5TH LUBLIN INTERNATIONAL MEDICAL CONGRESS FOR STUDENTS AND YOUNG DOCTORS

LUBLIN, 30TH NOVEMBER - 1ST DECEMBER 2018

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LUBLIN, 30TH NOVEMBER - 1ST DECEMBER 2018

Studens' Scientific Society
of the Medical University of Lublin

LUBLIN 2018

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ABSTRACTS

Anaesthesiology, Intensive Care and Emergency Medicine

NOT ON MY WATCH! HOW TO HANDLE CEREBRAL MALARIA - CASE REPORT.

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Background: Cerebral malaria is caused by P. falciparum which is the only plasmodium species to cause severe malaria, that leads to multi-organ failure. Cerebral malaria is a huge challenge for European doctors and require good cooperation between infectious disease specialists, anesthesiologists and neurologists. The following case report present the 41-year old patient admitted to the Intensive Care Unit with cerebral malaria caused by P Falciparum. This case report is meant to educate about the presentation and hospital course and after all, the importance of the anamnesis, in patient with fever and abdominal pain admitted to ER in the polish hospital.
Case Report: The patient came to the hospital with a fever (up to 40 degrees), nausea, diarrhea, abdominal pain, and icterus. He reported frequent visits in Angola in the past two years, his last visit terminated 2 weeks before admission. He also admitted that he had not follow the doctor's instructions about the proper prophylaxis. Serology tests for malaria were positive, microscopic examination shows Plasmodium falciparum parasites infecting 60% of the patient's red blood cells. Apart from that the lab tests revealed the signs of the liver failure (bilirubin – 6.01 mg/dl, PLT – 15 K/ µl, protein – 5.2 g/dl), with the negative serology test for HbS. In the evening the state of the patient started to deteriorate, he developed neurological symptoms – impairment of consciousness, non-reactive, pinpoint pupils and massive sweating. He was transferred to the intensive care unit with the following parameters – GCS 10, HR 140/min, BP 110/70, sat. 96% with non-invasive ventilation. The patient was in critical state for the next two days, with impairment of consciousness, high fever, and liver failure. The treatment included malarone, doxycycline, blood transfusions (2 units) and the non-invasive respiratory support. After two days in ICU the patient was transferred back to the infectious diseases department without a fever in a good condition.
Conclusions: The presented case shows the importance of the rapid diagnosis based on a good anamnesis. Thanks to the rapid treatment the patient was discharge from the hospital without any complication.

Keywords: Malaria, sepsis, Plasmodium, Cerebral malaria

Basic Sciences and Experimental Medicine

ISCHAEMIC MITRAL REGURGITATION - EXPLORATION OF PREDICTORS IN PATIENTS WITH STABLE CORONARY ARTERY DISEASE (CAD)

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Introducion: Mitral regurgitation (MR) is a condition in which the mitral valve does not close tightly, which causes the retrograde blood flow from the ventricle to the atrium. Ischaemic mitral regurgitation is predominantly due to the chronic coronary artery disease and therefore chronic ischaemia. It is rarely a severe effect of myocardial infarction. This condition is associated with numerous complications. The goal of our study is to specify the population at higher ischaemic mitral regurgitation obtaining risk and present consequences to emphasize the importance of primary prevention of ischemic heart disease as a prophylaxis method.
Methods: The analysis was performed retrospectively according to the data collected by the Department of Invasive Cardiology of the Medical University of Bialystok. 1001 patients with stable CAD, admitted for invasive diagnostic or invasive treatment, were included into the study. Analysis comprised medical history, basic laboratory test and clinical data. Statistical analysis was performed using Shapiro wilk, Kołomogorow-Smirnow, chi-square, odds ratio, Student's t, Mann-Whitney U and ANOVA tests. P value <= 0.05 was considered as significant
Results: Our study shows that chronic renal disease, atrial fibrillation and heart failure occurred more frequently in patients with MR. There was no difference in the prevalence of hypertension, diabetes mellitus and previous myocardial infarction. According to the data from a coronarography, patients with MR had greater stenosis of circumflex branch . We noticed that left and right bundle branch block, reduced ejection fraction, enlarged left atrium, concentric and eccentric left ventricular hypertrophy was more more common among patients with MR.
Conclusions: Patients with significant stenosis of circumflex branch detected in coronarography, might require more frequent echocardiographic observations in order to increased early recognition of MR. Prophylaxis of CAD can protect from ischaemic MR consequences, such as : atrial fibrillation due to the enlarged left atrium , heart failure with rejected ejection fraction and cardiac remodeling.

Keywords: mitral regurgitation, echocardiography, ischaemia

A NOTE OF MADNESS – SCHIZOPHRENIA AMONG POP CULTURE MUSICIANS.

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Scientific supervisor: Scientific supervisors: Małgorzata Futyma, M.D. Associate profesor, PhD. Hanna Karakuła-Juchnowicz
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Introducion: Despite many years of research aimed at specifying the correlation between schizophrenia and creativity, the connection between them still remains unclear. It is possible however, that not only the illness can shape artistic creation, also the environmental factors, such as one's lifestyle or use of psychoactive drugs can influence it significantly. They may affect both the disease and the creative process. The aim of this work is to examine two pop culture artists: Syd Barrett (Pink Floyd) and Brian Wilson (The Beach Boys) with a focus on the factors that might have had an impact on the development of schizophrenia, as well as on the influence of the illness on their works and career.
Methods: Available literature has been reviewed using the bibliographical data: Medline, Google Scholar, ScienceDirect and the Research Gate by typing the key words: Syd Barrett, Brian Wilson, creativity and schizophrenia, psychoactive substances and schizophrenia, as well as the time descriptors: 1970-2018.
Results: Both biographies indicate, that the use of psychoactive drugs could have been the source of high artistic potential and at the same time it could have triggered the development of schizophrenia. In Barret's case, misinformation led to difficulties in treatment, and that caused the end of his career During his life, Wilson went under several psychiatric hospitalizations as well as therapy and to this day he is artistically active.
Conclusions: There is a possibility that receative use of psychoactive substances in certain groups of artists can improve their creativity, but also can be a cause of exposure to psychiatric disorders. While comparing the two musicians, one can make an assessment that in such patient group, a psychiatric treatment may prolong artists' career.

Keywords: : Syd Barrett, Brian Wilson. Schizophrenia. Psychoactive substances

MICROVASCULAR DENSITY AND EXPRESSION OF HYPOXIA INDUCIBLE FACTOR (HIF 1ALPHA) IN VOCAL FOLD LESIONS WITH NO-DYSPLASIA, LOW AND HIGH-GRADE DYSPLASIA AND INVASIVE GLOTTIS CANCER.

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Introducion: The pathological significance and prognostic value of angiogenesis in malignancies are essential. The promotion of neovascularization could be described by microvascular density (MVD) and expression of hypoxia factors. The expression of CD31 and CD34 as MVD factors and HIF-1? as hypoxia factor were evaluated. The aim of our study was to determine and compare angiogenesis in hypertrophic vocal fold (VF) lesions of different histopathological status from non-dysplasia, low and high-grade dysplasia to invasive glottis cancer.
Methods: Histopathologically confirmed 77 VF lesions (consisted of 20 non-dysplastic, 20 low grade dysplasia, 17 high grade dysplasia and 20 invasive cancers) were examined. Immunohisto¬chemical studies were used to detect the expression of CD31-MVD, CD34-MVD and HIF-1?.
Results: The highest mean value of MDV CD31 (21.23±14.46) was identified in lesions with low grade dysplasia. The average MDV CD31 in other groups were consecutive: non-dysplasia – 12.47±8.41, high grade dysplasia - 13.74±5.56, invasive cancer - 20.11±9.28. The highest MVD CD34 was revealed in lesions with invasive cancer (35.64±17.21), the count of microvessels was also higher for low grade than for high grade dysplasia (25.87±12.3 vs 24.65±15.92). MVD CD34 in non-dysplastic lesions was 13.96±9.12. Strong or very strong expression of HIF-1? was identified in 60 % of non-dysplastic lesions, 100% of low grade dysplasia, 53% of high grade dysplasia and 50% of invasive cancers. The statistical analysis using Kruskal-Wallis tests confirmed significant differences in expression levels between analyzed groups.
Conclusions: The high expression of CD 31, CD34 and HIF-1? in precancerous lesions confirmed the crucial role of these factors in promoting the neoangiogenesis in vocal fold lesions. Their expression is also correlated with the advancement of dysplastic hallmarks, suggesting that they could be used as important prognostic markers in VF lesions.

Keywords: Microvascular density, CD31, CD34, hypoxia inducible factor, HIF 1?, vocal fold lesions, laryngeal cancer

EVALUATION OF EFFECTIVENESS OF HAEMOPHILUS INFLUENZAE TYPE B VACCINATION - IMPACT ON SELECTED IMMUNOLOGICAL PARAMETERS IN POST-SPLENECTOMY PATIENTS

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Introducion: Splenectomy is a surgery in case of splenic rupture after injury, in tumors, or as a treatment for certain diseases such as idiopathic thrombocytopenic purpura and spherocytosis. The effects, that splenectomy exerts on immune competence of an individual, are not completely established. The aim of the study was to determine a response of the immune system to the Haemophilus influenzae type B (Hib) vaccine and the impact of elective and urgent splenectomy on postoperative changes in circulating lymphocyte subsets and cell activation markers in vaccinated patients.
Methods: The blood samples were obtained from 25 patients after urgent splenectomy and 15 healthy volunteers with a spleen. Patients and the subjects from the control group were immunized with a single dose of HiB vaccine. The specific Hib antibodies concentration was assessed by enzyme-linked immunosorbent assay. The levels of selected immune cells were measured using the flow cytometry method.
Results: The specific anti-Haemophilus influenzae type B antibody titers following vaccination were significantly higher in the control group versus the study group ($p=0.003123$). The vaccination response criterion was achieved by 100% of subjects from the control group and 92% of patients. Before vaccination patients from the study group had a significantly lower percentage of NK cells ($p=0.005679$) and higher percentage of Treg cells ($p=0.000001$) than the subjects from the control group. After vaccination splenectomised patients had a significantly higher percentage of Treg cells ($p=0.000116$). Absolute counts of specific anti-H. influenzae antibody titers after vaccination were strongly correlated with NKT-like cells after vaccination ($p=0.042423$).
Conclusions: The results we obtained showed that NKT cell rates are closely correlated to the concentration of specific antibodies against H. influenzae in splenectomised patients. It can be concluded that in the absence of spleen, the number of NKT cells increases after administration of the vaccine to fill the gap in response to H. influenzae.

Keywords: H. influenzae, vaccination, splenectomy, Treg cells, NK cells, NKT-like cells, clinical immunology

ANGIOGENIC PROPERTIES OF TUMOR-ASSOCIATED MYELOID CELLS – SHORT REVIEW

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Introducion: Solid tumors are characterised by presence of various groups of immune cells. Five of them, tumor-associated macrophages (TAM), monocytes expressing the angiopoietin-2 (Ang-2) receptor - Tie2 (known as Tie2-expressing monocytes or TEM), myeloid-derived suppressor cells (MDSC), tumor-associated neutrophils (TAN) and tumor-associated dendritic cells (TADC), are called tumor-associated myeloid cells (TAMC). All of them support cancers progression by different mechanisms. One of them – stimulating angiogenesis – is the topic of this work.
Methods: To sum up an actual knowledge, authors collected and compared original and review science articles from 2016-2018 period, using PubMed, Scopus and Google Scholar searchers.
Results: Accessible literature reports many mechanisms of angiogenesis, which TAMC are involved in, like: 1) Secretion of VEGF, bFGF, TNF-?, IL-1beta, CXCL8, cyclooxygenase 2, plasminogen activator (uPA), PDGF-beta, MMP7, MMP9, and MMP12 by M2-like TAM 2) Secretion of IL-35 by tumor-recruited lymphocytes Treg, which promotes TAN differentiation into N2 phenotype, which works similarly to M2-TAMs 3) Tumor hypoxia fine-tunes M2-TAM 4) MDSC are able to produce VEGF, bFGF, Bv8, and MMP9 5) TEM are strongly proangiogenic throw Ang-2 and VEGFR signalling pathways. They express lymphangiogenic activity either. 6) TEM stimulates M2-TAM recruitment. 7) TADC in tumor-associated inflammation may secrete VEGF, especially when stimulated by PGE2, produced by tumor cells. 8) M2-TAM have increased expression of COX-2, which produces proangiogenic prostaglandins – like PGE2 ang PGI2.
Conclusions: To sum up, TAMC take an important role in tumor development. Their presence, amount, type and/or absence may be an important marker in tumor diagnosis. Those cells are met on every metabolic pathway of tumor pathogenesis. Angiogenesis, which has a key role in carcinogenesis, is not an exception. The crucial evidence of it is that some oncological treatment is targeted to block or reverse pathways presented above – some of them are monoclonal antibodies like bevacizumab and ranibizumab, while the other ones are not – like pazopanib and axitinib.

Keywords: TAMC, angiogenic properties. Tie-2 monocytes, carcinogenesis,

THE ROLE OF TH17 LYMPHOCYTES IN MULTIPLE SCLEROSIS RELAPSE – A CAPABILITY TO RAPID PRODUCTION OF IL-17.

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Introducion: Multiple sclerosis is a chronic demyelinating disease affecting many young adults. The relapsing-remitting form is characterized by alternating periods of exacerbation of the disease (relapse) and temporarily silencing its symptoms (remission). Pathogenesis is not fully understood, however, researchers agree on the significant role of Th17 lymphocytes in the pathogenesis of this disease. IL-17, a major Th17 cytokine, is probably involved in the inflammatory response in the nervous system. The aim of the study is to investigate and compare the percentage of Th17 lymphocytes and their expression of RORgammaT and IL-23R in patients during relapse, compared to remission and healthy control.
Methods: The study involved 34 people, 24 of them were diagnosed with relapsing-remitting multiple sclerosis and 10 of them were healthy controls. 19 patients were at the time of relapse and 5 during the remission. Blood samples were collected from them, stained with anti-human CD4 FITC, CD3 PE-Cy5, RORgammaT PE, IL-23R PE antibodies and analyzed by flow cytometry. Results were statically analyzed using GraphPad Prism 8. Kruskal-Wallis test was used to calculate statistical significance.
Results: The percentage of Th17 and IL-23R+ Th17 lymphocytes did not differ significantly between groups. Significant increase in expression of the RORgammaT was observed in relapse compared to healthy control.
Conclusions: The overexpression of the RORgammaT nuclear receptor in Th17 lymphocytes during relapse may be a sign of their involvement in the pathogenesis of relapse. RORgammaT is the main regulator of IL-17 secretion and the IL-17 is connected to neuroinflammatory response in MS patients. Overall, this suggests that those cells are capable of rapid IL-17 production and this seems especially important to initiate relapse.

Keywords: MS; Th17; flow cytometry; IL-17; IL-23R

DOES SCHIZOPHRENIA BEGIN DURING FETAL LIFE - A COMPARISON OF PREVALENCE OF MINOR PHYSICAL ANOMALIES BETWEEN SCHIZOPHRENIA PATIENTS AND HEALTHY CONTROLS.

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Introducion: Schizophrenia is a psychiatric disorder without a fully determined etiology. Nowadays, certain evidence confirms the neurodevelopmental hypothesis of schizophrenia, which assumes that early derangement of the orderly development of the central nervous system has a major impact on future development of schizophrenia. As both nervous system and the skin have the same ectodermal origin, minor physical anomalies (MPA) could reflect disturbances in brain development in fetal life. The MPA scale has been created to assess the potential changes within physical appearance of individuals suffering from schizophrenia as compared to the general population. The scale involves various factors, including anomalies within the fingers or face. The aim of our study was to compare minor physical anomalies between patients with schizophrenia and healthy controls using the MPA scale to confirm the neurodevelopmental model of schizophrenia.
Methods: 115 subjects: 59 patients (M=39, F=20) suffering from schizophrenia as defined by DSM-IV, who were hospitalized in the Department of Psychiatry in Lublin and 56 individuals (M=31, F=25) as a control group were assessed using MPA to evaluate minor physical anomalies. 10 items were taken into consideration including facial and hand measurements. We determined the difference in both groups basing on statistical p-values, which describe the correlation as significant if $p<0.05$.
Results: Schizophrenia patients showed significantly greater ($p<0.05$) values of MPA scores compared with the control group in 4 out of 10 analyzed physical anomalies: presence of two or more hair whorls, cuspidal ears (23,73% v 8,93%), high-arched palate (32,20% v 17,86%), asymmetrical ears (11,86% v 0,00%). Furthermore, additional 3 anomalies have a tendency to be more frequent in the experimental group: malformed ears (8,49% v 1,79%), epicanthic fold (8,49% v 1,79%) and furrowed tongue (32,20% v 17,86%).
Conclusions: In a theoretical context, the results may be considered as a confirmation of the neurodevelopmental theory of schizophrenia, but they also have practical implications for secondary prevention of the disorder. Therefore, it might be important to apply MPA scale to children of schizophrenia-affected parents in order to provide them with complex and targeted psychological intervention in the future.

Keywords: Schizophrenia, Neurodevelopmental theory, MPA scale

EVALUATION OF DNA DAMAGE AND ITS REPAIR EFFICIENCY IN LYMPHOCYTES FROM SM PATIENTS

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Introducion: Multiple sclerosis (MS) is a chronic neurodegeneration disease which leads to demyelination of nerve cells causing impairment of the motor functions, emotional conditions and memory. The oxidative stress (OS) may play a major role in the pathogenesis of MS. The comet assay is a good tool to evaluate the oxidative DNA damage and repair efficiency of the cells from SM patients and control group.The aim of the study was to measure DNA-repair efficiency in lymphocytes from SM patients and from control group using the comet assay.
Methods: For the study, there were analyzed blood from 5 SM patients and 5 controls. DNA repair efficiency in lymphocytes isolated from fresh peripheral blood were evaluated by alkaline comet assay. The cells were treated with H2O2 hydrogen peroxide at a concentration of 20?M. The level of DNA damage at 0, 60 and 120 minutes of incubation repair was assessed using the parameter Tail % DNA (100 – Head%DNA).
Results: The data collected from the comet assay was analyzed for DNA-repair efficiency in lymphocytes from SM patients and from control group. There were observed significant differences in the level of oxydative damage among examined groups (Mann–Whitney U test, $p<0,05$). The DNA-repair efficiency was statistically lower in lymphocytes from SM group 4,81% for time 120' as compared to control group 6,14%, respectively ($P < 0.001$).
Conclusions: Multiple sclerosis is a common neurodegeneraion disease. Oxydative damages are considered to play the main role in the pathogenesis of MS. The impaired DNA-repair efficiency in lymphocytes from SM patients contrary to control group may indicate new therapeutic strategies. Further study is needed to compare DNA-repair efficiency among phenotypes of SM during remissions and relapses.

Keywords: multiple sclerosis, oxidative stress, the comet assay

BENEFICIAL HEALTH EFFECTS OF TREATMENT WITH FLOTATION-REST

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Introducion: Flotation-REST is a method where an individual is immersed in a tank filled with water of an extremely high salt concentration, whereby environmental stimulation is restricted. Restricted environmental stimulation technique (REST) is a method used to achieve a deep relaxation and subsequent beneficial health effects on stress, quality of sleep, anxiety and depression. A few studies suggested its positive effects on muscle tension pain as well. The purpose of this paper is to review potential positive health effects of flotation-REST.
Methods: Review of medical journal literature published on PubMed to evaluate treatment with flotation restricted environmental stimulation technique.
Results: Flotation-REST treatment decreased the degree of stress, anxiety or depression, whereas the patients' optimism and sleep quality was significantly increased. The results also indicate that the most severe perceived pain intensity was significantly reduced, however low perceived pain intensity was not influenced by the floating technique. Another study's results indicate that flotation-REST reduces systolic and diastolic blood pressure due to greater relaxation.
Conclusions: It was concluded that flotation-REST has beneficial effects on decreasing stress, anxiety, depression and pain, therefore the method has potential as a complementary treatment of these. However, more studies should be conducted to further evaluate the treatments efficacy.

Keywords: flotation tank, flotation, flotation-REST, REST, relaxation, stress, anxiety, pain, health

INVESTIGATING GASTRIC SMOOTH MUSCLES RELAXING PROPERTIES OF QUERCETIN

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Introducion: Quercetin (QUE) is a natural polyphenol present in fruits, vegetables, leaves, and grains. Numerous studies report its properties such as: anti-oxidative, cardioprotective or anti-proliferative and anti-viral. Recent data indicate that QUE may inhibit the contractility of the gastrointestinal tract. Despite the increasing attention to the effect of polyphenoles on smooth muscles, little is known about the mechanisms of these effects. In our study we aim to assess the effect of QUE on a contractility of a gastric smooth muscles, as well as to determine whether its action is related with the synthesis of endogenous nitric oxide and the activation of small conductance calcium-activated potassium channels (SK) channels.
Methods: The study was conducted on a gastric snippets taken from the patients undergoing the sleeve gastrectomy due to obesity. The snippets were collected during the operation and transported to the laboratory in an ice-cold Tyrod buffer. The layer of a smooth muscles were dissected, attached to strain gauge and placed in a tissue bath with Tyrod buffer at 37oC, pH 7.4. After acclimatization contraction of a muscles was stimulated using carbachol (100?M). QUE was diluted in DMSO and added to the bath medium in an increasing concentrations (0,1?M-500?M). Endogenous NO synthesis were blocked using LNNA. Small conductance calcium-activated potassium channels were blocked using apamin. The study composed of 5 groups: control, control + DMSO (solvent), QUE, QUE+LNNA and QUE+apamin. The residual muscle tension, contraction amplitude and area under the curve (AUC) were measured using strain gauge. The statistical analysis was done using ANOVA test, the results were considered statistically significant at $p <= 0,05$.
Results: Exposure to QUE resulted in a significant, dose dependent, decrease of AUC and muscle tonus Moreover, high concentrations of quercetin decreased contraction amplitude. The inhibition of endogenous NO synthesis pathway and blockage of SK channels did not affected significantly the relaxant activity of quercetin.
Conclusions: Quercetin relaxes smooth muscles of gastrointestinal tract independently to NO and small conductance calcium-activated potassium channels. What is more, our results might explain the possible side effects of quercetin therapy related with a distorted motility of gastrointestinal tract observed in clinical studies with polyphenols.

Keywords: Quercetin, gastric muscles contractility, NO, QUE

DOES PROBABILITY OF INFECTION DURING PEDIATRIC CHEMOTHERAPY DEPEND ON SOCIAL AND LIVING CONDITIONS?

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Introducion: Immune system of oncological patient is twofold weakened due to influence of the disease and caused by chemotherapy. As a result, ordinary infections in these population can be life-threatening.
Methods: The retrospective analysis of medical documentation, laboratory and microbiological findings of patients from the Department of Pediatric Oncology and Hematology in Bialystok, in years 2014-2017 was performed. The study group (n) consisted of 65 patients (male:39; female:26). Average age in the moment of neoplasm diagnosis: 6,55, SD 5,54 years. Evaluation included CRP peaks, microbiological findings, place of living, residing, amount of household members.
Results: The most common infections were caused by bacteria (48,44%),influencing on 2 deaths out of 31 patients. 6,25% of infections are caused by viruses (1 of 4 was fatal) and 1,56% are fungal infections. 43,75% of surveyed patients have undetected pathogen. Average amount of infections is 3,92 per person among patients who live in the city. Patients living in the countryside have average amount of CRP peaks 5,67- higher than appears among people inhabiting urban areas. Average infection amount of patients living in a house is 4,59 per person. Among patients living in a flat average amount of CRP peaks is comparable: 4,62. There is no correlation between infections and number of household members (from 3 to 8). CRP level has not raised in 4,62% of patients. In the group of patients with acute lymphoblastic leukemia (44,62% of all diagnoses in the study) 64,39% seem to have infection caused by detected and specified pathogen, what marks these infections as severe. Three infections in children with ALL were fatal. 2 out of 31 bacterial infection and 1 of 4 viral infection.
Conclusions: Study shows that the key factor throughout social and living conditions is not the habitual residence - living at home or in a block and number of household members have no influence on the frequency of infections. Therefore it is significant to increase awareness of antiseptic importance among guardians of children living in a countryside.

Keywords: Infections, social, living, conditions, chemotherapy

ANALYSIS OF AORTIC VALVE AND CORONARY SINUSES MORPHOLOGY.

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Introducion: The aortic valve is located in the human heart between the left ventricle and the aorta. The normal aortic valve has three equal-sized cusps. This valve directs a one way forward flow of blood from the left ventricle of the heart to the rest of the body. When the valve is damaged for example during illness, their function is compromised leading to complications such as heart failure if left untreated. In severe cases, surgical replacement with a prosthetic valve is the gold standard treatment.
Methods: The study encompassed 50 formalin preserved aortic valves. Measurements were made with a caliper. Morphometric data of the aortic valve was recorded as follows: depth of coronary sinuses, distance of the right coronary ostium from the commiusure of left and posterior semilunar valve, distance of the left coronary ostium from the commiusure of right and posterior semilunar valve, distance of the right and left coronary ostium from bottom of aortic sinus.
Results: The mean depth of coronary sinuses for left was 12.87±2,1mm and for right 14.04±2.9mm. The mean distance between the left coronary ostium to commiusure of right and posterior semilunar valve was 13.68±4.6mm and 10.54±3.9 respectively. For right coronary ostium the mean distance to commiusure of left and posterior semilunar valve was 15.85±5.0 and 10.36±3.5. The average distance of the coronary ostium to bottom of aortic sinus was 15.09±2.8 for left and 15.93±3.7 for right.
Conclusions: The morphometric data based on cadaveric dissection is helpful for proper selection of aortic valve and may be helpful in aortic valve replacement or plastics.

Keywords: Aortic valve, morphometry, cardiology

EVALUATION OF MORPHOLOGICAL PARAMETERS OF STERNUM (BREASTBONE) IN TERMS OF SEXUAL DIMORPHISM.

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Introducion: Sternum is a long, flat bone composed of three parts (manubrium, body and xiphoid process), being an anterior component of thoracic skeleton. Its ossification generally starts from one primary ossification center forming in manubrium in 5th week of prenatal development. The next five to seven ossification centers appear gradually in body of sternum; the last one forms only after birth. Developing ossification centers exist as a quadrilateral plates connected together by synchodroses untill 15th year of life; during this period body of sternum is composed of four parts. After xiphoid process is ossified (25th year of life), the ossification of sternum is fully completed.
Methods: Retrospective analysis encompassed results of computed tomography (CT) studies performed in group of 240 patients (140 females, 100 males); the age range of patients in females and males group was 19-98 y/o and 21-94 y/o, respectively. Using CT scans the following parameters were measured: length, width and thickness of manubrium, length, width and thickness of body of sternum, length and thickness of xiphoid process, total length of sternum, sternal angle. The numerical variables of aforementioned features are presented as an arithmetic mean (M) and standard deviation (SD). Data was analyzed using the Mann-Whitney ”U” test, p value <0.05 was considered significant.
Results: The average length of manubrium, body of sternum and xiphoid process in females were 4,84±0,52; 8,67±1,32 and 4,02±1,28 cm, respectively; in males they were 5,16±0,52; 10,29±1,26 and 4,77±1,24cm, respectively. The mean total length of sternum was 12,73±3,12 cm in females and 15,03±3,41 cm in males. There wasn't any statistically significant differences in sternal angle dimension between groups. The average thickness of manubrium, body of sternum (2-point measurement) and xiphoid process in females were 1,38±0,2; 0,98±0,13; 1,07±0,77; 0,65±0,42 cm; respectively; in males they were 1,55±0,22; 1,06±0,14; 1,1±0,25; 0,75±0,25 cm, respectively. The mean width of manubrium and body of sternum(2-point measurement) in females were 5,46±0,8; 2,46±0,37; 3,02±0,51 cm, respectively; in male they were 6,37±1,11; 2,85±0,47; 3,48±0,6 cm, respectively.
Conclusions: For linear measurements length, width and thickness indicates substantial differences between sexes, therefore they seem to be the most useful morphometric parameters for sex identification.

Keywords: sternum, sexual dimorphism, morphometry

MODERN SYSTEMS OF MICROSTRUCTURE ANALYSIS OF COMPLEX MATERIALS USED FOR FILLINGS IN THE TEETH

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Introducion: Dentistry and material engineering are scientific disciplines that enable interdisciplinary evaluation of the quality of materials used in conservative dentistry. The use of composite materials as fillings in conservative dentistry require further research on their quality and analysis of their behaviour during their usage in the oral cavity. The use of modern research techniques that are used in engineering sciences allow for the visualization and analysis of selected properties of composite materials. Thanks to this, one can observe changes in the characteristics of composites and predict their durability. The properties of composite materials are significantly influenced by their structure: size of filler particles, its content, matrix structure (the more filler, the greater its elastic modulus, higher compressive strength, smaller shrinkage, water sorption and thermal expansion). The size of the filler affects the smoothness of the filling's surface and abrasion resistance. Therefore, the goal was to present the possibilities of using modern research devices used in engineering sciences to analyze materials used in dentistry.
Methods: Composite fillings were applied in third molar teeth, which were removed for orthodontic reasons. Composite microstructures (Essentia (GC), CeramX (Dentsply), XtraBulkfill (VOCO)) were analyzed using a non-destructive method; using a computer microscope SKYSCAN 1174 (Bruker, Belgium) with a VDS camera and software for image reconstruction. The quality of the fillings was analyzed using 2D and 3D imaging. Microstructural observations on metallographic specimens using the NIKON MA200 optical microscope (OLYMPUS) and the NOVA NANO SEM450 (FEI) scanning electron microscope were also used.
Results: On the basis of the microtomography image, using the degree of radiation absorption and the colour intensity of particular structures such as dentin, enamel and composite filling may be destinguished. 3D visualization allows toobserve the presence of porosities in the structure of the material, to distinguish its individual layers and to assess the quality of the bond between the composite and the tooth tissues. The traditional research methods do not present the actual internal mechanism of the microdamage. The use of computed tomography is an effective way to determine the microstructure and enables the analysis of the evolution of defects in glass fiber reinforced composites. Optical microscopy, on the other hand, allows the analysis of the distribution of glass fibers in the composite fill and the interface between the layers of the filling. Scanning microscopy also provided images of microstructures, with the possibility to view individual molecules in the nanometric scale. It is also possible to assess the structure of the adhesive bond between the filling material and the tooth tissues.
Conclusions: The use of modern research techniques in the field of engineering in dentistry reveal the quality of the structure of the fillings and microstructural analysis of the distribution of fibers and particles in the fillings. This allows one to evaluate the status of fillings and helps predict their behaviour during the use in the oral cavity.

Keywords: composite fillings, microstructure, quality of fillings

STERNAL FORAMEN - EVALUATION OF OCCURRENCE AND ITS RELATION WITH ANATOMICAL STRUCTURES IN THORAX CAVITY IN CLINICAL CONTEXT.

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Introducion: Sternum is a flat bone composed of 3 parts: manubrium, body and xiphoid process. One of the most common anatomical variation in sternum area is presence of sternal foramina. Ossification of sternum starts in the 5th week of prenatal life and lasts after birth. Sternum has several standalone ossification points which finally form sternum. Disorders of creating and merging the ossification centers give rise to the creation of sternal foramina. Possibility of sternal foramina presence is an important issue in some medical and paramedical procedures like trepanobiopsy or acupuncture. These procedures performed on patients with sternal foramina may lead to serious, life-threatening complications like pneumothorax, pericardial tamponade etc.
Methods: Retrospective analysis encompassed results of computed tomography (CT) studies performed on a group of 240 patients (140 females, 100 males); the age range of patients in female and male group were 19-98 y/o and 21-94 y/o, respectively. Using CT scans the location of foramina in the body of sternum were determined and diameters were measured. Correlation between foramina and vital structures were estimated.
Results: Sternal foramen in the body of sternum was found in 4,6% of all examinations. Most of them were located in the inferior part of body of a sternum. In 6 cases foramina were situated at the level of 5th rib. Other apertures were detected at the level of 4th intercostal space, 4th and 6th rib. In most CT scans, the directly adjacent structure to the detected foramen was lung (in 7 cases). In other cases it was pericardium/heart, mediastinal fat and liver (in 1 case). The average vertical diameter of foramen was 0,73±0,70cm; horizontal diameter was 0,47±0,30cm. The numerical variables of aforementioned features are presented as an arithmetic mean (M) and standard deviation (SD).
Conclusions: Sternal foramina appearance in 4,6% of examined population, with prevalence among males. The most often occurrence was level of the 5th rib, the most frequently behind sternum were lungs.

Keywords: sternal foramen, trepanobiopsy, acupuncture77

CLINICOPATHOLOGICAL PERSPECTIVES FOR PD-1/PD-L1 EXPRESSION ASSESSMENT IN BREAST CANCER. LITERATURE REVIEW.

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Background:
Case Report: Over past few decades, there is an increasing interest in tumor microenvironment (TME) and its role in cancer progression. One of the most important tumor-microenvironment interaction is between Programmed cell death 1 protein (PD-1) expressed on immune cells and its ligand Programmed Cell Death Ligand 1 (PD-L1) expressed on tumor cells. The key role of this interaction is negative regulation of T cells activity. Tumors can use this pathway through upregulation of PD-L1 molecule to protect themselves from immune attacks. Immunotherapy targeting PD-1 pathway garnered substantial enthusiasm after showing clinical efficacy in broad spectrum of cancers. In breast cancer however the exact role of PD-1/PD-L1 pathway remains undetermined. The diagnostic evaluation of PD-L1 expression is still not standardized and there are conflicting results pertaing its prognostic and predictive role. Thus, our review will try to clarify usefulness of determination PD-1 pathway markers in breast cancer.
Conclusions:

Keywords:

THE FREQUENCY OF ULCERATIVE COLITIS AND PRIMARY SCLEROSING CHOLANGITIS DIAGNOSIS IN PATIENTS WITH ATYPICAL ANCA PRESENCE.

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Introducion: Detection of the antineutrophil cytoplasmic antibodies (ANCA) plays a major role in ANCA-associated vasculitis (AAV) diagnosis and classification. There are two target antigens: proteinase 3 and myeloperoxidase relevant in AAV, which in indirect immunofluorescence method (IF) give cytoplasmic or perinuclear stain respectively. There are antibodies against other antigens (lactoferrin, elastase, etc) characterized by atypical perinuclear staining in IF which leads to frequent misinterpretation of IF ANCA results. Atypical perinuclear ANCA (xANCA) are associated with ulcerative colitis (UC), primary sclerosing cholangitis (PSC) and autoimmune hepatitis (AIH). We evaluate the frequency of UC/PSC/AIH occurrence in 71 patients with xANCA detected by IF method.
Methods: xANCA was detected in IF method by means of ethanol and formalin fixed human granulocytes. 71 patients with xANCA titer 1:10 or higher were enrolled. Patients' medical records were examined to look for UC/PSC/AIH and other autoimmune diseases diagnosis.
Results: Among all 71 patients with xANCA we found UC/PSC/AIH in 32 (45%), other autoimmune diseases (vasculitis, primary biliary cirrhosis, pancreatitis) in 14 (20%), and no autoimmune conditions in 25 (35%).
Conclusions: Due to xANCA stain pattern resemblance to true pANCA distinguishing between these two is difficult and their presence can be a cause of false clinical suspicion of AAV. It seems that positive IF ANCA result should be confirmed with methods using purified antigens (ELISA, blotting), especially in patients with autoimmune conditions with possible overlap syndrome and additional vasculitis.

