3RD LUBLIN INTERNATIONAL MEDICAL CONGRESS FOR STUDENTS AND YOUNG DOCTORS

LUBLIN, 2ND-3RD DECEMBER 2016

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3RD LUBLIN INTERNATIONAL MEDICAL CONGRESS FOR STUDENTS AND YOUNG DOCTORS

LUBLIN, 2ND-3RD DECEMBER 2016

STUDENS' SCIENTIFIC SOCIETY
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ABSTRACTS

Basic Sciences and Experimental Medicine

STRUCTURAL REBUILDING OF SUBLINGUAL SALIVARY GLANDS AT EXPERIMENTAL DIABETES AND ITS HERBAL REMEDY PROTECTION

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Introducion: Today diabetes type 2 - the most threatening disease. It is an important medical and social problem because of high prevalence, chronic and serious complications.
Methods: Experimental animals were divided into groups: 1 - intact, 2 - rats, which were simulated diabetes, 3 - diabetes prevention with herbal remedy (decoction of leaves of blueberries). There were 30 rats, 10 animals in each group. Animals of the second group were injected intradermally by dexamethasone at a dose of 0,125 mg/kg body weight for 14 days. In the third group experimental diabetes was created with its preventive medicines.
Results: In experimental group the serum glucose was higher by 30% in compared with the intact animals. Herbal remedy prophylactic administration has led to lower of blood glucose by 30% compared with experimental diabetes rats. In experimental pathology group there were registered weight loss, the increase in mass of major salivary glands. Experimental diabetes`s led to increased volume mukocytes by increasing the cytoplasmic volume. Lumen of acines has decreased. Mukocytes were very tight. There was a little of mucous secretions in the lumen acini. Straits also had a bit of secret. Van Gison staining has showed a significant increasing in connective tissue not only around gland capsule, but also between acinus and vessels. Histological examination of lipid accumulation has set them between acinus and around vessels. Lipids were determened as large droplets. Lipids were not observed at the ducts. Prophylactic administration of decoction of the leaves of blueberry has been to approach to the histology of intact animals. Acinus`s increased, they contained secret. A small amount of mucus was observed in the excretory ducts. The amount of connective tissue between the acinus, around the vessels has significantly decreased.
Conclusions: Thus decoction of the leaves bluelberry has a solid organ protective action.

Keywords: experimental diabetes type 2, sublingual salivary gland, herbal.

MICROSCOPIC STRUCTURE OF LUNG TISSUE IN EXPERIMENTAL ATHEROSCLEROSIS AND DIABETES AND THEIR HERBAL REMEDY PROTECTION

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Introducion: Today one of the most distributed diseases are diseases of the respiratory system. Among the factors that increase the number of patients with these diseases, are atherosclerosis and type 2 diabetes. Today, these diseases affected 20 million citizens of Ukraine. Economic crisis leads to the fact that treatment with modern pharmacological agents available to many people. Therefore, we consider that`s interesting to use herbal medicines for the prevention of pulmonary lesions.
Methods: The experiment was held on 50 male rats which were divided into 5 groups: an intact, a group with experimental atherosclerosis, a group with experimental diabetes, and two groups, which were conducted disease prevention by the decoction of medicinal herbs. Histological studies were carried out by the usual methods.
Results: During the experimental atherosclerosis and diabetes in the lung tissue degenerative changes occurred, which manifested by significant changes in qualitative and quantitative cellular composition. Atherosclerosis dominated emphysema of the lung tissue, the walls of the alveoli were overstretched, the amount of secretary alveolocytes decreased significantly. Most lesions aroused when we were modelling diabetes. The walls of the alveoli were thickened by impregnating of erythrocytes, were observed small haemorrhages. We observed an increase in the number of macrophages that can be regarded as the activation of cellular immunity.Prophylactic use of the herbal remedy for prevention the development of adverse changes in the lung tissue was successful in both cases.
Conclusions: Experimental atherosclerosis and experimental diabetes mellitus type 2 lead to significant restructuring of cell lung tissue. The positive impact of the prophylactic administration of the herbal remedy were confirmed in the lung tissue by macro and microscopic examinations at experimental atherosclerosis and experimental diabetes.

Keywords: atherosclerosis, diabetes, lung tissue, phytoprophylaxis

CARDIOPROTECTIVE EFFECT OF PLANTS AT THE EXPERIMENTAL PATHOLOGY

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Introducion: There are about 347 million diabetic patients and 2 billion atherosclerosis patients and this diseases complication in the world. In Ukraine, situation with cardiovascular diseases and diabetes mellitus tupe 2 is getting worse every year. Heart is the main organ, which primarily affected in these diseases.
Methods: All experimental animals were divided into groups: 1 - intact, 2 - rats whith simulated diabetes by dexamethasone, 3 - diabetes prevention with herbal remedy, 4– rats, which have prevention of atherosclerosis as a decoction plant preparation blueberry leaf, 5 - the prevention of diabetes by herbal drug. There were 10 animals in each group.
Results: At experimental atherosclerosis total cholesterol increased compared with the impact group, administration of plant preparation decreased by 2 times, and in the prevention of diabetes is 1,7 times. In experimental atherosclerosis muscle fibers thinned, poorly expressed transverse striations. We seen increasing connective tissue layer. Plug driver thickened or separated. In experimental diabetes marked decrease cross-striations myofibrils, there is perivascular edema of the connective tissue. The prophylactic administration of herbal drug with experimental atherosclerosis recovery in muscle fibers decrease leads connective tissue layers. Prophylactic administration plant preparation in group rats with experimental diabetes mellitus restore transverse striation myofibrils, reduce swelling periva connective tissue.
Conclusions: Experimental pathology leads to severe degenerative phenomena apparition of heart muscle. A decoction of the blueberry leaf has a strong cardioprotective effects in experimental atherosclerosis and in experimental diabetes.

Keywords: Experimental atherosclerosis, diabetes, dexamethasone

STRUCTURAL CHANGES OF THE CEREBRAL CORTEX IN EXPERIMENTAL ATHEROSCLEROSIS AND THEIR GENOTHERAPY

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Introducion: Today Ukraine is the first in terms of mortality from cardiovascular diseases in the world and in Europe.
Methods: The study was conducted on 30 male rats, which were divided into 3 groups an intact, experimental atherosclerosis, and a group with apoE genotherapy.
Results: The presence of lipids was observed in the form of small droplets and dust in nervecells of the cerebral cortex. Results of morphological studies of the cerebral cortex intact animals showed that the pia mater, which coverd the cerebral cortex contained little arteries from which numerous capillaries branched out. In the cerebral cortex unde the pia mater we observed following structural components: body cells with spikes, their nucleus, the nucleolus; capillaries. We differed the bodies of neurons and glia body. The neurons formed in the cerebral cortex six layers. The results of the determination of the different types of neurons found that the intact group of animals in III and V layers were dominated normochromal and a little of hypo- and hyperchromic neurons. Histochemical study of the cerebral cortex of rats with atherosclerosis observed the occurrence of lipids in the artery`s wall of pia mater and capillaries of the cerebral cortex in the form of small droplets and dust The cells with severe symptoms of ischemia predominated among pyramidal neurons in III and V layers of cortex. The nucleus and cytoplasm of these cells didn`t have any clear structure. It was noted also the reduce of the number normochromal pyramidal cells. In histochemical study after the influence of gene therapy we experienced a few lipids in the arteri`s wall of pia mater and capillaries of the cerebral cortex, as well as in cells of the cerebral cortex.
Conclusions: Experimental atherosclerosis leads to severe ischemia of the cerebral cortex of rats. Gene therapy has a strong neuroprotective effect.

Keywords: atherosclerosis, gene therapy

ASSESSMENT OF NEUROREGENERATING FACTORS INFLUENCE ON THE MOTOR FUNCTIONS REGAINING

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Introducion: The study presents possibilities of detecting subtle gait dysfunctions of rats (Wistar C) that underwent an operating spinal cord injury, without disturbing the structure of the spine. The main point of this work is to assess the influence of neuroregenerating factors on the motor functions regaining.
Methods: Spinal cords were damaged using a precisely directed stream of compressed air generated by the impactor. This method was used to simulate a damage causing spinal cord injury in humans, which occurs during traffic accidents. After surgery the animals were subjected to differentiated therapies based on the administration of neuroregenerating substances -NAP and implantation of Schwann cells and microglia. The aim of our study was to evaluate the changes of gait parameters in rats, using the 9.0 XT Catwalk system.The effectiveness of this method in the evaluation of movement dysfunction of animals was confirmed in many studies (e.g. concerning Parkinson disease)
Results: After surgery, on 4. And 7. Day and, 2.4 and 6 week the rats were functionally tested with CatWalk XT device. Many static (e.g.the size of paw prints) and dynamic (e.g. velocity of raising paws from the ground) parameters were tested. Results were precisely analysed (using Statistica software) and they were compared to the rest of results from appropriate group. Results proved that scale of regeneration process depended on used therapy.
Conclusions: The longer our study lasted, the more unresolved aspects appeared. More experiments concerning this problem must be conducted, but this discovery gives hope for curation to disabled people with central nervous system damage, including the spinal cord dysfunction.

