and require emergency Surgery, emergency and intensive therapy. Management of acute diverticulitis due to atypical symptoms, unusual disease course is challenging and often ambiguous.

Purpose: The aim of the study was to analyze the relationships between the diverticulitis disease course and variables regarding sex, age, and comorbidities.

Methods: Our research was carried among the patients hospitalized from January 2012 to March 2015, admitted to Department of General and Colorectal Surgery, emergency and intensive therapy at Medical University

of Lodz. This retrospective study was performed on the basis of the medical documentation of patients hospitalized due to acute diverticulitis. All enrolled patients have admitted to the Department in emergency procedure. In study the analysis includes time of hospitalization, white blood count (WBC) and C-reactive protein (CRP) levels, administrated antibiotics (including time, dose and frequency), accompanying diseases. In case of surgical procedures also type of operation and occurring postoperative complications. Results: In our study 30 patients were enrolled, 22 women (73%) and 8 men (27%). The average age of patients was $63.7\bar{i}, \pm 13.8$ years. 8 patients (27%) with acute diverticulitis underwent a Surgery, emergency and intensive therapy resection of sigmoid colon. The tendency to higher CRP levels in patients with Surgery, emergency and intensive therapy intervention ($91.89\bar{i}, \pm 95.79$ vs. $164.13\bar{i}, \pm 102.66$; $p=0.100$) was observed. No relationships were found between the acute diverticulitis related Surgery, emergency and intensive therapy and WBC levels and patients age (WBC: $10.4\bar{i}, \pm 4.0$ vs. $10.8\bar{i}, \pm 5.4$; $p=0.920$; Age: $63.5\bar{i}, \pm 13.2$ vs. $64.1\bar{i}, \pm 17.0$; $p=0.833$; respectively non-Surgery, emergency and intensive therapy group and acute diverticulitis related Surgery, emergency and intensive therapy group). In the patients without Surgery, emergency and intensive therapy intervention the hospital stay was shorter ($5.7\bar{i}, \pm 2.1$ vs. $12.6\bar{i}, \pm 6.7$ days; $p=0.004$) in comparison with patients who underwent acute diverticulitis Surgery, emergency and intensive therapy.

Conclusion: In our study we observed that CRP level was useful and easily available biomarker for predicting acute diverticulitis related Surgery, emergency and intensive therapy. There were no difference in WBC between the non-Surgery, emergency and intensive therapy group and acute diverticulitis related Surgery, emergency and intensive therapy group. In the patients without Surgery, emergency and intensive therapy intervention the shorter hospital stay was observed. Management of acute diverticulitis due to atypical symptoms, unusual disease course is challenging and further studies are warranted.

JUVENES PRO MEDICINA 2015
ABSTRACT BOOK

Eth: This paper is approved by Local Ethical Committee



JUVENES PRO MEDICINA

Łódź 2015

Medical University of Łódź

Session: Surgery, emergency and intensive therapy

Surgical management of rectovaginal fistulas – ten years' experience in tertiary referral center

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Introduction: Rectovaginal fistula (RVF) is chronic and serious condition with significant influence on patient's quality of life. Due to difficult operational techniques and various etiologies, treatment of RVF remains a challenge and demands individual approach to the patient. Thus, low rates of long-term positive outcomes are reported and recurrences are frequent.

Purpose: To analyze and asses the outcomes of surgical treatment of RVF depending on the etiology.

Methods: A retrospective analysis was performed on 94 females who underwent surgical treatment of RVF and related complications at our institution from January 2003 to December 2014. 82 of them were available for follow-up. The study data were retrieved from the hospital medical records, surgical protocols, laboratory test results, and imaging examinations. Data from patients who underwent follow-up in outpatient clinic were also included.

Results: The causes of fistula included: radiation induced (63 patients), inflammatory bowel diseases (IBD) (6), obstetric injury (5), trauma (2), cancer (8) and other (10). Median patients' age varied significantly between groups (obstetric – 31 years; radiation induced – 60 years; IBD – 44 years; trauma – 35 years ; cancer – 63 years; others – 38 years). Median follow-up was 3 years. The best surgical outcomes were achieved in group of patients after obstetric injury (80 % healing rate). Satisfactory results were achieved in trauma and others group (75 % healing rate). In group of radiation induced RVF, nearly all patients were managed by fecal diversion and this enabled healing in 10 patients (15,9 %) among which 5 underwent restoration of gastrointestinal continuity. In cancer group 2 fistulas were healed (healing rate 25%). In multivariate analysis, patients age below 60, presence of high fistula, no cancer history were independent predictors of fistula healing.

Conclusion: Treatment outcomes depend significantly on RVF etiology and patient-related factors (age, comorbidities). In management of RVF complex approach to the patient is crucial in order to achieve optimal outcomes.

Eth: This paper is approved by Local Ethical Committee.

Session: Surgery, emergency and intensive therapy

The incidence rate of colectomy and bowel resection in IBD patients treated with anti-TNF-alpha biologics.