Keywords: ANCA, antibodies, ulcerative colitis, autoimmune hepatisis, primary sclerosing cholangitis

IMAGE OF THE "IDEAL PSYCHIATRIST" IN THE EYES OF MEDICAL STUDENTS.

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Introducion: Communication between patient and doctor is one of very important factor affecting the quality of healthcare. The doctor with his knowledge and support can alleviate the patient's suffering, both physical and mental. There is a strong focus on medical students education to possess the ability to communicate with patients on a high level. In psychiatry, it is an especially important issue in process of treatment because the patients need to be fully understood and open itself to the doctor.
Methods: 137 (male = 48, female = 89) medical students (aged 22-27) of Medical University of Lublin were recruited to the survey and fulfilled questionnaire created by authors (KHK). The questionnaire consists of 47 questions related to two main aspects: 1) personal experience in contact with psychiatrist and 2) expectations in the field of communication, behavior and the appearance of a psychiatrist. A Microsoft Excel spreadsheet was used to perform statistical analyzes.
Results: In the opinion of most students, the outlook of psychiatrist did not matter. However, some students had a clearly defined picture of an “ideal psychiatrist”, also taking into account the gender and appearance of the doctor. Nevertheless, all agree that a psychiatrist should be a good listener, nonjudgmental and kind. They also notice that the body language and the positive face facial expressions play an important role in good communication between patient and doctor.
Conclusions: Students of the Medical University of Lublin thinks that to be “ideal psychiatrist” are more important personality traits (good listener, nonjudgmental and kind) than physical features (gender and appearance).

Keywords: patient-doctor communication, psychiatrist

CHILDHOOD OBESITY AND OVERWEIGHT

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Introducion: Obesity is a major nutritional health problem in developed and developing countries, which can be compared to the epidemic. Obesity is both a biological and a social problem and must be considered as a part of these larger contexts. Nowadays more and more children are becoming obese or overweight. Childhood obesity is a particular concern.
Methods: The experimental essay based on statistical data and literature review.
Results: According to "The Lancet" magazine, there are 124 million obese children in the world. Moreover the frequency of this disease in developed countries, including Poland, is constantly increasing. According to World Health Organisation is defined as the condition of excessive fat accumulation to such an extent that affects the individual's health. Another important issue to mention is that obesity certainly does constitute a disease. Despite the fact that obesity is a serious disease, it has an economic impact on developing several complications. Overweight and obesity are the main risk factors for many diseases such as hypertension, diabetes, cardiovascular disease, stroke and even various types of cancer. It is crucial to diagnose those diseases as early as childhood. The majority of research studies indicate that environment and genetics play important roles in childhood obesity. Moreover lack of physical exercises and exemptions from P.E. class which are easily to get leads to the development of bad habits.
Conclusions: Overweight and obesity are the main risk factors for many diseases. So, it is essential to take multidimensional approach in taking into account all risk factors. Treatment and effective diagnoses is also highly important to overcome the worldwide problem. The aim of the study is to statistical data the literature and present the current state of knowledge on the problem of obesity among children and youth in the world.

Keywords: Childhood obesity, overweight

Case Report

DIFFICULTIES IN PROLONGED THERPY WITH ECMO. COMPLICATIONS IN ACUTE RESPIRATORY FAILURE.

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Background: Veno-venous extracorporeal membrane oxygenation (ECMO) is one of the possible options used in patients with acute respiratory distress syndrome (ARDS) due to the potential reversible illness. The use of ECMO may be a method for reducing mortality in ARDS.
Case Report: The man was admitted to the ICU with ARDS due to legionella pneumonia. V-V ECMO therapy was included. During the therapy the most common complications occurred: bleeding and infection. In the following days, the ARDS covered the whole field of the lungs. Pneumothorax was formed with a hematoma. A toracotomy with removal of the VI rib was made. In the next day after a surgery, a massive bleeding occurred. In the following days, stabilization of bleeding and improvement of gas exchange were obtained. To assess the effectiveness of the treatment, CT was performed, in which the fluid in a pericardial sac was detected. In urgent mode, the tamponade was delivered. The consequence of the closed drain was the formation of a blood reservoir in the right-hand subscapular area, which was the source and focus of Candida albicans. After hematoma evacuation and antifungal treatment, improvement was achieved. On the 35th day of the therapy, as a result of the improvement in gas exchange, ECMO was disconnected. The consequence of the prolonged therapy was the critically ill polyneuropathy, which was intensively treated on the ward. After 99 days of ICU stay, the patient was transferred to the rehabilitation department.
Conclusions: ECMO is a very invasive therapy that gives the chance to save the life of patients with ARDS. It requires experience and the right skills to lead. Further evaluation requires the assessment of the lung regeneration possibility and the remote effects of the treatment.

Keywords: ECMO, ICU, ARDS,

SUCCESSFULLY TREATED HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS COMPLICATED BY ACUTE LYMPHOBLASTIC LEUKEMIA IN 2-YEARS FOLLOW-UP PERIOD - A CASE REPORT.

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Background: Hemophagocytic Lymphohistiocytosis(HLH) is a rare, severe syndrome caused by immunological reaction secondary to uncontrolled release of interferon gamma. HLH can be caused by congenital genetics mutations or be the effect of infections(usually EBV). Patient presents with fever, hepatosplenomegaly, jaundice, hemorrhagic diathesis, lymphadenopathy, edemas, neurological disorders. Pathological inflammatory process can lead to multi-organ failure. Left untreated HLH has 100% mortality rate in four to six months.
Case Report: The 18-month-old boy was admitted to pediatric ward due to the persisting fever, enlarged lymph nodes, pneumonia, and maculopapular rash. Patient was anemic, with elevated liver markers, and positive rotavirus test. Patient was transferred to Infectious Disease Ward but due to deterioration of the state he had to be admitted to the ICU. Ebstein-Barr Virus and type A influenza virus tests were positive and patient was treated accordingly with antiviral medications. Patient was transferred to the Hematology Department due to anaemia, thrombocytopenia, leukocytosis, hypertriglyceridemia and highly elevated ferritin levels (66480 ng/ml N: 20-200 ng/ml). Lymph nodes biopsy revealed hemophagocytic cells. Based on lymph nodes biopsy, laboratory results and decreased degranulation assay of NK cells the diagnosis of HLH was made. Genetic tests showed no known mutations related to HLH. Patient was treated according to the HLH 2004 guidelines that include four weeks of therapy with etoposide, dexamethasone and cyclosporin A. Patient's condition improved. One year follow-up showed slight anemia and minor renal insufficiency. Two year follow-up revealed asymptomatic extremely elevated WBC (309000/ul N: 4000-10000/ul) with anaemia and thrombocytopenia (Hb = 8,2 g/dl N: 10,5-13,5 g/dl; PLT=61000/ul : N: 150000-450000). Patient was diagnosed with Acute Lymphoblastic Leukemia and is treated with cytoreductive chemotherapy with good results.
Conclusions: Despite progress in treatment of HLH, the mortality still remains high. The treatment itself can cause severe adverse events even long time after the recovery. The careful follow-up monitoring is required. Potentially new therapeutic options that are in trials now, including anti-interferon-gamma antibodies, will improve the outcomes and reduce the complications.

Keywords: HLH, ALL, Hemophagocytic lymphohistiocytosis, Acute Lymphoblastic Leukemia,

CAN INOTROPES CAUSE HYPOTENSION? ACUTE LEFT VENTRICULAR OUTFLOW TRACT OBSTRUCTION SECONDARY TO THE SYSTOLIC ANTERIOR MOTION OF THE MITRAL VALVE - A CASE REPORT.

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Background: Systolic Anterior Motion of the Mitral Valve(SAM) in non-cardiac patients is an extremely rare phenomenon where the anterior leaflet of mitral valve is pulled towards the ventricular septum resulting in reduced flow through the Left Ventricular Outflow Tract(LVOT) leading to hypotension and pulmonary edema. Although frequency of this occurrence is much higher in patients with hypertrophic cardiomyopathy, myocardial infarct or post mitral valve repair, in patients with no previous cardiac history the presence of SAM remains casuistic.
Case Report: The 75-year-old male, post gastric cancer resection, was admitted to ICU due to sudden left-side hemiparesis and acute respiratory failure. Admission head CT did not confirm acute stroke. Chest x-ray revealed massive, merging, bilateral opacities corresponding with pulmonary edema or ARDS. Admission ECHO was non-diagnostic because of high PEEP(10 cmH2O) values. Mechanical ventilation adjustments required to maintain the proper arterial saturation made visualization of all chambers of heart difficult. Patient required catecholamines infusions (Dobutamine and Norepinephrine) due to severe hypotension. The next day after trials PEEP was set to 16 cmH2O and FiO2 to 0,7 to maintain 80% blood saturation. Patient became more hypotensive despite increased doses of catecholamines. The second ECHO assessment revealed Systolic Anterior Motion of the Mitral Valve with the LVOT gradient of 60 mmHg. Both ECG and troponin levels were within normal range. Due to the SAM diagnosis patient was given Metoprolol infusion meanwhile Norepinephrine and Dobutamine doses were reduced. Despite the modification of treatment patient stayed hypotensive. Lactates and procalcitonin were elevated reaching peak of 13,8 mmol/l and 13,32 ng/ml respectively. Patient became acidotic with blood pH of 6,94 and died due to asystole.
Conclusions: SAM is a severe phenomenon resulting in hypotension. Paradoxically inotropes can intensify the hypotension because of their impact on heart contractility causing the valve leaflet to move closer to ventricular septum during systole and increase obstruction of LVOT. The treatment goal should be to decrease heart muscle contractility by administration of beta-blockers and reduction of inotropes, while providing the fluids in compliance with Frank-Starling curve. However, the risk of fatal hypotension in septic patients without catecholamines support remains high.

Keywords: Systolic Anterior Motion, SAM, Hypotension, Inotropes

MANAGEMENT OF BYWATERS' SYNDROME AND COMPARTMENT SYNDROME IN ICU SETTING – A CASE REPORT.

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Background: Bywaters' syndrome is condition where, due to the trauma of the muscle tissues, released products of rhabdomyolysis damage kidneys causing acute renal failure. The severity of the syndrome depends on range of damaged tissues as well as previous renal function. Compartment syndrome is another trauma occurrence where, due to the damage to the venous vessels, blood without exit routes is stored in extremities. Compression on nerves and arteries, causes ischemia and, if left untreated, necrosis.
Case Report: The 28-year-old male, was transferred to the ICU after fasciotomy of the lower extremity due to work-related accident. Trauma resulted in extremely elevated CK values of 221891.00 IU/l (N: 25-195 IU) and potassium 6.5 mmol/l. Patient developed metabolic acidosis and anuria. Continuous veno-venous hemodiafiltration was started immediately. Patient developed acute renal failure with creatinine and urea serum levels reaching peak of 5,1 mg/dl (N: 0,9-1,2 mg/dl) and 221 mg/dl (N:19-44 mg/dl) respectively. CVVHD and CVVHDF were continued for 16 days resulting in lowering of CK levels to 1637 IU/L . During hospitalization patient required two additional fasciotomies and was transfused with 28 units of blood due to the recurring anemia. The cultures from the wound showed Enterobacteriaceae Cloacae that was treated accordingly to antibiogram. Patient was transferred to the hyperbaric center for continuation of treatment.
Conclusions: Bywaters' syndrome is life-treating condition leading to the acute renal failure. Early diagnosis is crucial to provide the proper treatment. AKI is regarded as a silent killer in ICU population, due to lack of pain symptoms during development. Thus, monitoring of renal markers and urine output is essential after major trauma. Epidemiologically population highly threatened with acquiring of Bywaters' syndrome and AKI is a group of elderly patients with underlying kidney disease that suffered from minor injury e.g. after falling from bed

Keywords: Bywaters' syndrome, crush syndrome, compartment syndrome, AKI management in ICU, fasciotomy

LONG-TERM PERITONEAL DIALYSIS TREATMENT AS A RISK FACTOR OF ENCAPSULATING PERITONEAL SCLEROSIS – A CASE REPORT

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Background: Peritoneal dialysis (PD) is one of the method of renal replacement therapy (RRT) used in patients with end-stage renal disease (ESRD). PD is recommended to all patients who are able to performed it for themselves and to those who are not, but have someone to help in performing it. PD should be the first choice of RRT in diabetic and cardiac patients, but especially in those who wait for renal transplant. In the past peritoneal dialysis was continued in some patients for many years, but now the time of PD treatment should be no longer than four years. The reason is a rare , but extremely dangerous complication: encapsulating peritoneal sclerosis (EPS).
Case Report: The 38-years old woman was sent to our dialysis center with ESRD because of chronic glomerulonephritis. Coexisting diseases were: hypertension, secondary anemia and secondary hyperparathyreoidism. The patient choosed peritoneal dialysis as the method of renal replacement therapy. She underwent Tenckhoff's catheter implantation without complications and stared PD. After nine years of PD treatment , because of recurrent abdominal pain we performed X-ray examination and found disseminated peritoneal calcification – typical signs of EPS. Despite treatment the patient suffered from small bowel obstruction. Two years after diagnosis of EPS was made the patient died after unsuccessful enterolysis.
Conclusions: EPS is very rare complication of PD, it occurs in less than 2 % of PD patients, but it's mortality is high. The causes of EPS are not established yet, but the risk factors are known. These are: long-term PD treatment, high glucose concentration in PD solution, nonphysiological solution, and PD-related peritonitis . All of them were observed in our patient.Now we do everything for the PD patients treated in our center to avoid this complication.

Keywords: peritoneal dialysis, encapsulating peritoneal sclerosis

ADENOID CYSTIC CARCINOMA OF THE BREAST – AN UNCOMMON MALIGNANCY OF UNPREDICTABLE CLINICAL BEHAVIOUR - A CASE SERIES OF FIVE PATIENTS

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Background: Adenoid cystic carcinoma (ACC) is a common tumour of the minor salivary gland, infrequently seen in on other anatomical localisations. In the breast, ACC is classified as a special type of invasive breast carcinoma (IBC) (according to the WHO 2012 classification) and accounts for <0,1% of patients diagnosed with breast cancer. Breast ACC shares the histologic pattern with that of its counterpart in the salivary gland, however it is characterised by a significantly different prognosis, i.e. an excellent survival (5-, 10-, 15- year survival rates are: 98,1%, 94,9%, 91,4%, respectively) with rare involvement of lymph nodes and infrequent metastases. Here we report our institutional experience with 5 cases of breast ACC diagnosed between 2009 and 2017.
Case Report: Mean age of women included in the study was 53 (ranged from 41 to 62). They presented a localized disease, without any specific features in physical examination and imaging. In two cases, ACC showed the solid growth pattern. In one case, ACC presented with a component of invasive ductal carcinoma (IDC). The mean size of lesions was 1,6cm (T1). At diagnosis, there were no cases with either nodal involvement or distal metastases. for Estrogen receptors (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER2), assessed immunohistochemically, were negative in all cases. Immunohistochemistry for epithelial and myoepithelial markers showed characteristic organisation around true glandular spaces and pseudolumina, confirming the diagnosis. Three patients have undergone surgical resection of the tumour - mastectomy or lumpectomy. One patient received adjuvant radiotherapy and chemotherapy, one chemotherapy without radiotherapy and one received no adjuvant therapy. Information about the treatment were not available for two patients. Median follow up of patients was 21 months (range 11 to 83). Two patients developed a metastatic disease, however no deaths were recorded.
Conclusions: ACC is a rare neoplasm of the breast and there are no robust recommendations for the treatment. ACC of the breast is regarded as an indolent disease, in contrast to ACC from other localisations. However, our case series shows that, despite its apparent indolent malignancy, it could present an aggressive course with distal metastases, which calls for a deep awareness of both pathologists and the clinicians in diagnosis and selection of appropriate therapeutic strategies.

Keywords: Breast.cancer.rare.upredictable clinical behaviour.pathology

SUCCESSFUL PREGNANCY IN PATIENT WITH PANHYPOPITUITARISM

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Background: Panhypopituitarism is defined as a deficiency of two or more of the hormones released by the pituitary gland. It can be caused either by congenital or acquired defects. Tumors located in the sellar region and their treatment are the most common reason of pituitary gland dysfunction. The majority of those lesions are pituitary adenomas. Rathke's cleft cysts are observed less frequently. Symptoms of hypopituitarism include among others growth retardation, short stature and delayed puberty leading to infertility. Moreover it can cause secondary hypothyroidism and hypocortisolemia as well as diabetes insipidus and hyperprolactinemia. Most patients suffering from hypopituitarism require adequate hormone replacement therapy. Spontaneous pregnancy in women with panhypopituitarism is rare as a result of ovulation disorders. It is also considered high risk for both mother and fetus. Obstetric complications such as postpartum hemorrhage (8,7%), transverse position (16%) and small for gestational age (42,4%) are more likely to occur than in physiological pregnancy. We present a case of a successful pregnancy in patient with panhypopituitarism.
Case Report: A 32-year-old woman with previous history of panhypopituitarism after Rathke's cleft cyst removal presented to infertility clinic for infertility treatment. Ovulation induction using follitropin alpha was performed. She had undergone IUI and two IVF. The second IVF attempt lead to a singleton pregnancy. Hormone replacement therapy was adequately adjusted: levothyroxine, cortisol, vasopressin and other drugs were administered according to the IVF protocol. At 6 weeks of gestation threatened miscarriage occurred, which was treated conservatively. Fetal development was normal. The patient developed hypertension at 36 weeks of gestation. She was admitted to the hospital and antihypertensive therapy was administered. At 37 weeks of gestation she had undergone emergency caesaerean section due to symptoms of severe preeclampsia and transverse position. A healthy 2,8 kg female baby was delivered. Following the delivery the patient required continuation of antihypertensive therapy. Both infant and mother were discharged feeling well.
Conclusions: The presented case history proves that successful pregnancy can occur in patients with hypopituitarism but requires individualized treatment. Appropriate management during pregnancy and delivery is crucial for positive outcome in these patients.

Keywords: Hypopituitarism, Rathke cleft cyst, pregnancy

MORPHOLOGICAL EVALUATION OF ATHEROSCLEROTIC PLAQUE IN THE INTERNAL CAROTID ARTERIES – CASE REPORT.

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Background: Frequency of internal carotid arteries' stenosis increases in population. 90% of cases are caused by atherosclerosis. Separation of thrombi, fragments of atherosclerotic plaques or complete occlusion of the artery can cause stroke or transient ischemic stroke. The treatment of this disease depends on the degree of narrowing of the vessel and therefore thorough diagnosis of atherosclerotic plaque is the basis for further treatment.
Case Report: A patient with cerebral circulation insufficiency was referred from the neurological clinic to the ultrasonographic evaluation of carotid and vertebral arteries to assess their patency. In the ultrasound examination in the internal carotid artery, on the posterior wall, the presence of atherosclerotic plaque with significant ulceration over 3 mm was diagnosed. The described atherosclerotic plaque causes an acceleration of the blood flow velocity at the limit of hemodynamic significance - narrowing about 60%.
Conclusions: Doppler ultrasound allows hemodynamic evaluation of blood flow in the carotid arteries, especially acceleration in the narrowed section. In addition, the ultrasound examination can accurately assess the morphology of the plaque and accurately assess its complications such as ulcers, which with the center of more than 2 mm, significantly increase the risk of embolism.

Keywords: atherosclerosis, plaque, USG, Doppler ultrasound

MANTLE CELL LYMPHOMA- THE GREAT IMITATOR

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Background: Mantle Cell Lymphoma (MCL) is a relatively rare and aggressive form of non-Hodgkin lymphoma. It consists of cells with irregular nuclei and it infiltrates the mantle zone surrounding the germinal centers. The key event in pathogenesis is the gene translocation t(11,14)(q13;q32) which in turn is responsible for overexpression of Cyclin D1. Its continuous production results in the disturbance of cell cycle in G1-S phase. The course of the disease often involves lymph nodes, bone marrow, gastrointestinal tract, lungs, Waldeyer's ring, being the skin rarely involved.
Case Report: The patient was admitted to the Department of Dermatology, Venerology and Pediatric Dermatology due to several diffuse cutaneous erythematous plaques involving mainly face, upper limbs and trunk. Skin involvement suggested erythema gyratum repens, a rare paraneoplastic skin rash associated with malignancies. The patient was fully tested in search for underlying neoplasm, including tumor markers, protein electrophoresis with immunofixation, colonoscopy, gastroscopy. None of these showed pathological changes. The patient was consulted with hematologist – without further diagnostic implications. Due to the change of clinical presentation onset of erythematous plaques and nodules, weight loss and fatigue the screening was repeated including CT- scans of thorax and abdomen. The final diagnosis of MCL was based on a histopathological examination of lymph node biopsy.
Conclusions: Awareness of skin manifestations of MCL is crucial for dermatologists, hematologist and hematooncologists to establish the early diagnosis and proper treatment.

Keywords: Mantle Cell Lymphoma, Erythema gyratum repens, paraneoplastic syndrome

UNEXPECTED LOCATION OF INFECTIVE ENDOCARDITIS.

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Background: Infective endocarditis (IE) is uncommon, however it's incidence is on the rise. IE is associated with significant short- and long-term morbidity and mortality. The estimated prevalence is 3-9 per 100,000 persons. There is an increased incidence of IE in people over 65 years of age. The male-to-female ratio is over 2:1. 1-year mortality for IE remains relatively high with reported rates between 20% and 30%. The disease is usually caused by bacterial infection. The most common symptoms are: fever, malaise, endurance fatigue, petechiae, heart murmur, weight loss.
Case Report: In our report, we describe the case of a 61-years old woman suffering from acute kidney injury (AKI), S.aureus sepsis, infective endocarditis, second-degree tricuspid regurgitation, second-degree mitral regurgitation, normocytic anemia and hypertension. The patient was admitted to the hospital due to sepsis and AKI. The levels of inflammation markers and D-dimer were extremely high. Blood culture showed S.aureus infection. The search for the source of infection began. During extensive diagnostics, an unusual IE location was detected. Cardiac echo revealed a vegetation on both leaflets of tricuspid valve (23x13mm-on the anterior leaflet and 15x7mm-on the septal). Right-sided IE is characteristic of drug addicts or patients with implanted devices, which was a huge surprise, because the patient did not belong to any of these groups. It is essential that CT of the chest indicated lesions arguing for septic blockages with multifocal pulmonary infarctions and fluid in the pleural cavity. The patient underwent dialysis and pleurocentesis. According to antibiotic sensitivity vancomycin and levofloxacin were used. The patient takes enoxaparin and is without cardiac surgery so far. This woman is in the middle of therapy and it is difficult to predict her fate now.
Conclusions: Left-sided IE is the most common. IE is a life-threatening condition with high mortality. The prognosis depends mainly on the etiological factor, the time that has elapsed since the first symptoms to the beginning of proper treatment, the age of the patient and the presence of embolic complications. IE in a patient with hemodialysis has a significantly worse prognosis. Furthermore, survivors have increased morbidity and reduced survival compared to the general population.

Keywords: IE, septic embolism, AKI.

CRITICAL ISCHEMIA OF LOWER LIMBS - IATROGENIC COMPRESSION OF THE NECK OF THE BIFURCATED STENT-GRAFT

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Background: The abdominal aortic aneurysm is a dilatation of infrarenal part of aorta. Ethiology of aneurysm is still unknown. Among main risc factors we can distinguish an infection and congenital disorders of conjunctive tissue. Nowadays the most common method is the endovascular procedure. An extremely important stage of the endovascular procedure is control after stent-graft implantation. This stage allows to confirm the correct location of the stent-graft and to evaluate the adequate flow through the vessels. Important thing is that the effect should be assessed in different planes of C-arm. Thanks to this, the risk of postoperative complications may significatelly be reduced.
Case Report: We present the case of 72-years old male who had been admitted to the Department of Vascular Surgery and Angiology with symptoms of ischemia of the lower limbs resembling to the Leriche syndrome. Previously, the patient underwent implantation of stent-graft into the abdominal aorta. Angio-computed Thomography, showed critically restricted blood flow through bifurcated stent-graft. Due to compression of its neck. In the first stage neck of stent-graft was decompressed by using ballooning technic. In the second stage stent-graft was implanted into aneurysm of the thoracic aorta. During the control angio-computed thomography confirmed positive effect of the procedure. There was no leak of the implanted stent-grafts with normal blood flow in the aorta. After few days the patient was discharged from the hospital without any symptoms.
Conclusions: Endovascular procedures such as implantation of stent-graft require exact postoperation diagnostics. It is important to perform angiography in the anteroposterior and lateral view to confirm the correct position of the stent-graft and normal blood flow through stent-graft. Such proceeding reduces the risk of complications and re-operations

Keywords: Aneurysm, Stent-graft, Complications

CHOLEDOCHOLITHIASIS AFTER CHOLECYSTECTOMY – DIAGNOSTIC IMAGING

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Background: Cholelithiasis is the most common disease of gallbladder. In Poland it occures in 20% of population. The main indication for surgical treatment is symptomatic cholelithiasis, which is the problem of 1/3 patients. Complications of cholecystectomy may include damage of bile ducts or hemorrhage. In case of small deposits, the stones can lodge in a common bile duct and cause the blockage. Choledocholithiasis happens in 5-10% cases of patients with cholelithiasis and it should be suspected if the patient after cholecystectomy is suffering from abdominal pain.
Case Report: The patient was admitted to the hospital with persistent, severe abdominal pain radiating to the back. Cholecystectomy was performed 6 months earlier. The first ultrasound of abdomen revealed common bile duct (CBD) expanded to 10mm, without deposits and proper intrahepatic bile ducts without deposits. The next two ultrasound examinations have shown stone-less, enlarged CBD (12mm) and proper intrahepatic bile ducts. Choledocholithiasis was suspected. The patient was refered to the Magnetic Resonance Cholangiopancreatography (MRCP). The MRCP revealed expanded to 12mm CBD with filling defects in the form of stones, proper intrahepatic bile ducts without deposits and proper duct of Wirsung.
Conclusions: Magnetic Resonance Cholangiopancreatography is an imaging technique that visualize the biliary and pancreatic ducts in a non-invasive manner. It is useful in the diagnosis of choledocholithiasis. MRCP allows to confirm or exclude presence of stones in CBD which can be unseen in ultrasound.

Keywords: choledocholithiasis, MR, cholecystectomy, common bile duct

SPONTANEOUS INTRAMEDULLARY SPINAL CORD HAEMORRHAGE DUE TO ANTICOAGULATION THERAPY.

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Background: Anticoagulants are being used well frequently in prevention of venous thromboembolism (VTE). They can counteract following complications like pulmonary embolism or stroke. However, it may occur unwanted effects like bleeding especially in digestive system and central nervous system (CNS). The frequency of hemorrhagic complications is correlated with level of International Normalized Ratio (INR) which is usually elevated in therapeutic range (INR 2-3). In CNS the most common are intracranial haemorrhages, but less common intramedullary spinal cord haemorrhages might be equally destructive.
Case Report: The patient was admitted to the hospital with acute abdominal pain under Th8 dermatome and paraplegia. He was treated with anticoagulants therefore INR was 15. In relation to presenting complains there was a suspiction of spinal cord lesion and subsequently MRI was performed with T1-weighted, T2-weighted and T1- and T2 Fat-Sat-sequence, additionaly hemo option was performed. Scans, in all sequences showed abnormal fusiform hyperintesity area in the spinal cord that was about 2cm x 1cm x 1cm at the level of Th5 and Th6. This patological change filled out almost whole width of spinal cord. „Hemo" sequence confirmed the presence of hemosiderin deposits at the level of Th5 to Th7 and T2-weighted sequence additionaly showed intraspinal edema from Th4 to Th8/Th9.
Conclusions: The most common reason of intraspinal nontraumatic hematoma is vascular malformation, but it is important to take it into consideration that bleeding may also appear due to anticoagulation therapy. The best method, which is using to diagnose spinal cord diseases, is MRI which had been performed and it showed lesions responding to presenting complaints. The treatment of intraspinal bleeding includes reversal of anticoagulation.

Keywords: anticoagulants, hematomyelia, MRI

MENIERE'S DISEASE RESISTANT TO PHARMACOLOGICAL TREATMENT - A CASE REPORT.

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Background: Meniere's disease is a rare chronic disease of the inner ear characterized by triad of symptoms including tinnitus, hearing impairment and vertigo. Pathology involves the excessive buildup of fluid in endolymphatic chamber that stretches vestibular membrane. Eventually, the membrane ruptures resulting in mixture of endolymphatic and perilymphatic fluid that enhances the symptoms.
Case Report: We present a case of patient with Meniere's disease of right ear after the operation involving the endolymphatic sac drainage to show the difficulties in disease diagnosis. A 73-year old patient was admitted to the Department of Neurology (in March 2014) due to recurring vertigo, nausea, tinnitus, balance disorders and nystagmus. For around 3 years, these symptoms had been treated ineffectively by GP as possible results of anaemia due to recent rectal cancer (2000) and atrial fibrillation (AF) (15 hospitalization with cardioversion). Patient underwent MRI, EEG, USG Doppler (TCD, TCCD), laryngological consultation, sensory organization test for balance disorders and hearing examination. Despite presence of clinical traid of Meniere's disease and inappropriate results of audiometric tests, the diagnosis remained unclear and pharmacological symptomatic treatment was introduced (Betanil Forte, Lucetam, Milgamma N) In July 2016 patient was admitted to Department of Laryngology in specialistic clinic due to constant vertigo complicated by balance disorders and loss of consciousness sometimes accompanied by episodes of AF. Patient underwent RTG, MRI, CT. Sensory organization tests were repeated showing worse results than in 2014- patient fell during experiment. Audiometric research showed bilateral disruption in optokinesis (yet, right side was more affected) and left sided horizontal nystagmus. That indicated on vestibular system impairment of a right ear. The research results in diagnosis of Meniere's disease of right ear. In December 2016, because of no significant progression due to pharmacological treatment, patient was assessed to drainage of endolymphatic sac. Currently, although patients sometimes suffers from vertigo yet the symptoms are minimized and his general condition is very good.
Conclusions: The diagnosis of Meniere's disease is complex and involves eliminating other medical entities. Additionally, the symptoms interfere the patients life in extensive range that involve specialistic treatment. Due to modern surgical treatment, even if pharmacology fails, patients have possibility to minimize the effects of the disease.

Keywords: Meniere's Disease, vestibular disorders, tinnitus, vertigo, hearing loss.

A LUNG TUMOR IN A PATIENT WITH KIDNEYS INSUFFICIENCY – AN INTERDISCIPLINARY PROBLEM OF DIAGNOSIS AND TREATMENT – A CASE REPORT

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Background: Pulmonary carcinoma is the most commonly occurring cancer in polish men's population. Symptoms aren't specific : loss appetite and body weight, easy fatigue, elevated body temperature and chronic, dry, and fatiguing cough. Less common but more specific hemoptysis is observed. X-ray chest is the first step to diagnosis. CT may be necessary to confirm carcinoma.
Case Report: We present a case of a 77-years old man with end-stage renal disease (ESRD) suffering from pulmonary carcinoma and the problems of his diagnosis and treatment. In 2010 the patient was diagnosed as ESRD patient of unknown reason. Before this moment he haven't been treated of any disease. We also found a high blood pressure and a small prostate hypertrophy. In the past the patient smoke cigarettes approximately 30 years, at least 20 pieces per day, but more than ten years he didn't smoke any more. The patient started peritoneal dialysis, at the beginning he was treated by using a cycler (APD) , but after 2 years he was transferred to continuous ambulatory peritoneal dialysis. About four years ago he reported a chronic pain in lower part of the chest, diagnosed as hyperacusis, a part of polyneuropathy observed in ESRD patients. Since January to March 2018 he suffered from "upper respiratory infection" treated by GP. Despite antibiotics use no improvement was observed. Patient had chronic and dry cough. In May 2018 X-ray chest examination revealed a tumor in the left lung. The patient was sent to the oncological center and there, because of kidneys injury instead of CT scans , PET scans was performed. The final confirmation of the lung tumor and it's matter was get by performing bronchofiberoscopy with EBUS in the thoracic surgery department. In histological examination a lung carcinoma was established. Chemotherapy and surgical treatment wasn't possible in this patient. The oncologist proposed to the patient radiotherapy. We'd like to transfer the patient to hemodialysis witch is more efficacy in sustaining water balance.
Conclusions: Diagnosis and treatment in patients with ESRD is in some cases difficult, costful and dangerous to the patients. Moreover it needs cooperation of many specialists

Keywords: renal insufficiency, lung tumor, diagnosis, treatment

RARE CAUSE OF RAPID MENTAL DETERIORATION – A CASE STUDY OF SPORADIC CREUTZFELDT-JAKOB DISEASE

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Background: Creutzfeldt-Jakob disease (CJD) belongs to transmissible spongiform encephalopathies. It is caused by the pathological prion protein (scrapie, PrPSc) which accumulates in the central nervous system and other tissues. It's a progressive, fatal and untreatable neurodegenerative disease. Sporadic CJD is an extremely rare condition, approximately one case occurs per 1,000,000 population per year with a worldwide distribution.
Case Report: A 57-year-old woman was admitted to the Neurological Department due to blurred speech, impairment of vision and gait. Initially transient ischemic attack was suspected. In the neurological examination on admittance the patient presented psychomotor slowness, dysarthria, impaired visual acuity and positive Romberg test. Gradually developed: dementia, aphasia and blindness. Markers of autoimmune encephalopathies came back negative. Protein 14-3-3 was absent in the cerebrospinal fluid, RT-QuIC test was planned. The third MRI showed lesions fulfilling the criteria of CJD diagnosis. Sequential EEG revealed bioelectrical activity suggesting CJD. Ultimately general condition of the patient worsened, the patient was without verbal contact, did not make any purposeful movements, generalized myoclonus was observed. After 3 months of observation the patient died.
Conclusions: CJD is the most frequent of the human prion diseases, although it is still rare. It's difficult to diagnose CJD because of nonspecific symptoms and the lack of any specific markers for CJD. Main clinical manifestation of CJD are rapidly progressive mental deterioration and myoclonus. Based on clinical symptoms, the disease can be characterized only as possible or probable.

Keywords: Creutzfeldt-Jakob disease, protein 14-3-3, mental deterioration

RARE UROLOGICAL NEOPLASM - TESTICULAR ADULT GRANULOSA CELL TUMOR – CASE REPORT.