Keywords: Rats, Wistar C, neuroregeneration, Catwalk

HEAVY METALS IN DIETARY SUPPLEMENTS WITH SPIRULINA AND CHLORELLA

Cios Aleksandra, Giebułtowicz Joanna, Wroczyński Piotr
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Introducion: Dietary supplements made of microalgae like Spirulina and Chlorella represent currently one of the fastest growing market of superfood products. They are commonly consumed as a source of minerals and vitamins. However, supplements do not undergo to strict quality control and may be contaminated with, e.g., heavy metals. There is little legislation on algae and seaweeds in the European Union, so little control is exercised on potentially harmful metals. The aim of our study was to determine the content of heavy metals in the supplements of Spirulina and Chlorella available on polish market.
Methods: Totally 52 samples of Spirulina and Chlorella in the form of powder, tablets and flakes were obtained from online shops. Each of samples was dissolved with a mixture of 65% HNO3 and H2O2 v/v 1:3 and performed by microwave digestion. Concentration of 22 metals in the samples were determined by Inductively Coupled Plasma Mass Spectrometry (ICP-MS).
Results: The concentration of metals in the obtained samples of Spirulina and Chlorella were range from 0.009 mg/kg d.w (Indium) to nearly 740 mg/kg d.w (Aluminium). Aluminium had the highest concentration in samples 21-52. Cobalt, chromium and thalium levels were above the permissible limit in most of tested samples. Ag, In, Li and Pb were mostly below the limit of quantification in most of samples. Although some of concentration limits were much above the recommended concentration of elements in supplements none of them exceeded the recommended daily intake.
Conclusions: Results showed that the concentration of several heavy metals detected in algae samples exceeded the recommended daily intake level for human. This is an alarming result and evidence of the contamination in the superfood products by chemical pollution. It is necessary to control the consumption of metals from dietary supplements, because the dose preferably for human consumption differs little from the harmful dose.

Keywords: Spirulina, Chlorella, heavy metals, dietary supplements, ICP-MS

ESTABLISHMENT OF METHOD OF SOLUBLE CASEIN ANTIGEN ACQUISITION IN ANIMAL MODEL OF DELAYED-TYPE HYPERSENSITIVITY.

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Introducion: Allergy to cow's milk, mainly casein, is one of the most common food allergies in children. Hypersensitivity to casein usually involves the IgE-mediated mechanisms that are characterized by immediate reaction. As observed, there's also a group of patients with non-IgE forms of delayed onset. That may suggest a contribution of cell-mediated hypersensitivity in allergy to casein. To verify this hypothesis establishment of animal model of delayed-type hypersensitivity to casein is required. However, insoluble casein administration induces humoral response. For cell-mediated response evaluation, casein antigen needs to be proceed to it's soluble form. Consequently, the aim of this study was to standardize the method of soluble casein antigen acquisition and to test its immunogenicity.
Methods: A soluble casein antigen was acquired by alkaline hydrolysis. Then hydrolyzate was dialyzed to neutral physiological saline. Casein concentration was measured spectrophotometrically at 280 nm. Immunogenicity of obtained antigen, administered intradermally, was assessed by comparison of the ear swelling response in sensitized mice and negative control.
Results: Soluble fraction of antigen, obtained by this method, was accounted for about 1% of total casein. This casein antigen is able to induce ear swelling in sensitized mice, in animal model of delayed-type hypersensitivity. It suggests that this antigen activates inflammatory response, which possibly is cell-mediated.
Conclusions: Described method can be used in further studies to standardize animal model of delayed-type hypersensitivity to casein with assessment of the effector cell phenotype. Consequently, it may also help to elaborate a strategy to inhibit hypersensitivity to cow's milk.

Keywords: Casein, cow's milk allergy, delayed-type hypersensitivity, animal model

KNOWLEDGE OF ISCHEMIC STROKES, IV THROMBOLYSIS AND THROMBECTOMY AMONG MEDICAL STUDENTS IN POLAND.

Izabela Dąbrowska, Karol Krawiec, Aleksandra Zimecka, Michał Konrad Zarobkiewicz, Mateusz Woźniakowski
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Introducion: Ischemic stroke is an important and frequent cause of death or disability. Standard treatment for ischemic stroke is nowadays pharmacological fibrinolysis. Not so long ago a second promising method – the thrombectomy – joined it.
Methods: The study was based on a self-prepared online survey, posted on Facebook walls of various medical students groups. As a result 470 answers were gathered. 71.28% of respondents were females, the average age of answerer was 22.83 ± 2.58 years. The majority were students of Nicolaus Copernicus University Collegium Medicum in Bydgoszcz (20.21%), Warsaw Medical University (18.30%) and Medical University of Łódź (16.81%). Almost a half (42.77%, n=201) were medical-degree undergraduates. Statistical analysis was performed with Statistica 12 (StatSoft®, USA).
Results: About two thirds (65.74%) have never heard about thrombectomy. Those who have heard (34.26%) answered detailed questions about thrombectomy and ischemic stroke. Most of them (65.22%) knew the therapeutic window while about a half (44.72%) chose the correct contraindications for this procedure. The second part of the survey verified knowledge about the strokes. 46.81% of answerers choose the proper frequency of ischemic cases in the total number of strokes. About one sixth (13.41%) knew how long after the stroke episode its first signs can be noted in CT. More than one forth (28.72%) knew the INR value which excludes patient from getting IV thrombolysis.
Conclusions: Ischemic stroke is still a big therapeutic problem as in many cases even properly administered thrombolytic treatment turns to be insufficient. For some patients thrombectomy is a good option. Due to high mortality and disability burden related to ischemic strokes basic knowledge about them should be possessed by every medical students, irrespective of the chosen faculty. Our study shows that unfortunately students cognisance in this topic is still less than satisfactory.

Keywords: ischemic strokes,thrombolysis, thrombectomy

THE EFFECT OF DEXAMETHASONE ON INTRAHEPATOCELLULAR SPHINGOLIPID CONCENTRATION IN THE PRESENCE OF LIPID OVERLOAD IN HEPG2 CELLS

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Introducion: Increased level of sphingolipids interferes with insulin signaling pathway and subsequently contributes to the development of insulin resistance. Dexamethasone (DEX) is currently one of the most commonly used glucocorticoids that widely affects lipid metabolism in different tissues including the liver.
Methods: HepG2 cells were cultured for 5 days in Dulbecco's Modified Eagle Medium (DMEM) with 10% fetal bovine serum and 1% penicillin/streptomycin at 37°C in a humidified atmosphere (5% CO2). The percentage of living cells was above 85%. Subsequently, different groups were incubated in the presence or absence of PA (0.75 mM) or DEX (1µM). All measurements were performed after 16h and 40h incubation. Sphingolipid content in HepG2 cells and incubation media was measured using a HPLC method.
Results: HepG2 cells incubation with PA +/or DEX for 16h and 40h revealed notable increase of intracellular ceramide content compared to control groups (CG). After prolonged incubation only DEX+PA group revealed effect of increasing ceramide content in HepG2 cells. Regarding other sphingolipids, palmitate alone markedly increased intracellular sphinganine level in HepG2 cells after 16h. Moreover, in comparison to CG, sphinganine level was greatest in PA both in a short-term (16h) and a long-term (40h) incubation group. Prolonged exposure resulted in significant increase in intracellular content of sphinganine in all groups compared to CG. There was a marked decrease of intracellular sphingosine content in all prolonged incubated (40h) groups as a result of PA +/or DEX treatment. Intracellular sphingosine levels were mainly raised in short-term DEX-alone incubation.
Conclusions: Dexamethasone combined with palmitic acid increased intrahepatocellular sphingolipid concentration in HepG2 cells and therefore DEX may contribute to the development of insulin resistance (IR) and consequently steroid-induced diabetes.

Keywords: insulin, resistance, dexamethasone, sphingolipid, lipid overload, HepG2

SHARE OF COLLAGEN FIBER IN THE STRUCTURE OF LYMPH NODES OF THE EUROPEAN BISON BISON BONASUS (L.) – A PRELIMINARY STUDY

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Introducion: The European Bison Bison bonasus (L.) present in large numbers in Podlasie province located in Northeastern Poland belongs to the Ruminantia family. This paper is a continuation of our research connected with the description of the overall structure of the lymph nodes of the European Bison subjected to H&E staining.
Methods: The research material consisted of lymph nodes from the neck region of European Bison Bison bonasus (L.) obtained from 11 culled animals. The animals were shot as part of a culling process eliminating sick, injured or emaciated individuals. The obtained lymph node samples were fixed in buffered formalin. Next the material was spliced using a microtone, processed using the paraffin technique and stained through the application of Sirius red F3B.
Results: The organ showed a well-developed capsule consisting of dense connective tissue. Numerous irregular collagen fibers making up the dense connective tissue combined into thick strands and their number grew toward the centre. The dense connective tissue of the capsule displayed singular small blood vessels with collagen fiber present in the walls. The cortex of the lymph node exhibited connective tissue trebeculae which radiated out of the capsule and divided the lymph node into easily distinguishable niches. Along the connective tissue trebeculae numerous parallel regular-running collagen fibers were visible. Within the niche of the stroma (reticulae connective tissue) single collagen fibers in a radiating pattern as well as numerous weakly stained lymphatic system cells were visible. Single lymphatic nodules were also present within the niches. The visible medullar portion displayed abundant medullar reticulae between which single reticulae connective tissue collagen fibers forming the organ's stroma were observed.
Conclusions: The structure of the lymph node of the European Bison contains collagen fibers, which form bundles of various thickness and show no definite arrangement in their positioning. The greatest number of collagen fibers was observed within the capsule and the connective tissue reticulae with the smallest amount being an element of the reticulae connective tissue present in the body of the organ.