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Introduction: Anti-tumor necrosis factor α effectively reduce the risk of mutilating surgical procedures in patients suffering from inflammatory bowel diseases (IBD). Unfortunately, the unsatisfactory response to anti-TNF- α represents a significant percentage of complications among individuals with Crohn's disease (CD) or ulcerative colitis (UC). Simultaneously, possible predictive factors for negative outcomes of biological treatment continue to remain uncertain.

Purpose: The aim of this study was to investigate the incidence rate of colectomy or bowel resection as an indicator for the loss of response to the biological treatment and analyze possible predicting factors for severe flares during anti-TNF- α therapy requiring surgical UC patients.

Methods: A total of 32 patients, who were qualified for anti-TNF- α treatment at the Department of Gastroenterology, Medical University of Lodz, between 2008 and 2014 were enrolled. The medical data was retrospectively retrieved from the hospital records consisting of patients' age, disease duration and laboratory results, before the first drug administration and after 14 weeks of biological therapy. The association between these parameters and negative biological therapy outcomes was then evaluated.

Results: In our study the unsatisfactory response to the anti-TNF- α therapy was observed in 11/38 IBD patients (30.6%), who underwent surgical colectomy or bowel resection. Mean disease duration at initiation of biological therapy was statistically longer in surgical patients (7.54 \pm 3.56y vs. 4.75 \pm 2.69y; $p=0.019$). Analysis of laboratory parameters revealed significantly higher values of CRP in the group that required surgical treatment measured before initiation of anti-TNF- α weeks if compared with patients, who responded to biologics (38.47mg/l \pm 44.24 vs. 18.65 \pm 24.08mg/l; $p=0.032$; 27.96 \pm 15.32mg/l vs. 9.04 \pm 14.72mg/l; $p=0.039$; respectively). Results also showed statistically lower values regarding RBC and Hct measured after 14 weeks in operated patients (RBC: 4.00 \pm 0.42 $\times 10^6/\mu\text{l}$ vs. 4.43 \pm 0.44 $\times 10^6/\mu\text{l}$; $p=0.019$; Hct: 15.63 \pm 18.38% vs. 40.31 \pm 2.72%; $p<0.001$).

Conclusion: In patients with unsatisfactory response to anti-TNF- α therapy who required colectomy or bowel resection higher CRP levels before initiation and after 14 weeks of therapy were observed. Additionally patients, who underwent operations presented longer disease duration prior to the first administered anti-TNF- α therapy. Although involving larger study group is required to fully address the mentioned problem, all of the above allows drawing a cautious conclusion that both the severity of inflammation expressed in CRP, RBC and Hct values and the disease duration itself may serve as predictive factors for biological therapy outcome and possibly play a role in individual treatment modification.

JUVENES PRO MEDICINA 2015
ABSTRACT BOOK

Eth: This paper is approved by Local Ethical Committee



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Łódź 2015

Session: Surgery, emergency and intensive therapy

Neutrophil to lymphocyte ratio predicts metastases presence in pancreatic adenocarcinoma.

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Introduction: Pancreatic adenocarcinoma (PDAC) has comparably low incidence, yet it is one of the most deadly cancer, having clinical outcome of only 5% of patients surviving up to 5 years after diagnosis. Because of difficulties concerning diagnosis and poor prognosis, it is paramount to establish markers for early PDAC diagnosis as well as for the prediction of cancer's prognosis. Since most of the developed molecular markers are still not in the widespread clinical use, seeking novel biomarkers is necessary. There is an increasing number of evidence that inflammatory biomarkers, for instance neutrophil to lymphocyte ratio (NLR), platelet to lymphocyte ratio (PLR), C-reactive protein (CRP) etc. reflect systemic inflammation, which play an important role in the cancer progression.

Purpose: We analysed several biomarkers- neutrophil to lymphocyte ratio (NLR), platelet to lymphocyte ratio (PLR), carbohydrate antigen 19-9 in order to determine whether their values correlate with PDAC stage. Evaluation of their usefulness is particularly important, as currently we lack proper tools to exactly determine pancreatic cancer advancement or prognosis.

Methods: We retrospectively analysed medical records of 530 patients with various pancreatic pathologies, treated in the Department between 2008-2015. Out of them, 243 were admitted because of pancreatic adenocarcinoma. Then, we checked their laboratory test to establish NLR, PLR, CA19-9.

Results: Our patients cohort consisted of 243 patients (145 males and 98 females, mean age:61 years SD +/- 9 years) 169 were presented with unresectable cancer, while 74 of them underwent surgical treatment. In the unresectable group we determined 40 patients with metastases. As for biomarkers only NLR was found to be statistically significant in predicting PDAC advancement. The mean NLR was 2,81 (SD +/- 1,62) 4,23 (SD +/- 6,93) and 4,41 (SD +/- 2,79) in resectable, locally unresectable and metastases groups, respectively($p=0,001$). Afterwards, ROC curve was carried out to establish cutoff point for NLR to predict PDAC advancement. Firstly, cutoff point was determined to differentiate patients with metastases from patients with locally unresectable cancer. Area under curve (AUC) was 0,652 (95%CI 0,56-0,744 $p=0,002$). With cut off point of 3,36, we could predict the presence of metastases with sensitivity of 64% and specificity of 67%. When adding to the analysis resectable patients group the presence of metastases was predicted with sensitivity of 64% and specificity of 71,5%.