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Background: Granulosa cell tumor is a sex-chord stromal tumor that occurs mainly in ovaries. It may be classified as a juvenile and adult type. Juvenile type is mainly benign. Testicular adult granulosa cell tumor is very rare. Its clinical progress is very hard to predict and may have malignant potential. Testicular granulosa cell tumors usually do not invade the tunica albuginea. Focal infiltration of the testicular parenchyma can be present. Cases reported previously have shown that only tumors over 5 cm in diameter were associated with adverse course. Less than 50 cases of testicular adult granulosa cell tumor were reported to date. Only 6 patients had metastatic disease. At the moment the average age is 45 (range 16-77). Due to lack of data reports no optimal treatment has been established.
Case Report: 57-year old male was admitted to hospital in order to surgical excision of tumor of left testis. Examination of the patient has shown abnormal mass (10x11x7cm) infiltrating whole volume of the left testis. Patient experienced acute testicular pain that started few months before admission to hospital. LDH level was elevated up to 265 U/L and AFP and beta-HCG levels were within normal range. Surgical excision of the left testis was performed.?There were no complications during the procedure and postoperative period. Histopathological examination revealed testicular adult granulosa cell tumor not infiltrating tunica albuginea of the testis. It was immunohistochemically positive for inhibin, calretinin and negative for epithelial membrane antigen. The patient was immediately send to oncological out-patient clinic. No local and distal metastases were diagnosed. No further treatment was prescribed.
Conclusions: It was found that following features were those which may predict the higher malignant potential of the tumor: size > 5,0 cm, lymphovascular invasion, tumor necrosis and hemorrhage. Due to the lack of data reported, no evidence of additional therapy after orchidectomy was found. There is also no consensus considering adjuvant treatment for metastatic disease which may include chemotherapy and/or radiation. Testicular adult granulosa cell tumor with reference to its rarity should intensify medical watchfulness and collaboration of urologist, pathologist and oncologist.

Keywords: urology, adult type, testicular, granulosa cell tumor

26-YEARS-OLD-PATIENT WITH SPONDYLO-EPI-METAPHYSEAL DYSPLASIA

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Background: Spondylo-epi-metaphyseal dysplasia is a congenital disease, type of dwarfism, with shortening of limbs, cleft lip and palate, small chest and convex abdomen. Afterwards it may lead to near-sightedness. Furthermore it's stated genu valgum and varum.
Case Report: 26-years-old-patient with spondylo-epi-metaphyseal dysplasia, agreement for operation in our clinic from her we have received, in order lengthening of left leg with correction of genu valgum and application of an Ilizarov apparatus afterwards. The result of this performance was, according to expectations, lengthening of operated limb with correction of genu valgum.
Conclusions: Use of Illizarow apparatus is a valuable method in patients with congenital skeletal disorders.

Keywords: 26-years-old-patient, spondylo-epi-metaphyseal dysplasia, Ilizarov apparatus.

SEVERE ETHYLENE GLYCOL POISONING OF 56 YO WOMAN – CASE REPORT

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Background: Ethylene glycol poisoning is one of the heaviest poisonings of toxicology. Nowadays, the number of people with alcohol addiction is still increasing. In the course of addiction, non-food alcohols can be also consumed. . Ethylene glycol is quickly absorbed from the digestive tract. Its toxicity is the result of combining few different mechanisms. Metabolites of decomposition, especially glycolic acid, are responsible for appearance of metabolic acidosis. Precipitated crystals of calcium oxalate additionally impair the function of organs such as kidneys, CNS and circulatory system.
Case Report: We present the case of 56 years old woman, who was admitted to Toxicology Department because of ethylene glycol poisoning. According to interview we know that she has been consuming alcohol for a few days before the incident. Her general condition in that moment was very severe. She had respiratory insufficiency and severe metabolic acidosis. Laboratory tests showed high level of ethylene glycol (190mg/dl) and benzodiazepines (745,13ng/ml). Intensive therapy was carried out, including antidotal treatment (ethanol) and hemodialysis. During further hospitalization there were observed features of acute kidney injury (Creatinine: 4,43mg/dl; eGFR: 10,4ml/min/1,73m2) and electrolyte disturbances. The general condition improved due to the treatment applied. After psychiatric evaluation the patient was transported to psychiatric hospital.
Conclusions: In pathogenesis of ethylene glycol poisoning toxic metabolites are crucial. The diagnosis of ethylene glycol is often a very hard task. It it is based on the interview, a set of syndromes, biochemical tests and targeted toxicological tests. This poisoning occur the most often among patients addicted to alcohol. It may lead to multi- organ damage or even death. It’s very important to make a diagnosis quickly and to implement effective treatment: hemodialysis and giving specific antidotes – Fomepizole and ethanol. In differential diagnosis there should be taken into consideration various states with respiratory insufficiency, metabolic acidosis and acute renal injury. It is very often that patients are influenced by some other chemical substances, different alcohols or drugs, which causes the diagnosis harder to make – as in the presented case.

Keywords: Ethylene glycol poisoning, alcohol poisoning, toxicology

DIFFERENT APPROACHES TO MANAGE ACROMEGALY – A CASE SERIES.

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Background: Acromegaly is a pituitary hormonal disorder which affects adults. The symptoms are caused by an excessive level of GH and successive hypersecretion of IGF-1. The disease is characterized by an acquired progressive somatic disfigurement but the most important systemic consequences of acromegaly are: hypetension, increased risk of cardiovascular disease, secondary diabetes and neoplasms.
Case Report: We present case studies of 3 patients diagnosed with acromegaly due to pituitary macroadenoma, with special focus on differences in treatment options and outcomes. The first patient underwent two subsequent surgeries with incomplete resection of the pituitary macroadenoma. This woman sufferes from most characteristic symptoms of acromegaly, such as hypertension, diabetes, left cardiac ventricular hypertrphy. Because of active acromegaly, unsuccessful surgicical treatment, somatostatin analogs were applied, but the level of IGF-1 is still increased. The patient could probably benefit form therapy with pasireotide- a new somatostatin analog with different SSTR subtype affinity. The second patient underwent a transsphenoidal resection of pituitary macroadenoma and suffers from active acromegaly because of incomplete resection. The somatostatin analog therapy was reintroduced during the post-operative evaluation, but her disease is well controlled and her IGF-1 remains within reference range. The third case is an example of effective surgical treatment. This patient does not require any therapy with somatostatin analogues.
Conclusions: The main objective in treatment of acromagaly is a complete resection of the pituitary adenoma. When the surgical approach is contraindicated or proves to be ineffective due to infiltration of cavernous sinuses, the GH and IGF-1 levels should be controled with somatostatin analogues therapy to prevent disease systemic complications.

Keywords: acromegaly, macroadenoma, somatostatin analogues

UNUSUAL CAUSE FOR A VERY SEVERE AND RARE MANIFESTATION OF A WELL-KNOWN CONDITION - A PANCREATITIS CASE REPORT.

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Background: One third of inexplicable weight loss are secondary to malignancy. Ascites, while being a relatively common finding in emergency setting ultrasonography, always calls for a prudent investigation to find it's cause. Both of those conditions, paired with non-characteristic abdominal pain and a clinical worsening of patient's state are highly alarming and require ruling out very serious diseases with poor outcomes before opting for a more favourable diagnosis.
Case Report: A 48-year old female got admitted to the hospital because of the rapidly increasing ascites and abdominal pain – especially in the upper abdomen, radiating to the spine. Apart from that, she complained of around 10 loose stools per day, without visible traces of blood and oliguria; all those symptoms persisted for about a week before the admission. Moreover, the patient unintentionally lost ~10kg in 6 months before the hospitalization. Laboratory tests indicated the increase in inflammation markers; amylase, AST, GGT, d-dimer increase; hypoalbuminemia and anemia. In the beginning of the diagnostic process, subsequent imaging procedures revealed nothing but chronic pacreatitis signs and massive ascites – without any findings indicative for it's cause. In addition to that, numerous gynecological consultations were performed to exclude malignancy. Paracentesis revealed bloody peritoneal fluid with high amylase concentration. In spite of the gross appearance (possibly indicative of pancreatic or ovarian cancer, both with poor prognosis), the analysis of the fluid revealed no neoplastic cells. In this case report, final diagnosis based on the clinical image and further radiological findings, introduced treatment and patient's outcome are described.
Conclusions: Careful diagnostic process is always essential for the best outcome of the patient, especially the one presenting with multiple "red-flag" symptoms. Nevertheless, ruling out the most suspicious diseases with the use of specialist procedures doesn't necessarily facilitate making the final diagnosis and introducing appropriate treatment. This paper underlines the necessity of the awareness on extraordinary manifestations of well-known conditions, in order to apply the best possible treatment; reminding, that "classic" conditions might always pose a massive diagnostic challenge for clinicians.

Keywords: gastroenterology, endocrinology, internal medicine, fistula, rare manifestation

WHEN YOU NEED TO LOOK AT THE PATIENT'S HEART - COMPLICATION AFTER THORACIC AORTA SURGERY - CASE REPORT.

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Background: Complications of cardiothoracic surgery are rare (0,5-2%) but associated with high morbidity and mortality (even 88%). Most common postoperative complications include osteitis, deep sternal wound infection with mediastinitis, prosthetic aortal graft infection, which may lead to anastomotic dehiscence, perigraft hematomas or abscesses, aortic pseudoaneurysms, and fistulas. Symptoms of aortic graft infection may be nonspecific, including recurrent fever, chest or back pain and swelling. Early diagnosis is crucial, as delay of treatment is associated with an increase in mortality. ECG-gated computed tomography (ECG-CT) is most commonly used imaging modality for assessment of postsurgical cardiac and ascending aorta graft complications - its sensitivity and specificity ranges between 55-64% and 86-100%, respectively. Signs of graft infection on ECG-CT include large amounts of low-attenuation perigraft material, pseudoaneurysm, and perigraft gas collections.
Case Report: An 11-year-old female patient suffering from Marfan syndrome was admitted to the cardiology ward, presenting with high fever and signs of sepsis. Analysis of the medical history revealed an open-heart surgery aimed to close an atrial septal defect (ASD II). During another surgery, a composite graft replacement of the aortic valve, aortic root and ascending aorta (Bentall procedure) was performed along with the mitral valve replacement. Afterward, an increasing haematoma and signs of a cardiac tamponade required reopening the patient's mediastinum. On readmission, EKG-CT was ordered due to clinical history and present symptoms suggesting mediastinitis. It showed an aortic pseudoaneurysm and the presence of an abscess around the aortic graft. The patient did not qualify for a surgical intervention due to high risk of death and a slim possibility of a successful outcome. She was administered wide-spectrum antibiotics, which reduced the inflammation and improved her general condition. A year later EKG-CT was repeated, confirming the presence of a pseudoaneurysm and a reduction in the volume of free fluid around the graft.
Conclusions: Computed tomography is an indispensable method of assessing anatomical relations after a cardiothoracic surgery, allowing to monitor the evolution of complications resulting from these procedures. It is a vital tool for clinicians, enabling them to choose an appropriate course of treatment.

Keywords: ECG-gated computed tomography, thoracic aorta surgery, pseudoaneurysm, aortic graft infection

GRAVES DISEASE FOLLOWING RADIOIODINE THERAPY FOR NON-TOXIC GOITER: CLINICAL CASE REPORT.

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Scientific supervisor:

Background: The term non-toxic goiter refers to abnormal growth of the thyroid gland with normal thyroid hormone production. There is no consensus regarding the optimum treatment of non-toxic goitre.
Case Report: Department of Nuclear Medicine, Medical University of Bialystok, Bialystok, Poland. A 44-year-old female, with non-toxic goiter was referred to our Department for thyroid volume reduction. Serum levels of FT4, FT3 and TSH were within normal range, high resolution ultrasonography show enlarged thyroid glands (50 ml), with 2 nodules: one in the left and one in the right lobe. Malignancy was ruled out by ultrasound-guided fine-needle aspiration biopsy. Thyroid radioiodine scintigraphy showed homogenous and diffuse uptake in the right lobe, with very low uptake in the left lobe, radioiodine uptake (RAIU) after 24 and 48 h was 32.3 and 33%. The effective half-life measured by the use of RAIU was about 7 days. The activity dose was calculated by Marinelli's formula and the patient received 280 MBq of I-131. The absorbed dose was about 200 Gy. After 3 months of radioiodine therapy, the patient developed hyperthyroidism. TSH serum levels decreased and serum FT4 and FT3 increased, the TSH receptor antibodies increased, anti-thyroglobulin antibodies and anti-peroxidase antibodies were within normal range. The patient received antithyroid drugs to control the hyperthyroidism, after 6 months of radioiodine therapy the patient was in subclinical hyperthyroid state, thyroid scintigraphy showed homogenous and diffuse uptake in both lobes with small reduction in the thyroid volume. RAIU after 24 and 48 h was 53 and 48% respectively. The patient received more doses of antithyroid drugs to achieve euthyroidism before the second dose of radioiodine therapy.
Conclusions: Radioiodine therapy is non-invasive, safe and cost effective method of therapy for reduction of goiter even in patient with low radioiodine uptake and should not be restricted to elderly, or to patients with high operative risk. In this case radioiodine therapy induced hyperthyroidism, maybe due to the activation of silent Graves' disease.

Keywords: Hyperthyroidism, non-toxic goiter, radioiodine therapy;

CHRONIC USE OF PPI AS A POTENTIAL CAUSE OF ANAEMIA - CASE REPORTS AND REVIEW OF LITERATURE

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Background: Proton pump inhibitors (PPI) are drugs commonly used in many diseases of the gastrointestinal tract, such as gastroesophageal reflux disease (GERD), erosive oesophagitis and peptic ulcer of the stomach and duodenum. Used in case of treatment for about 30 years, they are currently the most effective drugs reducing gastric secretion of hydrochloric acid. Although, a dramatic increase of their consumption has been observed recently. More and more often, they are used not in accordance with the guidelines. The consequences of prolonged use of IPP may vary, with the most common side effects being bone fractures, cardiovascular events, recurrent infections, and vitamin and mineral deficiencies.
Case Report: A 82-year-old and a 58-year-old patients were admitted to the Outpatient Clinic of the Hematooncology department with vitamin B12 and iron deficiency anemia. Both patients were administered omeprazole orally, a proton pump inhibitor (PPI), for dyspeptic symptoms for a prolonged period of time. Both were screened negative for H. pylori infection. Previous treatment with B12 and iron sulfate were ineffective. Patients were switched to ranitidine and the anaemia was cured within three months.
Conclusions: There are no definitive evidences that the long-term use of PPI can induce anaemia, but our cases strongly suggest that thesis. The number of such cases is growing and there is a definite need for a more precise studies, considering the alleged link between the antidypeptics and the effectiveness of hematopoiesis that we would like to continue in the near future.

Keywords: PPI, case report, anaemia, B12 deficiency, iron deficiency

RARE RADIOLOGICAL IMAGE OF FOURNIER'S GANGRENE

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Background: Necrotizing fasciitis or Fournier's gangrene is a rare and life-threatening infection caused by aerobic and/or anaerobic microorganisms that synergistically affect subcutaneous tissue and fascia with microcirculation thrombosis, and consequently, rapidly progressive necrosis of the skin in the affected region. Necrotizing fascilitis is usually formed as a consequence of minor injuries or hygienic activities in this area. Men are 10 times more likely than women to have Fournier's gangrene. The most commonly observed comorbidity is diabetes mellitus. Common comorbidities include immunodeficiencies, hepatic cirrhosis, heart failure, obesity, alcoholism, systemic lupus erythematosus, Addison's disease, hypertension, and peripheral vascular disease. Many cases of the disease is manifested by changes in the perineum, buttocks and wall of the abdominal cavity.
Case Report: We present a very rare case of Fournier necrosis in a 65-year-old woman. Patient does not sufferfrom diabetes, autoimmune disorders or alcoholism. The computed tomography revealed gangrenous lesions dissecting intercytically from the tissues (left limb stump) of the left thigh to the crotch area. Necrosis includes the muscles and the abdominal and pelvic wall.
Conclusions: Fournier's gangrene is a disease with a dramatic course and uncertain prognosis. Treatment approach: intensive systematic management, broad-spectrum antibiotic therapy, early surgical debridement.

Keywords: Fournier's gangrene, necrotizing fasciitis, microorganisms

SINGLE LUNG TRANSPLANTATION FOR CYSTIC FIBROSIS WITH URGENT CARDIAC SURGERY.

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Background: Cystic Fibrosis is a congenital, progressive disease affecting many organs. It frequently leads to severe respiratory failure, which can be treated by means of double lung transplantation. Single lung transplantation is justified only in several cases.
Case Report: Case report describes 19-years old female patient, who became single lung recipient due to cystic fibrosis during cardiothoracic surgery which also included intervention in right atrium. At the age of 14 patient underwent left pneumectomy. Patient was qualified for lung transplantation at the age of 16. At qualification, she presented clinical symptoms of chronic respiratory failure. Additionally, patient had percutaneous endoscopic gastrostomy (PEG) and was implanted with vascular port. After 2 years on national lung transplant waiting list, she underwent removal of the right atrial thrombus followed by immediate single lung transplantation during one procedure. She was discharged 3 weeks after the procedure in good health. Nowadays, patient is treated with 3-drug immunosuppression based on tacrolimus and does not require supplemental oxygen therapy.
Conclusions: Patients with cystic fibrosis require double lung transplantation. Under normal circumstances, making single lung transplantation would be considered an improper treatment. However, in cases of patients life aforementioned recipient such procedure was necessary in order for her to live.

Keywords: single lung transplantation, cystic fibrosis, cardiac surgery, transplantation

PSYCHE OR SOMA: PARANOID SCHIZOPHRENIA CASE REPORT

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Background: Paranoid schizophrenia is the most common subtype of schizophrenia. Morbidity is estimated at approximately 20/100 000 people a year and affects both sexes to a similar extent. The first episode of schizophrenia usually occurs before the age of 30, earlier in men than in women. During the prodromal phase negative symptoms like lack of motivation, inability of focusing or social isolation mount. After the prodromal there is an active phase of schizophrenia in which patient usually experiences persecutory, thought broadcasting or mind control delusions and auditory hallucinations.
Case Report: 26-years-old male patient with the diagnosis of paranoid schizophrenia. Patient has been diagnosed towards eating disorders due to cessation of food intake and significant weight loss and towards endocrine disorders (elevated prolactin level, reduced urine specific gravity) since July. The patient was examined several times for urinary tract infections due to dysuria. In recent months, symptoms have intensified. He has stopped taking care of personal hygiene. The patient experienced violence in childhood. During last few years he was twice in two different convents, went to across the country to work, while not maintaining contact with his family. After returning home, he isolated from the environment and was reluctant to perform basic activities. The diagnosis of paranoid schizophrenia was based on the occurrence of negative symptoms such as: flattened affect, formal thought disorder, disturbed speech, slowness of speech, withdrawal, apathy, weakened emotional bond, isolation. During the diagnostic process lasting from the beginning of October, the patient reported auditory hallucinations once.
Conclusions: The patient has shown changes in behavior for several years but it was not associated with the disease. The diagnostic problem is dysuria. Due to the lack of cooperation of the patient, it is impossible to determine whether these symptoms result from somatic illness or are they cenesthetic hallucinations in paranoid schizophrenia. Also eating disorders may result from physical disorders or be a consequence of negative symptoms of the disease. Diagnostic process of eating disorders, endocrine and infectious disorders resulted in a significant prolongation of psychiatric treatment and the possibility of rapid therapy initiation.

Keywords: schizophrenia, paranoid schizophrenia

ISOLATED FETAL CYSTIC HYGROMA - A CASE REPORT

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Background: Cystic hygroma is a rare lymphatic malformation usually developing along the jugular chain in the cervicofacial region. It is benign fluid-filled cystic structure caused by incorrect connection with normal drainage pathways. Its pathogenesis is unknown. Incidence of cystic hygroma is 1/6000 live births. Macrocystic lymphatic malformations may exert meaningful mass effect on adjoining structures due to a potential large size.
Case Report: We are reporting a case of a 33-year-old woman in the first pregnancy admitted to The Department of Gynecology, Obstetrics and Gynecologic Oncology in Bytom because of diagnosed cystic hygroma in fetus during 1st trimester scan as isolated increased nuchal translucency. Other abnormalities were not found during 1st and 2nd trimester scan. Biochemistry values of blood samples from 1st and 2nd trimester were in the reference range for population. The prenatal USG during 2nd trimester has shown growth of neck mass to size 4,8x7cm. The pregnancy was complicated by hypothyroidism and uterine myomas. The patient underwent caesarean section in 37+3 Hbd. The male infant weighed 2490g and was 51 cm long. Apgars were 8 and 9 at 1 and 5 minutes respectively. Most of cystic hygroma mass was located on the neck in the posterior cervical triangle and to the left external region. It was soft, compressible, and partly translucent. It was asymptomatic, no stridor or vomiting was observed. Postnatal USG has shown cystic structure without vascularisation and with single septum inside of hygroma. The infant was transferred to the paediatric surgery department, where removal operation was postponed until neonate was 1 month old. The mother was discharged from the hospital with the recommendation of postoperative wound care in the 4th day after caesarean section.
Conclusions: Cystic hygroma is an important indicator of many congenital diseases such as Down syndrome, Turner syndrome, Noonan syndrome and fetal alcohol syndrome. It may cause potential airway obstruction leading to asphyxia. The treatment options of cystic hygroma are limited to sclerotherapy, surgical resection or both. The indications for method of treatment depends on extent and location.

Keywords: Cystic hygroma, lymphangioma,

SUCCESSFUL PREGNANCY IN PATIENT WITH PANHYPOPITUITARISM

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Background: Panhypopituitarism is defined as a deficiency of two or more of the hormones released by the pituitary gland. It can be caused either by congenital or acquired defects. Tumors located in the sellar region and their treatment are the most common reason of pituitary gland dysfunction. The majority of those lesions are pituitary adenomas. Rathke's cleft cysts are observed less frequently. Symptoms of hypopituitarism include among others growth retardation, short stature and delayed puberty leading to infertility. Moreover it can cause secondary hypothyroidism and hypocortisolemia as well as diabetes insipidus and hyperprolactinemia. Most patients suffering from hypopituitarism require adequate hormone replacement therapy. Spontaneous pregnancy in women with panhypopituitarism is rare as a result of ovulation disorders. It is also considered high risk for both mother and fetus. Obstetric complications such as postpartum hemorrhage (8,7%), transverse position (16%) and small for gestational age (42,4%) are more likely to occur than in physiological pregnancy. We present a case of a successful pregnancy in patient with panhypopituitarism.
Case Report: A 32-year-old woman with previous history of panhypopituitarism after Rathke's cleft cyst removal presented to infertility clinic for infertility treatment. Ovulation induction using follitropin alpha was performed. She had undergone IUI and two IVF. The second IVF attempt lead to a singleton pregnancy. Hormone replacement therapy was adequately adjusted: levothyroxine, cortisol, vasopressin and other drugs were administered according to the IVF protocol. At 6 weeks of gestation threatened miscarriage occurred, which was treated conservatively. Fetal development was normal. The patient developed hypertension at 36 weeks of gestation. She was admitted to the hospital and antihypertensive therapy was administered. At 37 weeks of gestation she had undergone emergency caesaerean section due to symptoms of severe preeclampsia and transverse position. A healthy 2,8 kg female baby was delivered. Following the delivery the patient required continuation of antihypertensive therapy. Both infant and mother were discharged feeling well.
Conclusions: The presented case history proves that successful pregnancy can occur in patients with hypopituitarism but requires individualized treatment. Appropriate management during pregnancy and delivery is crucial for positive outcome in these patients.

Keywords: Hypopituitarism, Rathke cleft cyst, pregnancy

HYPERSEGMENTATION OF GRANULOCYTES AND MONOCYTES IN PATIENT WITH PRIMARY MYELOFIBROSIS TREATED WITH HYDROXYCARBAMIDE.

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Background: Myelofibrosis (MF) is a chronic myeloproliferative neoplasm (MPN). Hydroxycarbamide (hydroxyurea, HU) is frequently given as treatment for myelofibrosis, when leukocytosis and thrombocytosis appear in the course of hyperproliferative stage of disease. Hydroxycarbamide decreases the production of deoxyribonucleotides via inhibition of the ribonucleoside reductase. Cytoreductive treatment with HU often results is megaloblastic anaemia and hypersegmentation of neutrophils.
Case Report: A 62-year-old man with a history of primary myelofibrosis was admitted to the emergency room due to abdominal pain. He remains under maintenance therapy with hydroxycarbamide. Complete blood count showed the following: white blood cells (WBC) count 169.73 x 10 9 /l, hemoglobin (HGB) 113 g/l, mean corpuscular volume (MCV) 115.20 fl and platelets (PLT) count 119 x 10 9 /l. A peripheral blood film showed 10% blasts, macrocytosis and nuclear hypersegmentation of neutrophils. Suprisingly, blood film presented extremely rare findings: hypersegmented basophils and eosinophils with “polymorhonuclear”, hypersegmented-like monocytes.
Conclusions: A side effect of hypersegmentation of neutrophils after MF treatment with HU is common. However impaired segmentation of other granulocytes’ nuclei remains unusual finding. This is the first described case of “polymorphonuclear” monocytes after HU treatment.

Keywords: hypersegmentation, myelofibrosis

DERMATOMYOSITIS AS A RISK FACTOR OF CARCINOGENESIS- CASE REPORT

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Background: Dermatomyositis (DM) is an idiopathic inflammatory myopathy involving proximal muscle weakness and non-suppurative skeletal muscle inflammation. The average age of diagnosis is 40 and almost twice as many women are affected as men, with a prevalence rate of 1 per 100,000 in general population. Diagnostic criteria include progressive proximal symmetrical muscle weakness, elevated muscle enzymes, myopathic changes on electromyography, characteristic muscle biopsy and typical skin rash (e.g., periorbital dusky violaceous erythema, or macular violaceous erythema such as in V, shawl, and Gottron signs). The autoimmune mechanism of disease development is not fully known. Several lines of evidence showed the link between DM and neoplastic disease.
Case Report: The aim of the work is to present a case of a 49 year old patient with DM diagnosed in 2016. Early symptoms were typical cutaneous manifestation- rash on the face and eyelids, Gottron sign, proximal muscle weakness, difficulties with deglutition and speech. Since 2017 blood tests were showing elevating value of CA-125 and positive ROMA test. In the CT scan of abdomen and pelvis there were no clear signs of carcinogenesis. In ultrasound scan thickening of endometrium was discovered. Tests results and digestive track cancer in the family were the reason for investigation towards gynecological cancers. In 2018 performed laparoscopic removal of both fallopian tubes and right ovary. Histopathological examination detected neoplastic cells in left oviduct. It was a low differentiated serous cancer infiltrating parts of fallopian tube, connective tissue and surrounding fatty tissue.
Conclusions: Dermatomyositis can be a risk factor of carcinogenesis. It is important to pay attention to possibility of cancer development. Patients should be under careful medical supervision.

Keywords: dermatomiositis, ovarian cancer

THE PROBLEMS OF TREATMENT OF DUAL DIAGNOSIS DISORDERS- CASE REPORT

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Background: Co-morbidity or dual diagnosis is defined by the World Health Organisation (WHO) as "the co-occurrence in the same individual of a disorder resulting from the use of a psychoactive substance".and other mental disorders'. In recent years, this problem has taken on importance in discussions, as it has become clear that an increasing and probably growing number of people are affected. Nearly half of the people suffering from schizophrenia during lifetime also present substance use disorders (SUD), a rate that is much higher than the one seen among unaffected individuals.
Case Report: 22-year-old woman admitted to a neuropsychiatric hospital due to inadequate behaviour, mutism, being subject to ethereal interpretations, experienced hallucinations of various modalities. Patient after alcohol intoxication. She denied the use of psychoactive substances but family reported that there was such a possibility in the past. She took medicines irregularly. The preliminary diagnosis was established as paranoid schizophrenia. During hospitalization, the patient denied the occurrence of manufacturing symptoms already in the first week. She was adapted in behaviour, calm, not very active, cooperating. In a superficial conversation, initially negating a mental health problem. Due to irregular psychotropic medication intake by the patient, it was decided to include treatment in the form of intramuscular injection in the form of depot. Initially zuclopenthixol was replaced by flupenthixol due to vision disorders. The patient declared motivations for a global change in the current functioning, therefore, continuation of therapy in the dual diagnosis centre in Gliwice was commissioned.
Conclusions: This case reveals the characteristics of treatment problems in patients with double diagnosis. Often these are patients with a long history of disease, numerous diagnoses and problems in treatment, who require appropriate form of pharmacotherapy, as well as care in a centre combining therapeutic models of psychoactive substance addicts' patients with mental illness.

Keywords: dual diagnosis, co-morbidity, substance use disorder

ULTRASONOGRAPHY DIAGNOSTIC OF PNEUMOTHORAX – CASE REPORT.

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Background: Pathological occurrence of air in pleural cavity is called pneumothorax. Within the last years, the relevance of transthoracic lung ultrasound in the diagnostic process of the pneumothorax has greatly increased. To diagnose pneumothorax at USG following criteria must be fulfilled: lack of lung sliding sign and B-line sonographic artefacts (and other vertical artefacts), present of changes referred to as A'-profile and lung point, undetectable lung (cardiac) pulse. Lung point is a point, which is end of pneumothorax cavity and sliding symptom is afresh possible to noticed. This term denotes a sonographic sign which marks the border between the pneumothorax and normally aerated lung.
Case Report: A 15 year old boy was submitted to the University Children's Hospital in Lublin due to anxiety and a persisting, sharp resting pain localised in the thorax. In auscultation, there was normal vesicular murmur, with distinct silencing at the top of the left lung. After admitting the patient, a chest X-Ray was done where a pneumothorax was visualized on the left side of the patient's chest. In order to confirm the diagnosis and what the previous diagnostic procedures have detected, a transthoracic ultrasound of the patient's lungs was conducted and revealed the lack of the lung sliding sign above the upper half of the left scapula. The lung point has been localised between the midaxillary line and the anterior axillary line (on the left side) while the patient was laying down. In the following ultrasounds the size of the air pocket of the pneumothorax was monitored. A conservative treatment was elected – oxygen therapy and rest.
Conclusions: Due to male sex, period of rapid growth and asthenic body type our patient was in risk group of idiopathic pneumothorax. In presented case all sonographic criteria for pneumothorax were filled. It speaks in favour for use USG procedure during diagnostic process and monitoring presenting air in pleural cavity.

Keywords: pneumothorax, ultrasonography

PLACENTAL MATURE TERATOMA – CASE REPORT

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Background: Tumours of the placenta are uncommon and not well-known lesions which develop from placental tissues during time of pregnancy. Placental neoplasms can be divided into three main groups: trophoblastic, non-trophoblastic and metastases of maternal neoplasms. Mature teratoma is a benign, non-trophoblastic tumour, which consists of all three germ layers tissues; hence, it can present skin, muscle or nervous tissue histology. These tumours occur commonly in ovaries or testicles; placental localization is extraordinary. The origin of placental teratoma is uncertain, albeit there is a theory, that they are result of migration of cells from yolk sac. The tumour always lies between the amnion and chorion. Most commonly is associated with umbilical cord. It is considered as neoplasm without any adverse effect on fetus or mother. Teratoma can be wrongly recognized as fetus acardius amorphus (fetus in fetu). However, fetus acardius amorphus has a separate umbilical cord. Teratoma does not have an umbilical cord, it gets blood supply from major fetal vessels.
Case Report: A thirty-six years old lady at 35 week of her 5th pregnancy was admitted to the Maternity Unit, PSK4 in Lublin. Since 20 week of gestation ultrasound examination showed tumor-like cyst within the amniotic sac. Caesarean section was performed and placenta was sent for histopathology. Gross examination revealed tumour mass connected to umbilical cord measuring over 10 cm in diameter. Microscopic examination revealed the mature components of teratoma – mainly fibrous, adipose and nervous tissue. Lack of one umbilical artery within the fetal umbilical cord was also diagnosed in the placenta.
Conclusions: Teratoma of placenta is very rare, bening tumour. Up to now, only approximately 25 cases were reported. This lesion can be a diagnostic problem, because it can be misdiagnosed as fetus in fetu. It is imported for diagnostics to have awareness about untypical placental changes like teratoma.

Keywords: Teratoma, placenta, tumour, case report

PATIENT WITH AUTOIMMUNE THYROIDITIS WITH NON-TYPICAL OPHTHALMOLOGY PROBLEM.

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Background: Thyroid-associated orbitopathy (TAO) is a set of ophthalmic symptoms resulting from autoimmune process. The reason is hypersecretion and accumulation of glycosaminoglycans in the orbital fibroblasts or by inflammatory process in the extraocular muscles. These changes may cause eyeball motility disturbances, keratopathy and compression of the optic nerve. TAO accompanies Graves' disease (GD) in most cases, however rarely it can occur in patients with Hashimoto's disease (HD).
Case Report: 46-year-old patient presented with exophthalmos. No history of smoking and no symptoms of hyper- or hypothyroidism were reported. On physical examination a significant, symmetrical proptosis of both eyes was found. The proptosis measured with Hertel's exophthalmometer was 27mm in both eyes. The CT of the orbits showed swelling of superior and inferior rectus muscles. Laboratory tests showed an increase in serum TSH, a decrease in serum FT4 and increased serum levels of thyroglobulin antibody (TgAb) and thyroid peroxidase antibody (TPOAb). The TSH receptor antibodies (TRAb) test was positive. Thyroid ultrasound showed hypoechogenic gland with normal thyroid volume. Fine-needle aspiration biopsy (FNAB) indicated chronic inflammation. The patient was diagnosed with Hashimoto's thyroiditis orbitopathy and treated with levothyroxine replacement therapy and corticosteroid therapy.
Conclusions: TAO is a symptom typical for GD but very rarely accompanies HD. TgAb and TPOAb are increased in both diseases. However, increased TRAb is common in GD but rarely positive in HD. A frequent transformation of GD into HD and conversely is probably related to the altered number of blocking and stimulating antibodies respectively. The increased TSH level, small thyroid volume with decreased echogenicity and chronic inflammation in FNAB support the diagnosis of HD. The cause of Hashimoto's atrophic thyroiditis is thought to be due to TSH stimulation-blocking antibodies (TSBAb). TSBAb is a TSH-receptor antibody which blocks the action of TSH hormone and subsequently causes thyroid atrophy and hypothyroidism.

Keywords: Thyroid-associated orbitopathy, Hashimoto's disease, autoimmune process, ophthalmic symptoms

ONE BLOOD SAMPLE – THREE DIFFERENT RESULTS. AN EFFECT OF LIPEMIA ON COMPLETE BLOOD COUNT.

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Background: The interference of lipemia with multiply laboratory tests is known as an important factor, which affects proper interpretation of patients results. Here we present an example of complete blood count (CBC) result, performed in one blood sample without and with diagnostician's intervention.
Case Report: A 54-year old man was admitted to the hospital due to newly recognized diabetes mellitus His past medical history includes pancreatitis two years ago, which he recovered well. His laboratory test results at admission were as follows: Na+ 142 mmol/l, K+ 4.6 mmol/l, glucose 261 mg/dl, creatinine 0.94 mg/dl, total cholesterol 957 mg/dl, HDL-cholesterol 74 mg/dl, triglicerydes (TG) 7525 mg/dl, lipase 33 U/L, HbA1C 8.2%, CRP 13.7 mg/dl, INR 0.95, aPTT 37.0. Complete blood count, due to incorrect results, was repeated three time using Yumizen H2500 Horiba and Sysmex XN-2000 hematology analyzers using impedance method and optical channel for red blood cells parameters measurement in highly lipemic samples. H2500, XN2000 impedance and XN 2000 optical showed: RBC 3.8, 4.16, 4.16 x1012/L, Hgb 17, 17.8, 13.0 g/dL, MCHC 43.0, 43.1, 31.5 g/dL, WBC 5.97, 6.68, 6.68 x109/L, neutrophil count 1.01, 3.74, 3.74 x109/L and lymphocytes 3.38, 2.31, 2.31 x109/L.
Conclusions: Falsely increased hemoglobin concentration in a sample with high triglycerides concentration results from absorbing and scattering light by chylomicrons and very low density lipoproteins (VLDL), but also from replacing plasma volume by TG. High TG also interfere with WBC differentiation, and such result of CBC should be interpreted cautiously.