Keywords: collagen, fiber, lymph, node, European, Bison

MODERN BONE CEMENTS ON THE BASIS OF ORGANOSILICON POLYMERS AND THEIR APPLICATIONS

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Introducion: Organosilicon bone cements are rarely used in vertebroplasty, kyphoplasty, filling the bone ullage and in stabilization of fractures. They should meet the requirements: easy injection(moderate viscosity), bioactivicity and biocompatibility and short time of cohesion. The aim of the study was an examination of physico- chemical and biological properties of the silicon bone cements.
Methods: During research the commercial silicon bone cement was used. The analysis of cements' morphology and the map of location its compounds in polymieric matrix was conducted using SEM microscope. The chemical structure was examined using FTIR spectroscope .Technique DSC enabled to establish the amount of heat released during polymerization.Time of hardening was measured in 27 and 37?C in Shore's scale . The wettability of cements' surface was established based on the geometrical structure of water drop on the examined surface. SEM was used to estimate the blood plates' level of activation and aggregation.
Results: In chemical structure the non-polar bonds dominate (hydrophobic structure). Examined biomaterial characterised with good contact with blood. All of presented results are connected with work on the mark the most suitable material for innovative surgical technique used to treat degenerated spine.
Conclusions: Acknowledgement This work was entirely supported by NCBiR under the project code of PBS3/B9/45/2015 with acronym IIVbF.

Keywords: bone cement, polymerization

MACROPHAGE IMMUNE ACTIVITY IS AFFECTED BY ADMINISTRATION OF ANTIHYPERTENSIVE DRUGS TO HEALTHY MICE.

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Introducion: At present, disorders of the cardiovascular system, including hypertension, are recognized as associated with altered inflammatory response. Despite considerable efforts are made to develop new medications showing additional anti-inflammatory effect, little is known about the possible influence of currently used drugs on immune system. The aim of our study was to determine the effect of hypotensive drugs from different clinically relevant groups on the inflammatory activity of mouse macrophages (Mf), assayed as the expression of cell surface markers as well as secretion of cytokines, reactive oxygen intermediates (ROIs) and nitric oxide (NO).
Methods: Healthy CBA male mice were treated intraperitoneally for 7 days with saline-solutions of one of the following hypotensive drugs: propranolol (10mg/kg), carvedilol, captopril, verapamil (5mg/kg), amlodipine (3mg/kg) or olmesartan (1mg/kg). On the 2nd day mice were injected with mineral oil to induce peritoneal exudate containing Mf, which after harvest were either analyzed cytometrically or cultured to assess the secretion of cytokines, ROIs and NO into resulting supernatants in, respectively, ELISA, chemiluminomescence and colorimetric Griess reaction-based assays.
Results: Treatment with propranolol led to reduction of the expression of antigen presentation markers on Mf surface, in contrast to captopril action. Further, administration of tested drugs generally decreased the release of pro-inflammatory cytokines and gently increased production of anti-inflammatory cytokines. Amlodipine administration slightly enhanced ROIs generation and, along with carvedilol, production of NO, whereas other drugs, verapamil especially, showed reverse effects.
Conclusions: Our data preliminarily suggests that routinely used hypotensive drugs can modulate the activity of Mf, as leading conductors of the innate, inflammatory and acquired responses, by modifying the process of antigen phagocytosis and presentation that depends on the surface expression of specific molecules and production of cytokines, ROIs and NO. Our observations may be useful to fully understand the potential of antihypertensives to ameliorate excessive inflammation accompanying cardiovascular disorders.

Keywords: macrophage immune activity, antihypertensive drugs

OLEAMIDE BOTH IN HIGH AND LOW DOSE ALONGSIDE NICOTINE PROMOTE GLOMERULAR HYPERPLASIA AND HYPERTROPHY IN MICE.

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Introducion: Oleamide is a CB1 canabinoid receptor agonist, acts as antidepressant when administered to mice (10 or 20mg/kg body weight), similar action can be attributed to nicotine, what is important both substances administered concomitantly in subtherapeutic doses impose anti-depressant effect (Kruk-Słomka M. et al., 2015). Hua P. et al showed that nicotine ingestion caused glomerular and mesangial hypertrophy in diabetic mice (Hua P. et al., 2010).
Methods: 40 mice were divided into three groups – control C (20), receiving nicotine 0.1mg/kg body weight subcutaneously and two experimental – both receiving nicotine like C, E1 also oleamide 5mg/kg body weight intra-peritoneal while E2 2.5mg/kg body weight. After 2 weeks animals were decapitated, their organs were gathered and embed in paraffin blocks. 5µm thick slices were prepared and stained according to standard H&E protocol. Microscopic analysis was performed with Olympus BX46 with digital camera and CellSens software. Statistical analysis was performed with Statistica 11 (StatSoft, USA). Statistical significance was calculated with Kruskal-Wallis test, only for the thickness of vein wall F-variance analysis test was used, the level of significance was set at $p<0.05$
Results: Higher glomerular cellularity with lower glomerular presence of RBC was observed in both experimental groups. The mean diameter of glomeruli was greater in both E1 and E2 than C (50.02 ± 10.49 vs 51.79 ± 7.32 vs 55.16 ± 8.43µm respectively, $p<0.0001$) while Bowman's space was the lowest in low-dose oleamide treated group (E1: 7.52 ± 3.62 vs E2: 4.60 ± 1.36 vs C: 7.14 ± 2.76µm, $p=0.0005$). The mean artery wall thickness was the highest for high-dose oleamide group (13.94 ± 4.64µm) and the lowest for low-dose oleamide group (10.49 ± 1.97µm; C:12.28 ± 3.13µm), $p<0.0001$. Opposite results were observed for vein wall thickness (E1: 14.67 ± 1.67 vs E2: 19.15 ± 2.84 vs C: 16.28 ± 2.57µm, $p=0.000025$).
Conclusions: Both low and high dose of oleamide promote simultaneous glomerular hyperplasia and hypertrophy.

Keywords: oleamide, nicotine, mice, kidney

INCREASED EXPRESSION OF OPIOID RECEPTORS HAS AN IMPACT ON THE DEVELOPMENT OF COLONIC INFLAMMATION IN MICE

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Introducion: Inflammatory bowel disease (IBD) is a group of chronic, relapsing disorders of the gastrointestinal (GI) tract with unclear and still unknown pathophysiology. The symptoms of IBD include: inflammation, damage of the intestinal mucosa, abdominal pain and diarrhea, weight loss and fecal bleeding. Currently available therapies lead only to alleviation of disease symptoms, therefore novel potential drug targets are still searched. The endogenous opioid system (EOS) plays an important role in the maintenance of homeostasis in the gastrointestinal tract. EOS participates in the immune response and is implicated in pain signaling. The aim of our study was to assess whether differences in the activity of EOS influence the development of the intestinal inflammation in mice.
Methods: Swiss-Webster mice were obtained from the Institute of Genetics and Animal Breeding of the Polish Academy of Sciences in Jastrzebiec, Poland. Mice were bred using bidirectional selection and classified as HA (the high analgesia line) and LA (the low analgesia line). Immunohistochemistry was used to detect expression of opioid receptors in the distal colon. Experimental colitis was induced by intracolonic injection of trinitrobenzenesulfonic acid (TNBS) in 30% EtOH/saline. After 4 days, the macroscopic score was assessed and the samples for biochemical, molecular and histological studies were collected.
Results: The expression of opioid receptors was significantly increased in the distal colon of HA mice, as compared to LA mice. Consequently, a significant difference in the development of colitis between HA and LA mice was observed, as indicated by the macroscopic score and ulcer score. HA mice were in good general health throughout the experimental period whereas mice from LA line suffered serious intestinal damage. Hematoxylin and eosin staining confirmed a significant difference between both mouse lines as indicated by histology score (muscle thickness, damage of the intestinal wall, immune cell infiltration, crypt hyperplasia and disruption). Myeloperoxidase activity, a measure of neutrophil infiltration, was also significantly increased in LA vs. HA mouse line.
Conclusions: An increased expression of opioid receptors may be crucial in colitis development, and thus EOS may be an attractive pharmacological target in the treatment of IBD.

Keywords: IBD, opioids, endogenous opioid system

THE ACTIVITY OF ALDEHYDE DEHYDROGENASE 1(ALDH1) IN BLOOD OF PATIENTS WITH MACROCYTIC ANEMIA.