Conclusion: Our results show that elevated NLR has a potential to initially discriminate patients with disseminated PDAC from patient with resectable and locally unresectable neoplasm. Therefore, this biomarker could be used as one of prognostic factors when establishing patient's prognosis and planning further treatment strategy. Yet, neutrophil to lymphocyte ratio potential should be validated on the bigger cohort of patients. Nevertheless, current research shows that elevated NLR is especially useful in predicting cancer specific survival of patients.

Eth:

Session: Surgery, emergency and intensive therapy

Sigmoid colon and rectum perforation due to migration of biliary stent: two case reports.

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Introduction: Biliary stents deployed during endoscopic retrograde cholangiopancreatography (ERCP) are a well-established for the management of biliary diseases. Migration of biliary stent is a recognized complication of ERCP. Yet, less than 1% of migrated stents cause intestinal perforation. Perforation distal to the ligament of Treitz is even rarer event. Here, two cases of distal perforation are going to be presented.

Purpose: Because of the distal perforation rarity, two cases of distal perforation were analysed. Although, stent migration is usually benign complication, perforation of the distal part of gastrointestinal tract might lead to very serious complications. Therefore, proper management of these patients in the terms of diagnosis and surgical treatment is paramount for the uncomplicated recovery period. Presented cases show diagnostic process and surgical management that lead in both cases to the patients full recovery after perforation.

Methods: Department's medical records were retrospectively analysed in order to obtain patients medical data.

Results: (Cases presentation). An 76 year-old female patient presented with a 3-day history of the umbilical and hypo gastric regions pain. She had a cholecystectomy 6 months earlier followed by endoscopic insertion of a biliary stent due to choledocholithiasis. Biliary stent should be removed or replaced within 2 up to 3 months after insertion. She had not underwent stent removal in proper time due to lack of compliance and unawareness of potential threats. She underwent abdominal X-ray imagining, abdominal USG and CT. These imagining studies confirmed sigmoid colon perforation caused by the biliary stent migration. Diverticulitis and umbilical hernia were also revealed. Afterwards, she underwent sigmoid colostomy. Her recovery period was complicated with diffuse peritonitis.

An 68 year-old male patient presented with a 4-day history of the hypo gastric region pain. He had a papillotomy with the deployment of the 10 F 7 cm biliary stent because of the cholestasis secondary to unresectable pancreatic head adenocarcinoma. Imagining studies (abdominal USG, CT) revealed rectum perforation due to the biliary stent migration. Patient underwent transverse colostomy. His recovery period was complicated with diffuse peritonitis.

Conclusion: Taking into account cases present and the review of current literature, patients experiencing distal perforation of gastrointestinal tract are a diverse group of patients. Though, it is more likely to occur in patients with bening disease, having risk factors including diverticular disease, abdominal hernia, postoperative adhesions, other patients are also at the risk of developing distal perforation. Therefore, proper surveillance as well as patient's compliance is paramount for prevention of stent migration.

Eth:-

Session: Surgery, emergency and intensive therapy

Patient perceptions of physician performing the per rectum examination during admission to the surgical ward

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Introduction: The sex of the physician performing the per rectum examination procedure is one of the parameters influencing patient comfort and satisfaction. Also, the stress related to per rectum examination during admission to the surgical ward may affect negatively on the well-being of the patient and his treatment outcomes.

Purpose: The aim of our study was to characterize patients' preferences according to their sex, age, socioeconomic status, and religious beliefs and according to procedure-related variables.

Methods: All patients admitted to the Department of General and Colorectal Surgery, emergency and intensive therapy at Medical University of Lodz between January 2015 and April 2015 were asked to complete a questionnaire regarding their sex, age, ethnic background, socioeconomic status, religious practice, and preference for a physician performing the per rectum examination procedure during admission to the surgical ward. The

questionnaire was comprised of 2 open and 15 closed questions. Only fully completed questionnaires were included for analysis.

Results: The study involved 53 patients, who agreed to complete the questionnaires – 58% women and 42 % men.

In the study the most common reason of admission to hospital was colorectal cancer, reported in 39% patients . Most patients expressed no preference for sex of the physician performing the per rectum examination during admission to the surgical ward, while 6 % patients preferred a female physician, and only 2 % preferred a male physician. 25 % of patients prefer to be tested by mature doctor (30-35 year old), 2 % person by young doctor (resident), 2 % person by elderly physician (over 60 year old), while for 53 % of patients had no preference for that age of a physician. Physician's sexual preference as important variable was reported only by 23% of patients. Different skin color of physician as a problematic factor was noted in 10 % of patients.

Conclusion: In our study most patients expressed no preference for sex of the physician performing the per rectum examination during admission to the surgical ward. However, the one-tenth of patients reported preferences to a particular gender of physician. Addressing patients' preferences may improve the atmosphere in the clinical environment, reduce stress, and facilitate better treatment.

Eth: This paper is approved by Local Ethical Committee.

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