Keywords: blood sample, lipemia, hemoglobin, hematology

LIFE-SAVING STENTING OF PULMONARY ARTERIES CRITICALLY NARROWED BY MEDIASTINAL LYMPHOMA

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Background: Stenting of pulmonary arteries is performed for some complex congenital heart defects. These operations are rare and are performed in patients in a stable state. Performing this procedure in a patient in a critical condition is associated with a much higher risk. To the best of our knowledge, this is a first reported pulmonary artery stenting as a life-saving procedure for the complications of mediastinal tumour.
Case Report: A 23-year-old woman reported to the hospital after returning from vacation due to shortness of breath, malaise and generalized swelling. Echocardiography performed in a city hospital revealed a large amount of free fluid in the pericardial sac (600 ml was drained). The patient was transferred to the another hospital. There was performed the diagnosis of pulmonary embolism (angio-CT), stating the presence within the mediastinum of a tumor narrowing critically pulmonary arteries. Then the patient was transferred to the Thoracic Surgery Department in order to collect histopathological specimens. A few hours later occured symptoms of profound shock, so the patient was intubated and transferred to the ICU of the Silesian Center for Heart Diseases in Zabrze. Despite the infusion of catecholamines, the features of shock were maintained. Laboratory tests showed profound acidosis (pH 7,21), very high transaminase values (AST 6000 IU/l) and INR values (6,09) as well as features of DIC. In view of the exhaustion of the current forms of therapy and the persistence of immediate life threatening, after the consultation, the decision was made to extend the pulmonary arteries by inserting stents to the left and right pulmonary artery (ultimately only to the right; the left artery extended similar to coronary arteries - PCI). After surgery a general improvement was achieved and in the following days – respiratory and circulatory improvement. The diagnosis was continued, finally confirming the presence of lymphoma. After 30 days of ICU treatment, the patient was referred to the oncological center. The woman underwent therapy, after which she recovered.
Conclusions: In case of pulmonary arteries stenosis, after an asymptomatic period, the patient's general condition deteriorates rapidly. Mediastinal tumors may be the cause of immediate life-threatening condition. Thanks to the innovative use of stents in pulmonary arteries, the patient's life has been saved.

Keywords: pulmonary artery, stenting, stents, lymphoma

Doctoral students` session

CORRELATION BETWEEN THE INFECTION OF HPV VIRUS AND BLADDER CANCER DEVELOPMENT

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Introducion: Evaluation of the prevalence of HPV in tumor tissue taken during transurethral resection of patients with bladder cancer.
Methods: 172 samples were taken from patients at different stages of the disease. 131 of the patients are men 80% of whom are active smokers or quit smoking. The methodology of work was based on DNA isolation (Maxwell RSC DNA FFPE) from fragments of formalin-fixed tissues embedded in paraffin blocks. Thanks to the Real-Time PCR technique, 14 high-risk HPV types were detected: 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68 and a beta-globin DNA fragment
Results: The results showed the presence of human papillomavirus in 7% of patients. The highest oncogenic HPV type, number 16, was observed in 4% of patients. The virus was isolated in G1 (43%) and G2 (57%). Statistical analysis did not show a significant correlation between HPV, sex, smoking, contamination or the degree of cancer.
Conclusions: Based on the obtained results, the correlation between HPV infection and bladder cancer can not be confirmed. The fact the high risk genotypes were detected suggests their potential role in the pathogenesis of bladder cancer, however, it is not possible to exclude the participation of other carcinogenic factors in this process (smoking, chemical compounds). A larger number of patients, as well as molecular diagnostics of genetic defects of bladder cancer, would allow more accurate determination of the degree of correlation between the pathogenesis of this cancer and infection with the HPV virus. Research will be continued.

Keywords: HPV, Bladder cancer

KNOWLEDGE AND SEXUAL BEHAVIOR OF YOUNG PEOPLE IN POLAND

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Introducion: Analysis of the knowledge of young people about their sexuality, contraception, preventive examinations and HPV virus.
Methods: The research was carried out in the form of a questionnaire published on the Internet, as well as paper given to students of junior high schools and high schools. Over two thousand people were examined, whose average age was 21.6 +/- 5.3 years for men and 22.1 +/- 4.7 for women.
Results: The obtained results showed that the most commonly used method of contraception among young people is a condom (30.49%) or a contraceptive pill (13.50%). Other methods, like the intrauterine device (0.57%) or natural methods (2.87%), are much less popular in this group. Statistical analysis shows that the respondents do not perform self-examination ($p < 0.0001$), have no knowledge how to do it correctly ($p < 0.0001$) and do not understand how large they affect the cancer prevention. It is worth mentioning that 30.84% of respondents do not know how to perform self-examination, as well as 47.64% can not examine a partner. We observed that the average number of young people who had earlier started sexual intercourse had more partners. The most surprising answer was that only 28 subjects (1.34%) were vaccinated against HPV. There is a visible relationship between more frequent visits to the gynecologist and a test for HPV ($p = 0.00093$).
Conclusions: The data obtained by us shows that sex education is very important in the lives of young people. We also observed clear negligence in the quality and manner of transferring knowledge. It is necessary to implement educational programs that will focus on cancer problems among young people.

Keywords: HPV, prevention, sexual behavior

DO THYROID DISEASES HAVE AN IMPACT ON SIGNS AND SYMPTOMS OF TEMPOROMANDIBULAR DISORDERS?

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Introducion: Endocrine disorders have influence on the functioning of almost the whole body. Thyroid diseases affect 2-5% of society, more often in women and the elderly. Thyroid hormones have an essential influence on metabolism of the body and also bone formation, growth and remodeling. The aim of the study was to present an impact of thyroid diseases (hypothyroidism, hyperthyroidism, Hashimoto's disease, thyroid nodules) on the masticatory motor system casued by own experience of difficulties in the physiotherapy of patients with temporomandibular disorders (TMD) and co-occurrence thyroid diseases. In addition, there was lack of current research about this subject, particularly in physiotherapy.
Methods: Questionnaires of 322 patients with temporomandibular disorders (TMD) were analyzed, who underwent targeted for TMD physiotherapy. Fourty four (40,2 ±10,6 years) patients with TMD and co-occurring thyroid diseases was isolated and divided according to the diagnosis of thyroid disease into four groups: hypothyroidism (N1=13), hyperthyroidism (N2=11), Hashimoto’s disease (N3=11) thyroid nodules (N4=9). A questionnaire of Manual Functional Analysis of masticatory system (MFA) and a questionnaire for palpation of head and neck muscles according to Festa were used to assess sign and symptoms of TMD. Statistical processing of the data was done with STATISTICA 13 and was conducted considering significance at a p-value < 0.05.
Results: Study presents that hypomobility of temporomandibular joints (TMJ) was typical for patients with hypothyroidism (84,6%), and hypermobility of TMJ was more frequent in patients with hyperthyroidism (45,5%). Patients with Hashimoto's disease were often diagnosed with pain syndromes of masticatory system (90,9%). Tension headaches (58,8%) and tinnitus (52,3%) coexisted with TMJ disorders in thyroid diseases. However, no significant differences were found between group of thyroid diseases ($p>0.05$).
Conclusions: Thyroid diseases have some influence on signs and symptoms of TMD. However, there were no statistically significant differences between the types of thyroid diseases and the symptoms of TMD.

Keywords: thyroid diseases, temporomandibular disorders (TMD), masticatory system, physiotherapy

POLYMORPHISMS OF THE PROMOTER REGION ON CRBN GENE AS PREDICTORS OF ADVERSE\NEVENTS OF THALIDOMIDE-BASED CHEMOTHERAPY IN MULTIPLE MYELOMA PATIENTS.

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Introducion: Cereblon is a key protein that determines the anti-myeloma effects of immunomodulatory drugs (IMiDs) - thalidomide and its analogues. Single-nucleotide polymorphisms (SNPs), especially those located within the promoter region of the CRBN gene, can potentially alter the expression level or function of cereblon and consequently affect the efficacy and toxicity of thalidomide. The aim of the study was to analyze the influence of selected SNPs (rs6768972 and rs1672753) located in the promoter region of CRBN gene on the toxicity of first-line thalidomide-based chemotherapy in multiple myeloma (MM) patients.
Methods: The study group consisted of 82 MM patients aged 39-87 treated with first line CTD chemotherapy – i.e. thalidomide in combination with cyclophosphamide and dexamethasone. For the SNPs analysis of the CRBN gene, the Real-Time PCR method was used. DNA was isolated from peripheral blood leukocytes. Hematologic (neutropenia, anemia, thrombocytopenia, lymphopenia) and non-hematologic (infection, polyneuropathy, thromboembolism, diarrhea and constipation) adverse effects of chemotherapy were assessed according to CTCAE criteria.
Results: Patients with CC genotype (rs1672753) of the CRBN gene were found to have significantly higher risk of peripheral neuropathy compared to patients with other variants of the SNP. Carriers of this genotype were also burdened with significantly higher (about 8 times) risk of diarrhea during treatment. In turn, the presence of AA (rs6768972) or TT (rs1672753) genotypes of the CRBN gene was associated with lower risk (in both cases about 5 times) of constipation in the course of the treatment.
Conclusions: Selected SNPs of the CRBN gene may be a useful molecular marker in the assessment of the risk of adverse events such as peripheral neuropathy and gastrointestinal motility disorders associated with the use of thalidomide in MM patients. Determining the genetic predisposition for the occurrence of treatments adverse effects may help in the development of personalized anti-cancer therapies.

Keywords: Multiple myeloma, MM, Cereblon, polymorphisms, SNP, IMIDS, Thalidomide

3-AMINE-5-ARYLIDENEIMIDAZOLONES AS POTENTIAL COMPOUNDS ABLE TO RESTORE ANTIBIOTIC EFFICIENCY.

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Introducion: Although discovery of antibiotics was a great breakthrough in treatment of bacterial diseases, these organisms quickly created mechanism of resistance. Nowadays, multi-drug resistance (MDR) is a serious medical problem, and searching for solutions is, consequently, an important topic in medicinal chemistry. One of the ways is design and synthesis of new antibiotics omitting MDR mechanisms. However, it seems to be a short-term solution since bacteria are able create new mechanism of resistance after a few years. Thus, a new approach is searching for compounds able to restore antibiotic efficiency - antibiotic adjuvants. These compounds could block one or more mechanism of resistance e.g. efflux pumps or gene responsible for creation of resistant strains. A principle is that antibiotic adjuvants should not display antibacterial activity itself. During previous studies adjuvant properties for imidazolone derivatives were found. Taking this into account, this study is focused on synthesis and the adjuvant activity evaluation in microbiological assays for new 3-amine-5-arylideneimidazolones.
Methods: The new compounds were designed based on similarities to previously found active structures. Then, compounds were synthesized in 4-step synthesis started from (I) Knoevenagel condensation. Next, (II) S-methylation was performed. Third step was (III) reaction of S-methyl intermediates with primary amine, in which (IV) Dimroth rearrangement was observed. All compounds were converted into hydrochloride forms to increase solubility. Microbiological assays were performed in Department of Microbiology, UJCM. In this part of research, two tests were performed using both, susceptible and resistant, S.aureus strains. First assay was to determine intrinsic MIC. Then, final products were tested for their synergistic effect with oxacillin.
Results: As result, nine new 5-arylideneimidazolone derivatives were designed and synthesized. Nearly all compounds displays significant (at least 4) reduction of oxacillin MIC in MRSA HEMSA 5 strain during microbiological assays. Additionally, 1/3 of synthesized compounds show 16-fold reduction of antibiotic MIC.
Conclusions: Results of this study have confirmed adjuvant properties for 3-amine-5-arylideneimidazolones. The highest potency was found for compounds with anthracyl or 2-naphthyl as aromatic moiety at position 5. Research was cofinanced by “Diamentowy Grant” K/PMI/000327 and statutory K/ZDS/007886.

Keywords: Antibiotic adjuvant, MDR bacteria, MRSA, imidazolones

OUTCOME OF LUNG TRANSPLANTATION AS A VIABLE TREATMENT FOR PATIENTS WITH CYSTIC FIBROSIS.

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Introducion: Lung transplantation is viable treatment for many end-stage lung diseases. Cystic fibrosis is a congenital, progressive lung disease, which can be treated that way. Such procedure is no longer considered as palliative treatment, but it actually elongates life of those patients. The aim of the study was to assess the impact of transplantation on survival and respiratory capacity after receiving such treatment in a single center.
Methods: The study group included 38 patients, who were qualified to receive lung transplant due to cystic fibrosis between 2011-2018 in SCCS. Data analysis consisted of assessment of survival, respiratory capacity and qualification process. Follow-up was performed by means of 6-minute walk test (6MWT) and spirometry results. Follow-up exclusion criterium was inefficient time after transplantation (less than 3 months).
Results: 1 year-survival was reached by 77% of the patients. Mean time from qualification to death was 290 days in case of patients, who died without transplantation. Mean time between aforementioned events were 405 days if patients died after transplantation. Mean 6MWT distance at qualification was 377,65m, whereas this parameter 3 months after lung transplantation was 533,5m. Mean forced expiratory volume in 1 second (FEV 1) was 0.75l. Graft recipients obtained a mean FEV1 of 2,48l 3 months after procedure.
Conclusions: Lung transplantation improves patients' functional status as assessed by 6MWT and spirometry. What is more, qualified patients live longer after receiving the graft. That is why, such treatment should be recommended to cystic fibrosis patients with respiratory failure.

Keywords: lung transplantation, cystic fibrosis, pulmonary function tests, 6mwt, spirometry

EXTENDING LUNG DONORS' CRITERIA – IS IT WORTH IT?

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Introducion: Lung transplantation is a surgical procedure, in which recipients with end stage lung disease have their lungs replaced by donors' ones. In 2018 in Silesian Center For Heart Diseases the donors qualification criteria were expanded according to Hanover Hospital protocol. The main aim of the study is to compare short term survival among recipients with double – lung transplant before and after supplying the new criteria.
Methods: Study group consisted of 41 patients qualified as double – lung transplant donors by SCCS lung transplant team between 2016 and 2018(2016-2017 - mean age 41,63 yo., 2018 – mean age: 33,94). Data was obtained from medical records, Donor's Qualification Card in particular.
Results: 22 out of 24 lung recipients from years 2016 and 2017 reached 3-month survival, with the mean oxygenation index level of the donors' lungs of 529 mmHg. All of the included recipients from 2018 reached required follow up, with the donor's mean oxygenation index level at the qualification of 435 mmHg.
Conclusions: Short term outcome seems to be not affected by new criteria in a negative way. Extending a donors criteria is safe for recipients and is necessary to extend lung donor pool in Poland.

Keywords: lung transplantation, donors' pool, organ procurement,

KNOWLEDGE ABOUT LGBT PEOPLE IN NURSES

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Introducion: The LGBT (Lesbian, Gay, Bisexual, Transgender) term considers groups of homosexual, bisexuals and transgender people as a whole. As patients, LGBT people present specific needs in the health sector, which are not always satisfied (Zdrowie LGBT. Przewodnika dla kadry medycznej, 2016). Social and health discrimination, stigmatization and violation of patient's rights are few of causes of fear of visiting health care facilities by LGBT people. The aim of study was to estimate the knowledge about LGBT people among nurses.
Methods: The research group included 154 women practicing as nurses. The average of age of the respondents was 34±8.19 years of age. Authors compiled a questionnaire consisted of metrics, questions about meaning of LGBT term, transition and proper care of LGBT patient.
Results: The vast majority of the respondents declared acquaintance of term LGBT (74,3%). However, only 41,5% of surveyed proved actual knowledge of acronym. Over the half of the research group (57%) knows LGBT person in their closest society. A small part of group (23%) had an experience with a patient who identified him/herself as LGBT person. Correct knowledge of process of transition was showed by 27% of surveyed nurses. For the question about recommendations of specialists taking care of patients with problems in field of sexual orientation, the most common answers were sexologist (54%), psychologist (31%) and psychiatrist (15%).
Conclusions: The LGBT and transition definitions are not known enough in nurses. The informational materials and professional textbooks, as well as congresses and schooling in context of taking care of LGBT patient should be more available and wider distributed in order to increase medical staff competence.

Keywords: LGBT, knowledge, nurse

BODY IMAGE AND SEXUAL SATISFACTION AMONG WOMEN

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Introducion: Sexuality is an attribute of a human from birth to death. These two concepts function inseparably from ancient times. Over the centuries, the concept of ideal beauty has changed to reach the modern canon. However, the pattern promoted by the media, unattainable for many people, can cause many disorders, including anorexia and depression. The aim of the work was to estimate self-assessment of the respondents body and their sexual satisfaction and capture the eventual the relationship between self-esteem, actual body dimensions and achieved sexual satisfaction.
Methods: The study included 232 polish women, aged 19 - 50 years. To carry out the study, two standardized questionnaires were used: the Body Evaluation Scale and the Sexual Satisfaction Questionnaire, to which authors added metrics and questions about weight and height. The questionnaire included 53 questions. Statistical analysis was performed using the GNU PSPP statistical program.
Results: The vast majority of respondents declare self-esteem of particular traits and body parts in the range between 3 and 5. The mean of the Body Assessment Scale scores gained by respondents was 3.49 in the five-point scale. Statistical analysis showed a moderately positive Spearman correlation ($r = 034$, $p < 0.05$) between physical conditions and sexual activity (self-assessments of these components). Over 70% of respondents declared that their sex life is successful, indicating the answer 3 or 4 on a four-level scale. Most of the results of both questionnaires calculated on the sten scale were in the range of average values.
Conclusions: The self-esteem of the respondents and their sexual satisfaction are at a moderately positive level. The awareness of the image of the human body, its needs and the sexual sphere associated with it seems to favorably affect the overall self-esteem of the respondents in order to achieve full well-being. Developing body positivity movements and social campaigns counteracting disorders associated with low self-esteem are needed to help the public see the beauty of the human body beyond the frames of an extremely slim, trained figure.

Keywords: body image, sexual satisfaction, women

CONCEPT OF FEMINISM AMONG YOUNG ADULTS - KNOWLEDGE AND OPINION

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Introducion: The functioning of the world over the centuries was based on the division into the male and female, from biological to cultural functions. The term of feminism as a concept of gender equality appeared relatively recently. This year we are celebrating the hundredth anniversary of women's electoral rights in Poland. The aim of the study was to test knowledge of young adults in field of assumptions of feminism, and to estimate awareness and approach of the respondents to the problem of gender equality.
Methods: The study involved 100 people, 70 women and 30 men in age 19-30. Authors compiled a questionnaire containing questions about feminism, opinion and approach to the issue of gender equality. Statistical analysis was performed with IBM SPSS Statistics.
Results: Almost 37% of surveyed thinks that feminist movements are needed in the modern world. Almost 40% of the respondents experienced gender discrimination. Over half of the group admit that they consider the other gender as equal. There is a moderate negative correlation ($r= -0,37$; $p<0,001$) between opting for division professions into male and female and opting for equal division of household duties between women and men. Authors found weak positive correlation ($r= 0,28$; $p<0,05$) between considering other gender as equal and knowing documents regulating gender equality.
Conclusions: Feminism, despite the many established stereotypes and the controversy surrounding this term, seems to be increasingly better perceived by the younger part of society. Greater emphasis should be placed on education that promotes women's rights as a human rights, and on bringing people closer to equality in a positive context, in order to achieve well functioning society.

Keywords: feminism, knowledge, gender equality

POLISH WOMEN'S KNOWLEDGE ABOUT CHANGES IN MENSTRUAL CYCLE

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Introducion: Knowledge about changes in the menstrual cycle allows conscious body observation, determining fertile and infertile periods in the cycle, detecting but also interpreting changes in it, which it is also allows on early diagnosis of disease, thus the implementation of faster diagnostic and treatment.
Methods: 3154 Polish woman took part in the survey. An original questionnaire consisting of a data and 15 questions.
Results: Most of respondents included women between 20-29 years old, living in the town or city, Roman Catholic's denomination, women who had already begun sexual intercourse. 60.7% ± 21.1% of the surveyed women correctly answered the questions about menstrual cycle and hormonal changes in the cycle. The majority of problems were caused by questions about ovulation. For women, the main source of knowledge about fertility are websites (74.45%), medical staff (58.91%) and specialist and scientific literature (45.94%).
Conclusions: Women's knowledge about the menstrual cycle and changes taking place in the cycle is at the medium level, it needs to be supplemented. It is particularly important to introduce women with the knowledge of fertility in the cycle. It would be useful to complete the knowledge on the Internet for example by an information portal about the menstrual cycle, hormones, fertility's physiology and by medical staff explaining information and knowledge during visits and advices at doctor's office and midwife's office.

Keywords: Menstrual cycle. Hormones. Menstruation. Ovulation. Follicular phase. Luteal phase

RELATIONSHIP BETWEEN NO2 CONCENTRATION AND LUNG CANCER MORBIDITY IN ŚWIĘTOKRZYSKIE VOIVODESHIP COMPARED TO WHOLE POLAND'S POPULATION

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Scientific supervisor:

Introducion: NO2 concentration is related to road transport. On the basis of numerous scientific research, it is believed that the NO2 is linked to increased morbidity of many health problems and among them lung cancer. The aim of the study was to find out relationship between air pollution (measured with NO2 concentration) and lung cancer morbidity and show possible differences among Poland's and Świętokrzyskie voivodeship

Methods: We used Microsoft Excel to analyze databases of the National Cancer Registry (2009-2013), Chief Inspectorate for Environmental Protection (2009-2015), Map of Health Needs in the Field of Oncology for Poland, WHO Air Quality Guidelines 2005.

Results: In 2009-2015, in Świętokrzyskie voivodeship concentration of NO2 had more or less similar level also national average of NO2 was at similar level In this period. The morbidity of lung cancer in the analyzed period increased both in Świętokrzyskie voivodeship and Poland's populations. This trend is maintained in the forecast for 2029 Świetokrzyskie voivodeship: Lung cancer morbidity (ICD10: C33+C34): 2009- 714, 2010-746, 2011-760, 2012-716, 2013-751, 2029-1085. NO2 annual mean µg/m3: 2009-16,9; 2010-19,4; 2011-15,8; 2012-23,1; 2013-16,9; 2014-13,8; 2015-18,1 Poland: Morbidity of ICD 10: C33 + C34: 2009- 20643, 2010-20871, 2011-20837, 2012-21870, 2013-21556, 2029-32521. NO2 annual mean µg/m3: 2009-18,8; 2010-19,7; 2011-19,7; 2012-18,54; 2013-18,3; 2014-18,1; 2015-18,4 WHO Guideline: NO2 - 40 µg/m3 annual mean

Conclusions: The data show us that the situation of air quality in the Świętokrzyskie voivodeship is better then average of our country. On this background increasing incidence of lung cancers, despite the similar level of NO2 remains a distressing fact. This may suggest that incidence of lung cancer can be weekly influenced by pollution or we have exceeded the concentration of pollutants that affect develope of cancer. However it must be stressed that modern life is connected with heavy migration which can blur the whole picure.

Keywords:

General Surgery

APPENDECTOMY VERSUS ANTIBIOTIC TREATMENT IN ACUTE APPENDICITIS

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Introducion: Acute appendicitis is the most common abdominal surgical emergency in the world. For over a century, an open appendectomy was the only treatment for appendicitis. The latest evidence has suggested that it is possible to treat uncomplicated appendicitis with antibiotics alone.
Methods: Review of medical journal literature published on PubMed in the last 5 years to evaluate operative and nonoperative treatments of acute appendicitis.
Results: Nearly 90 percent of patients with acute appendicitis treated with antibiotics were able to avoid surgery during the initial admission. The other 10 percent did not respond to antibiotics and required an immediate appendectomy. Approximately 70 percent of those successfully treated with antibiotics during the initial admission are able to avoid surgery during the first year. The other 30 percent require an appendectomy in the following year after the initial admission.
Conclusions: It is still suggested for adult patients with appendicitis to be treated with appendectomy rather than with antibiotics alone. Despite the evidence for the effectiveness of treating uncomplicated appendicitis with antibiotics, studies who provided such evidence show modest recurrence rates and missed neoplasm.

Keywords: appendicitis, appendectomy, antibiotic treatment

Gynaecology and Obstetrics

THE ROLE OF FETAL AUTOPSY AND PLACENTAL EXAMINATION IN THE EXPLANATION OF CAUSES OF FETAL AND NEONATAL DEATH.

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Introducion: Intrauterine death and neonatal death in the first 24 hours of life forms a major part of perinatal mortality which thereby is a good indicator of pregnancy wastage as well as quality of healthcare available. The aim of this study was to investigate the most possible cause of death of fetuses and neonates by evaluating postmortem examination results and placental pathology.
Methods: A retrospective study of autopsy results of 132 fetuses and neonates conducted at the Department of Clinical Pathomorphology, Medical University in Lublin in years 2014 – 2018. At the same time results of histopathological examinations of placentas were reviewed.
Results: 132 autopsies of fetuses and neonates were performed, which consisted of 111 autopsies of fetuses and 21 of neonates (that died in the first 24 hours of life). The most common results of fetal autopsy were: fetal malformations (31 - 27,9%) and intrauterine infection (4 - 3,6%). Neonatal autopsy results showed IRDS (3 - 14,3%), neonatal malformations (14 - 66,7%) and intrauterine infection (1 - 4,8%). The major fetal pathology were various malformations. Placental examination was performed in 39 of these autopsies. A placental possible cause of fetal death was identified in 36 cases. The major relevant placental pathologies were retroplacental hematoma (15 - 38,5%), fetal vascular malperfusions (11 - 28,2%) and feto-placental infections (10 - 25,6%). Moreover 4 twin's placental examinations were performed along with autopsies. Placental pathology had relevant correlation with intrauterine fetal demise in 3 of these pregnancies. No associated relevant factors were disclosed in (3 - 7,7%) fetuses and neonates classified as unexplained deaths. In 92 of all 132 fetal and neonatal autopsies no placental examination was performed.
Conclusions: Placental examination preformed together with fetal autopsy plays an important role in reduction of unexplained fetal intrauterine demise. The data obtained from accurate placental examination may influence the further management of women's health and pregnancies.

Keywords: Placenta, histopathological examination, stillbirth, fetal autopsy

KNOWLEDGE OF MEDICAL STUDENTS ON GYNECOLOGICAL CANCER.

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Introducion: Medical professions should have a much broader knowledge of tumors of the female reproductive system than people in the population. We asked ourselves if this is for sure.
Methods: A questionnaire was created containing 25 questions about gynecological cancer, which was carried out on the Internet in closed groups of medical universities, obtaining responses from various provinces. 531 responses were received from many division (most often medical faculty, obstetrics, nursing)
Results: The results showed that knowledge about these cancers in the medical environment is satisfactory. The majority of respondents know the most oncogenic types of HPV virus (95.3%, $p < 0.05$), just as they know the method to confirm cervical cancer (78.5%, $p < 0.05$). A noticeable discrepancy in the answer appears in the case of a question about specific oncological aspects, only 48% ($p < 0.05$) of respondents can test the development of mucosal cancer.
Conclusions: Education in oncological gynecology still requires deepening and broadening, however, the general knowledge of medical professions on this subject is already significant, and what is most satisfactory all the respondents show a will to learn in this area.

Keywords: cancer, tumor, reproductive system, knowledge

PLACENTAL PATHOLOGY - THE ANALYSIS BASED ON FIVE YEARS MATERIAL

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Introducion: Placental abnormalities are the most common cause of stillbirth, ranking second only to unexplained death. Pathologic examination of the placenta helps to explain intrauterine fetal demise, fetal malformations, neonatal collapse or influence of the maternal diseases on fetal and placental development.
Methods: The aim of this study was to review the results of histopathological examination of the placenta performed in the Department of Pathomorphology, Medical University of Lublin in years 2014 - 2018. The data were obtained from computer database. Material was divided into 3 main groups: aborted fetus (up to 23 hbd), preterm delivery (24-37 hbd) and birth at term (>37 hbd). Microsoft Office Excel was used for the analysis.
Results: 343 placentas were included in the study. Since 2014 the significant increase in number of examined cases was observed. In 90 % cases gross and microscopic examination determined placental pathology. Results were also reclassified according to Amsterdam Placental Workshop Standards (2016). Placental examination showed the possible cause of death in approximately 91 % of cases from group of aborted fetus. Similarly, in second (preterm delivery) and third group (>37 hbd) the examination revealed significant pathology: in 82 % and 87 % respectively. The main observed lesions were: acute ascending infection, retroplacental haematoma, vascular malperfusions and umbilical cord abnormalities.
Conclusions: Our analysis showed the presence of placental pathology in 90% of cases. These results indicate the usefulness of this procedure. As the number of placenta sent for histopathological examination increases, due to increased demands and expectations, uniform standards for reporting placental pathology should be worked out.

Keywords: Placenta, histopathological examination, stillbirth

PSYCHOLOGICAL ASPECTS OF INFERTILITY

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Introducion: According to the World Health Organization, infertility is defined as an inability to get pregnant despite the yearly, regular intercourses without the usage of contraceptives. Infertility could be caused by both biological and genetic factors. There is also a concept of idiopathic infertility, in which the cause remains unknown. It is estimated that in idiopathic infertility psychological aspects, especially stress and depression play an important role. In psychology, stress is defined as dynamic, adaptive relation characterized by a lack of psychological and physical balance between capabilities of an individual and demands of a situation. Depression determines syndromes appearing in the course of affective disorders manifesting itself by lowering the mood, impossibility to experience pleasure, lowering psychomotor drive and also daily rhythm disorders. Possible interactions between difficulties in procreation and psychological factors have been studied for many years. Back in 1942, a thesis has been put forward that psychophysiological emotional tension might contribute to developing functional infertility.
Methods: Analysis of available literature indexed in MEDLINE and Cochrane bases has been conducted. 48 publications published between 1955-2018 have been chosen from the broad literature.
Results: It turns out that even 80% of diseases arising because of the stress are consequences of the weakened immune system. It is caused by excessive cortisol production, which causes the reduction of white cells amount and therefore the ability of an organism to produce antibodies. Effects of prolonged depression cause the unfavorable impact of brain cortex on hypothalamus by reduction of biogenic amines activity, which might be a possible mechanism leading to inhibition of secretion of follicle-stimulating hormone and luteinizing hormone and in consequence inhibiting ovulation. Chronic stress, probably in the mechanism of cortisol effect causes prolonged oviduct contraction, therefore impairing its peristalsis which has a relevant impact on gonads' and fertilized cell transport and also its implantation.
Conclusions: Analysis of the available literature allows concluding that stress and depression as psychological factors contribute to infertility. Presented studies show that these factors affect our bodies to a large degree. They have a negative impact on the immune system and may lead to hormonal disorders.

Keywords: Infertility. Psychological factors. Stress. Depression.

IMMUNOLOGICAL MECHANISMS IN OVARIAN CANCER: THE ROLE OF PD-1 AND ITS LIGANDS.

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Introducion: Ovarian tumors encompasses a heterogeneous group of malignancies that have different origins and vary in molecular biology. They require various therapeutic interventions, which are unfortunately, often ineffective. The most frequent malignancy is epithelial ovarian cancer (EOC), which at the same time is causing the greatest therapeutic issue. Currently the basic treatment consists of surgery and chemotherapy. The most active agents are carboplatin, paclitaxel, topotecan and pegylated liposomal doxorubicin. There are also strategies aimed to target angiogenesis in EOC using monoclonal antibodies that can neutralize vascular endothelial growth factor. However, these strategies extend progression-free survival period, they are still not fully effective. Considering the highest mortality rate among all gynecologic malignances, it is vital to analyze the pathogenesis of the EOC and the mechanisms of anti-tumor response of cancer cells to find the treatment that will increase overall survival. In recent years, a promising theory was created about the meaning of the PD-1 and PD-1/PD-L1/PD-L2 pathway in EOC. It gives new opportunities about the immunotherapy of EOC. The aim of the review is to discuss the pathogenesis of the OC including the role of PD-1 receptor and PD-1/PD-L1/ PD-L2 pathway.
Methods: Entering keywords: ovarian cancer, ovarian cancer pathogenesis, immunotherapy, PD-1 using databases such as: Medline, Google Scholar, Research Gate.
Results: PD-1 (programmed cell death protein 1) and PD-1/PD-L1/ PD-L2 pathway are involved in effector T cell responses. PD-1 is a negative modulator of T cells, expressed on effector T cells, B cells, monocytes, NK cells and dendritic cells after their activation. High activity of the pathway protects cancer cells against effector T cells.
Conclusions: Cancer cells evade from immunological system by down-regulation of effector T cells. They are modifying the microenvironment by modulating the expression of different molecular pathways, including PD-1/PD-L1/ PD-L2. Having the knowledge about the PD-1 and PD-1/PD-L1/ PD-L2 pathway gives a great hope of the new way of immunotherapy of EOC.

Keywords: ovarian cancer, PD-1 receptor, immunotherapy

SYNTHEASE ATP GENE EXPRESSION EVALUATION WITH MICRO ARRAY TECHNIQUE IN PATIENTS TREATED WITH OVARIAN CANCER.

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Introducion: Because of the increase in the incidence of ovarian cancer in the last 10 years, the disease is extensively researched on molecular level. In this work is described synthease ATP gene responsible for synthesis of ATP. AIM : evaluation of correlation of gene expression of synthease ATP with the survival rate in woman with ovarian cancer.
Methods: for the gene expression BD Atlas TM Human Cancer 1.2 Array -PT3547-3E were used. Gene expression was assesed by comparission of healthy tissue and cancerous tissue .
Results: Time of survival of patients in correlation with ATP synthease gene with the probability of survival by Kaplan- Meier is (p=0.007).
Conclusions: The gene expression with makroarrays might be a valuable factor for prediction of survival rate and time of survival in patients with ovarian cancer.

Keywords: ovarian cancer, survival rate, Gene expression, micro-array

Head and Neck Diseases, Dentistry

PATHOMECHANISMS INVOLVED IN THE INTERACTION BETWEEN DENTAL MATERIALS AND THE ORAL MUCOSA.