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Introducion: Aldehyde dehydrogenases (ALDHS, E.C. 1.2.1.3) belong to a group of enzymes that catalyze the oxidation of (dehydrogenation) aldehydes, the highly reactive compounds with cytotoxic, genotoxic, carcinogenic and mutagenic potential. ALDH1 is a cytosolic ALDH isozyme, whose high activity can be observed in the liver, the stomach, and erythrocytes. Since the ALDH1 is considered to be a marker of various pathologies including echinococcosis and liver cancer it is essential to define the factors influencing its variability. Recently we have shown that in microcytic anemia, which is characterized by the presence of small red blood cells in a peripheral blood smear, the ALDH1 activity is higher than in healthy controls and depends on the disease severity. However, there are no data on the enzyme activity in macrocytic anemia, in which red blood cells (RBC) has greater volume than the reference range.
Methods: The blood samples used in the experiment were collected in the Public Central Teaching Hospital in Warsaw. Samples were stored in a refrigerator and enzyme activity was measured on the day of collection. ALDH1 activity was determined fluorometrically in blood of 60 patients with macrocytic anemia and 100 healthy controls.
Results: ALDH1 activity [U/l of blood] in healthy controls were significantly higher comparing to the anemia group ($p<0.0001$). However, when we compared the ALDH1 activity in RBC, the results shown that macrocytic erythrocytes had higher ALDH1 level than normal cells ($p=0.0192$). Moreover, the enzyme activity [mU/RBC] was higher in severe (Hb<8 g/dl) than mild ($p<0.0031$) and moderate anemia ($p<0.0001$).
Conclusions: Macrocytic anemia is a pathology related to changes in ALDH1 activity, what should be considered during evaluation of the clinical importance of the enzyme. The ALDH1 activity increase in erythrocytes depends on severity of anemia and might be a compensatory effect against oxidative stress regulated via, e.g., Nrf2 and Nf-?B signalling pathways.

Keywords: Aldehyde dehydrogenases, macrocytic anemia,

BIOELECTRICAL IMPEDANCE ANALYSIS AS A TOOL FOR THE ASSESSMENT OF BODY COMPOSITION

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Introducion: Body mass provides negligible amounts of information about the amount of fat, fat-free mass and hydration status. Bioelectrical impedance analysis (BIA) is a non-invasive method that enables an accurate and quick body composition analysis.
Methods: Provided systems use two, four or eight surface electrodes connected to the analyzer. Electrodes are carefully placed on the skin after washing the skin. A patient should lie down for 5-10 minutes before and during the measurement. Limbs should rest loosely at 30-45 degrees to the body. BIA test consists on passing a low intensity (~ 1 mA) alternating electrical current through the tissues and measuring their impedance, which is composed of resistance (R) and reactance (Xc). The phenomenon of resistance is associated with different resistivity of tissues, whereas reactance mainly depends on capacitance of cell membranes, which work like capacitors. The measurement can be performed at different frequencies, usually at 50 kHz.
Results: The results obtained by BIA are highly reproducible. Fat tissue and the extracellular water have minimal reactance, since they do not act as capacitors, but they have electrical resistance. On the contrary, the reactance is formed on the cell membrane of tissues with high water content which perform as a capacitor composed of two covers. Resistance causes the voltage drop, while reactance causes the phase shift of the applied electrical current, represented as phase angle (PA). The measurement provides information about extracellular body water (ECW) and its relation to the total body water (TBW). BIA also provides data about the changes of the content of intracellular water (ICW), which represents body cell mass (BCM). Lean body mass consists of fat-free body mass (FFM) - TBW, BCM and bone mineralization. The rest of the body weight is fat (FM).
Conclusions: BIA provides information about the proportion of muscle to fat tissue. It can be used in both sexes and at all ages. It is used in various institutions ranging from clinics to fitness clubs to estimate body composition.

Keywords: bioelectrical impedance analysis, BIA, impedance, body composition

PHASE ANGLE AS AN INDICATOR OF THE CONDITION OF THE CELLS

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Introducion: Phase angle (PA) is one of the parameters obtained by bioelectrical impedance analysis (BIA). It is considered to be a marker of well-being of the body, which results from a good condition of the cells. BIA is a non-invasive method of estimating body composition based on different electrical properties of tissues. It involves measuring their impedance which is composed of resistance (R) and reactance (Xc).
Methods: BIA requires the surface electrodes connected to the analyzer. The measurement is performed in a horizontal position. It consists of passing a low intensity (approx. 1 mA) alternating electrical current through tissues, usually at frequency 50 kHz. Resistivity of cells reveals as resistance, whereas reactance is the result of electric capacity of the cell membrane. Resistance causes the voltage drop, while reactance causes the phase shift of the applied alternating current, represented as phase angle. Phase angle can be calculated by the relation between reactance and resistance PA = arc tangens Xc/R.
Results: The membrane potential is the difference between potentials on both sides of the cell membrane. Cells due to their structure and properties act as capacitors. Efficient cells generate proper potential, which causes high phase angle of an applied electrical current. Phase angle value ranges from 5 to 7 degrees in healthy adults. Disorders in the biochemical activity and energetical processes disable the cell to generate adequate membrane potential. In this circumstances phase angle decreases. Low values of phase angle are observed for example in undernutrition, AIDS, chronic diseases or cancer.
Conclusions: Phase angle, as a parameter obtained by BIA, is a measurable indicator of the body condition at the cellular level. Its high values depend on the integrity of cell membranes resulting from well-being of the cells. Low phase angle characterizes the bad condition of the cells caused by metabolic disorders at cellular level.

Keywords: phase angle, PA, bioelectrical impedance analysis, BIA, impedance

SERUM AND PERITONEAL FLUID LEVELS OF IL-6 IN TYPE I AND TYPE II OF OVARIAN CANCER PATIENTS.

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Introducion: IL-6 is being regarded as an important factor in tumorigenesis. Recent studies detected high expression of IL-6 in neoplastic cells, lymphocytes T and B, tumor-associated macrophages (TAMs) and peritoneal epithelial cells. The role of IL-6 in neoplastic development is still not fully understood. Kurman classification of ovarian cancers divides ovarian cancers (OC) into two categories (type 1 and type 2) to correspond to two main pathways of tumorigenesis: low-grade neoplasms which gradually arise and high-grade neoplasms developed de novo.
Methods: The aim of the study was to evaluate the plasma and peritoneal fluid (PF) IL-6 concentrations in patients with OC and to compare the results between patients with type 1 and type 2 cancer according to Kurman classification of OC. PF and plasma were collected from 74 patients with ovarian cancer, divided into two groups according to Kurman classification of OC: type 1 (n=32) and type 2 (n=42).
Results: It was found that IL-6 concentration in PF of patients with OC was Med=4586.340 pg/ml and was significantly higher comparing to IL-6 plasma concentrations (Med=35.657 pg/ml, p=0.00003) Higher IL-6 PF concentration was detected in both type 1 (p=0.01) and type 2 group (p=0.001). Significantly higher PF IL-6 concentration was found in type 2 of Kurman classification comparing to type 1, whereas IL-6 plasma concentrations were not statistically different between type 1 and type 2 of Kurman classification.
Conclusions: IL-6 PF concentration is higher comparing to IL-6 plasma concentration in both type 1 and type 2 of OC. IL-6 PF concentration is higher in type 2 group comparing to type 1 of OC. High IL-6 PF concentration show that IL-6 may have a substantial role in the development of neoplastic process.

Keywords: IL-6, ovarian cancer, Kurman classification

HIGH RESOLUTION MELTING: RELIABLE SCREENING TECHNIQUE FOR DETECTION OF SF3B1 MUTATIONS IN CLL

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Introducion: SF3B1 mutations are recently revealed genomic alterations found in chronic lymphocytic leukemia (CLL) cells. They are represented by missense substitutions occuring in exons 14-16. Although the presence of the mutation is concerned with less favorable prognosis, it is not fully recognized as a prognostic marker of the disease yet. Present diagnostic algorithm of SF3B1 detection is based on Sanger sequencing which is expensive and laborious procedure. It requires time consuming nucleobases searching within three exons, performed for each patient. With this in mind, a reliable screening method is much needed. High Resolution Melting (HRM) analysis is s promising tool for identification of variations in nucleic acid sequences. It is based on small differences of melting temperature points between amplicons harboring the mutations and wild types. The analysis is performed in real-time and presented on the melting curves. In the present work, we performed for the first time HRM analysis as a screening for SF3B1 mutations in representative population of Central Europe.
Methods: Peripheral blood mononuclear cells were isolated from samples of 364 CLL patients. Screening for SF3B1 mutations: K700, E622/R625 and H662/K666 (exons 14 and 15) was performed using HRM analysis and the results were confirmed by Sanger sequencing.
Results: SF3B1 mutations were observed in 17/364 patients (4,7%): 9 of them were presented in exon 14, while 8 occurred in exon 15. Most common variant of SF3B1 mutations was K700, which accounted for 47% of all mutations. HRM analysis was found as a simple and fast method of SF3B1 detection, which might be performed in even 300 samples at once. Unfortunately, HRM, due to sensitivity to the reaction conditions, gives some false positive results.
Conclusions: HRM analysis is a reliable screening technique for detection of SF3B1 mutations, which makes laboratory work much more effective. Therefore, HRM may contribute in widespreading of SF3B1 marking. Due to potential role of SF3B1 mutations as negative prognostic factors in CLL, HRM seems to be promising tool for creating improved classification of the disease.

Keywords: chronic lymphocytic leukemia, SF3B1, High Resolution Melting

IS EXPOSURE TO CAFFEINE, AN ADENOSINE RECEPTOR ANTAGONIST, AFFECTING ANTIEPILEPTIC DRUG – TOPIRAMATE'S EFFECT ON MOTOR COORDINATION?

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Introducion: Brain structure and functions step by step tend to be more understood. However, disorders affecting this organ are generally not fully curable at present. One of them is epilepsy, which affects more than 1% of people all over the world. What is more, drugs used to cure this disease are not always entirely effective due to the increasing seizure resistance. Another problem is toxicity of nowadays used pharmacological methods. Topiramate (TPM) is a well-known antiepileptic drug. It blocks voltage-gated sodium channels, calcium L-type channels, increases the effectiveness of gamma-aminobutyric acid for GABA-A receptors, and decreases the activity of glutamic acid. TPM is also used to cure migraine headaches. Caffeine is the most common stimulant and most known adenosine receptor antagonist. It belongs to the group of purine alkaloids and is found in beverages such as coffee and tea. It binds to the A1, A2A, A2B and A3 receptors. The A1 receptors are most common in the central nervous system (CNS). Their activation results in sedation, anticonvulsant effects and depression of motor activity.
Methods: The experiment was carried out on Swiss mice. Pregnant mice were divided into two groups, first group received caffeine with drinking water (0.3g/l) during pregnancy and lactation period, the second one drank tap water without caffeine. The adult offspring was administered TPM in ranged doses from 418 to 420 mg/kg. After drug application, disorders of motor coordination were evaluated with chimney test.
Results: Caffeine, given during prenatal and lactation period at a concentration of 0.3g/l, did not affect TPM (in ranged doses 418 – 420 mg/kg) action on motor coordination in adult mice.
Conclusions: Caffeine exposure, an adenosine receptors antagonist, during pregnancy and breastfeeding, did not influence the effect of TPM on motor coordination in the offspring.

Keywords: caffeine, topiramate, mice, motor coordination

THE INFLUENCE OF COMBINATIONS OF CAFFEINE WITH CARBAMAZEPINE ON LONG-TERM MEMORY IN MICE EXPOSED TO CAFFEINE IN PRE- AND PERINATAL PERIOD.

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Introducion: Caffeine is a central nervous system stimulant of the methylxanthine group. This substance is contained in many beverages and painkillers used widely around the world. At high doses, similarly to other methylxanthine derivatives it induces seizure activity in animals. There are experimental data available pointing to the caffeine-induced impairment of the protective activity of a number of antiepileptic drugs. Carbamazepine, one of the antiepileptic drugs, stabilizes the inactivated state of voltage-gated sodium channels, making fewer of these channels available to subsequently open. A great body of evidence suggests that methylxanthines should be avoided in epileptic patients.
Methods: Pregnant female Swiss mice were divided into 2 groups. The first group received water with caffeine in a concentration of 0.3 g/l during 3 weeks of pregnancy and 3 weeks during breast-feeding. The second group drunk pure tap water. Subsequently, the 8 week-old males were separated and then received carbamazepine in a dose of 8.4 mg/kg for first group and 11.6 mg/kg for the second one. The long-term memory was rated using the passive avoidance test.
Results: Carbamazepine did not influence long-term memory both in the control and exposed to caffeine mice.
Conclusions: Caffeine, the CNS stimulant, following exposure during pregnancy and breastfeeding did not modulate the effect of carbamazepine upon long-term memory in the adult offspring.

Keywords: caffeine, carbamazepine, long-term memory

COMPARISON OF ANTIMICROBIAL ACTIVITY OF GARLIC EXTRACT (ALLIUM SATIVUM L.) AGAINST SELECTED GRAM-POSITIVE AND GRAM-NEGATIVE BACTERIA.

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Introducion: Gram-positive Enterococcus faecium and Enterococcus faecalis, and Gram-negative rods Acinetobacter baumannii are often multi-drug resistant and play important role in nosocomial infections, like bacteraemia and sepsis. Difficulties in the therapy of these bacteria led to search for new treatments by investigators. The attention of researchers was focused on natural substances like allicin in the garlic. The aim of study was to investigate the activity of garlic against E. faecium, E. faecalis, and A. baumannii with or without antibiotics and compare the effects between them.
Methods: During our research 9 strains of each pathogen were used. Antimicrobial activities were tested using disk diffusion method. Disks were divided into 3 groups: a group contained only garlic extract (10 µl), disks comprised only antibiotics: imipenem (IMP), gentamicin (CN) and vancomycin (VA) and the extract and antibiotics together. All of the zones of growth inhibition were measured and expressed in millimeters.
Results: A. baumannii average diameters of the zones of growth inhibition were as follow (in mm): garlic 32, IMP 9, IMP+garlic 30, CN 12, CN+garlic 31, VA 6, VA+garlic 31. E. faecium average results were as follow garlic 16, IMP 7, IMP+garlic 18, CN 12, CN+garlic 16, VA 13, VA+garlic 21. E. faecalis diameters of the zones of growth inhibition were as follow garlic 17, IMP 22, IMP+garlic 26, CN 11, CN+garlic 19, VA 11, VA+garlic 17. Differences in the size of the zones of growth inhibition for garlic were as follow: A. baumannii vs. E. faecium 16, A. baumannii vs. E. faecalis 15, E. faecium vs. E. faecalis 1.
Conclusions: The garlic extract proved significant antibacterial effect against all examined microbes. Its antimicrobial effect was much better for A. baumannii then E. faecium or E. faecalis. Its results against A. baumannii and E. faecium were better than any antibiotic results. Imipenem was the only antibiotic more effective than garlic in case of E. faecalis. The combinations: garlic+imipenem or vancomicin for E. faecium and garlic+imipenem or gentamicin for E. faecalis were more effective than garlic itself. The antimicrobial effect of garlic was greater than combinations in case of A. baumannii.

Keywords: garlic, Enterococcus, faecalis, faecium, Acinetobacter, baumannii

OXIDATIVE STRESS PARAMETERS IN PATIENTS WITH CHRONIC HYPERTENSION.

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Introducion: Hypertension is a chronic medical condition in which the blood pressure in the arteries is elevated, usually without notable symptoms, but is a major risk factor for many diseases like: coronary artery disease, vision loss, and chronic kidney disease. According the WHO date in 2014 ~22% of the population of the world had hypertension. Persistent high blood pressure cause histological and biochemical changes in the human organisms by many ways, one of which is increasing the oxidative stress – the state of imbalance between reactive oxygen species and cell ability to neutralize them. The markers of oxidative stress used in the experiment are total antioxidant capacity (TAC), concentration of malone dialdehyde (MDA) – the main product of lipid peroxidation, and concentration of ascorbic acid (AA) – one of low molecular weight antioxidants, which are used to directly neutralize reactive oxygen species.
Methods: The value of TAC and concentrations of MDA and AA were measured in blood plasma of 103 patients (50 men and 53 women), who were treated in Endocrinology Department of SPSK 4 in Lublin for different reasons. TAC was measured using FRAP method – ferric reducing antioxidant power. Concentration of AA and MDA was determined by modified Kyaw method and reaction with tiobarbituric acid, respectively. The study group of 47 patients with hypertension was compared with a control group of 56 patients without hypertension. All measurements were done in double repetition.
Results: The TAC and AA values were slightly elevated in the patients with hypertension. The MDA concentration was significantly elevated in patients with hypertension.
Conclusions: The chronic hypertension causes adaptive changes against the adverse conditions in patients organisms by increasing total antioxidative capacity and increased absorption of ascorbic acid. Despite that changes, elevated amount of ROS are damaging the lipids. What is reflected as the significantly elevated of level of MDA concentration.

Keywords: Oxidative stress, TCA, ascorbic acid, malondialdehyde, hypertension,

ASSOCIATION OF UROVIRULENCE GENES WITH THE ANTIBIOTIC RESISTANCE AMONG UROPATHOGENIC ESCHERICHIA COLI STRAINS BELONGING TO PHYLOGENETIC GROUP B2 ISOLATED FROM COMMUNITY-ACQUIRED PATIENTS IN BIAŁYSTOK.