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Introducion: A significant number of patients are allergic to dental materials. These materials include noble and base metals, amalgam, impression materials, acrylic and cement used in a wide variety of dental restorations. Their significance is based upon the fact that they induce a local immune response in the form of allergic contact stomatitis. This may cause symptoms including a burning sensation, itching and general discomfort. Physical examination reveals swelling, redness and ulceration of oral mucosa with possible lichenoid lesions, blistering and hyperkeratosis. Symptoms can occur in other parts of the body in the form of dermatitis on hands and feet, muscle pain and weakness. Special cases include patients with EM (erythema multiform) and angioedema.
Methods: The aim of the paper is to present the pathomechanisms involved in the interaction between dental materials and the oral mucosa. Analysis of available literature and case studies
Results: Elimination of the allergic agent is key to preventing and treating contact stomatitis. Replacing acrylic dentures with flexible appliances made of nylon is worth considering as acrylic monomers are known to cause inflammation. It is important to note the significance of the manufacturing quality of dentures and the polymerisation process involved in making them. A broader use of composite and glass-ionomer materials in dental restorations can further decrease exposure to allergens present in amalgam fillings.
Conclusions: Additional anti-inflammatory medication and the use of antiseptics help in reducing symptoms and improving quality of life.

Keywords: pathomechanism, oral cavity, stomatitis

OTOSCLEROSIS – THE SYNOPSIS OF THE MOST IMPORTANT INFORMATIONS

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Introducion: Otosclerosis is a hereditary disease characterised by abnormal bony growth and remodelling around otic capsule which progressively leads to conductive hearing loss. If the diseases remains untreated, otosclerotic foci may expand into the inner ear, destroying cells and resulting in both sensorineural and mixed hearing loss. Adults make up the majority of patients, otosclerosis is also encountered in children. Most people with otosclerosis notice hearing problems in their 20s or 30s. Main symptoms of otosclerosis include: hearing loss that gets gradually worse, particular difficulty hearing low, deep sounds and speaking quietly because their voice sounds loud to them. Treatment of otosclerosis can be understood basically under three head : medical, surgical and amplification. Surgical cure of otosclerosis is stapes surgery. There are various methods: stapedotomy or stapedectomy.
Methods: Available materials and publications concerns recent knowledge about patients with otosclerosis.
Results: Due to clinical manifestation, audiometry as well as CT imaging in patients with otological problems, the recognition of otosclerosis has increased in last few years. In the last 10 years there has been the introduction and increase in the development of modern treatment of otosclerosis-stapedectomy.
Conclusions: Experts aren't sure exactly what causes otosclerosis however after surgical intervention 95 % of patients hear better.

Keywords: Otosclerosis, bone remodelling, conductive hearing loss.

ORBITAL COMPLICATIONS OF RHINOSINUSITIS - STUDY REVIEW

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Introducion: Chronic rhinosinusitis is defined as an inflammatory process affecting the paranasal sinuses which persists for a period of at least 12 weeks. It is most often the effect of unresolved acute sinusitis, although causes may be related to other noninfectious factors such as allergy, gastroesophageal reflux or cystic fibrosis. The common symptoms include nasal obstruction, nasal discharge, postnasal drip, facial pain and fullness as well as less specific signs like malaise, fever, dental pain, chronic cough, sore throat or visual disturbances. If left untreated, chronic rhinosinusitis may cause serious intracranial and orbital complications due to the close proximity of the paranasal sinuses to the orbit and cranial cavity. The most common orbital complications include preseptal cellulitis, subperiosteal abscess, orbital cellulitis, orbital abscess and cavernous sinus thrombosis. Treatment is most successful when implemented swiftly and aggressively and involves pharmacologic measures such as antibiotics, saline irrigation, decongestant therapy and anti-inflammatory drugs, as well as open or endoscopic surgical approaches.
Methods: A review and analysis of available publications on Google Scholar, NCBI, PubMed, ScienceDirect and other online journals was conducted to provide statistical data and scientifically credible information regarding orbital complications in patients suffering from chronic paranasal sinus inflammation.
Results: The examined data showed that polysinusitis was the most common cause of orbital complications in patients with chronic paranasal sinus inflammation, followed by ethmoid sinus inflammation and joint maxillary and ethmoidal sinusitis respectively. The majority of patients fell into the I and II group of Chandler's classification, indicating that inflammatory oedema and orbital cellulitis were the most common manifestations of orbital complications in patients with chronic rhinosinusitis. The most prevalent orbital symptoms were erythema/oedema of the eyelids, proptosis, limited extra ocular motility and decreased visual acuity. The best therapeutic outcomes were obtained in patients within the I, II and III groups in Chandler's classification.
Conclusions: Despite rarely being life threatening, chronic rhinosinusitis may cause severe orbital complications if left untreated. Early implementation of treatment, combined aggressive therapy and physician awareness towards these problems are therefore of utmost importance in preventing loss of vision and ensuring the best therapeutic outcomes when facing patients with such pathologies.

Keywords: laryngology, chronic rhinosinusitis, orbital complications

HPV AS AN ETIOLOGIC FACTOR IN HEAD AND NECK TUMORS - STUDY REVIEW

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Introducion: Human Papillomavirus (HPV) is a DNA virus responsible for producing epithelial tumours of the skin and mucous membranes in infected individuals. The virus is spread between people through direct contact and most commonly affects the genitals, mouth, throat as well as the skin. Some strains of the virus (particularly 16 and 18) play a key role in the development of cancers of the cervix, vulva, vagina, penis, anus, mouth and throat. Anogenital complications have long been known to express a correlation with HPV infections, however the awareness of HPV's influence in the development of head and neck cancers is still insufficient. It is believed that soon, HPV will surpass tobacco as the main factor contributing to the development of oral cancer. It is therefore of profound importance to stress the role of HPV as an aethiologic factor in head and neck neoplasms.
Methods: A systematic analysis of numerous studies concerning the relationship between HPV infections and the development of head and neck tumours was conducted. Articles were obtained from the online databases NCBI, BMJ Journals, UpToDate and PubMed.
Results: The analysed data indicates towards a substantial relationship between HPV infection and the prevalence of hypopharyngeal, laryngeal and oropharyngeal carcinomas. Among various types of oropharyngeal squamous cell carcinomas (OPSCC), HPV-related OPSCC present with less severe manifestations, ensuring better prognostic outcomes. Choice of therapy in OPSCCs is independent of HPV presence and the highest survival rates are observed in patients treated surgically. As for the non-oropharyngeal squamous cell carcinomas (non-OPSCC), studies also show longer survival rates (21.4 months vs 10.3 months) in patients with HPV-positive carcinomas.
Conclusions: All studies show that HPV-positive head and neck carcinomas are strongly associated with lower morbidity, which suggests that this etiologic factor should be taken into strong consideration while selecting the proper method of treatment. However, regardless of better prognostic outcomes, these tumors still remain life-threatening and thus, it is essential to inform society about the favorable aspects of vaccinations.

Keywords: laryngology, hpv, head and neck tumors

CHOLESTEATOMA – SYMPTOMS AND TREATMENT

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Introducion: Cholesteatoma is a tumour located in the middle ear of a non-cancerous nature. It is a cystic structure formed by the accumulation of exfoliated keratin, cholesterol crystals and multilamellar flat keratinized epithelium, surrounded by a bag called a matrix. Cholesteatomas are divided due to the time of develope for congenital and acquired cholesteatoma. Symptoms of cholesteatoma may be absent for a long period of time. Tumour growth can cause various ailments. The most common manifestation of cholesteatoma is: leak from the external auditory meatus and conductive hearing loss which is induced by the destruction of malleus, stapes or incus. If ailment left untreated it may cause complications such as deafness, dizziness, paresis and facial nerve palsy, as well as meningitis. The surgical procedure is the only effective way to treat the middle ear cholesteatoma. Type of performed surgery depends on the extensiveness of the growth.
Methods: Available materials and publications concerns recent knowledge about Cholesteatoma and surgical methods of treatment
Results: As with any disease process, the analysis of research and information from an interview with the patient is the key to early diagnosis, which in turn allows earlier and less invasive surgical treatment.
Conclusions: Cholesteatoma is a non-cancerous tumour which disposes to relapse and gives many symptoms, the most common are: conductive hearing loss and purulent leakage from the external auditory meatus. The solitary effective method is excision of the entire expanse.

Keywords: Cholesteatoma, Chronic otitis media, Congenital cholesteatoma, Surgical treatment

MICROINVASIVE TECHNIQUE FOR CHRONIC SINUSITIS

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Introducion: Rhinosinusitis arises as a result of blocking "the mouth" of the sinuses, causing deposition of secretion and inflammation of the sinus cavity. There are two forms of inflammation : acute and chronic. The difference criterion is the period of persistence of symptoms over 12 weeks. The main symptoms of the disease are pathological nasal secretion, obstruction of the nasal passages, a feeling of distraction in the face and impaired sense of smell. First, conservative treatment is used, which includes: avoidance of allergens and irritans, intake of glucocorticoids nasally, oral antibiotic therapy, nasal irrigation and antihistamines (only for "allergics"). If there is no improvement, surgery should be considered. The existing, classical methods of surgical treatment are characterized by considerable invasiveness. Currently, the metod of choince is created in the eighties of the last century, functional-endoscopic surgery (FESS). The procedure is aimed at widening the sinuses and allowing free evacuation of secretion from the sinuses and stopping the process of sinus mucosal hyperplasia.
Methods: Available literature and the latest guidelines were analyzed
Results: Minimally invasive surgical techniques in the treatment of chronic rhinosinusitis provide improved ventilation and patency of the paranasal sinuses and ensure better drug penetration. At the same time, they shorten the patient's stay in the hospital in comparison to traditional surgery.
Conclusions: Conservative treatment is the basis for the treatment of chronic Sinusitis. However, in same cases, surgical treatment is indicated and brings good results.

Keywords: Chronic Sinusitis, microinvasive surgery, endoscopy

PROCEDURE IN THE ORAL CARE, THROAT, AND ESCAPE OF CHEMICAL SUBSTANCES

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Introducion: Burns in the mouth, throat and oesophagus are mucosal damage resulting from the consumption of corrosive substances, mainly acids and alkalis. Burn the principle causes deep necrotic necrosis and scalding with superficial acid coagulation necrosis. The degree of tissue damage (according to Zargar's 5-step classification) depends on the amount of substance, its type and the time of contact with the mucous membrane. Initial symptoms include severe pain, salivation, dysphagia, nausea and vomiting; shock symptoms and dyspnea as a result of laryngeal oedema. Subsequent symptoms, which develop after about 24h, are symptoms of systemic intoxication - damage to the kidneys, liver, haemolysis and disorders of water and electrolyte balance. Chemical burns of mucous membranes may be a life-threatening condition and require immediate hospitalization. At the prehospital stage, it is recommended to dilute the corrosive substance by giving a large amount of water or milk, but there is no evidence of the effectiveness of this method. It is currently not recommended to gastric lavage and administration of antacids and to induce vomiting. In the diagnosis, the most important is the interview whether it was not a suicide attempt, the identification of the agent consumed, and the time of the event. Initial proceedings in the hospital are performed by endoscopy within 24-48 hours. (up to 96 hours) from consumption. Contraindications include suspicion of perforation and epiglottic oedema, third-degree burns in the posterior-lower throat and shock. You can also take an X-ray of the chest and abdomen. The patient is given painkillers, sedatives and suppressing gastric secretion; the use of antibiotics and steroids is debatable. In the case of narrowing of the oesophagus, the extension procedure can be performed after a few days.
Methods: Available materials and publications on the treatment of oral, throat and oesophagal burns with chemical substances
Results: Burns with chemical substances of the mucous membranes of the mouth, throat and oesophagus is a significant problem both in ENT and gastroenterology. Currently, the use of antibiotics and steroids is absent, and the effectiveness of the administration of antacids has not been proven
Conclusions: Burns with chemical substances of the mucous membranes of the mouth, throat and oesophagus require immediate intervention as they may be a life-threatening condition for the patient. It is necessary to thoroughly gather an interview, provide medicines and identify the substance, and in the absence of contraindications, perform an endoscopic examination

Keywords: burns, chemicals, necrosis, hospitalization

THE ANALYSIS OF TEMPERATURE DISTRIBUTION IN TOOTH TISSUES IN THE TIME OF POLYMERISATION OF COMPOSITE MATERIALS

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Introducion: Composite materials used to fill cavities in human teeth are polymerized with the use of light. During the polymerization process, lamps emit light of various energy, the effect of which is the release of heat. The main problem associated with the use of halogen lamps is the process of degradation of the device which results in increased heat release and a reduction of the polymerization efficiency. The advantage of LED lamps is the consumption of low energy and the lack of significant release of heat emitted to tooth tissues during the polymerization of fillings. The temperature during polymerization should not exceed the limit temperature of 42°C, in which the tooth's pulp is damaged.
Methods: The study used third molars without caries, which were removed for orthodontic reasons. In the teeth class I according to Black, cavities were prepared of a depth of 3-4 mm. The G-Bond binding system (GC), XtraBulkfill (VOCO) and Essentia (GC) composite were applied and polymerized. The fillings were cured using a Cromalux 75 (Megadenta) halogen lamp with a spectrum of 400nm to 500 nm and LED 55 lamps (TPC USA) with a spectrum of 430nm to 490 nm. The variable parameters were the type of composite (conventional and bulk fill), the polymerization method (continuous and soft-start). The OPTRIS P1450 thermal camera was used. The distance of the samples from the camera was fixed at 50mm. The measured size was the temperature distribution in the teeth and fillings during cooling. Images were recorded in the first, eighth and sixteenth second of the study
Results: During the polymerization of the composite material with a halogen lamp, the highest temperature rise was recorded in the first second after the further polymerization of two layers of previously polymerized material Essentia (GC) (4.35 °C increase). The highest temperature was recorded in the first second of the polymerization of the first layer of Essentia (GC). Using the LED lamp, the highest temperature rise occurred in the first second of the bulkfill material - XtraBulkfill (VOCO) material (7.24 °C increase). The highest temperature was reached in the first second of the XtraBulkfill (VOCO) material - 36.59 ° C. On the other hand, during the cooling of the samples, it was observed that the heat propagates through the composite filling, not through the tooth tissue.
Conclusions: The analysis of the obtained results show that the temperature during the polymerization of the tested composites did not exceed the limit temperature of 42°C, and during the cooling period heat from the filling was not transferred to the tooth tissue.

Keywords: conservative dentistry, composite, termovision analysis, bulk fill

Internal Medicine

SEX-RELATED LEFT VENTRICULAR GEOMETRY IN POPULATION OF PATIENTS WITH STABLE CORONARY ARTERY DISEASE - PRELIMINARY STUDY

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Introducion: Changes in structure of left ventricle usually occur among patients with stable coronary artery disease (SCAD). Abnormal left ventricular (LV) geometry is associated with increased risk of severe cardiovascular events and may be an independent predictor of it. The aim of our study was to find the main factors that cause different types of LV geometry in both genders. It is relevant to know this varieties in LV geometry in order to set the best therapy.
Methods: The analysis was performed retrospectively according to the data collected by the Department of Invasive Cardiology of the University Hospital in Bialystok. The study population consisted of 205 patients (age 66.71±9.84y; men: 65.85%) with SCAD. The laboratory test results, blood pressure and ECG were analysed. Echocardiographic assessment consisted of valve function, heart chambers dimensions, Left Ventricle Ejection Fraction (LVEF) investigation. Statistical tests: U Manna-Whitneya, t-test, ANOVA, Chi-square, Shapiro-Wilk were used. P value <= 0.05 was considered as statistically significant.
Results: We observed that concentric hypertrophy was more frequent in women (men vs women) (17.04% vs 38.57%; p=0.0176). Severely abnormal hypertrophy occurs more often in female patients. Moreover, they had more incidences of chronic kidney disease. It turned out that there were no statistical differences in hypertension between sexes. Women also had higher LVEF and tricuspid valve regurgitation was more common among them. Dimensions of the heart chambers were larger in men, however after indexing the heart was bigger in women. As far as men are concerned, they had higher prevalence of past myocardial infarction and limb ischaemia.
Conclusions: More frequent occurrence of concentric hypertrophy in women can be connected with chronic kidney disease which is more common in female patients. Furthermore, we notice significant difference in body surface area between sexes. We suspect that LV geometry might be overestimated by using indexed values for calculation. It leads to the conclusion that there is a need of more personalised calculation formula. We have to analyse more patients in order to find relevant risk factors that may cause different types of LV geometry.

Keywords: echocardiography, left ventricular geometry, sex differences, concentric hypertrophy

CORRELATION BETWEEN SELECTED TUMOR-ASSOCIATED ANTIGENS AND TUMOR DEVELOPMENT AMONG PATIENTS WITH SYSTEMIC SCLEROSIS

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Introducion: Systemic sclerosis, also known as scleroderma, is a chronic, multiorgan connective tissue disease of unknown etiology, characterized by persistent inflammation, microcirculation abnormalities and excessive fibrosis that result in internal organs disfunction, reduced quality of life and premature death. Patients with systemic sclerosis are at particular risk of developing comorbidities, including neoplastic ones, due to administred therapy and disease itself. Recent studies show that elevated levels of selected tumor-associated antigens may serve as a indicative factor of tumor development risk in patients with systemic sclerosis. The aim of this study was a retrospective analysis of neoplasm occurrence in patients with systemic sclerosis in whom at least one tumor-associated antigen level was assessed.
Methods: Data from 51 patients treated at the Department of Dermatology, Venerology and Paediatric Dermatology in Lublin between 2005 and 2017 due to systemic sclerosis were collected and consecutively studied. In all these patients, levels of at least one tumor-associated antigen, including CA 125, HE4, CA 19-9, CEA, CA 15-3, AFP, CA 72-4, were assessed. Data were analysed using Chi-Square Test of Independence, considering P-value <0.05 as statistically significant.
Results: Increased levels of at least one tumor-associated antigen were present in 27 of 51 patients with systemic sclerosis. 7 cases of neoplasm both benign and malignant at present or in the past were recorded. Levels of CA 19-9 and CA 15-3 directly correlated with presence of neoplasia (Chi-Square=13,119 and p=0,001, Chi-Sqaure=12,007 and p=0,002, respectively).
Conclusions: Different serum tumor-associated antigens may be increased among patients with systemic sclerosis. Moreover, some of them are in correlation with tumor development in the course of the disease. Follow-up in patients with elevated tumor-associated antigens levels is essential due to increased cancer risk among patients with systemic sclerosis.

Keywords: systemic sclerosis, scleroderma, tumor, neoplasia, tumor-associated antigens, CA 15-3, CA 19-9

EVALUATION OF CONCENTRIC HYPERTROPHY RISK FACTORS - PRELIMINARY STUDY.

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Introducion: Concentric hypertrophy is a result of cardiac wall thickening without enlargement of an organ preserving lower heart volume. It is known as a risk factor of cardiovascular diseases in patients with hypertension. Studies have shown that left ventricle hypertrophy leads to increase in cardiac mortality, especially in the presence of coronary artery disease. Aim of our study was to evaluate risk factors of developing concentric hypertrophy.
Methods: The study population consisted of 205 patients (age 66.71±9.84y, male 65.85%) admitted into Department of Invasive Cardiology, University Hospital in Bialystok for invasive treatment or diagnostic process. Patients were divided into four groups: normal geometry, concentric remodeling, eccentric hypertrophy and concentric hypertrophy. In our study we compared two groups of patients with normal geometry and with concentric hypertrophy. Statistical analysis based on medical history, laboratory tests, clinical data and echocardiographic measurements. We used Shapiro-Wilk test to stratify distribution. Chi-square, U Mann-Whitney, t-test were used for statistical analysis. P value <= 0.05 was considered as statistically significant.
Results: Our study shows that the most crucial risk factor of developing concentric hypertrophy is hypertension and its compensation. Moreover another risk factors are sex, age and chronic kidney disease. What is more we observed that aortic stenosis which causes increased afterload may have significant impact on developing concentric hypertrophy.
Conclusions: Our study shows that in clinical practise we should focus on lowering blood pressure in hypertensive patients in order to decrease the risk of developing concentric hypertrophy. This approach may help us lower cardiovascular mortality. Moreover we should intensify echocardiographic screening in groups with risk factors mentioned above in order to find early stage of concentric hypertrophy or eventually aortic stenosis because the earlier treated the more positive influence on left ventricular geometry it may have.

Keywords: concentric hypertrophy, cardiovascular disease, geometry, hypertension

PULMONARY HYPERTENSION AMONG PATIENTS REFERRED FOR LUNG TRANSPLANTATION – SINGLE CENTER STUDY

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Introducion: Pulmonary hypertension (PH) is a serious complication of end-stage lung disease and is associated with worse prognosis. The gold standard for the assessment of PH is right heart catheterization (RHC), although transthoracic echocardiography assured additional information about state of pulmonary circulation. The aim of the study was to evaluate the incidence of PH and the usefulness of echocardiographic parameters for detecting PH in patients referred for lung transplantation (LT).
Methods: Study group consisted of 104 patients qualified to LT (included 36 chronic obstructive pulmonary disease (COPD) patients and 68 interstitial lung diseases (ILDs) patients) in Silesian Center for Heart Diseases between 2004-2018; excluded criteria were lack of RHC results and idiopathic pulmonary artery hypertension (IPAH) diagnosis. Analyzed medical records included echocardiography, right heart catheterization and potential lung transplant recipient questionnaire.
Results: Pulmonary hypertension was detected among 62% (N=64) patients qualified to Ltx, average mean pulmonary artery pressure (mPAP) of patients with diagnosed PH was 36,6 mmHg. 39% (N=14) of COPD and 74% (N=68) of interstitial lung diseases (ILDs) patients presented PH. Average left ventricle ejection fraction (LVEF) was 54,13%. Qualified patients mostly (42%) presented first stage of tricuspid valve incompetence.
Conclusions: PH is common condition diagnosed in patients with chronic lung diseases, more often appeared in patients qualified due to ILDs. Well-known echocardiographic parameters (e.g. right ventricle systolic pressure (RVSP)), could be useful in identifying patients suffering for PH. Due to frequent occurrence of pulmonary hypertension, it’s important to assess the pulmonary circulation among patients referred for LT. These results encourage further research on larger study group.

Keywords: pulmonary hypertension, lung transplantation, COPD, ILD

ECCENTRIC LEFT VENTRICULAR HYPERTROPHY- OUTCOMES AND CAUSES

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Introducion: Cardiac geometry abnormalities are a group of molecular, cellular and interstitial changes that manifest clinically as changes in size, mass, geometry and function of the heart. One of the form is pathological eccentric left ventricular hypertrophy which is manifested by increase in mass index and normal or dilated relative wall thickness, in response to cardiovascular causes. The goal of our study is to determine the factors that influence eccentric left ventricular hypertrophy to prevent its consequences.
Methods: The analysis was performed retrospectively according to the data collected by the Department of Invasive Cardiology of the Medical University of Bialystok. 102 patients, admitted for invasive diagnostic or invasive treatment, were included into the study. In our study we compared two groups of patients with normal geometry and with eccentric hypertrophy. Analysis comprised medical history, basic laboratory test, clinical data and echocardiography measurements. Statistical analysis was performed using Shapiro wilk ,chi-square, Student's t, Mann-Whitney U and ANOVA tests. P value <= 0.05 was considered as significant.
Results: Comparing to the patients with normal cardiac geometry , these with eccentric left ventricular hypertrophy were more likely to have: decreased ejection fraction, heart failure, left bundle branch block (LBBB), past myocardial infarction and mitral regurgitation. Patients with eccentric hypertrophy tend to have atrial fibrillation and tricuspid regurgitation more frequently . No differences were observed in hypertension, diabetes mellitus, chronic renal disease and lipid disorders in patients with both cardiac geometry patterns. In group with eccentric hypertrophy the prevalence of enlarged left atrium was greater.
Conclusions: Eccentric left ventricular hypertrophy may be associated with ischaemic processes, therefore it is crucial to prevent the development and increase efficiency of treatment of coronary artery disease. Such approach may lead to decrease prevalence of life-threatening complications such as: atrial fibrillation, heart failure and LBBB. Particular attention should be paid to patients with mitral regurgitation, due to a volume overload on the left ventricle which lead to compensation by eccentric hypertrophy.

Keywords: cardiac geometry, echocardiography, eccentric hypertrophy

MOST COMMON CAUSES OF HYPERPROLACTINEMIA IN HOSPITALIZED PATIENTS

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Introducion: Prolactin (PRL) is a protein hormone mainly secreted by lactotroph cells of the anterior pituitary gland. Hyperprolactinemia is the most common hypothalamus-pituitary axis dysfunction defined as elevated prolactin levels in blood.It may be initiated by number of physiological and pathological conditions such as organic damage of hypothalamic-pituitary axis or functional disorders of hypothalamic regulation of PRL secretion.
Methods: The aim of the study was to assess the frequency of various hyperprolactinemia causes depending on sex. We carried out the analysis of medical documentation of the Department of Endocrinology, Medical University at Lublin from 2012 to 2017.Statistical analysis of results was performed with the STATISTICA. Chi-square and Mann-Whitney tests were used with p<=0.05 considered significant.
Results: The study included 112 patients aged 18 to 79 yo diagnosed with hyperprolactinemia. The most common cause of hospitalization due to hyperprolactinemia was pituitary adenoma, which has been confirmed in imaging studies in 33 patients (27.7%).Almost half of the cases were caused by organic causes- pituitary adenomas and other tumors of the hypothalamic-pituitary area (44.5%). Endocrinopathies (PCOS and hypothyroidism) affected 26.9% of the patients. There was a statistically significant difference in the incidence of organic causes, endocrinopathies and other causes of hyperprolactinemia depending on sex.
Conclusions: According to the literature, hyperprolactinemia affects 1% of society, so it is a significant clinical problem nowadays. The most common cause of hiperprolactinemia is a pituitary tumor.

Keywords: hyperprolactinemia, endocrinopathies, pituitary adenomas

THE CLINICAL IMPORTANCE OF ACNE IN THE ESTIMATION OF POLYCYSTIC OVARY SYNDROME

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Introducion: Acne is characterized by increased sebum production, abnormal follicular epithelial differentiation, cornification obstructing the pilosebaceous follicle by desquamated epithelial cells and inflamation. Despite, androgens irrevocably play an important role in the development of cutaneous features, the clinical importance of acne in the estimation of androgen excess disorders, including polycystic ovary syndrome (PCOS), remains controversial. The aim of the study is to present the current state of knowledge on the relationship between acne and PCOS.
Methods: The PubMed, Web of Science, and Cochrane Library electronic databases were searched for the following keywords: "acne" and "androgen excess" or "hyperandrogenemia" and "PCOS".
Results: The Amsterdam ESHRE/ASRM-sponsored third PCOS Consensus Workshop Group suggested that acne is not commonly associated with hyperandrogenemia and therefore should not be regarded as evidence of androgen excess. However, the results of many studies indicate that acne is an important sign of hyperandrogenemia. It is well documented that 72% of acneic women may have androgen excess disorder such as polycystic ovary syndrome (PCOS), idiopathic hyperandrogenemia (IH), idiopathic hirsutism (IH) or non-classical congenital adrenal hyperplasia (NCAH). The most common cause of acne is PCOS (39.6%). 55% patients have at least one raised serum androgen level and there is no significant correlation between the severity of acne and hormonal values. The increased sebum production in acne patients may be due to increased circulating androgens or a hyper-responsiveness of the target organ (the pilosebaceous unit) to androgens, or both. What's more, there is an increased local production of androgens by the sebaceous glands of patients with acne. It suggests that although hyperandrogenemia has a role in the pathogenesis of acne, it may be seen in patients with normal serum androgen levels and those patients may be hyperandrogenic at tissue level.
Conclusions: In conclusion, recent data suggest that in the majority of patients, acne is not only a cosmetic problem and the presence of androgen excess disorders, including PCOS, should be evaluated in patients with acne. By excluding acne from being a hyperandrogenic symptom, those patients may be misdiagnosed which might cause the treatment failures.

Keywords: acne, PCOS, androgen, hyperandrogenemia

PRIMARY GLOMERULONEPHRITIDES AND THE ALTERATION OF THE PD-1/PD-L1 INHIBITORY PATHWAY

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Introducion: The pathogenesis of primary proliferative and non-proliferative glomerulonephritides (PGN and NPGN) is still not fully understood, however, current evidence suggests that most cases of PGN and NPGN are the results of immunologic response to different etiologic agents that activates various biological processes leading to glomerular inflammation and injury. Programmed cell death protein 1 (PD-1) is the major inhibitory receptor regulating T cell exhaustion. The aim of this study was to evaluate the frequencies of PD-1-positive and PD-ligand 1 (PD-L1)- positive T and B lymphocytes in patients with NPGN and PGN in relation to clinical parameters for the first time.
Methods: The study included peripheral blood (PB) samples from 20 newly diagnosed PGN and NPGN patients. The control group comprised of 20 healthy age- and sex-matched subjects. The viable PB lymphocytes underwent labelling with fluorochrome-conjugated monoclonal antibodies anti-PD- 1 and anti-PD- L1, and were analyzed using a flow cytometer.
Results: The frequencies of CD4+/PD1+ T lymphocytes, CD8+/PD1+ T lymphocytes, and CD19+/PD-1+ B lymphocytes in the PGN group exceeded values obtained both in the NPGN group, and the control group. Alteration of PD-1/PD- L1 pathway may be involved in poorer prognosis, as patients with PGN are characterized by higher frequencies of PD-1- positive and PD-L1- positive T and B lymphocytes than patients with NPGN.
Conclusions: Our results suggest that deregulation of PD-1/PD- L1 axis may contribute to the PGN and NPGN pathogenesis. High percentages of lymphocytes with PD-1 and PD-L1 expression may be related to the continuous T-cell activation and development of glomerular inflammation and injury.

Keywords: primary glomerulonephritis, PD-1/PD-L1 inhibitory pathway, T cells

END-STAGE RENAL FAILURE AS A FACTOR ACCELERATING THE AGING OF BLOOD VESSELS

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Introducion: Chronic kidney disease (CKD) is strongly associated with higher risk of cardiovascular disease (CV). CV mortality in patients with end-stage renal disease (ESRD) is 10-30 times higher than in the age-adjusted general population. An important non traditional risk factor of cardiovascular disease in renal patients is vascular stiffness (VS). In fact VS is used to estimate vascular aging in general population. The purpose of our study was to investigate if vascular stiffness and vascular age is increased in cohort of patients with CKD (especially in CKD 5-ESRD).
Methods: In this cross-sectional study, 100 patients with CKD stage 3-5 were examined using non invasive blood pressure monitor with pulse wave analysis (Mobil-O-Graph). The study group consisted of 47 patients in CKD stage 5 (hemodialysis and kidney transplant recipients) and 53 patients in CKD stage 3-4 (GFR 59-15ml/min). Vascular age was measured three times using Mobil-O-Graph and then the mean of the measurements was calculated. Demographic and clinical parameters were collected and used for statistical analysis.
Results: The mean metrical age in CKD 5 group was 49,4 y. (range 21-73) and in CKD 3-4 was 47,2 y. (20-80). Mean vascular age was 53,6 y. (range 30-76) and 49,9 y. (21-84) in CKD5 and CKD3-4 respectively. Both study groups were comparable in term of metrical age, gender, BMI, hypertension and diabetes ($p>0.05$). In both study groups metrical and vascular age differed (higher vascular age). The most significant difference between metrical and vascular age was found in CKD5 patients (4,58 vs 2,77 y.; $p<0,05$). GFR negatively correlated with difference between vascular and biological age.
Conclusions: Our study indicates that advanced kidney disease is accompanied by accelerated aging of the vessels.

Keywords: Nephrology, vascular age, PWV, chronic kidney disease, vascular stiffness

SUICIDE ATTEMPT WITH CALCIUM CHANNEL BLOCKERS- A BRIEF LOOK INTO TREATMENT PROCESS.

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Background: Continuous advances in medicine and elder care over the years have produced constrictive population model in many countries. As a result, there are many elder people that require cardiological treatment. Calcium channel blockers (CCBs) are widely used cardiological drugs. They are prescibed in treatment of hypertension, angina, cardiac dysrhythmias and other disorders . The mechanism of action is reduction of calcium flux into cells and, in effect, vasodilatation of arteries and decreased myocardial contractility. Nondihydropyridine CCBs like diltiazem or verapamil have more negatively chronotropic and inotropic effect than the dihydropyridine subclass. Severe overdosage of CCBs is relatively rare condition but it is simultaneously one of the most potentially lethal drug overdoses. Implantation of the emergent management in such poisoning is essential. However we are still missing guidelines for such events.
Case Report: The 54-year-old female was brought by emergency medcial services to the Toxicology Clinic due to CCB and ethanol poisoning . Upon admission patient was conscious, in stable condition, and with adequate responses. She confessed to ingestion of 40-60 Isoptin SR, 120mg tablets. Gastric lavage and activated carbon didn't produce awaited decontaminating effect. ECG revealed prologned QT interval. In response to increasing bradycardia 55/min and hypotension 90/50 mmHg catecholamines were provided. During hospitalization specific treatment was admitted, such as continuous infusion of high doses of insulin, calcium, 10% glucose. Essential part was evening out electrolyte disturbances caused by drug overdosage and used medication. Important A stable patient was discharged from the hospital.
Conclusions: Course of CCB poisoning may be dramatic and remedying is not always successful . Therefore, due to wider availability and rising number of suicide attempts in our society it is crucial to develop standard procedures for such events.

Keywords: Calcium channel blockers, CCB, poisoning,

CONCENTRIC REMODELING AND ITS RISK FACTORS IN PATIENTS WITH STABLE CORONARY ARTERY DISEASE

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Introducion: Concentric left ventricular remodeling is characterised by normal LV mass, but lower left ventricular end-diastolic diameter. Previous studies suggest that concentric have been associated with a risk of cardiovascular events that was greater than a normal geometry. This phenotype is associated with sudden cardiac death, higher risk of ventricular arrhythmias, and ischemic stroke. The aim of our study was to determine the risk factors of developing concentric remodeling.
Methods: The analysis was performed retrospectively. The study population consisted of 205 patients (age 66.71±9.84y, male 65.85%) with stable coronary artery disease. The geometry type stratification was based on the criteria taken from Recommendations for Cardiac Chamber Quantification (2015). We focused on comparison between patients with normal geometry (n=47) and concentric remodeling (n=63). The laboratory test, systolic and diastolic blood pressure. 12-lead ECG were analysed. Shapiro wilk, chi-square, Student's t-test, U Mann-Whitney and ANOVA tests were used to perform analysis.
Results: Our study shows that the most crucial risk factor of developing concentric remodeling is age. Patients with concentric remodeling are different in height but not in body surface area(BSA). We observed no differences in the occurrence of diabetes mellitus, chronic renal disease and lipid disorders, atrial fibrillation and past myocardial infarction. In patients with this phenotype of LV tends to have higher rate of hypertension and aortic stenosis than seen in normal geometry. There is no association between concentric remodeling and both: glycaemia and lipid profile
Conclusions: Among patients with Stable coronary artery disease concentric remodeling was most common. We suspect that ischemic heart diseases may be predisposing factor. Another explanation may be overestimation by criteria for geometry type basing on indexed to BSA value of cardiac mase. In study there was no difference in BSA between normal and remodeling patients but there was height difference. There is possibility that LV size was proportional to height more than to BSA in some patients. Our analysis suggest relation between age and concentric remodeling. Age may affect LV by higher BP and higher rate of degenerative valve disease.