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Introducion: Uropathogenic strains of *Escherichia coli* (UPEC) are the most significant cause of urinary tract infections (UTIs). Increasing antibiotic resistance among UPEC underscores the need for development of novel strategies for prevention and effective treatment. The aim was to evaluate and analyze the correlation between the antibiotic resistance and virulence factors of UPEC belonging to phylogenetic group B2 isolated from patients with community-acquired UTIs in Białystok.
Methods: The total of 79 *E. coli* strains collected from 38 (48,7%) adults and 41 (51,3%) children/adolescents with community-acquired UTIs in 2015 at the Department of Microbiology of UMB, were investigated. The Hoeprich method was performed to determine the significant growth of bacteria. Identification of UPEC isolates was done on the basis of spectral fingerprints using the MALDI-TOF-MS. The presence of virulence genes (*fimH, papC*, *sfaDE*, *afaBC*, *iroN*, *irp2*, *hlyA*, *cnf1*, *vat*, *agn43*, *usp*, *traT*) was assessed by the magnetic beads extraction technology and multiplex PCR. Antibiotic resistance profiles of UPEC were performed using the disk diffusion method according to EUCAST criteria. Data were analyzed using Chi-square and UMann-Whitney tests ($p<0.05$).
Results: Isolated *E. coli* strains belonged to phylogenetic group B2. Of the 79 isolated *E. coli*, 22.8% strains were resistant to trimetophrim/sulfamethoxazole (SXT), 20.3% to nalidixic adic (NA) and 10.1% to ciprofloxacin (CIP). Furthermore, 11.4% of *E. coli* strains were multidrug resistant (MDR). The most abundant pattern of virulence genotypes including adhesions (*fimH+*, *papC+*, *sfaDE+*), iron acquisition systems (*irp2+*, *iroN+*), toxins (*vat+*, *hlyA+*, *cnf1+*) and other virulence factors (*usp+*, *agn43+*) was noted in 49.4% of UPEC. The statistically significant correlation between the absence or the number of the genes of virulence factors and antibiotic resistance was observed ($p<0.05$). In this investigation, prevalence of *papC*, *sfaDE*, *hlyA*, *cnf1* among CIP-R strains of UPEC were significantly reduced compared with susceptible isolates.
Conclusions: In conclusion, the study with the phylogenetic group B2, showed reduced virulent potential of UPEC resistant to fluoroquinolones. Routine assessment of the susceptibility of UPEC is needed to help understand the association between resistance and virulence.

Keywords: *Escherichia coli*, UPEC, UTI, ciprofloxacin, antibiotic resistance

HIGHER GLOMERULAR CELLULARITY IN MICE AFTER ADMINISTRATION OF CB2 ANTAGONIST AND NICOTINE.

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Introducion: AM 630 (6-iodopravadoline) is a CB2 cannabinoid receptor antagonist. CB2 receptors have been identified in the brain and have been proposed to play a functional role in mental disorders and drug addiction (Gamaleddin I. Et al., 2012). Stimulation of CB2 receptors in mice acts as antidepressant, similar as nicotine. However, administration of combination of AM 630 and nicotine had no influence on the antidepressant effects provoked by nicotine injection (Kruk-Słomka M. et al., 2015).
Methods: 30 mice were divided into two groups – control (20), receiving nicotine 0.1mg/kg body weight subcutaneously and experimental one (10) – receiving nicotine like control and also AM 630 2mg/kg body weight intra-peritoneal. After 2 weeks animals were decapitated, their organs were collected, fixed in 10% formalin and embedded in paraffin blocks. On the 5?m thick slices H&E stain was conducted. Afterwards tissues were evaluated independently by authors. Microscopic analysis was performed with Olympus BX46 with digital camera and CellSens software. Collected statistical data were analyzed with Statistica 11 Software. Study design was approved by Ethics Committee of the Medical University of Lublin.
Results: Higher cellularity in glomerule was observed in the experimental group. The mean diameter of glomeruli was higher (58,49 ± 8,46 vs 55,16 ± 8,43 µm) while Bowman's space was lower in the experimental one (4,95 ± 1,88 vs 7,14 ± 2,76µm). The mean of artery wall thickness was higher in the experimental group (15,22 ± 3,53 vs 12,28 ± 3,13µm), however the lumen of artery was greater then in the control one (24,8 ± 9,74 vs 19,67 ± 9.73 µm). Results was statistically significant.
Conclusions: Administration of both nicotine and AM 630 stimulates glomerular hyperplasia and thickening of artery wall in comparison to nicotine alone.

Keywords: nicotine, AM 630, CB 2 antagonist

Cardiosurgery and Thoracic Surgery

WHATS THE HIGH RISK ADULTS PROFILE TO ENDOCARDITIC

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Introducion: Endocarditic is a big dilemma in cardiology. Mostly cardiologist didnt remember about oral cavity check-up for they patients. It may goes to severe complication such as endocarditis.
Methods: We made our own survey then got permission from Bioethical Commission and made research. Our research has consist into two parts: questionnaire filled by patients and oral cavity check-up to detect old tooth roots, abscesses etc.
Results: We included to our study 43 patients (56,8% men) from Cardiology Unit Military Hospital in Bialystok. For 97,72 % of them it was next hospitalization. The average patients was 68 yo. (Me: 72; 21-89; ±15,78), lived in village (40,9%), have got primary education (56,81 %) good economical situation, never smoked (63,63 %). 44,18 % of patients didn't brush tooth; 95,34 % never used dental flossing and more than 1/3 (34,88%) didn't do any about oral cavity hygiene. 64,28% have dental prosthesis but more than a half of them didn't wash it. 48,83% was in dental office during the last six months but the main reasons of it was bad tooth pain (40,47 %) and prosthesis making (42,85%). 67,44 % didn't attend to frequently oral cavity check-up. Only 36,58 % patients was been told about oral cavity state during hospital admission and only 13,79 % has got dental consultation during hospitalization. For 50 % of them the tooth removing was made. The most patients suffered from bad mouth smell (46,42%) ,plaque (35,48%) and cavity bleeding (30,76%). 47,5 % lost tooth before 20 yo. Slightly less than 40% has got atherosclerosis; 15,78 % cancer; 10,52 % rheumatology arthritis; 7,89 % reflux. 87,80 % was intake systemically medication.
Conclusions: Patients from cardiology unit wasn't asked and treat due to dental problems which can be dangerous during cardiology/cardiosurgery/interventional cardiology treatment. This patients was bad oral cavity hygiene and a lot of risk factors to endocarditic eg. Plaque (bacterials' environment).

Keywords: endocarditis, cardiology

DO THE PEOPLE WHO GRADUATED FIRST-AID COURSE HAVE THE ACTUAL KNOWLEDGE OF PROVIDING FIRST AID?

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Introducion: Basic life support consists of cardiopulmonary resuscitation (CPR) and, when available, defibrillation with automated external defibrillators (AED). The keys to survival from sudden cardiac arrest are early recognition and treatment, specifically immediate initiation of effective CPR, along with an early defibrillation. Self-possession and composure during an emergency treatment can only be achieved through competent theoretical and practical training.
Methods: Three hundred and fifty seven adolescent inhabitants of Lublin Voivodship, Poland, took part in the research. A questionnaire consisting of 23 questions was used as the research instrument. Participation in the research was voluntary and anonymous.
Results: Twenty two per cent of the interviewers claimed that they had taken part in an FA course. Thirty per cent reported having acquired information about giving first aid from the European Resuscitation Council guidelines. The rest of respondents reported getting the knowledge from inexpert sources such as the internet, friends and magazines. 94,9% of young people after FA course and 95% people without a course were aware of the ratio of chest compressions to ventilations. Moreover, 56.2% of the young people after a course and 51.8% of the people without FA course recognised the correct point on the chest where the compression should be performed.
Conclusions: The level of FA knowledge in the research group is slightly better in a group of young people after first aid course. Unfortunately the general knowledge of FA is unsatisfactory. That state is caused by the false conviction that newly acquired knowledge does not require constant repetition and updating.

Keywords:

URACHUS PERSISTENT – A RARE CONGENITAL DISORDER

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Introducion: Symptomatic urachus persistent can occur in every age but asymptomatic can be present as well. Choice of surgical method should be adjusted to patients' condition and presented signs and symptoms.
Methods: Cases of children diagnosed in Provintional Speciaistic Childrens' Hospital in Olsztyn with urachus persistent were taken as a material. Casebooks of patients diagnosed with urachus persistent between October 2011 – October 2016 retrospectively analyzed was a method. 7 patients were diagnosed with urachus persistent during that time. Average age of the patients was 5,8-year-old. The youngest patient was 2/12 months and the oldest 17-years-old. 4 patients were males and 3 were females. The most common sign was leakage of clear fluid from navel – 4 patients. One patient presented granuloma of the navel. One patient had coexisting dilatation of left pyelocalyceal system, one had hypothyroidism and bronchial asthma, other patients didn't present any coexisting diseases. In 3 cases laparotomy was chosen as a surgical method. In 3 cases laparoscopy was chosen. In 1 case conversion had to be performed. The shortest period of time of taking painkillers (NSAIDs) was 1 day, and the longest 5 days. 4 patients did vomit after surgery for 1 day, 1 had haematuria for 5 days and 1 had leakage of the postsurgical bandage. One patient had the surgery dismissed due to closure of the urachus persistent confirmed in ultrasound examination.
Results: 2 patients had coexisting diseases. Laparotomy and laparoscopy were chosen 3 times each as surgical method, but in one case conversion had to be performed. Painkillers were given to every patient, average time of the therapy was 2,2 days . All children were discharged from the hospital in good health. Average time of hospitalization was 3,5 days.
Conclusions: Urachus persistent is a congenital disorder that can become symptomatic in any age. Choice of surgical method should be adjusted to patients' condition.

Keywords: urachus persistent, pediatric surgery

LONG TERM CLINICAL RESULTS OF THE ARBOR TRILOGY BIOLOGICAL AORTIC HEART VALVE IMPLANTED WITH TISSUE RETENTION ELEMENTS (TRES).

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Introducion: The Trilogy Aortic Valve (TAV) consists of a separate stented leaflets, a flexible, stand-alone gasket which can be positioned easily since there are no valve leaflets in this component to encumber surgical technique. Implantation is quick using Arbor Tissue Retention Elements (TREs).The aim of study is to evaluate the clinical feasibility of using the Arbor Trilogy™ Aortic Valve System (TAV-XX) for aortic valve replacement in the long-term follow-up.
Methods: In a prospective, non-randomized study, 13 patients with severe aortic valve stenosis underwent aortic valve replacement with TAV implanted with TREs in 2007. Patients were evaluated for improvement in hemodynamic performance and NYHA functional class. They were also appraised for safety by appearance adverse events in nine years follow-up.
Results: Valve implantation was successful in 13 patients. There was one intraoperative adverse event which was aortic regurgitation shown by TEE during the procedure. There was no intraoperative mortality nor reoperation in 9 years follow-up. One patient died of Pulmonary Artery Embolia in postoperative follow-up. Another 4 patients died of causes unrelated to the valve during follow-up. NYHA functional class has been improved in all surviving cases. Left ventricle hypertrophy regression has been noticed as a consequence of longstending lower paravalvular gradient.
Conclusions: Trilogy Aortic bioprosthesis and Arbor Tissue Retention Elements are feasible and safe. No valve related complications were noted in 9 years follow-up. None of the patients required reoperation in 9 years follow up.

Keywords: Trilogy Aortic Heart Valve, valve implantation, trilobal valve, Tissue Retention Elements

THE ANALYSIS OF THE OCCURANCE AND CAUSES OF DELIRIUM AMONG PATIENTS OF THE DEPARTMENT OF ANESTHESIOLOGY AND INTENSIVE CARE

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Introducion: Recently there has been a rise of the patients admitted to intensive care with alcohol dependence syndrome or alcohol intoxication related to the subsequent development of delirium tremens, alone or combined with other disorders of consciousness.
Methods: A retrospective study, based on analysis of patients hospital charts being treated in the ICU of Grodno Regional Clinical Hospital in the period since December 1, 2015 - till January 31, 2016 was carried out. 293 hospital charts were analyzed. The consciousness disorders were observed in 25 (8, 59%), including 20 cases of men and 5 of women, with percentage of 80% and 20% respectively. Delirium tremens were found in (including 4% in women) 32% of all cases.
Results: Delirium tremens was caused by the following disorders: injury - 37.5% of all cases, pancreatitis - 25% of all cases, fourth stage cancer with brain metastases - 10.5% of all cases, pathology of upper respiratory tract - 7% of all cases, vascular pathology - 20% of all cases. During their treatment in the department of anesthesiology and intensive care 27% of patients started to have seizures. The average duration of treatment in ICU was - 6.02 ($p < 0.05$). The total time of hospitalization was $8{,}12 \pm 1{,}2$ ($p < 0.05$) days.
Conclusions: The development of delirium associated with alcohol consumption significantly increases the residence time in the department of anesthesiology and intensive care, and the total time of treatment in hospital in general. A significant increase in the duration of therapy was not observed among the patients with encephalopathy of mixed origin and encephalopathy based on somatogenic diseases, although the tendency to increase can be still observed. Thus, alcohol abuse increases the financial costs of both the treatment and the timing of temporary disability of patients. A large-scale study should be done, considering the fact, that this study used a small cohort of patients.

Keywords: Delirium, delirium tremens, alcohol dependence syndrome

ENDOTHELIAL VASOACTIVE PROPERTIES IN PATIENTS AFTER CORONARY ARTERY BYPASS SURGERY WITH DIFFERENT LEVEL OF HEMOLYSIS

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Introducion: Introduction. Implementation of coronary artery bypass grafting (CABG) in patients with coronary artery disease (CAD) can improve the quality of life of patients, however, may develop various complications. Their pathogenesis is caused by reperfusion syndrome. The most important mechanism is oxidative stress. Other factor of coronary artery bypass grafting complications is the use of cardiopulmonary bypass. The implementation of CABG is accompanied by hemolysis of red blood cells as a result of mechanical damage. The purpose was to investigate the endothelium vasoactive properties in patients with different degrees of hemolysis during coronary artery bypass surgery with cardiopulmonary bypass.
Methods: Methods. The studies were performed in 34 patients with CABG. Evaluation of the degree of hemolysis was carried out during coronary artery bypass with cardiopulmonary bypass. The study of endothelial vasoactive properties was carried out with the reactive hyperemia test [Celermajer, D.S. 1992]. Determination of vasoactive properties of the endothelium was performed one day before CABG surgery and on the fifth day after CABG surgery.
Results: Results. Patients with coronary artery bypass graft with cardiopulmonary bypass revealed worsening of the endothelial dysfunction at patients with severe degree hemolysis value 0.6-0.8 g/L (n=8) compared to preoperation period by 28% ($p < 0,05$), while as patients with mild hemolysis 0.1-0.2g/L (n=10) worsening endothelial dysfunction was 5% ($p > 0,05$). These differences between the groups were significant. In 16 patients with the moderate hemolysis 0.3-0.5g/L worsening endothelial dysfunction was 15% ($p < 0,05$). After performing tests with nitroglycerin using of the endothelium independent vasodilation of blood vessels were not revealed. It is indicate that in all groups of patients guanylate cyclase mechanism of vasodilation was normal.
Conclusions: Conclusions. This studies show pathogenic influences of hemolysis on the vascular endothelium in patients with coronary artery bypass grafting with cardiopulmonary bypass. It supposed that the cause of worsening of endothelial dysfunction with a severe degree of hemolysis is the high level of free iron (not binding transferrin) in blood plasma. Perhaps the binding of free iron will reduce endothelial dysfunction and associated postoperative complications in patients with coronary artery bypass with cardiopulmonary bypass.

Keywords: ENDOTHELIAL VASOACTIVE PROPERTIES, CORONARY ARTERY BYPASS SURGERY, HEMOLYSIS

THE APPLICABILITY OF ALVARADO SCORING SYSTEM IN EARLY DIAGNOSIS OF ACUTE APPENDICITIS IN THE EMERGENCY DEPARTMENT.

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Introducion: Appendicitis is one of the most frequent diagnoses during visits in the Emergency Department resulting in hospitalization. The clinical diagnosis of appendicitis is largely based on the patient's signs and symptoms. This process could be improved by using a scoring system that includes objective variables that reflect the inflammatory response. The Alvarado score was constructed from eight variables with independent diagnostic value: migratory right iliac fossa pain, anorexia, nausea and vomiting, right iliac fossa tenderness, rebound tenderness, fever, leukocytosis and shift to the left (increase of immature neutrophils). A score below 5 points excludes a diagnosis of appendicitis, 5-6 points is an indication for observation, while a score of 7 points or more is strongly predictive of acute appendicitis.
Methods: Data were collected retrospectively from 101 patients admitted for suspected appendicitis at the Medical University of Białystok Clinical Hospital. Diagnostic performance was assessed using Alvarado score. The results are based on analysis of medical documentation of patients hospitalized in years 2009-2015 in Second Department of General and Gastroenterological Surgery.
Results: Our study showed that 16 out of 84 patients with intraoperatively confirmed acute appendicitis had 7 points in Alvarado score but the rest of the patients had 5 points or below. This means that 68 patients had false negative Alvarado score. Furthermore, 17 patients with reactive or catarrhal changes in the appendix had 5 points or below, which means that there were no false positives. The most sensitive parameter was leukocytosis, which occured in 72% of the patients. The least sensitive parameter of Alvarado score was rebound tenderness, which occured in 25% of the patients.
Conclusions: This simple clinical scoring system can correctly classify only some of the patients with suspected appendicitis For the rest of the patients, with an indeterminate scoring result, we should consider a need of further diagnostic imaging or diagnostic laparoscopy. Leukocyte shift to the left is not routinely assessed in Emergency Department setting, that is why our study did not evaluate the usefulness of this parameter. Management of patients based on Alvarado score does not expose them to unnecessary operation.

Keywords: The Alvarado score appendicitis

ONE YEAR EXPERIENCE OF VENTRICULAR SEPTAL DEFECT SURGERY TREATMENT

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Introducion: Ventricular Septal Defect (VSD) is a Simple Heart defect which may be single or combined with another, more serious defects. VSD is often diagnosed with genetics disorders eg. Down Syndrome.The goal of this study was briefly introduction of VSD treatment in one pediatric cardiac surgery clinic in Poland
Methods: 30 children was hospitalized in 2015 in Department of Pediatrics Cardiac Surgery (DCS) Institute of Pediatric Jagiellonian University Collegium Medicum in Cracow because of VSD, Echocardiography examination had been performed according to European Cardiac Society. To data collection we'd base on a patients charts and surgical protocols. Data was analyzed in Statistica 12.0.
Results: In 2015 in DCS 30 (about 10 % of all cardiac surgical procedure in our department) patients was treated due to VSD. The boy was dominated (56,67 %). The average patient age during surgery procedure was 28 weeks. 1/3 of patients had Down Syndrome. The most common localization was sup aortic. The average patients ejection fraction (EF) before surgery was 52,3 % [40-70;±9,17]; after surgery EF was 61 % [58-70;±4,05]. All patients was been treated surgically with medium sternotomy, hypothermia, cardio-pulmonary bypass. To repair the VSD the patients own pericardium and artificial material was used. Post-operative side effect eg. Collapsed lung was detected in 6,67 %, general infection in 6,67 % (2 cases: 1 MSSA, 1 ESBI). The liquid collection after surgery was detected in 24,24 %, and was located around the heart in pericardium. Post operation echocardiography examination control wasn't detect any serious leakage in ventricular septum.
Conclusions: VSD is a heart defect related to Down Syndrome. Mostly patients had been diagnosed and treated very early (first quarter of life). Open surgical method is non-hazardous and beneficial way of VSD treatment. Patients after surgery had improved significantly LV EF ($p<0,05$). Post operation complication was sporadically in our DCS.