Keywords: left ventricular geometry, concentric remodeling

THE INFLUENCE OF RADIOIODINE THERAPY ON SOME PARAMETERS OF OXIDANT/ANTIOXIDANT BALANCE IN PATIENTS WITH TOXIC NODULAR GOITRE

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Introducion: Oxidative stress is defined as an imbalance between production of reactive oxygen species and system's ability to counteract or detoxify their damaging effects. It plays an important role in hyperthyroidism-induced tissue damage. The purpose of this study was to determine whether radioiodine therapy can reduce oxidative stress in patients with toxic nodular goitre.
Methods: A group of 50 patients with toxic nodular goitre was studied. The group cosisted of 36 female and 14 male aged 20-68 years. Control group was assembled consisting of 17 normal adult volunteers (age and sex-matched). All the patients were in mild hyperthyroidism with serum TSH levels below 0.1 mU/l and effective half-life more than 3 days at the time of treatment. Malignant changes were excluded in all nodules by fine needle aspiration biopsy. In the investigated groups, malondialdehyde (MDA) as a marker of oxidative stress, glutathione (GSH) and glutathione peroxidase (GPx) activity as a parameters of antioxidant system before and 6 months after radioiodine therapy were determined. The serum fT4, fT3 and TSH were evaluated before and monthly up to 12 months after RIT. In order to assess thyroid volume thyroid ultrasound and thyroid scan were done after 12 months of I131 therapy. The activity dose was calculated by Marinelli's formula and ranged between 280 and 800 MBq. The absorbed dose ranged between 160 and 300 Gy and was proportional to thyroid volume.
Results: Significantly increased serum MDA levels with significant decrease in GPx activities and GSH level were observed in patients with toxic nodular goitre before treatment compared to controls subject. Achievement of euthyroidism after 6 months of radioiodine administration resulted in a significant decrease of MDA level, significant increase of GSH level and in GPx activities. Euthyroidism was achieved in 45 patients and hypothyroidism developed in 5 patients. Thyroid volume reduced to about 47%(average).
Conclusions: Results confirm the imbalance of the antioxidant/oxidant status in patients with toxic nodular goitre. Improvement of this balance can be achieved by radioiodine therapy.

Keywords: oxidants, antioxidants, radioiodine treatment, euthyroidism, toxic nodular goitre.

Neurology and Neurosurgery

MULTIPLE SYSTEM ATROPHY WITH CEREBELLAR ATAXIA (MSA-C SUBTYPE)

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Background: Multiple Systemic Atrophy (MSA) is a neurodegenerative disease characterized by the coexistence of varying in intensity Parkinsonian symptoms, cerebral, autonomic and pyramidal disorders, atrophy of neurons as well as glial cytoplasmatic ?-synuclein inclusions in oligodendrocytes. It's a rare disease with a incidence of 4:100000, mainly in the sixth decade of life. Basing on the severity of cerebellar and Parkinsonian symptoms two types are distinguished - MSA-P (superiority of parkinsonism) and MSA-C (predominance of cerebellar ataxia). The basis for the diagnosis is imaging techniques, mainly MRI.
Case Report: Presented case concerns 59-year-old patient suffering from gait disturbances, balance disorders and weakness of lower limbs muscles. Detailed neurological examination displayed slow movement, wide-based and unstable gait, speech ataxia, lower limbs ataxia, bilateral adiadochokinesis and negative Romberg's test. The patient was admitted with a previously performed CT of the head, in which cortico-subcortical atrophy was found, especially in the frontal lobes and the cerebellum. During hospitalization, a MRI was performed, which revealed generalized supratentorial and infratentorial neuronal atrophy, atrophy of middle cerebellar peduncles, vermis and cerebellar hemispheres, atrophic widening of the ventricular system, particularly of the fourth chamber and typical for the MSA „hot cross bun sign" in the pons. In addition, EEG and lumbar puncture were performed for differential diagnosis. EEG didn't reveal essential pathologies. In the CSF analysis, there was a bloody discoloration, turbidity of the fluid (after centrifugation, a clear, transaparent fluid) and increased cytosis. The patient received symptomatic treatment - gabapentin, piracetam and supplementation with group B vitamins.
Conclusions: Sometimes it's very difficult to clearly assign a given case to certain type of disease, some authors distinguish even a third variant (MSA-A), when there is a predominance of autonomic symptoms. A relatively large number of cerebellar symptoms and a low intensity of Parkinsonian symptoms, which in combination with the „hot cross bun sign" in MRI leads to the diagnosis of MSA-C. The prognosis in both types of MSA is poor, causative treatment is unknown and the survival time in most cases is 6-9 years. An early autonomic failure, older age, female gender and Parkinsonian variant all predict a shortened survival.

Keywords: Multiple System Atrophy, cross bun sign, Multiple System Atrophy with Cerebellar Ataxia

NEUROFIBROMATOSIS TYPE II WITH BILATERAL VESTIBULAR SCHWANNOMAS- CASE REPORT

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Background: Neurofibromatosis (NF) is a group of inherited diseases characterized by the occurrence of tumors of the nervous system. Neurofibromatosis type II (NF2) is generally less frequent then type I (NF1) and affects 1 in 25,000 births (approximately 10% of all patients with NF). It is caused by mutations in the NF2 gene at the locus of 22q12. NF2 is manifested by tumors in central nervous system, especially by bilateral vestibular schwannomas, also known as acoustic neuromas (that often lead to hearing loss) and numerous meningiomas.
Case Report: This report presents a 21-year-old patient with NF2 who was admitted to the Department of Neurology due to seizures. The patient underwent thoracic surgery a few years ago, and in 2014 he had the meningiomas of the anterior cranial fossa (that previously caused blindness) removed. In addition, the patient began to develop progressive hearing loss. In the neurological examination at the time of admission to the clinic, there was a binocular blindness, bilateral hearing loss, asymmetry of the face - lower setting of the right angle of the mouth. During the hospitalization symptomatic focal epilepsy was diagnosed and an antiepileptic treatment with Levetiracetam was introduced. In the MR scan of the head bilateral acoustic neuromas were found at the stem-cerebellar angles with a clear pressure on the stem, therefore the date of neurosurgical treatment was established. In a few weeks, the patient was hospitalized again in the Department of Neurology due to deterioration of contact and the appearance of right-sided paresis. In the neurological examination, there was a binocular blindness, bilateral hearing loss, asymmetry of the face - lower setting of the right angle of the mouth and right-sided paresis.
Conclusions: While NF1 affects mostly the skin, peripheral nerves, eyes, and less frequently bones and internal organs, NF2 is characterized by a much worse prognosis affecting mostly CNS. In this case, the disease caused a significant degree of disability in the patient. At such a young age, he suffers from blindness, significant loss of hearing and is largely dependent on other people when it comes to daily functioning.

Keywords: neurofibromatosis, bilateral vestibular schwannomas, epilepsy

THE COMPLEXITY OF SYMPTOMS IN HUNTINGTON'S DISEASE AS THE CAUSE OF LATE DIAGNOSIS

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Scientific supervisor:

Introducion: Huntington's disease (HD) is a rare, genetic, neurodegenerative disease caused by the mutation in the gene located on the short arm of the chromosome 4 (IT15), coding the Huntingtin protein. HD shows autosomal dominance with full penetration, that is to say every child in the family has a 50% risk of inheriting and developing HD. This means that the disease can occur among several people in a family simultaneously and for several generations. The phenomenon of anticipation is observed, i.e. the earlier occurrence of symptoms and more severe course in subsequent generations. Trajectory of disease in a family with HD can last up even to 30 years. HD usually starts at the age of 35-40 and progression of the disease leads to disabilities in everyday life and death within 15 years. The most common cause of death are falls, pneumonia and suicide.
Methods: The search was conducted on 15-19.12.2017 in the database of PubMed and EMBASE. It was searched using the combination of words: “Huntington disease”, “triad of symptoms” , “late diagnosis”, “unusual symptoms”, “prodromal symptoms”, ”complexity of symptoms”.
Results: The classic form of HD is characterized by movement disorders, neuropsychiatric symptoms and progressive impairment of cognitive functions. However, psychiatric and cognitive symptoms can often be up to 15 years ahead of full-blown motor disturbances, resulting in delayed HD diagnosis or diagnosis of another disease.
Conclusions: HD is a challenge for health care workers due to the rare occurrence, unusual symptoms and their multiplicity , a hidden beginning and a huge impact on the entire family.

Keywords: Huntington’s disease, prodromal symptoms, neuropsychiatric symptoms, cognitive symptoms

TWO CASES OF UPPER AND LOWER MOTOR NEURON DISEASE

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Background: Amyotrophic lateral sclerosis (ALS) is a rare, fatal neurodegenerative disease of the human motor system that affects upper and lower motor neurons. Main symptoms encountered in this disease are dysphagia, dysarthria, spasticity, fasciculations and muscle weakness. Peak age at onset is 50 to 70 years. Majority of patients with ALS die due to respiratory failure, mostly within 3-5 years from the occurrence of the first symptoms. The cause of ALS remains unknown. Pathogenesis involves interaction between molecular and genetic pathways. In spite of much research in this field, there is no biomarker or diagnostic test for ALS. Neurologists rely on clinical criteria in diagnostic process. In the absence of curative treatment, the management bases on both improving quality of life and prolonging survival.
Case Report: The aim of the study is to present two cases of ALS. First patient, a 70-year-old female was admitted to Neurology Clinic due to progression of dysarthria and dysphagia. Recent neurological examination revealed the bulbar syndrome, impaired movement, fibrillations and dystrophy of tongue, dysarthria, diminished pharyngeal and palatal reflexes, dysphagia with excessive mandibular reflex, upper limbs muscular dystrophy, increased tendon reflexes and problems with walking. Second patient, a 37-year-old female was admitted to Neurology Clinic as result of worsening of respiratory failure. ALS diagnosis was made 3 years prior to the admission, when she presented impairment of motor function and respiratory failure for 2 months. Recent neurological examination revealed: dysphagia, paresis of upper limbs with paralysis of lower limbs, dyspnea, pathological hyperreflexia, diminished pharyngeal and palatal reflexes and excessive mandibular reflex. Currently she is using a wheeled walker. Patient was discharged from the hospital with home ventilation support and long term multidisciplinary care.
Conclusions: Diagnosis of ALS was based on neurological examination, nerve conduction study, electromyography, cerebrospinal fluid tests and imaging tests like MRI of brain. ALS is one of the most severe neurological diseases. Due to its fast progression every case should be thoroughly analysed in order to make quick diagnosis, introduce treatment and improve quality of life. Improving our understanding of its pathogenesis is first step in discovering effective treatment.

Keywords: amyotrophic lateral sclerosis, neurodegenerative disease, motor neuron

APPENDECTOMY – THE WAY TO PREVENT PARKINSON'S DISEASE? - REVIEW

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Introducion: Parkinson's disease is a long-term degenerative disorder of central nervous system, which affected 6,2 million people and resulted in 117,400 deaths globally (2015). The pathogenesis of Parkinson's disease involves the accumulation of aggregated alfa-synuclein. The clumps of protein have been discovered in the appendix and other parts of digestive system.
Methods: Review of medical journal literature published on PubMed in the last 5 years.
Results: Three studies about the role of vermiform appendix in developing Parkinson's disease were found on PubMed. First one in 2015, with the experimental group of 295 Parkinson's disease individuals, has observed relationship between appendectomy and Parkinson's disease. Second one in 2017, based on retrospective data of 1625 patients, suggested there is no effect of appendectomy on the emergence and clinical manifestation of Parkinson's disease. Third study is the biggest and the newest one (October 2018), involving more than 1,6 million individuals, based on epidemiological database. The study suggested that removal of the appendix decades before Parkinson's disease was associated with lower risk for Parkinson's disease, particularly for individuals living in rural areas.
Conclusions: Despite the promising outcomes of mentioned studies, more studies are needed to fully confirm the relationship between appendectomy and Parkinson's disease.

Keywords: appendicitis, appendectomy, Parkinson's disease

Orthopaedics, Physical Therapy and Rehabilitation

THE EFFECTIVENESS OF TEMPOROMANDIBULAR JOINT PHYSIOTHERAPY IN PATIENTS WITH HYPERMOBILITY JOINT SYNDROME.

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Introducion: The Hypermobility Joint Syndrome (HJS) occurs on average in 5-10% of the population, more often in young people and women. The research proves the correlation between the occurrence of HJS and temporomandibular disorders (TMD). Aim of the study was presentation of the effectiveness and methods of physiotherapy in patients with TMD and co-occurring HJS.
Methods: Questionnaires of eight patients with TMD and co-occurring HJS were analyzed (38,7 ±10,6 years) who underwent physiotherapy and control of its results after 3 weeks of therapy. Beighton scale was used to assess HJS. All patients qualified for the study had more than 4 points on a scale The intervention included manual therapy and stabilization exercises directed at the temporomandibular joints and their areas. As a research tool, the questionnaire of Manual Functional Analysis of masticatory system (MFA) and a questionnaire for palpation of head and neck muscles according to Festa were used. Outcome measures included bilateral level of pain over the masseter, sternocleidomastoid, trapezius and temporalis muscles (Visual Analogue Scale), active mouth opening (mm) were all assessed pre- and post-intervention. Wilcoxon`s signed-rank test was used to examine the effects of the intervention on each outcome measure. The results were statistically analyzed in the STATISTICA 13 and was conducted considering significance at a p-value <0.05.
Results: It was noted that in group patients with HJS were accompanied by hyperthyroidism (75%). All patients had hypermobility of the mandible. Significant differences were found between pre-intervention and post-intervention for level of pain, that decreased on average by 3 points on the VAS scale ($p = 0.00005$). Active mouth opening was improved in the best case by 3 mm, on average by 0,8 mm ($p=0,11$).
Conclusions: The efficacy of stomatognathic physiotherapy in patients with HJS and TMD in the case of reduction of TMJ's pain has been demonstrated. Physiotherapy requires a holistic approach to the patient with the problem of the masticatory motor system, because the accompanying diseases such as the HJS can significantly affect the results of therapy.

Keywords: Hypermobility Joint Syndrome (HJS), physiotherapy, temporomandibular joint disorders (TMD), hyperthyroidism

SHORT STEM PROSTHESIS IN PATIENTS WITH HAEMOPHILIA

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Introducion: Haemophilic arthropathy is one of the most important problems at patients with haemophilia. There occur degenerative changes which leads to serious impairment of the motor system functions and often to disability even at a young age. Only few reports have been published to date concerning the application of a short stem endoprosthesis in total hip arthroplasty in this population.
Methods: Between 2010 and 2016, 38 short-stem-THA procedures were performed at patients with haemophilia. The mean duration of observation was 34.3 months. The post-operative outcomes were evaluated using the HHS, WOMAC and VAS scales to assess patient satisfaction with the surgery.
Results: The patient's scoring according to mentioned scales has shown good efficiency of short stem endoprosthesis in case of haemophilic arthropathy.
Conclusions: The preliminary results of THA using short stem endoprostheses are satisfactory and suggest, that these implants are a reasonable and appropriate solution for patients with such a hip arthropathy.

Keywords: Short stem prosthesis, haemophilia, degenerative changes, few reports, THA (total hip arthroplasty), 38 patients, HHS, WOMAC and VAS scales; satisfying results.

CURRENT TRENDS IN ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION.

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Introducion: The rupture of the Anterior Cruciate Ligament (ACL) is a common complication of a knee trauma. Arthroscopic ACL reconstructive surgery is the method of choice in most of these cases. This procedure is an increasingly common procedure due to low invasiveness, good treatment results and a constantly growing number of operators able to perform them. The aim of the study is to review currently used methods of reconstruction of the Anterior Cruciate Ligament. There are many types of transplants, and the choice is related to individual factors (including gender, age, occupation, physical activity) and the patient's expectations. The operator's skills and preferences also determine therapeutic choice. Considering above-mentioned aspects, authors of the study will analyze ACL reconstruction methods based on the latest literature.
Methods: Base of Patients, Department of Orthopaedics and Traumatology Articles
Results: Currently, arthroscopic procedures are basic treatment of ACL injuries. Due to various types of transplants, the procedure, result and complications may vary depending on the choice. An autograft is the preferred treatment for this injury. The autografts that are willingly selected are the ligaments of the semitendinosus muscle and the patellar tendon. Less frequently taken autografts include ligaments of the quadriceps muscle of the thigh and gastrocnemius muscle (Achilles tendon). Another type of transplant is allograft. Material is taken from the donor (dead donor in relation to ligaments). It is less frequently used due to its high cost, lower strength compared to autograft and a greater number of complications. The third type of transplants are synthetic grafts. These are fibers made of materials such as Gore-Tex. Synthetic grafts are also rarely used for the same reasons as allografts. Internal Bracing (IB) is becoming more popular procedure. This method allows you to re-attach broken ligament in original position. It is possible if only one extremity of the ligament is broken. An important issue is the number of bundles (single-bundle, double-bundle), position and type of attachment (titanium screws, absorbable, endobutton).
Conclusions: The final choice of the treatment method depends on the operator's skills and preferences.

Keywords: Autografts, Arthroscopy, Meniscus, Cartilage,

ASSESSMENT OF THE SURGICAL TREATMENT EFFECTIVENESS IN DISORDERS OF METATARSOPHALANGEAL JOINTS (MTP).

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Introducion: Dysfunction of 1st metatarsophalangeal joint (I MTP) is one of the most common diagnostic and therapeutic problem in podiatry. The main ailments reported by patients with this disease are pain and limited range of motion, especially a dorsal flexion, caused by progressive destruction of articular surfaces and osteophytes formation. A radical surgical treatment (cheilectomy or arthrodesis) has been so far a method of choice among patients with advanced disease, however in recent years an endoprosthesoplasty of I MTP joint became an alternative to aforementioned methods.
Methods: The study encompassed 12 patients (10 females and 2 males, the average age: 58) with symptomatic dysfunction of I MTP joint, who were qualified for surgical treatment using I MTP Tornier DX FuturaTM endoprosthesis. To provide information about: pain experienced by the patient, functioning of I MTP joint and the alignment, an assessment of patients' signs and symptoms was performed twice - before and after surgery, using modified version of AOFAS Ankle-Hindfoot Scale. The maximum score to be obtained during the examination was 100 points. The results were subjected to statistical analysis using dependent t-test for paired samples; $p < 0,05$ is considered statistically significant.
Results: The average time after which the postoperative assessment of patients was performed is 31,1 months (M=31,1; Me=33). The average obtained scores of patients' condition in AOFAS Ankle-Hindfoot Scale before and after surgery are 36,2 (M=36,2; Me=35) and 81,5 (M=81,5; Me=88), respectively. Satisfactory improvement of I MTP joint's function after operation was achieved in 9 patients during 9,4 weeks (M=9,4, Me=6,5); in 2 patients there was no betterment of joint working. In 1 case the removal of endoprosthesis was necessary.
Conclusions: The results of performed analysis revealed that the endoprosthesoplasty using Tornier DX FuturaTM endoprosthesis is an effective method of improvement I MTP joint's function and it is a promising alternative to other surgical methods commonly using in clinical practice.

Keywords: I MTP, endoprosthesis, AOFAS Ankle-Hindfoot Scale, osteoarthritis

Paediatrics and Neonatology

THE EVALUATION OF UTILITY AND FREQUENCY OF THE USE OF DEVICES EMITTING WHITE NOISE -THE IMPACT ON THE BEHAVIOR OF CHILDREN.

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Introducion: Scientific researches claim that white noise reduces pain experienced by newborns during vaccination, simple medical procedures and during colic. There are many devices emitting white noise designed for calming children.
Methods: The study was conducted by performing an anonymous, online questionnaire. The survey was divided into 3 parts: the demographic data, the way of using devices emitting white noise, an impact on child's behavior. It contained single-choice and multiple-choice questions.
Results: 580 people took part in the survey: 576 women and 4 men. The average age of the population was 29.27 years. 69% of respondents have higher education. The most commonly used devices emitting white noise are Szumiś (40.3%), Whisbear (32.8%) and sound recordings imitating electrical devices (30.9%). 24.7% of parents use devices 3 and more times a day, 24.1% twice a day and 23.3% use them occasionally. The rest of the respondents use this type of devices once a day or several times a week. The main purpose is to put a child to sleep (86.9%). Almost half of parents (48.1%) puts the device to a child's crib. 497 (85.7%) respondents admit that a child falls asleep better after applying white noise. 80% of parents think that this sound causes the child to become calm faster and stop crying. Over 97% of respondents did not notice the negative effects of using white noise in their children. 58.6% of parents learned about devices emitting white noise from the Internet.
Conclusions: 1.The emitting devices can be complementary to other methods of calming young children. 2. The devices emitting white noise, after meeting the appropriate technical criteria, may be recommended by pediatricians to facilitate calming children and making it easier to fall asleep. 3. The long-term impact of using the devices too close from a child and the effect on the child's psychomotor and psychological development is unknown. Therefore, parents ought to keep their children within an appropriate, safe distance from aforementioned devices while using them.

Keywords: White noise, sleep, whisbear,

FACTORS RELIEVING PAIN IN CHILDREN AFTER SURGERY. PART II

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Introducion: The International Society for the Study of Pain assumes that pain is a subjective and unpleasant sensory impression that arises under the influence of various stimuli that damage or threaten tissue damage furthermore, the pain has a multidimensional character and permeates on two levels: somatic and mental. It is possible to identify many factors that alleviate the pain of various organs, including those occurring after the surgery.
Methods: The research method was a diagnostic survey, and the research tool was an original questionnaire, which was carried out in 125 children staying at the University Children's Hospital in Lublin, in the first days after the surgery. The study was conducted from April 20 to May 19, 2018, in the group of children aged 7 to 18 years.
Results: The pain threshold increases with age, but there can be used pain reducing agents. Respondents mentioned the following factors that alleviated pain: sleep (64.4%), the right position of the body (42.4%), presence of parents / carers (34.4%) and silence (25.6%). A big impact on minimizing pain among children was the distraction of their attention by watching TV (12%), playing on a tablet or smartphone (22.4%) and reading books (4.8%). Patients often also mentioned nonpharmacological pain relief measures and included to them deep breaths (9.6%), breathing exercises (7.2%) and cold compresses (16%). In addition, every tenth patient said that talking to peers also relieved pain and raised the comfort of hospitalization.
Conclusions: The most common factors for alleviating postoperative pain in children include sleep, silence, cold compresses, contact with a parent or carers, right position of the body and reading books. However, if there is such a need, the patient is given pharmacological agents to relieve pain.

Keywords: pain, relieving factors, surgery, children

FGF-23 AS AN EARLY BIOMARKER OF RENAL INJURY IN CHILDHOOD CANCER SURVIVORS.

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Introducion: Childhood cancer survivors are exposed for many late side effects of anticancer treatment. One of them is chronic kidney disease caused mainly by nephrotoxic drugs. FGF-23 is an early biomarker of renal injury and increased when filtration rate decreased. Osteoblasts and osteocytes secrete FGF-23 in response to high blood phosphate and vitamin D levels.
Methods: The study group included 66 patients (male: 29, female: 37). The mean age at the time of study was 13.7 ? 4.45 years . At diagnosis of cancer, the mean age was 4.58 ? 3.69 years. The mean age after completed treatment was 6.34 ? 4.50 years. Patients were treated due to: leukemia (n= 45; 69.23%) and other cancers- Hodgkin lymphoma and solid tumors (n= 21; 30.77%). FGF-23 and Klotho protein were measured by ELISA. Levels of calcium (Ca), phosphorus (P), alkaline phosphatase (ALP) and GFR were assessed for each patient.
Results: There was no significant difference in FGF-23, Klotho protein, Ca, P, ALP or GFR levels between the two groups. Mean level of FGF-23 was 38.75 pg/ml ? 18.06 vs. 38.13 pg/ml ? 20.88 (p= 0.84); Klotho protein 990.00 pg/ml ? 683.50 vs. 1455.00 pg/ml ? 817.00 (p= 0.17); Ca 2.47 mmol/l ? 0.08 vs. 2.49 mmol/l ? 0.09 (p= 0.12); P 4.31 mg/dl ? 0.65 vs. 3.80 mg/dl ? 0.83 (p= 0.63); ALP 189.60 IU/l ? 98.46 vs. 151.66 IU/l ? 114.20 (p= 0.51); GFR 110.70 ml/min/1.73 m2 ? 23.51 vs. 117.00 ml/min/1.73 m2 ? 31.96 (p= 0.61) respectively. GFR was below the range norm for age in 36.36% of patients. There were correlation in the levels of GFR and FGF- 23 (rs= -0.346) as well as GFR and Klotho protein (rs= 0.320) for all patients.
Conclusions: Almost 37% of patients had GFR below the norm range for age. There were no significant differences in FGF- 23 levels in patients treated due to leukemia and other cancers in the first decade after completion of treatment. Nevertheless, the function of the urinary tract in childhood cancer survivors should be regularly monitored for early detection of renal damage.

Keywords: FGF-23, childhood cancer survivor, renal injury.

FACTORS AGGRAVATING PAIN IN CHILDREN AFTER OPERATION. PART 1

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Introducion: According to the International Association for the Study of Pain (IASP), pain is defined as “an unpleasant sensory and emotional experience that is associated with actual or potential tissue damage or described in such terms”. A particular type of pain is post-operative pain. The type of operation, its location, extent and duration affect the sensation of pain. Pain has two main roles: warning and defense. It depends on many factors which can relieve or increase it.
Methods: The method used in the work was a diagnostic survey, and the research tool was the author's questionnaire. The respondents were children from 7 to 18 years of age, in the first days after surgery, staying at the University Children's Hospital in Lublin. The questionnaire was completed by 125 children. The survey was conducted from April 20 to May 19, 2018.
Results: One-third of respondents (31.2%) claims that noise is the factor which escalates pain in the greatest extent, and every fourth respondent (25.6%) as the main aggravating factor points the lack of fresh air in the hospital room. Other factors indicated by the respondents were: excessive lightning in the hospital room (8.8%), intense odour (7.2%), patients' visitors (4.8%), as well as staying with other patients (4.0%). Almost every tenth patient did not notice what causes aggravation of pain (9.6%), while only 25 people from the study group reported a factor increasing postoperative pain. The remaining patients indicated the answer "others", which included: wound touching (20.0%), physical effort/movement (56.0%), cessation of analgesics (4.0%), laughter (4.0%), uncomfortable body position (8.0%) and swallowing saliva (8.0%).
Conclusions: The most important factors increasing the pain in the post-operative period are: noise, lack of fresh air and excessive lighting in the room. Statistical analysis did not show the relationship between the length of hospitalization and the intensity of pain experienced. It is worth noting that the pain threshold increases with age, which is why postoperative pain is worse tolerated by children than by adults.

Keywords: Post-operative pain, children, aggravating factors, operation.

THE IMPORTANCE OF THE MAGNETIC RESONANCE PROTOCOL IN THE DIAGNOSIS OF SELECTED PATHOLOGIES IN CHILDREN.

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Introducion: Magnetic resonance imaging (MR) allows for imaging the central nervous system, giving a high resolution image showing the smallest anatomical structures. The possibilities that we can derive from magnetic resonance imaging such as non-invasive brain or spinal cord examination and very detailed images obtained have significantly changed today's approach to the diagnosis and treatment of multiple sclerosis and epilepsy in children. The changes in the MR protocols used in the MS and epilepsy have evolved over the years, which to a significant extent shows the importance of this diagnostic method.
Methods: This work is the gathering of the latest and most effective protocols used in the diagnosis of diseases in children such as drug-resistant epilepsy or MS. The collection of the most effective patterns of action in the diagnosis of diseases in children with the use of MR shows the evolutionary changes in these protocols and emphasizes their importance in the diagnosis and assessment of diseases in children. Standard sequences including evaluation of T1 and T2 weighted images and current protocols in the diagnosis of drug-resistant epilepsy and MS based on McDonald's criteria have been discussed. The importance of using the FLAIR option and its modifications and volumetric images allowing for accurate imaging of periventricular and paraventricular changes visible in MS was emphasized, as well as volumetric sequences performed in children with drug-resistant epilepsy to search for epileptic foci.
Results: In the past drug resistant epilepsy was visualized by computed tomography but this imaging modality was not the most effective method because it did not show number of epilepsy foci in the brain. The use of MR increased diagnostic efficiency and the use of dedicated protocols made it possible to identify pathologies such as gray matter heterotopia, cortical dysplasia or congenital syndromes with polimicrogyria. The use of the dedicated epilepsy protocols is justified by the fact that the sensitivity of the focal lesion detection in the standard MR was 50%, compared with the sensitivity of 91% for the MRI of the epilepsy protocol. Similarly, in children with MS, computered tomography did not show many pathologies. Changes in the white matter are revealed by the MR technique, while the number of lesions and their location is most effectively evaluated in specific MR sequences / protocols.
Conclusions: Various diseases and different patients' age require the use of different dedicated protocols. The use of different patterns of operation, depending on the suspected pathology, will allow to obtain the most accurate analysis and subsequent evaluation of the test results. Detailed MR protocols dedicated to specific pathology should be used, modified and improved for optimal diagnosis and monitoring of treatment.Various diseases and different patients' age require the use of different dedicated protocols. The use of different patterns of operation, depending on the suspected pathology, will allow to obtain the most accurate analysis and subsequent evaluation of the test results. Detailed MR protocols dedicated to specific pathology should be used, modified and improved for optimal diagnosis and monitoring of treatment.

Keywords: epilepsy, sclerosis multiplex, MRI, FLAIR protocol

IN SEARCH OF THE CAUSE OF CHRONIC COUGH? AT A 12-YEAR-OLD BOY – A CASE REPORT

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Background: In a child, dry cough occurring over 4 weeks or more is a reason to initiate a detailed diagnostic process, because it may suggest a serious respiratory disorder. Foreign body aspiration among child patients should not be marginalised, as it is fairly common and usually presents with cough, wheezing or stridor, along with limited or abnormal auscultatory sounds on examinations. However, it can mimic other conditions and thus cause trouble with accurate diagnosis, including misdiagnoses of asthma or pneumonia. Delayed diagnosis is associated with increased morbidity, especially due to a respiratory infection. Most foreign bodies typically aspirated by children are radiolucent, meaning they are not visible in an X-ray. Detailed history of the aspiration episode and any persistent symptoms are the most vital and can be the basis for referral for a bronchoscopy evaluation.
Case Report: Boy, aged 12, has been admitted to University Children's Hospital in Lublin in February 2018 due to chronic dry cough. In December 2017 basing on an X-ray, the patient has been diagnosed with a right-sided pneumonia; after antibiotics the inflammation has been reduced. History shows an incident of the patient choking on a small eraser in November 2017. Due to the persistent cough, the boy has been directed to the Clinic. At admission, the patient was in a good general condition. In auscultation, there was normal vesicular murmur, with distinct silencing and singular whizzing at the base of the right lung. Ultrasound has shown an atelectatic consolidation at the base of the right lung. A chest CT scan has shown a foreign object in intermediate bronchus of the right lung; the object has been removed the day after through bronchoscopy. The general condition of the patient has improved, while the cough and auscultatory symptoms have subsided.
Conclusions: Everyday practice shows how important a thorough diagnostic process is, as well as how seemingly trivial symptoms cannot be ignored. Prolonged presence of a foreign body in the airways can lead to complete immobilisation of a lung segment and inflammation. In this case, the test performed and a quick diagnosis allowed for effective treatment and full recovery of the patient.

Keywords: cough, foreign body aspiration, child

HEMOPTYSIS - ONE OF „RED FLAG" SYMPTOMS IN AN ADOLESCENT

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Background: Hemoptysis is the act of coughing up blood. The most common cause of hemoptysis is a respiratory tract infection, disease of the cardiovascular system or a coagulation disorder. Teenagers often experience pseudo-hemoptysis, associated with episodes of epistacxis or gastrointestinal bleeding. Hemoptysis should always be seen as an indicator of a potentially serious underlying condition. Since the symptom is not pathognomonic, it requires a thorough differential diagnosis.
Case Report: We report a 16-year old girl who was admitted to the Department of Paediatric Pulmonology and Rheumatology for diagnosis and treatment of haemoptysis episodes. Symptoms began six months prior with hoarseness, cough, discomfort in the neck, weakness and daily haemoptysis (< 100 ml/day). The patient was cardiovascularly and respiratorily stable, had no fever. Physical examination revealed the presence of crackles over the left lung and decreased vesicular murmur at the base of the right lung. Laboratory tests suggested iron deficiency anemia. There were no changes in chest X-ray. CT showed ground-glass opacification. The cardiological and gastrological causes of hemoptysis were excluded. The laryngological examination revealed expanded vessels of the Kiesselbach plexus. Despite cauterization of the plexus vessels, hemoptysis persisted. The bronchoalveolar lavage demonstrated a small amount of hemosiderin deposition within the alveolar macrophages and blood vessel walls. The patient underwent thoracoscopic lung biopsy in Warsaw. The results of biopsy was ambiguous, suggested the diagnosis of Pulmonary Hemosiderosis (PH).
Conclusions: This case shows the importance of thorough differential diagnosis of hemoptysis in pediatric patients. It is vital to take into consideration rare causes of hemoptysis, including PH. Pulmonary Hemosiderosis is an extremely rare lung disease clinically manifests hemoptysis, iron deficiency anemia and occurring mostly in children in the first decade of life. Early diagnosis of PH is imperative to avoid pulmonary fibrosis and mortality. It is worth noting the correct diagnosis has only been stated after the CT chest, bronchoscopy and biopsy, as x-ray imaging was not sufficient.

Keywords: haemoptysis, iron deficiency, anemia, hemosiderosis, lung, biopsy

INFLUENCE OF INFECTIONS IN PREGNANT WOMEN ON THE CONDITION OF THE NEWBORN'S VISION.

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Introducion: Infections in newborns is a serious problem in neonatology. Common cause of prenatal infections is TORCH syndrome. The pathogens cause serious disturbances of fetal maturating, resulting in the inhibition of development or even miscarriage.
Methods: An online search of the literature was conducted covering years from 1998 to 2017 with different keywords such as: congenital, eye manifestations, TORCH, etc. Well documented individual patient reports and patient series of ocular manifestations of congenital infections were also reviewed.
Results: Symptomatology of congenital infections includes ocular symptoms, of which chorioretinitis and chorioretinal scars are the most characteristic. These symptoms are common in TORCH syndrome, that is caused by pathogens: Toxoplasma gondii, rubella virus, cytomegalovirus, herpes viruses, and others (including human immunodeficiency virus). Other pathogens that cause these symptoms are varicella virus, lymphocytic chorioretinitis virus and West Nile virus. Congenital cataract is also a common symptom, but less specific for prenatal infections. It was reported in some cases of congenital rubella, syphilis, varicella-zoster, and Epstein-Barr virus infection. Ophthalmic complications of prenatal bacterial infections include interstitial keratitis (caused by Treponema pallidum) and conjunctivitis (caused by Neisseria gonorrhoeae or Chlamydia trachomatis). Less common symptoms are congenital glaucoma, microphthalmia, microcornea, retinal detachment, strabismus, nystagmus, optic atrophy, optic neuritis. Eye manifestations can result in serious consequences, including childhood blindness.
Conclusions: Ophthalmic manifestations negatively affect the child's development. Proper diagnosis and the prompt implementation of treatment prevent many serious complications. Establishing a proper diagnosis may be difficult due to the immaturity of the neonatal visual system. Treatment is usually long-term and complications can last for years.

Keywords: congenital infections, eye manifestations, TORCH, chorioretinitis, chorioretinal scars

JARCHO-LEVIN SYNDROME AS AN EXAMPLE OF COOPERATION BETWEEN VARIOUS SPECIALIZATIONS.

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Background: Jarcho-Levin syndrome was first described in 1938 by Saul Jarcho and Paul Levin from Johns Hopkins Hospital, whereas they reported cases of thoracic insufficiency due to vertebral and rib anomalies. This rare genetic, autosomal recessive disorder, also known as spondylothoracic dysplasia is characterized by vertebral column malformations (butterfly formation of vertebras) and ribs malformations (fan-like configuration of the ribs), reduction in rib number and shortened thorax. It is caused by mutation in the DLL3 gene on chromosome 19q13. Newborns with Jarcho-Levin syndrome have restricted thorax, that can cause improper development and crowding of internal organs, leading to complications such as breathing difficulties, recurrent respiratory infections and pneumonia. The aim of our study is to present a case about a rare illness, Jarcho-Levin syndrome, as an example of cooperation between various specializations – not only in diagnosing, but also during a long-term care.
Case Report: Premature newborn, born in the 35th week of gestational age, Apgar score of 8/7/7/7 points with birth weight 2570g, 6th pregnancy/ 4th labour complicated by mother's tobacco addiction. Patient was treated for prematurity, congenital pneumonia, respiratory failure, jaundice and observed towards malformations of the spine in the thoracic region and heart defects (Patent Foramen Ovale, Atrial Septal Defect II). Infant was transferred to the Department of Neonatal Pathology for further diagnosis and treatment. Physical examination revealed minor dysmorphic features such as short neck and small chest (without visible deformation). X ray depicts complex defects of the thoracic vertebrae and ribs (on the right side 11,on the left side 10 ribs were affected).Child was consulted by geneticist - Jarcho-Levin syndrome was suspected. Hearing test was performed - left ear abnormalities were discovered, 3-month follow-up control was recommended .
Conclusions: Holistic approach was crucial in this case – the newborn presented many abnormalities. Only the help of many specialists will maintain the well-being of the child, due to the fact, that treatment of Jarcho-Levin syndrome is based on presented signs and symptoms. Treatment may include surgery for bone malformations and respiratory support.

Keywords: Jarcho-Levin syndrome, premature, case report, spondylothoracic dysplasia

HYPERGLYCEMIA IN A NEWBORN- CASE REPORT

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Background: Hyperglycemia in the newborns is diagnosed when the concentration of glucose in the venous blood exceeds 150mg/dl. Hyperglycemia is a common problem in preterm infants. It is associated with serious complications like increased mortality, retinopathy of prematurity and intraventricular hemorrhage.The most common causes of hyperglycemia include: small birth weight, prematurity, IUGR, sepsis, stress, iatrogenic which is caused by intravenous administration of glucose or drugs such as glucocorticoids. There are also two subtypes of neonatal diabetes mellitus: transient neonatal diabetes and permanent neonatal diabetes, which must be considered if a neonate presents refractory hyperglycemia within the first 6 postnatal months and low birth weight. The aim of our study is to present a case report of a rare neonatal hyperglycemia presentation.
Case Report: We present a case of newborn with prematurity with the accompanying diagnostic and therapeutic difficulties. In the first day patient presented glucose intolerance with glucose levels above 200mg/dl. Insulin was applied and he was transferred to Children's Clinical Hospital in Lublin for further diagnose neonatal diabetes. Laboratory tests revealed anaemia, glycemic levels were controlled and showed no results above 200mg/dl. The patient remains under the care of specialists.
Conclusions: In neonatal hyperglycaemia transient neonatal diabetes should be considered. This diabetes is associated with mutations of sulfonylurea receptors at chromosome 6q24, so in this case we should perform genetic tests. Precise, still monitoring of blood glucose levels is very important, because abnormalities in glucose homeostasis can have serious short term consequences.

Keywords: hyperglycemia, case raport, premature

IS THE MEASUREMENT OF TEMPERATURE AT MCBURNEY'S POINT USEFUL IN DIFFERENTIATING ACUTE ABDOMINAL PAIN IN CHILDREN ADMITTED TO EMERGENCY WARD?

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Introducion: Acute appendicitis is one of the most common surgical causes of acute abdominal pain in patients admitted to pediatric emergency ward. Despite the existence of many diagnostic tools and scales, diagnosis of this condition can be difficult since the symptoms can be similar to other ailments. It is suggested that local inflammation may cause a temperature rise at McBurney's point, which may be useful in differential diagnosis of acute appendicitis. The aim of this study is to investigate whether temperature at McBurney's point vary between patients with acute appendicitis and with non-surgical afflictions.
Methods: Children admitted to the emergency department at University Pediatric Hospital in Cracow from March 30th, 2015 to December 19th, 2015 with a diagnosis of acute abdominal pain (defined same as ICD-10.R10) were enrolled into this study. Each patient underwent standard diagnostics and additional temperature measurements at McBurney's point and a symmetrical point, which was performed using the same shooting thermometer. Pediatric surgeons qualified patients for the surgery or conservative treatment based on clinical view. The temperatures were compared between group 1 (children treated conservatively or with negative appendix histopathology) and group 2 (children with positive appendix histopathology).
Results: Into this study 309 participants (154 female) were recruited. In the group of patients with histopathologically confirmed diagnosis of appendicitis (group 2, n=132) the median temperature at the McBurney's point was 37.2C and in the group 1 (n=177) it was 37.5C (p=0.11084). Stratification due to sex, age (intervals of 1-7; 8-10; 11-14; 15-18 years old) and weight (according to International Obesity Task Force guidelines for children) was performed and none of this analyzes has shown statistically significant differences, except sex-based division. In subgroup of girls differences in the temperature at McBurney's point between group 1 and group 2 was statistically significant (p=0.01693).
Conclusions: Although there is no significant difference between groups with and without confirmed appendicitis in general pediatric population, subgroup analysis has shown that temperature measurement at McBurney's point could be useful in female patients. There is a need of further muliti-centered prospective studies with greater number of participants to verify this assumption.

Keywords: appendicitis, acute abdominal pain, pediatric surgery, McBurney point, temperature, diagnostic tool

Pharmacology, Dietetics and Genetics

DUPILUMAB AS A NOVEL DRUG FOR ATOPIC DERMATITIS

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Introducion: Atopic dermatitis is a chronic, inflammatory and pruritic skin disease. It is one of the most common dermatological condition in developed countries which can seriously affect the quality of life. The choice of therapy depends on disease severity raging from topical agents, such as emollients, to systemic immunosuppressants, like oral steroids or cyclosporin A. Researches on its pathogenesis and advancement in pharmacology provided novel biological agents effective in treating the inadequately controlled forms of the disease. One of these drugs is dupilumab, a human monoclonal antibody directed against the interleukin-4 receptor alpha subunit. The aim of this study is a literature review of dupilumab utility in atopic dermatitis treatment.
Methods: PubMed database was searched for articles containing the following keywords: 'atopic dermatitis' and 'dupilumab'. Most relevant publications focused on the use of dupilumab in atopic dermatitis were included in this study and chosen for further review.
Results: Twenty articles were reviewed. Dupilumab is a human monoclonal antibody which targets the interleukin-4 receptor alpha subunit. As a result, it blocks the signalling of both interleukin-4 and interleukin-13 and reduces the underlyring inflammatory process, mediated by type 2 T helper cells. Reviewed papers showed that dupilumab improved the clinical symptoms and decreased inflammatory mediators underlying of the disease without evidence of serious adverse effects.
Conclusions: Dupilumab seems to be a promising therapeutic option for these atopic dermatitis forms which cannot be fully controlled by other available forms of treatments. Futher research on its long-term safety and efficiacy in comparision to other agents is needed.

Keywords: dupilumab, atopic dermatitis

DO POLES CONSIDER GENETIC TESTING NECESSARY?

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Introducion: Analysis of the state of knowledge on diseases, counseling and approach to genetic research in the Polish population.
Methods: The survey was conducted in the form of a questionnaire which prevents the identification of individuals. The study group are people aged 18-80, both sexes. The preliminary analysis concerns over seven hundred people, from all sixteen provinces, whose average age is 31.6 years for men and 30.1 years for women.
Results: After an initial analysis of the results, it was found that a significant proportion of respondents incorrectly indicate who the clinical geneticist is (39.9%), however only 12% openly admits that they do not know the answer to this question. The most frequently given erroneous answer was the answer that a clinical geneticist is a laboratory diagnostician (16%). Interestingly, every 20 respondents (4.5%) used the help of clinical geneticists, however, as many as 8.2% of respondents performed genetic testing. Statistical analysis shows that the respondents have no knowledge about genetically determined tumors ($p < 0.0001$), they can not indicate correctly which of them have a genetic basis and which are not ($p < 0.0001$) and do not understand how much influence genetic mutations have on formation of tumors. However, almost over a quarter of the respondents do not know what the BRCA1 and BRCA2 genes are and what they carry the risk. The biggest surprise coming from the study is the fact that almost half of the respondents think that cervical cancer is genetically determined (45.8%).
Conclusions: The research shows that knowledge about genetics is not satisfactory. Educational programs should be implemented, however the most important is the role of the doctor, who should, if possible, make patients aware and explain the essence of genetics in our lives. It is satisfactory that the vast majority of respondents mark a positive attitude towards the genetic tests ordered by the doctor.

Keywords: testing, questionnaire, genetic

PHLOROGLUCINOL REDUCE HEPATIC STEATOSIS AND AMELIORATES ANTIOXIDANT CAPACITY IN NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD)

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Introducion: Phloroglucinol (PHG) is a plant-derived, phenolic compound synthesized eg. algae Ecklonia cava or gut microbiota. Furthermore, it is a constituent of a spasmolytic drugs commonly used eg. in stomachache, irritable bowel syndrome, bile and renal colic, painful menstruation or to prevent preterm birth. Recent study shows that it might also have anti-diabetic properties due to its similarity to resveratrol. The aim of a present study was to determine the effect of phloroglucinol on a lipid accumulation and total antioxidant capacity in fatty liver.
Methods: The experiments were conducted on HepG2 cells incubated with either PHG (25uM-1000uM) and/or 0,5mM palmitic acid (PA) during 16h exposure. Hepatic steatosis was estimated using Oil Red O staining and total antioxidant capacity was assessed by colorimetric test. The data was analyzed with ANOVA test and results were considered to be statistically significant at $p <= 0.05$.
Results: Exposure to both PHG and PHG combined with PA resulted in a significant dose-dependent decrease of lipid accumulation in HepG2 cells (50uM PHG: -29,7%; 100uM PHG: -36,1%; 400uM PHG: -28,1%; 1000uM PHG: -53,8% $p<0,05$) (PA:+25,3%, PA+50uM PHG: -18,1%; PA+100uM PHG: -43,4%; PA+200uM PHG: -8,0%, PA+400uM PHG: -27,7%; PA+1000uM PHG: -57,0% $p<0,05$). On the other hand, PHG had a significant influence on total antioxidant capacity only in the steatotic groups: (PA+50uM PHG: +18,7%; PA+100uM PHG: +18,8%, PA+400uM PHG: +21,2%; PA+1000uM PHG: +47,6% $p<0,05$).
Conclusions: The results of the present investigation demonstrate hepatoprotective effects of PHG supplementation. Reduced lipid accumulation and increased antioxidant capacity may ameliorate insulin resistance occurring NAFLD or type 2 diabetes. However, the underlying mechanisms of PHG action in a field of lipid and carbohydrate metabolism remains unknown.

Keywords: phloroglucinol, steatosis, oxidative stress, NAFLD

Poster Session

ACUTE PHASE PROTEINS AND VITAMIN D SEASONAL VARIATION IN END-STAGE RENAL DISEASE PATIENTS

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Introducion: Hemodialysis patients are especially vulnerable to vitamin D deficiency due to impaired renal hydroxylation, but also low dietary intake and sun exposure. Vitamin D plays a role in innate and adaptive immunity and its seasonal variation has been linked to mortality. End-stage renal disease (ESRD) patients are exposed to numerous inflammatory stimuli due to volume overload, acidosis, infections and dialysis treatment but also decreased glomerular filtration rate and inadequate removal of pro-inflammatory cytokines, which regulate acute phase protein (APP) synthesis. The aim of the study was to look for associations between lifestyle factors, diet and vitamin D seasonal variation and their relationship with APP and calcium-phosphate metabolism parameters.
Methods: The study included 59 patients in ESRD treated with maintenance hemodialysis. 24-hour recall was conducted in post-summer (PS) and post-winter (PW) period. So were measurements of selected laboratory parameters: serum vitamin D, acute phase proteins: ?1-acid glycoprotein (AGG), C-reactive protein (CRP), albumin, prealbumin (PRE) and phosphate-calcium metabolism markers (iPTH, calcium, phosphate). Self-constructed questionnaire gathered information on vitamin D supplementation, patients' sun exposure and physical activity.
Results: The 24-hour recall showed higher caloric intake in PW compared to PS period. Less than 15% of participants met daily nutritional recommendation for energy, protein, fiber, vitamin D and magnesium. Patients supplementing vitamin D had higher serum vitamin D level, regardless of season. AAG, PRE, albumin, vitamin D and Ca x P presented seasonal changes and showed higher values in PS period ($p < 0.02$ in all comparisons). In patients with vitamin D serum level below 25 ng/mL, we observed statistically significant correlations between vitamin D seasonal change (PW/PS x 100%) and CRP seasonal change ($R=-0.4$, $p=0.03$), similarly prealbumin change ($R=0.4$, $p=0.04$). Phosphate and Ca x P ratio correlated positively with AGG ($R=0.29$, $p = 0.025$; $R=0.30$, $p= 0.02$, respectively).
Conclusions: Vitamin D may influence inflammation via regulation of cytokines production, modulation of transcriptional activity or target gene expression. Seasonality of vitamin D cooccurs with seasonality of some of acute phase proteins, which may indicate interdependence. Low vitamin D serum level may impact inflammatory cascade, however, further studies are warranted so as to elucidate the mechanism involved.

Keywords: Vitamin D, hemodialysis, inflammation, acute phase proteins, diet, lifestyle MM acknowledges the support of InterDokMed project POWR.03.02.00-00-I013/16

THE ANTICANDIDAL EFFECT OF WATER EXTRACTS FROM POPULUS NIGRA X P. MAXIMOWICZII

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Introducion: The yeasts from genus Candida, are a part of the microbiota colonizing mucocutaneous areas within the oral cavity, upper airways, gastrointestinal tract and vagina of healthy individuals with a reported prevalence 15-75%. Simultaneously, these fungi, especially Candida albicans and Candida glabrata are the most important cause of opportunistic infections worldwide, affecting predominantly immunocompromised or hospitalized patients. Candidiasis include a wide spectrum of diseases which range from superficial infections (e.g. oropharyngeal candidiasis) to life threatening systemic disorders. The increased resistance of these pathogens to conventional antifungal drugs and the common side effects of antimycotics, have encouraged the search for novel therapeutic alternatives. Therefore, the aim of the study was the evaluate of anticandidal activity of water extracts from Populus nigra x P. maximowiczii.
Methods: Raw materials from Populus nigra x P. maximowiczii: cortex and/or wood supplied by the University of Warmia and Mazury in Olsztyn were subjected to water extraction at the New Chemical Syntheses Institute in Puławy. The water extracts from this plant were screened in vitro for antifungal activities. The minimal inhibitory concentration (MIC) and minimal fungicidal concentration (MFC) of extracts were examined using the broth microdilution method according to European Committee on Antimicrobial Susceptibility Testing (EUCAST) and Clinical and Laboratory Standards Institute (CLSI) guidelines against reference strains of yeasts belonging to Candida albicans ATTC 10231 and Candida glabrata ATTC 90030.
Results: The results of our study showed that the reference strain C. glabrata ATTC 90030 showed a higher sensitivity (MIC = 0.078 – 0.312 mg/mL; MFC = 0.312 – 1.25 mg/mL) to the extracts compared to the C. albicans ATTC 10231 (MIC = 0.625 – 1.25 mg/mL; MFC = 1.25 – 2.5 mg/mL). Moreover, the MFC/MIC ratios were 1 – 2, indicating that the extracts showed fungicidal effect against these microorganisms.
Conclusions: Our data indicated that the studied extracts from Populus nigra x P. maximowiczii showed some fungicidal effect against yeasts belonging to Candida spp. suggesting their potential use as possible alternatives to synthetic antifungal drugs.

Keywords: water extracts, Populus nigra x P. maximowiczii. Candida spp., antifungal activity
Acknowledgments: This research was supported by the National Centre for Research and Development under the framework of “Environment, agriculture and forestry”, project: “Bioproducts from lignocellulosic biomass derived from marginal land to fill the gap in current national bioeconomy”, No. BIOSTRATEG/344252/NCBR/2017

MODEL FOR END-STAGE LIVER DISEASE (MELD) SCORE AMONG PATIENTS QUALIFIED FOR LUNG TRANSPLANTATION WITH END-STAGE LUNG DISEASES INVOLVING IDIOPATHIC PULMONARY ARTERIAL HYPERTENSION WITH PARTICULAR CONSIDERATION OF MEDIAL PULMONARY ARTERY PRESSURE.

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Introducion: Model for End-Stage Liver Disease (MELD) score is used all over the world to assess the severity of chronic liver disease. It is implemented in transplantology, particularly in the process of qualification for urgent liver transplantation. The aim of our study was to assess the liver function of patients qualified for lung transplantation due to end-stage lung disease using MELD score, especially among those with pulmonary arterial hypertension (PAH), taking under consideration medial pulmonary artery pressure as an important risk factor.
Methods: Study group consisted of 123 patients qualified for lung transplantation in Silesian Center for Heart Diseases between 2004-2017. Patients were diagnosed with following lung diseases: Idiopathic Pulmonary Fibrosis (35,8%), Chronic Obstructive Airway Disease (26,8%), Idiopathic Pulmonary Arterial Hypertension (20,3%) and other lung diseases (17,1%). Data relevant for MELD score calculations and medial pulmonary artery pressure were acquired from medical records. MELD score was calculated for every patient individually, as well as catheterization of the pulmonary artery.
Results: The average MELD score among patients qualified for lung transplantation was 8,24 points and medial pulmonary pressure was 35,02 mm Hg. Those, who were diagnosed with IPAH acquired the highest results (mean MELD score =13,1 points) as well as medial PA pressure (57,7 mm Hg). Patients diagnosed with pulmonary arterial hypertension obtained higher mean MELD score (9,05 points) comparing to those without PAH (6,45 points). Medial pulmonary artery pressure among patients with PAH was 42,3 mm Hg and the group without PAH was 19 mm Hg.
Conclusions: Patients qualified for lung transplantation due to IPAH should remain under special supervision for liver insufficiency. Due to MELD result above 10 points in this group (mean MELD=13,1), patients with IPAH have increased mortality due to liver failure in comparison to patients with other lung diseases. Also, taking pulmonary arterial pressure under consideration during qualification process, pulmonary arterial hypertension seem to be an independent risk factor.

Keywords: MELD score, lung transplantation, Idiopathic Pulmonary Arterial Hypertension

MEDULLARY SPONGE KIDNEY AS A RARE CONGENITAL ANOMALY OF THE URINARY TRACT AND ITS RADIOLOGICAL DIAGNOSTICS.

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Background: Medullary sponge kidney (MSK), also known as Cacchi–Ricci disease, is a rare congenital disorder of the kidneys. The main pathology lies in dilatation of the precalyceal collecting tubules, which create cysts or diverticulars that connect to the renal pyramids. This anomaly can be asymptomatic but sometimes it can cause symptoms of kidney stones or urinary tract infections.
Case Report: A 40-year-old woman came to the hospital emergency department with symptoms of right renal colic. Ultrasound examination revealed the presence of a widened collective system of the right kidney and deposits in the proximal section of the right ureter. Additionally, suspicion of nephrocalcinosis has been reported because of the echogenic medullary pyramids. Further radiological examinations performed in an outpatient setting (computed tomography, excretory urography) confirmed the presence of nephrocalcinosis in the course of medullary sponge kidney.
Conclusions: The MSK is a rare anomaly of the urinary tract, which most often proceeds asymptomatically. The patology is usually detected accidentally based on the disclosure of calcifications of the renal parenchyma on the abdominal x-ray or during the diagnosis of kidney stones, haematuria or urinary tract infection. The best radiological test confirming MSK is excretory urography.

Keywords: Medullary sponge kidney, Cacchi–Ricci disease, nephrocalcinosis, excretory urography

SPLENIC HAEMANGIOMATOSIS - A CASE REPORT

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Background: Splenic haemangiomas are the most common benign primary tumor of the spleen. Typically, these are single and asymptomatic changes, detected accidentally during abdominal ultrasonography (USG) performed from other indications. Depending on the histological type (cavernous or capillary haemangiomas), they are characterized by different radiographic features in USG, computed tomography (CT) and magnetic resonance (MR). In case of small, solitary lesions, the procedure of choice are clinical observation and performing radiological control studies. Splenic haemangiomatosis, characterized by the presence of multiple vascular malformations in the spleen parenchyma, is very rare disease. It can occur as a manifestation of systemic angiomatosis (such as Klippel-Trenaunay or Kasabach-Meritt syndrome) or, less commonly, confined to the spleen (diffuse isolated splenic haemangiomatosis). Due to its poor specificity of imaging, a wide spectrum of differential diagnosis and the risks associated with percutaneous biopsy of the spleen, splenectomy is frequently performed when definitive characterization of splenic lesions is needed.
Case Report: A 38-year-old patient, a traffic accident participant, was admitted to the SPSK 4 Hospital Emergency Department in Lublin. In the whole body CT scan (trauma scan), there were no life-threatening post-traumatic changes in the areas of the head, neck, chest, abdominal cavity and pelvis. The study revealed the presence of multiple contrast-enhancing focal lesions in the spleen, of a vague character. A three-phase CT scan of the abdomen performed in an outpatient setting confirmed the presence of multiple, pathological changes in the spleen. The largest of them exceeded to 4 cm in diameter and extends beyond the spleen's contours. Taking into account the good clinical status of the patient, the absence of comorbidities and the correct results of laboratory tests, the diagnosis of multiple splenic haemangiomas was made. Due to the high risk of haemangioma rupture and bleeding, the patient was referred for a splenectomy. Histopathological examination confirmed the presence of splenic haemangiomatosis.
Conclusions: Multiple splenic haemangiomas are rare pathology, often detected as incidental findings while performing abdominal USG. The radiological features of the disease can be very diverse. The final diagnosis is usually made on the basis of splenectomy and histopathological examination.

Keywords: Splenic haemangiomatosis, radiology, multiple vascular malformations

PSYCHEDELIC THERAPY – A REVIEW ON WHAT WE CAN LEARN FROM THE GROUNDBREAKING RESULTS IN PSYCHIATRIC APPLICATION OF PSYCHEDELIC DRUGS.

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Background: Affective spectrum disorders, anxiety and substance abuse are among the most common psychiatric disorders in the population. Even though modern psychiatry offers a variety of pharmacological interventions, a significant proportion of them doesn't result in substantial improvement in large groups of patients and our understanding on their adequcy is still lacking. With a tremendous increase in psychiatric conditions prevalence in general population, new treatments need to be investigated. Psychedelic drugs are a group of substances inducing an altered state of consciousness, mainy via serotonin receptor agonism, which is known as a psychedelic state. Despite being omnipresent in nature and in effect – known in most cultures – the use of psychedelics has been largely disregarded in medicine, mostly due to the worldwide drug prohibition. Nonetheless, after being shortly present in 50's-70's psychotherapy, an increase of interest in psychedelics use in psychiatry has been noted – with various studies suggesting substantial advancements, comparing to conventional interventions.
Case Report: Published (up to 10.11.18) studies on psychedelic therapies on Pubmed and other data bases were systematically reviewed, focusing on reviews with at least one randomized controlled trial. The review suggests, that psilocybin, and lysergic acid diethylamide have anxiolytic, antidepressive, and antiaddictive effects, hence their succesful use in end-of-life anxiety, cancer related depression and alcohol addiction treatment. MDMA (3,4-Methylenedioxymethamphetamine) has been granted permission by FDA to enter Phase 3 clinical trials on it's application in treatment-resistant Post Traumatic Stress Disorder, with up to 83% patients responding by more than 30% reduction of their symptoms in a pilot study. Other studies contribute to the understanding of neuroplasticity, by observing psychedelic induced changes in brain function.
Conclusions: Albeit seemingly revolutionary, many of the studies on psychedelics are still based on relatively small groups of patients and of the observational nature, which calls for careful approach. In order to better understand how those substances affect human brains, what it implies for our comprehension of neurophysiology and their clinical application – more studies on larger cohorts of patients need to be performed.

Keywords: psychiatry, neurology, psychotherapy, psychedelics, drugs

ANALYSIS OF THE CURRENT STATE OF KNOWLEDGE OF WOMEN ABOUT STRESS URINARY INCONTINENCE

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Introducion: In Poland, problem of urinary incontinence concerns 4 to 6 million women. The most frequently occurring type is stress urinary incontinence and mixed urinary incontinence, the component of which is SUI. The main symptom of SUI is uncontrolled outflow of urine occurs during activities causing pressure rise inside the abdominal cavity. This problem is important because it affects not only the physical sphere, but also the psychological and social spheres.
Methods: Hundred female subjects, ages 25-69 participated in the study. The author's questionnaire was used to conduct the study. The obtained results were subjected to statistical analysis using the U Mann-Whitney test and the ANOVA test
Results: Level of women general knowledge about stress urinary incontinence is medium. More than 50% of respondents did not pass the knowledge test. As a result, it was shown that the level of women knowledge was influenced by such factors as the type of source of knowledge, knowledge of prevention campaigns and education. The majority did not know when to go to a specialist (79%). Most of the respondents based their knowledge on unprofessional sources of knowledge.
Conclusions: Despite carried out the prevention campaigns, the need for further education of women in the area of urinary incontinence is still observed. It is worth to focus on the means of implementation prevention campaigns, specialist training of medical personnel and at a later stage on the implementation of training for patients.

Keywords: Stress Urinary Incontinence, Female, State Of Knowledge

TRANSPLANTOLOGY IN POLAND IN 2017 ON THE BACKGROUND OF EUROPEAN STANDARDS

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Introducion: Transplantation is the transfer (engraftment) of human tissue, tissues or organs from a donor to the body. Nowadays, an organ transplant is often the only solution for a terminally ill patient.
Methods: Statistical data collected by Poltransplant until 2017 was analyzed and compared with data collected by Global Observatory on Donation and Transplantation during this time period.
Results: In 2017, a total of 1,614 organ transplants were performed in Poland, which gives an average of 42.98 per million inhabitants. The European average is 61.64 pmp obtained thanks to 43,015 transplants. A total of 720 reports of potential dead organ donors were submitted to Poltransplant. In 560 cases, organs were collected. 99.7% of donors were qualified according to neurological criteria. From 560 donors, 390 (70%) were multi-organ donations. In total, in 2017, 1714 organs were taken from dead donors in Poland, of which 1,588 organs were successfully transplanted. The number of transplants per organ in Poland and in Europe was compared. All parameters per population were lower in Poland than in Europe, except for the pancreas, where the 1.07 pm ratio was almost equal to the European result of 1.1 pmp.
Conclusions: The number of transplants in Poland is systematically growing. Against the background of Europe, Poland ranks eighth in the number of transplants carried out.

Keywords: Transplantology,epidemiology

Public Health

PLAGUE – HISTORY OR ACTUAL THREAT?

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Introducion: Plague is an infectious disease caused by bacterium Yersinia pestis. There are three ways of transmission into human: bite of a flea, droplet path and contact with contaminated fluid or tissue. During the Black Death from 1347 to 1353, about 75 to 200 million people died. While it may seem to be a history, the recurrence of plague in certain countries is nowadays visible and cannot be ignored.
Methods: Analysis of publications and reports concerning information about plague in Madagascar in 2017.
Results: According to World Health Organization (WHO), from the 1st of August to the 26th of November 2017, there were 2417 cases of confirmed, probable and suspected plague. They took place in half of the Madagascar districts, including capital city. 209 people died which is 9.0%. The majority of patients (1854) suffered from pneumonic plague. In addition, there were reports of 355 cases of bubonic plague, 1 case of septicemic plague and the rest unspecified. Pivotal for diagnose is both rapid dipstick test and Polymerase Chain Reaction (PCR). Antibiotics are effective against plague if patients are quickly diagnosed. Recommended treatment is with gentamicin, or, as second choice, doxycycline for 7 to 14 days. Nevertheless, there is a huge problem with social acceptance of this disease. Many people deny its occurrence, they consider it as a governmental manipulation leading to getting money from abroad. Concealment that a family member had probable symptoms of plague still happens and is dangerous for public health. For those who have been in contact with plague cases or high risk exposure such as infected fleas' bites, prophylactic treatment is indispensable. Effectiveness of vaccine against pneumonic plague is not satisfying and therefore, it is not recommended.
Conclusions: Plague still cannot be concerned as an eradicated disease. Poverty, low hygiene and local rituals of digging up of corpses of family members for a macabre dance may be the reasons why it reoccurred in Madagascar in 2017. Moreover, even in the United States (mainly in western and southern regions) in recent decades, 1 to 17 human plague cases per year have been reported. It is important to remember that plague is curable if antibiotics are administered immediately after early diagnosis.

Keywords: plague, Yersinia pestis, Madagascar

COMPREHENSIVE GERIATRIC ASSESSMENT IN FAMILY MEDICINE

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Introducion: Comprehensive geriatric assessment (CGA) is the process of planning and coordinating care of the elderly, which is especially important nowadays, when Polish population is getting older. CGA allows physicians to evaluate long term care needs of their patients, improve their quality of life and maintain them independent. CGA is typically used in hospitals, but it might be helpful also in outpatient care. The main aim of this study was to perform CGA in general practitioners' (GP) offices and assess how elderly patients function.
Methods: A cross-sectional study was conducted among patients who were 65-year-old and above in two outpatient clinics in Cracow. CGA was performed among senior patients, using various tools such as: the Activities of Daily Living, the Instrumental Activities of Daily Living, Mini-Mental State Examination, the Geriatrics Depression Scale, Tinetti Test, the Mini Nutritional Assessment, Clinical Frailty Scale, Athens Insomnia Scale and EQ-5D-5L.
Results: The study was performed in two groups of patients from two different GPs' practices. Each group consisted of 30 patients aged over 65 years. The majority of participants were females – 42 (70%). The mean age of patients was 74.5-year-old. The most common chronic diseases in this group were: hypertension (66%), hypercholesterolemia (50%) and ischemic heart disease (58%). A very important problem in elderly patients was polypharmacy – 60% of patients took 6 or more different medicines. Seniors assessed also their quality of life related to health status - it was at the level of 67,4% and was lower in the group of patients with 4 or more chronic diseases. According to the study, depression and insomnia were also common in the group of elderly patients. Moreover, we observed small differences between two practices in seniors' results.
Conclusions: Due to lack of physicians specialized in geriatrics, general practitioners should be aware of the existence of CGA and must be able to perform it correctly. CGA can reveal new problems of elderly patients that might be not-known to family doctors. CGA helps physicians in maintaining good condition of their patients.

Keywords: Comprehensive Geriatric Assessment, Cracow, old age, general practitioner

CAN FAMILIES PROPERLY ASSESS THEIR RELATIVES' MEDICAL CONDITION? - RESULTS OF A PILOT STUDY IN CRACOW

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Introducion: Ageing of the highly-developed societies is a growing problem of modern world. In Poland due to the shortage of social programs that support elderly people, their families are usually the ones who take care of seniors. In this pilot study we aimed to assess how the caregivers were coping with typical problems of their charges.
Methods: The study was conducted in Cracow among the caregivers indicated by their relatives who were above 65-year-old and visited general practitioner (GP). A comprehensive geriatric assessment (CGA) was performed on the older patients. To receive information about caregivers we used the authors questionnaire that consisted of 19 questions regarding the health condition of the elderly, demographic data and the access to professional support.
Results: 29 caregivers with the mean age of 58,75 years were examined in the study. 72% of them were females, most of them were children (45%) or spouses (31%) of the elderly patients. More than half of them were sharing a house with their relatives. Almost 1/4 of the caregivers thought that their relatives had some kind of cognitive impairment whereas the study performed on them showed that it concerned only 16%. 41% of the relatives noticed depression among the elderly, but the occurrence of this disease was revealed only in 25% of the patients. Sleeping disorders occurred in 40% of the examined elderly and were noticed by 48% of the caregivers. Finally, only 10% of the families used social support.
Conclusions: Even though Polish families pay a great attention to their elderly relatives, we believe that social support programs should be introduced. Sometimes families can assess seniors' condition in a proper way, but they may have misleading impression of patient's condition. GPs who are professionals and know their patients should guide families on how to take proper care of elderly people and propose new solutions.

Keywords: elderly, caregivers, general practitioner, Comprehensive Geriatric Assessment

SEXUAL ACTIVITY OF PATIENTS AFTER LUNG TRANSPLANTATION.

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Introducion: End-stage respiratory disease reduces quality of every aspect of patient's life. Lung transplantation (LTx) can reverse the terminal stage and improve the patients' health conditions. Satisfactory sexual health and proper sleeping habits are fundamental for experiencing a good quality of life; therefore they must be a part of patients evaluation after lung transplantation.
Methods: We took into consideration 17 male patients (age 17-61), who underwent lung transplantation. To determine, if their sexual activity and sleep quality are satisfactory we used following questionnaires: sex score, IIEF-5 questionnaire (SHIM) and Athens Insomnia Scale (AIS).
Results: All of our patients are thinking about sex, but only 82,35% (n=14) are undertaking sexual activity. One of our patients is using sildenafil. 23,53% (n=4) of patients don't have any erectile dysfunction. More than half of our study group has no need of having children in the future (58,82%). According to AIS one of our patients suffered from insomnia.
Conclusions: Sexual activity is very important for our patients and they want to undertake sexual activity after LTx. Less than half of our patients think, that their sexual intercourses are satisfactory for them. It is necessary to conduct future research on consequences of transplantation in the sexuality of men and women affected by chronic respiratory disease.

Keywords: insomnia, lung transplantation, quality of life, sexual activity

MELATONIN AS A POTENTIAL CURE FOR OBESITY.

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Introducion: Obesity and it's complications are one of the biggest problems of modern medicine. Crucial mechanism in the development of obesity is chronic sleep deprivation. A number of researches showed relationship between processes regulating metabolism, energy balance and circadian rhythm of organism. The aim of the study is to present the current state of knowledge on the impact of melatonin on the development of obesity.
Methods: Melatonin regulates the circadian rhythms in organisms. Insufficient production of the hormone results in impaired secretion of leptin and ghrelin, which causes abnormal energy supply. Numerous researches on animals show that treatment with melatonin may prevents the development of obesity. Unfortunately, there are still limited data on the effects of melatonin on human body weight, although it is believed that the hormone administration in the evening may possess a beneficial effect on weight loss in overweight people. The mechanisms by which melatonin limits the increase in body fat include: hormone antioxidant properties, effect on activation of brown adipose tissue, participation in the regulation of the circadian rhythm of metabolic processes and energy balance of the body, as well as lipolytic effects on adipocytes by melatonin (MT1 and MT2) membrane receptors.
Results: Melatonin has been shown to stimulate the transformation of white adipose tissue into brown, which is currently considered one of the most important mechanisms supporting the normalization of body mass. Many studies have confirmed the beneficial effect of melatonin on the secretion of adipokines (including leptin and adiponectin), which are one of the most important hormones that regulate the body's energy balance.
Conclusions: In conclusion, melatonin may be a valuable therapeutic option in the treatment of obesity; however, further research is needed to determine the status of the hormone in weight loss therapies.

Keywords: melatonin, obesity, hormone, leptin, circadian rhythm of organism

SEASONAL AND METEOROLOGICAL INFLUENCE ON GLYCEMIC VARIABILITY IN SCHOOLCHILDREN WITH TYPE 1 DIABETES MELLITUS

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Introducion: According to the Consensus of American Diabetes Association, glycemic variability (GV) is an independent risk factor for: diabetes complications (cardiovascular disease), decrease in cognitive function and increase of mortality in the ICU. Understanding the influence of seasonal and meteorological factors on blood glucose fluctuations may be helpful to increase GV control.
Methods: Continuous Glucose Monitoring System (CGMS, MiniMed 640g + Guardian 2 Link) was used to register glycemic levels in group of 45 patients, from November 2015 to January 2017. Patients included in the study were younger than 18 years, had clinically confirmed type 1 diabetes mellitus (T1DM) for longer than 6 months and were treated using insulin pump. CGMS data was synchronised with meteorological data specific for time and place of registration. GlyCulator 2.0 was used to calculate glycemic indices for each patient (mean, median, SD, CV, eA1c, LBGI, HBGI). We divided patients to responders and non-responders by calculating patient-specific correlations of meteorological factors and glycemic indices, using criteria of significant response in >5% of examined correlations. Main effect ANOVA with post-hoc Tukey's HSD for unequal measures was applied to compare GV between responders and non-responders for each season. Odds ratio for increased GV for meteorological responders was calculated.
Results: A total of 97 patient-months of data was collected, 45 patient-specific profiles were analyzed. Mean (+/-SD) and CV (+/-SD) of glucose level for the whole study period were 140.93 (+/-42.29) and 29.74% (+/-8.58%). The lowest GV (as lowest CV) was observed in June [27.73% (+/-7.97%)] and the highest in November [30.69% (+/-7.57%)]. Meteorological responders had greater overall GV measured as CV>36% (OR 1.14, 95%CI 0.95-1.37). This effect was greater in Spring and Summer (OR 2.26, 95%CI 1.65-3.09). Time in range between 70-140mg/dL was also lower for Spring and Summer in group of meteorological responders: adequately, 56.72% (95%CI 54.29%-59.15%) to 66.53% (95%CI 63.12%-69.93%) for Spring and 56.17% (95%CI 54.62%-57.71%) to 63.16% (95%CI 60.71%-65.61%) for Summer.
Conclusions: Increased rate of severe hypoglycaemia in Spring and Summer was previously reported in T1DM. Observed influence of seasonal and meteorological factors on glycemic variability may be applied to increase control of glycemic fluctuations, especially in young patients.

Keywords: diabetes, continuous glucose monitoring system, glycemic variability, seasonality, meteorological factors

EVALUATION OF QUALITY OF THE RELATIONS BETWEEN PATIENTS' PARENTS AND THE MEDICAL STAFF.

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Introducion: The proper communication between patients' parents and medical staff is a crucial factor, not only during diagnosing and curing patients, but also in creating reliance on medical service. The purpose of the study was a qualitative analysis of communication between the parents and medical staff – doctors and nurses.
Methods: We decided to carry out a survey amongst parents in the Department Of The Neonate and Infant Pathology. We asked several questions, including whether parents had confidence in doctors' and nurses' work and which factors have the greatest impact on the cooperation.
Results: The parents evaluate this relations as kind and friendly, although they point out how important is doctors' patience, availability and honest interest in patients' state. Another issue that can be easily noted is a limited faith in doctors' decisions. Parents tend to broaden their knowledge of their children's diseases in alternative sources.
Conclusions: We have learnt that the way and place of providing medical information is crucial to create relation based on trust and empathy, between medical staff and parents of our smallest patients. Effective cooperation occurs when the parent feels that he has found all the answers to questions about the health status of his child, in the way he feels respected and listened.

Keywords: communication, pediatric patient, relations

CURRENT EPIDEMIOLOGICAL SITUATION AND THE LATEST ACHIEVEMENTS IN MEDICINE IN THE FIELD OF PREVENTION AND TREATMENT OF AIDS.

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Introducion: The goal of the study is to analyze levels and trends of HIV/AIDS incidence, prevalence, coverage and effective of antiretroviral therapy (ART) from the beginning of epidemy in 1983 until the newest reports from 2018.
Methods: Materials used for the epidemiological analysis are the statistical data of World Health Organisation (WHO), United Nations Programme on HIV/AIDS (UNAIDS) and several Pubmed publications, elaborated based on descriptive method.
Results: In 2017 36.9 million people globally were living with HIV. There was 1,8 million new infections and 0,9 mln deaths caused by AIDS-related diseases. About 59% (21,7mln) of all patients with HIV were given antiretroviral treatment (ART.). 80% of pregnant HIV-positive woman had access to treatment and the number of vertical transmission was decreased to 5-15%. Thanks to "treat-all" method maintained by WHO in 2016, every HIV-positive patient has an access to treatment. Antiretroviral drugs are used also in pre-exposure prophylaxis, post-exposure prophylaxis and Elimination of mother-to-child transmission (EMTCT). According to the HPTN 52 clinical trial from 2011, PreEP reduces the sexual transmission of HIV in HIV-serodiscordant by more than 96%. There are many effective programs that aim to reduce the incidence of HIV. One of them is "90-90-90 Targets" programme launched In 2014, by the UNAIDS. Its main goals are to achieve the level of 90% of patients awareness of their HIV status, 90% of all diagnosed receive ART treatment and 90% of them will have had viral suppression by 2020. By the end of 2017, the world's results are 75–79–81. The greatest successes so far have been: EMTC for the first time on Cuba (2015), later The Caribbean, Thailand, Belarus, Armenia, Republic of Moldavia, Malaysia (2018). In 2016, Sweden was the first to achieve 90-90-90 targets.
Conclusions: The number of new HIV infections is decreasing. The financial outlay enable effective education, detection and prevention of new infections. Forecasts for the future are promising. WHO assumes the control of the epidemic until 2030.

Keywords: HIV,EPIDEMIOLOGY

THE INFLUENCE OF CONSCIENCE ON THE DOCTOR'S DECISIONS. SURVEY OF MEDICINE STUDENTS' OPINIONS IN POLAND.

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Introducion: According to Polish legislation, the doctor has the right to refuse to perform a procedure incompatible with his conscience. It is provided by the Codex of Medical Ethics, the Act on the Medical Profession and the Constitution of the Republic of Poland. Most often this problem concerns abortion and emergency contraception.
Methods: The diagnostic survey method was used on a group of 497 students from 8 different Medical Universities in Poland to examine the opinion of future doctors about the conscientious objection in medical practice.
Results: Research shows that 67% of respondents think that a gynecologist should have the right to refuse to perform an abortion if he has objections to the conscience. In the case of emergency contraception, this right could be used in the opinion of 35.6% of the respondents. According to the opinion of 26.4% of asked students the information about which doctor refuses to perform these procedures should be public. Medical students were asked whether in the future they would use the right to refuse to perform the procedure because of their conscience. 34.6% of respondents answered "yes", 35.8% said "no", 29.6% "I do not know". The respondents most often (over 80%) chose the situations included in Polish law as the proper reasons for abortion. These are: immediate threat to the mother's life, very serious fetal defects, pregnancy as a result of crime. 6.4% of respondents believe that no reason is sufficient and abortion should not be legal.
Conclusions: The results of the study show that the majority (67%) of surveyed medical students think that a gynecologist should have the right to refuse to perform an abortion if it is incompatible with his conscience. Every third (34,6%) student asked declare that he would like to use of this right in the future.

Keywords: Conscience,abortion,anticonception,survey,medicin students

Radiology and Nuclear Medicine

STEREOTACTIC BODY RADIOTHERAPY (SBRT) IN THE TREATMENT OF OLIGOMETASTATIC DISEASE: A SYSTEMATIC REVIEW

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Introducion: Stereotactic body radiotherapy (SBRT) allows for delivering high doses of radiation in a small number of treatments, typically a large single dose (i.e. 10-30 Gy) or a few (2-5) large fractions. It may be used as an alternative to traditional surgical methods. It has proven effective in the treatment of patents with oligometastatic disease, where the number of metastases does not exceed 3. CyberKnife is a highly conformal radiosurgical technology which allows for a high degree of precision necessary in SBRT.
Methods: A review of current literature using the PubMed database was performed to identify and summarize key findings in SBRT using CyberKnife.
Results: The protocol for metastatic cancer has traditionally been palliative chemotherapy and supportive care. While surgical resection remains the gold standard for oligometastases in many organs, stereotactic body radiation therapy (SBRT) presents a non-invasive alternative for achieving local control. Stereotactic radiotherapy has originally been used for CNS tumours and has subsequently been extended to extracranial tumours. High clinical efficacy of SBRT can be achieved due to the delivery of very high doses, which is not possible in conventional methods. SBRT using the CyberKnife system was found to be a feasible and effective treatment to suppress the growth of a number of cancers. CyberKnife is a radiosurgical technology which can successfully treat patients who do not qualify for salvage surgery, or who have previously been treated with full-dose radiotherapy. The radiobiology of SBRT is much less known compared to that of conventional dose fractionation. High local effectiveness of SBRT depends both on the direct radiation cell kill (5R's), as well as three additional factors (extra 3R's): non-direct vascular damage, programmed death of stem cells and anti-tumour immunity. There is still a need for further exploration of the immunogenic effects of radiation, especially large doses. The effects on the immune system initiated by large dose fractions appear to be two-fold: both stimulatory and suppressive in nature.
Conclusions: New advances in SBRT are highly effective in oligometastatic disease, leading to substantial improvement in patient survival (both overall and progression-free). SBRT using CyberKnife is feasible, safe, and effective treatment for oligometastatic sites and has been successful in the treatment of lung, prostate, colon and renal cancer (among others).

Keywords: CyberKnife, stereotactic radiotherapy, oligometastatic disease, metastases

DYNAMIC CT MYOCARDIAL PERFUSION IMAGING AS A NEW MODALITY FOR ASSESSMENT OF CORONARY ARTERY DISEASE

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Introducion: The coronary arteries disease (CAD) is a major health problem in developed countries. There are many ways to diagnose it but none of them are perfect. The latest non-invasive diagnostic tool is coronary computed tomography angiography (CCTA), which can asses anatomy of the heart and coronary arteries but not the hemodynamic significance of a detected stenosis. This is the problem of all modalities used in diagnostic of CAD – none of them can simultaneously detect coronary arteries stenosis and evaluate its hemodynamic significance. However, recent technical developments allow providing a tool for comprehensive evaluation with single modality – dynamic myocardial computed tomography perfusion. The First Department of Medical Radiology, Medical University of Lublin has conducted the first pioneering dynamic computed tomography myocardial perfusion imaging in Poland. There are only a few centers in Europe capable of performing that procedure.
Methods: The imaging study was performed using 256-rows GE Revolution CT system, with full heart coverage at the stationary table. It had eliminated motion artifacts, existing in table shuttle mode. The study had a duration of the 50s and the patient could breathe freely thanks to the feature removing respiratory artifacts.
Results: Dynamic CT myocardial perfusion imaging requires additional radiation dose but it is lower than in SPECT CT. It may visualise both anatomies of coronary arteries, their stenosis and perfusion defects by measuring parameters such as the myocardial blood flow, the myocardial blood volume and mean transit time.
Conclusions: There is a need of the single modality examination for assessment of severity of coronary arteries stenosis and its impact on myocardium perfusion. Currently, CT myocardial perfusion may be the best available modality but further extensive researches are needed for evaluation of this method.

Keywords: coronary artery disease, dynamic CT myocardial perfusion imaging, single modality examination

ASSESSMENT OF VALSALVA SINUS ANEURYSM IN CT IMAGING

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Introducion: Valsalva sinus aneurysm (VSA) is a rare condition, observed in about 0.09% of the general population. Most VSAs are congenital, but also acquired cases have been reported, for example as the complication of bacterial endocarditis. 75% patients with VSA are male. It is extremely rare to observe aneurysm of more than one sinus. If aneurysm is not ruptured, it may be asymptomatic (approximately 20% of all VSA are asymptomatic over the life span) and usually discovered incidentally, but it can also cause mass effect on cardiac structures. It may lead to ischemic heart disease, arrhythmia or aortic insufficiency. When ruptured, symptoms such as: insidiously progressive congestive heart failure, severe acute chest pain with dyspnea may occur or even - in extreme cases - cardiac arrest. It is undisputed that ruptured VSA requires surgical treatment. Large leaks can significantly decrease the hemodynamic function of the heart and thus urgent surgery is required. Smaller leaks can be treated with elective surgery. Valsalva sinus aneurysm most commonly ruptures into the right ventricle (approximately 55% of all cases). Second most frequent place of rupture is the right atrium (40%). Most Valsalva sinus aneurysms are diagnosed echocardiographically. However, CT may provide more detailed data, and allows for accurate diagnostic imaging of even small VASs.
Methods:
Results:
Conclusions:

Keywords: CT imaging, aneurysm, sinus of Valsalva

CT IMAGE OF PARTIAL CONGENITAL ABSENCE OF PERICARDIUM

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Introducion: Congenital absence of the pericardium is a rare cardiac malformation with a reported incidence of <1 in 10 000 in autopsy. However, the true prevalence may be underestimated as most patients are asymptomatic and the diagnosis is generally incidental. In some cases, patients present various non-specific clinical manifestations as: fatigue, pain or cardiac conduction abnormalities. In some cases the anomaly can result in mechanical impairment of cardiac function and even death. The aim of this study is to show the utility of CT imaging of partial congenital absence of pericardium, present CT images and inspect potentially coexisting abnormalities.
Methods: A series of CT studies of patients with diagnosed partial absence of pericardium have been reviewed. Radiological signs have been checked. We have also checked concomitant abnormalities in CT scans.
Results: Patients mostly present more than one radiological sign such as: absence of the pericardial lining around the heart, excessive levoposition, displacement of the heart apex leftward. An interposition of a “tongue” of lung tissue between aorta and pulmonary trunk, between the diaphragm and the base of the heart or between the diaphragm and the base of the heart has been observed. Some patients present hype density of adjacent lung tissue, as well as bulging of the left atrial appendage through the defect.
Conclusions: Congenital absence of the pericardium frequently remains undiagnosed throughout patients’ life. Thanks to some radiological signs, CT examination allows to visualize this malformation and make a right diagnosis.

Keywords: pericardium, CT scan, heart

MSCT IN MESENTERIC ISCHEMIA DIAGNOSIS

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Introducion: Mesenteric ischemia is a condition in which injury to the small intestine is caused by not enough blood supply to tissues. It is more and more significant problem, both from clinical and social angle. It mainly affects people of advanced age and those who chronically suffer from diabetes and cardiovascular and renal diseases. Mortality in gangrenous type of ischemia reaches up to 90%.
Methods: The analysis is based on literature and clinical cases using multi-level computed tomography. The classification of intestinal ischemia and radiological images on the background of arterial embolisms, vein thrombosis and disturbances in microcirculation has been presented.
Results: Presentation of clinical cases of intestinal ischemia and diagnosing them with the use of multidetector computed tomography.
Conclusions: Diagnostic imaging such as multidetector computed tomography allows to increase the probability of early recognition of intestinal ischemia. Making diagnosis before the symptoms occur is the most important factor in improving the patient prognosis.

Keywords: Acute intestinal ischemia, chronic intestinal ischemia, ischemic colitis, computer tomography

EXAMINATION OF THE LOWER LIMB VEINS AMONG PATIENTS DIAGNOSED WITH PULMONARY EMBOLISM.

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Introducion: Pulmonary embolism is cardiological life-threatening condition. It's a result of narrowing or complete blockage of pulmonary artery by embolismic material which is usually blood clot that comes from deep veins thrombosis. Those blood clots may become fragmented or separated from vein's wall and move to pulmonary circulation where they may become a cause of pulmonary embolism. Among many diagnostic methods one of the most useful is doppler ultrasonography examination of the lower limb veins, which allows us to detect many abnormalities and deploy proper medical treatment and prophylaxis of pulmonary embolism.
Methods: The examination was performed with twelve patients, earlier diagnosed pulmonary embolism using CT angiography. Patients were directed to the Department of Interventional Radiology and Neuroradiology, University of Lublin, in order to perform a doppler ultrasonography examination of the lower limb veins. Among patients, one had suffered from lower limbs oedema, five had this symptom in lower limb and six did not experience oedema of lower limb at all.
Results: On the basis of examinations, one patient was diagnosed with total, bilateral femoral and popliteal vein thrombosis. Four patients were identified with unilateral femoral and popliteal vein thrombosis. Popliteal vein thrombosis was stated in one case, but the patient did not experience oedema of lower limb. Iliac vein thrombosis occured in one instance, and the patient did not suffer from femoral or popliteal vein thrombosis. Moreover, in five cases deep vein thrombosis was not detected.
Conclusions: Deep vein thrombosis can be asymptomatic, that is why every patient with diagnosed pulmonary embolism should have an ultrasound examination of lower limb done. Every patient with oedema of lower limb and lack of thrombosis in femoral and popliteal vein, should have an iliac vein examined to exclude or confirm thrombosis.

Keywords: pulmonary embolism, ultrasoonography examination, deep vein thrombosis

NON-TOXIC NODULAR GOITER WITH LOW RAIU I131 TREATMENT WITH A SINGLE DOSE OF RECOMBINANT HUMAN THYROID-STIMULATING HORMONE (RHTSH).

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Introducion: The aim of our study was to assess the effectiveness of radioiodine therapy (RIT) on the reduction of thyroid volume after pre-treatment adjunct of rhTSH in patients with non-toxic goitre with low RAIU.
Methods: We treated 36 patients; (28 female, 8 male) aged 35–77 years. Initial 24 h RAIU was ranged between 5 and 17%, and thyroid volume ranged between 42 and 128 ml. Twelve patients had compressive symptoms. Malignant changes were excluded in all nodules by FNAB. All the patients received a single dose of 0.05 mg rhTSH given intramuscular. About 24 h later diagnostic dose of 131I was administered and RAIU after 24, 48 and 72 h was estimated. Therapeutic dose of 131I was given on the third day of rhTSH administration. Serum TSH, fT4 and fT3 were determined, 24 h, 72 h after rhTSH administration and on the 3rd day after RIT. The activity dose calculated by Marinelli's formula and ranged between 400 and 800 MBq. The absorbed dose ranged between 160 and 300 Gy. Follow up control was done every 6 weeks. Thyroid ultrasound, and thyroid scan were done again after12 months of RIT.
Results: A significant 4-fold increase in 24 h RAIU from 12.2 to 54% was observed. The significant increase in serum TSH from 1.4±0.5 to a peak level 12.21±4.62 was seen after 24h . After 12 months 91% of patient were in euthyroidism, 9% (3 patients) develop hypothyroidism. Thyroid volume reduced to about 45% average. In all of the patients the compressive symptoms relieved and exercise tolerance improved.
Conclusions: Pre-treatment with rhTSH allows the therapeutic dose of 131I to be reduced by 50–58% without compromising the result of thyroid volume reduction. This mode of therapy can be recommended, especially when RAIU is low and the dose of radioiodine to be administered is high.

Keywords: radioiodine therapy, recombinant human thyroid-stimulating hormone, non-toxic goitre, low RAIU

Radiology and Nuclear Medicine Session

RESPONSE TO RADIOIODINE THERAPY FOR THYROTOXICOSIS

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Introducion: Multinodular goitre is a common cause of hyperthyroidism, especially in areas of mild to moderate idodine deficiency. Treatment modalities include medical therapy by blockade of new hormone synthesis and release, and inhibition of the peripheral effects of thyroid hormone and ablation of thyroid tissue by radioactive iodine (RAI) or surgery.
Methods: Our study included 440 patients, aged 28-67 years (78% female and 22% male) treated with I131 for Multinodular toxic goitre. 260 patients with MNG and 180 with ATN, thyroid volume ranged between 19 and 128 ml (30% with thyroid volume >50 ml). Qualification of these patients were based on clinical features, characteristic appearance on thyroid scans and ultrasound. Malignant changes were excluded in all nodules by fine needle aspiration biopsy. All the patients had serum TSH levels below 0.1 mU/l abd effective half-life more than 3 days at the time of treatment. The activity dose ranged between 200 and 800 MBq. The absorbed dose (gy) ranged between 150-260 for MNG and 200-300 for ATN. Follow-up control was done every 6 weeks. Thyroid ultrasound and thyroid scan were done before and after 12 months of RIT to assess RAIU, volume of thyroid gland and nodules. Repeated RIT was given after 6 months of the first dose if needed.
Results: After 4 years of follow-up the success of treatment was: 95% of patients with ATN and 90% of patients with MNG achieved euthyroidism. 5% of patients with ATN and 10% patients with MNG developed hypothyroidism. 14 patients with toxic MNG and 2 patients with ATN received more than one dose of RIT. Thyroid volume reduced to 53% in MNG and 45% in ATN.
Conclusions: The achievement of euthyroidism and the remission of the symptoms and signs of clinical hyperthyroidism, were due to well preparation of the patients; accurate measurement of administered activity, relatively high effective half-life, and well-organised follow-up.

Keywords: radioiodine therapy, hyperthyroidism, multinodular goitre, radioactive iodine

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Doctoral students` session

69 ..... CORRELATION BETWEEN THE INFECTION OF HPV VIRUS AND BLADDER CANCER DEVELOPMENT
70 ..... KNOWLEDGE AND SEXUAL BEHAVIOR OF YOUNG PEOPLE IN POLAND
71 ..... DO THYROID DISEASES HAVE AN IMPACT ON SIGNS AND SYMPTOMS OF TEMPOROMANDIBULAR DISORDERS?
72 ..... POLYMORPHISMS OF THE PROMOTER REGION ON CRBN GENE AS PREDICTORS OF ADVERSE\NEVENTS OF THALIDOMIDE-BASED CHEMOTHERAPY IN MULTIPLE MYELOMA PATIENTS.
73 ..... 3-AMINE-5-ARYLIDENEIMIDAZOLONES AS POTENTIAL COMPOUNDS ABLE TO RESTORE ANTIBIOTIC EFFICIENCY.
74 ..... OUTCOME OF LUNG TRANSPLANTATION AS A VIABLE TREATMENT FOR PATIENTS WITH CYSTIC FIBROSIS.

75 ..... EXTENDING LUNG DONORS' CRITERIA – IS IT WORTH IT?
76 ..... KNOWLEDGE ABOUT LGBT PEOPLE IN NURSES
77 ..... BODY IMAGE AND SEXUAL SATISFACTION AMONG WOMEN
78 ..... CONCEPT OF FEMINISM AMONG YOUNG ADULTS - KNOWLEDGE AND OPINION
79 ..... POLISH WOMEN'S KNOWLEDGE ABOUT CHANGES IN MENSTRUAL CYCLE
80 ..... RELATIONSHIP BETWEEN NO2 CONCENTRATION AND LUNG CANCER MORBIDITY IN ŚWIĘTOKRZYSKIE VOIVODESHIP COMPARED TO WHOLE POLAND'S POPULATION

General Surgery

82 ..... APPENDECTOMY VERSUS ANTIBIOTIC TREATMENT IN ACUTE APPENDICITIS

Gynaecology and Obstetrics

84 ..... THE ROLE OF FETAL AUTOPSY AND PLACENTAL EXAMINATION IN THE EXPLANATION OF CAUSES OF FETAL AND NEONATAL DEATH.
85 ..... KNOWLEDGE OF MEDICAL STUDENTS ON GYNECOLOGICAL CANCER.
86 ..... PLACENTAL PATHOLOGY - THE ANALYSIS BASED ON FIVE YEARS MATERIAL
87 ..... PSYCHOLOGICAL ASPECTS OF INFERTILITY
88 ..... IMMUNOLOGICAL MECHANISMS IN OVARIAN CANCER: THE ROLE OF PD-1 AND ITS LIGANDS.
89 ..... SYNTHEASE ATP GENE EXPRESSION EVALUATION WITH MICRO ARRAY TECHNIQUE IN PATIENTS TREATED WITH OVARIAN CANCER.

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91 ..... PATHOMECHANISMS INVOLVED IN THE INTERACTION BETWEEN DENTAL MATERIALS AND THE ORAL MUCOSA.
92 ..... OTOSCLEROSIS – THE SYNOPSIS OF THE MOST IMPORTANT INFORMATIONS
93 ..... ORBITAL COMPLICATIONS OF RHINOSINUSITIS - STUDY REVIEW
94 ..... HPV AS AN ETIOLOGIC FACTOR IN HEAD AND NECK TUMORS - STUDY REVIEW
95 ..... CHOLESTEATOMA – SYMPTOMS AND TREATMENT
96 ..... MICROINVASIVE TECHNIQUE FOR CHRONIC SINUSITIS
97 ..... PROCEDURE IN THE ORAL CARE, THROAT, AND ESCAPE OF CHEMICAL SUBSTANCES
98 ..... THE ANALYSIS OF TEMPERATURE DISTRIBUTION IN TOOTH TISSUES IN THE TIME OF POLYMERISATION OF COMPOSITE MATERIALS

Internal Medicine

100 ..... SEX-RELATED LEFT VENTRICULAR GEOMETRY IN POPULATION OF PATIENTS WITH STABLE CORONARY ARTERY DISEASE - PRELIMINARY STUDY
101 ..... CORRELATION BETWEEN SELECTED TUMOR-ASSOCIATED ANTIGENS AND TUMOR DEVELOPMENT AMONG PATIENTS WITH SYSTEMIC SCLEROSIS
102 ..... EVALUATION OF CONCENTRIC HYPERTROPHY RISK FACTORS - PRELIMINARY STUDY.
103 ..... PULMONARY HYPERTENSION AMONG PATIENTS REFERRED FOR LUNG TRANSPLANTATION – SINGLE CENTER STUDY
104 ..... ECCENTRIC LEFT VENTRICULAR HYPERTROPHY- OUTCOMES AND CAUSES
105 ..... MOST COMMON CAUSES OF HYPERPROLACTINEMIA IN HOSPITALIZED PATIENTS

106 ..... THE CLINICAL IMPORTANCE OF ACNE IN THE ESTIMATION OF POLYCYSTIC OVARY SYNDROME
107 ..... PRIMARY GLOMERULONEPHRITIDES AND THE ALTERATION OF THE PD-1/PD-L1 INHIBITORY PATHWAY
108 ..... END-STAGE RENAL FAILURE AS A FACTOR ACCELERATING THE AGING OF BLOOD VESSELS
109 ..... SUICIDE ATTEMPT WITH CALCIUM CHANNEL BLOCKERS- A BRIEF LOOK INTO TREATMENT PROCESS.
110 ..... CONCENTRIC REMODELING AND ITS RISK FACTORS IN PATIENTS WITH STABLE CORONARY ARTERY DISEASE
111 ..... THE INFLUENCE OF RADIOIODINE THERAPY ON SOME PARAMETERS OF OXIDANT/ANTIOXIDANT BALANCE IN PATIENTS WITH TOXIC NODULAR GOITRE

Neurology and Neurosurgery

113 ..... MULTIPLE SYSTEM ATROPHY WITH CEREBELLAR ATAXIA (MSA-C SUBTYPE)
114 ..... NEUROFIBROMATOSIS TYPE II WITH BILATERAL VESTIBULAR SCHWANNOMAS- CASE REPORT
115 ..... THE COMPLEXITY OF SYMPTOMS IN HUNTINGTON'S DISEASE AS THE CAUSE OF LATE DIAGNOSIS
116 ..... TWO CASES OF UPPER AND LOWER MOTOR NEURON DISEASE
117 ..... APPENDECTOMY – THE WAY TO PREVENT PARKINSON'S DISEASE? - REVIEW

Orthopaedics, Physical Therapy and Rehabilitation

119 ..... THE EFFECTIVENESS OF TEMPOROMANDIBULAR JOINT PHYSIOTHERAPY IN PATIENTS WITH HYPERMOBILITY JOINT SYNDROME.
120 ..... SHORT STEM PROSTHESIS IN PATIENTS WITH HAEMOPHILIA
121 ..... CURRENT TRENDS IN ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION.
122 ..... ASSESSMENT OF THE SURGICAL TREATMENT EFFECTIVENESS IN DISORDERS OF METATARSOPHALANGEAL JOINTS (MTP).

Paediatrics and Neonatology

124 ..... THE EVALUATION OF UTILITY AND FREQUENCY OF THE USE OF DEVICES EMITTING WHITE NOISE -THE IMPACT ON THE BEHAVIOR OF CHILDREN.
125 ..... FACTORS RELIEVING PAIN IN CHILDREN AFTER SURGERY. PART II
126 ..... FGF-23 AS AN EARLY BIOMARKER OF RENAL INJURY IN CHILDHOOD CANCER SURVIVORS.
127 ..... FACTORS AGGRAVATING PAIN IN CHILDREN AFTER OPERATION. PART 1
128 ..... THE IMPORTANCE OF THE MAGNETIC RESONANCE PROTOCOL IN THE DIAGNOSIS OF SELECTED PATHOLOGIES IN CHILDREN.
129 ..... IN SEARCH OF THE CAUSE OF CHRONIC COUGH? AT A 12-YEAR-OLD BOY – A CASE REPORT
130 ..... HEMOPTYSIS - ONE OF „RED FLAG" SYMPTOMS IN AN ADOLESCENT
131 ..... INFLUENCE OF INFECTIONS IN PREGNANT WOMEN ON THE CONDITION OF THE NEWBORN'S VISION.
132 ..... JARCHO-LEVIN SYNDROME AS AN EXAMPLE OF COOPERATION BETWEEN VARIOUS SPECIALIZATIONS.
133 ..... HYPERGLYCEMIA IN A NEWBORN- CASE REPORT
134 ..... IS THE MEASUREMENT OF TEMPERATURE AT MCBURNEY'S POINT USEFUL IN DIFFERENTIATING ACUTE ABDOMINAL PAIN IN CHILDREN ADMITTED TO EMERGENCY WARD?

Pharmacology, Dietetics and Genetics

136 ..... DUPILUMAB AS A NOVEL DRUG FOR ATOPIC DERMATITIS
137 ..... DO POLES CONSIDER GENETIC TESTING NECESSARY?
138 ..... PHLOROGLUCINOL REDUCE HEPATIC STEATOSIS AND AMELIORATES ANTIOXIDANT CAPACITY IN NON-ALCOHOLIC FATTY LIVER

DISEASE (NAFLD)

Poster Session

140 ..... ACUTE PHASE PROTEINS AND VITAMIN D SEASONAL VARIATION IN END-STAGE RENAL DISEASE PATIENTS
141 ..... THE ANTICANDIDAL EFFECT OF WATER EXTRACTS FROM POPULUS NIGRA X P. MAXIMOWICZII
142 ..... MODEL FOR END-STAGE LIVER DISEASE (MELD) SCORE AMONG PATIENTS QUALIFIED FOR LUNG TRANSPLANTATION WITH END-STAGE LUNG DISEASES INVOLVING IDIOPATHIC PULMONARY ARTERIAL HYPERTENSION WITH PARTICULAR CONSIDERATION OF MEDIAL PULMONARY ARTERY PRESSURE.
143 ..... MEDULLARY SPONGE KIDNEY AS A RARE CONGENITAL ANOMALY OF THE URINARY TRACT AND ITS RADIOLOGICAL DIAGNOSTICS.
144 ..... SPLENIC HAEMANGIOMATOSIS - A CASE REPORT
145 ..... PSYCHEDELIC THERAPY – A REVIEW ON WHAT WE CAN LEARN FROM THE GROUNDBREAKING RESULTS IN PSYCHIATRIC APPLICATION OF PSYCHEDELIC DRUGS.
146 ..... ANALYSIS OF THE CURRENT STATE OF KNOWLEDGE OF WOMEN ABOUT STRESS URINARY INCONTINENCE
147 ..... TRANSPLANTOLOGY IN POLAND IN 2017 ON THE BACKGROUND OF EUROPEAN STANDARDS

Public Health

149 ..... PLAGUE – HISTORY OR ACTUAL THREAT?
150 ..... COMPREHENSIVE GERIATRIC ASSESSMENT IN FAMILY MEDICINE
151 ..... CAN FAMILIES PROPERLY ASSESS THEIR RELATIVES' MEDICAL CONDITION? - RESULTS OF A PILOT STUDY IN CRACOW
152 ..... SEXUAL ACTIVITY OF PATIENTS AFTER LUNG TRANSPLANTATION.
153 ..... MELATONIN AS A POTENTIAL CURE FOR OBESITY.
154 ..... SEASONAL AND METEOROLOGICAL INFLUENCE ON GLYCEMIC VARIABILITY IN SCHOOLCHILDREN WITH TYPE 1 DIABETES MELLITUS
155 ..... EVALUATION OF QUALITY OF THE RELATIONS BETWEEN PATIENTS' PARENTS AND THE MEDICAL STAFF.
156 ..... CURRENT EPIDEMIOLOGICAL SITUATION AND THE LATEST ACHIEVEMENTS IN MEDICINE IN THE FIELD OF PREVENTION AND TREATMENT OF AIDS.
157 ..... THE INFLUENCE OF CONSCIENCE ON THE DOCTOR'S DECISIONS. SURVEY OF MEDICINE STUDENTS' OPINIONS IN POLAND.

Radiology and Nuclear Medicine

159 ..... STEREOTACTIC BODY RADIOTHERAPY (SBRT) IN THE TREATMENT OF OLIGOMETASTATIC DISEASE: A SYSTEMATIC REVIEW
160 ..... DYNAMIC CT MYOCARDIAL PERFUSION IMAGING AS A NEW MODALITY FOR ASSESSMENT OF CORONARY ARTERY DISEASE
161 ..... ASSESSMENT OF VALSALVA SINUS ANEURYSM IN CT IMAGING
162 ..... CT IMAGE OF PARTIAL CONGENITAL ABSENCE OF PERICARDIUM
163 ..... MSCT IN MESENTERIC ISCHEMIA DIAGNOSIS
164 ..... EXAMINATION OF THE LOWER LIMB VEINS AMONG PATIENTS DIAGNOSED WITH PULMONARY EMBOLISM.
165 ..... NON-TOXIC NODULAR GOITER WITH LOW RAIU I131 TREATMENT WITH A SINGLE DOSE OF RECOMBINANT HUMAN THYROID-STIMULATING HORMONE (RHTSH).

Radiology and Nuclear Medicine Session

167 ..... RESPONSE TO RADIOIODINE THERAPY FOR THYROTOXICOSIS

We thank our partners for their support