Keywords: ventricular septal defect, surgical treatment, efficacy, effectivness

LEADLESS CARDIAC PACEMAKER- NEW TREND IN CARDIOLOGY

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Introducion: Conventional cardiac pacemakers despite their effectiveness are related with quite frequent complications including problems with transvenous electrodes and the subcutaneous pocket of pulse generator. Leadless pacemakers were created to limit these side effects. This is a new technology which was approved In European Union in April 2015. First pacemaker implantation in Poland took place in January 2016. Available devices are Micra TPS made by Medtronic company and Nanostim LCP made by STJ Medical company. The devices are inserted in the endocardium where they release corticosteroids which reduce inflammatory reaction. Their mechanism of action is similar to conventional pacemakers.
Methods: Analysis of studies and scientific publications concerning safety and efficiency of leadless pacemakers.
Results: The LEADLESS trial published In 2014 was made among 33 patients requiring permanent single-chamber ventricular pacing. The percentage of successful implantation of pacemakers was 97% and after 90 days of observation 94% of them were free of side effects. In another study made by TPS that included 140 patients it has been shown that 18,6% of participants experienced side effects during observation. Micra Transcatheter Pacind System Study published in February 2016 was made among 725 patients which underwent long term observation. 99,2% of implantations were successfully perfomed. Only 4% of patients experienced complications during 6-month follow-up. These results were compared with historical data about conventional pacemakers. In the group of patients with leadless pacemakers lower risk of complications has been shown. All mentioned researches have shown that leadless cardiac peacemakers are highly efficient.
Conclusions: The results of recent clinical trials concerning wireless stimulators have shown that these devices are safe and effective. Modified design of new pacemakers may lead to fewer complications that are associated with conventional devices. However, these devices are limited to patients with an indication for single-chamber ventricular pacing and they give pro-arrhythmic effects. Further studies about these devices are necessary to determine possible side effects in long-term therapy.

Keywords: pacemaker, cardiac pacing therapy, leadless

Case Report

FABRY'S DISEASE- RARE EXAMPLE OF STORAGE DISEASE.

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Background: Fabry's disease is a rare lysosomal storage disease. The DNA mutation is X-linked recessive and it involves GLA gene of lizosomal enzyme alpha-galactosidase A (Î±-Gal A). Deficiency of the Î±-Gal A leads to accumulation of the globotriaosylceramide (GL-3) in cells and causes a wild spectrum of c linical manifestations. Abnormal GL-3 accumulation occurs in cells of the skin, kidney, heart, brain and nervous system, The manifestation of the disease begins usually in an early childhood and includes decreased sweating, heat intolerance, proteinuria, severe pain of the extremities, hearing loss, chronic fatigue, depression, anxiety and chronic gastrointestinal disorders. The disease is commonly diagnosed at the late clinical stage. The treatment includes enzyme replacement therapy.
Case Report: Methods: We have analyzed the literature performing the current data about Fabry's disease. We also present a case of 28 years old man who presented to the hospital with oliguria, proteinuria and hypertension. Kidney biopsy was performed at early stage of the disease. Results: Examination of the kidney biopsy revealed ultrastructural changes seen in electron microscopy consistent with the diagnosis of Fabryâ's disease.
Conclusions: Renal biopsy is an invasive diagnostic method but it can provide diagnosis in cases of kidney disease of unknown etiology. Assessment of the biopsy should be done by experienced nephropathologist with the use of light, electron and immunofluorescence microscopy. Genetic studies should be performed to confirm the diagnosis.

Keywords: Fabry’s disease, chronic kidneys disease (CKD), organs insufficiency

SADDLE MASSIVE PULMONARY EMBOLISM IN THE COURSE OF RADIOCHEMOTHERAPY TO THE HEAD AND NECK CANCER.

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Background: Thromboembolic complications are frequently observed in cancer patients. Both surgical and non-surgical anti-neoplastic treatment are associated with the complications. Awarness of the risk among physicians taking care of cancer patiens is insuffisant.
Case Report: 65-year-old male patient was diagnosed with unknown primary cancer of the head and neck region. Pathological examination revealed low-differentiated carcinoma. Co-morbidities included diabetes, arterial hypertention and visceral obesity. Patient was hospitalized to undergo radiotherapy to the head and neck region with concomitant chemotherapy. After fifth week of radiotherapy the patient fainted with short-term loss of conciousness. Neutropenia, thrombocytopenia and hypoalbuminemia was observed, so adequate treatment was introduced and radiotherapy was suspended for 6 days. 4 days after radiotherapy resumtion, he received third course of chemotherapy. Next day, he fainted once again, with short loss of contact, unvoluntary urinating, decreased arterial pressure and tachycardia. Brain CT examination as well as ECG and cardiac enzymes indicated no potential reasons for fainting. Since the patient was bed-ridden - low-molecular-weight heparin (LMWH) at prophylactic doses was introduced. 6 days later patient fainted for the third time, with tachycardia and normal blood pressure. D-dimers reached 6560 ng/ml. Arterial blood gas examination revealed decline in oxygen saturation - pO2 preassure reached 59mmHg. Angio-CT of the chest revealed massive pulmonary embolism (â€žsaddle" type). The patient was transferred to the cardiology intensive care unit and received LMWH at the therapeutic dose. His clinical status improved. Radiotherapy was discontinued. One month later he fainted for the fourth time and was hospitalized due to the heart insufficiency. Full dose of LMWH was continued. After two months - progression of the cancer was observed and he underwent systemic palliative treatment, still being on therapeutic doses of LMWH. Six months after pulmonary embolism he developed severe neutropenia and his general condition deteriorated so he was reffered for best supportive care.
Conclusions: Physicians should be aware of possibility of thromboembolic complications, including severe pulmonary saddle embolism during the course of non-surgical treatment (e.g. radiochemotherapy).

Keywords: cancer, thromboembolic complications, pulmonary embolism, non-surgical antineoplastic treatment

INVASIVE MENINGOCOCCAL DISEASE – A PAEDIATRIC CASE REPORT

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Background: Neisseria meningitidis is a bacteria that colonises the nasopharyngeal cavity. It can be carried asymptomatically but it can also cause a life-threating condition - an invasive meningococcal disease (meningitis and sepsis). Moreover it can cause pneumonia, arthritis, pericarditis or inflammatory disease of the bones and bon e marrow. Children from 3 months to 4-5 years old are the most vulnerable.
Case Report: We present a case report of a 5-month-old boy with invasive meningococcal disease, septic shock and disseminated intravascular coagulation (DIC). A retrospective analysis of medical records was conducted. A five-month-old patient was admitted into the Intensive Care Unit (ICU) with sepsis and DIC. Boy presented: tachypnoe (45/min), Glasgow Coma Scale (GCS) - 11/15, numerous petechiae, especially on lower extremities. Blood pressure was - 57/36 mmHg, heart rate over 200/min and signs of multiple organ failure. A latex agglutination test (LAT) confirmed Neisseria meningitidis infection. Complexed therapy was conducted in accordance with a Surviving Sepsis Campaign guidelines. As a result of thrombosis, embolisms and haemorrhage patient had temporary ischemia of the lower extremities. On the 18th day of hospitalization the patient's tracheal tube was removed and complex neurological symptoms were discovered. CT scans of the central nervous system showed pathological changes due to post septic encephalopathy. On the 33rd day patient was admitted to the surgery ward for removal of necrotic skin.
Conclusions: Invasive meningococcal disease has a high mortality rate. It can also lead to leg amputation, but our case report proves that we can prevent it by a proper treatment.

Keywords: Neisseria meningitidis, DIC, sepsis

TONSILLAR LYMPHOMA – CANNOT INTUBATE CANNOT VENTILATE – A PEDIATRIC CASE REPORT

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Background: Lymphoma is the most common head and neck neoplasma in children, and unilateral tonsillar enlargement is the most frequent clinical manifestation of tonsillar lymphoma. Asymmetrical tonsils are present in about 73.2% of lymphoma cases.
Case Report: We report a case of a 6-year-old boy pre pared for tonsillectomy and adenoidectomy with suspicion of lymphoma because of unilateral tonsillar enlargement. A retrospective analysis of medical records was conducted. Evaluation whether presented difficult and potentially fatal situation could have been avoided. Patient â€“ ASA scale II E (upper respiratory tract infection), IIËš in Mallampati score. After premedication with midazolam and initial oxygenation, the patient underwent induction of anaesthesia with atropine, fentanyl, propofol and mivacurium. Patient was easily ventilated via a face mask, laryngoscopy showed enlarged right tonsil. While intubating with a guideway tracheal tube there was a small resistance. After removing the guideway, patient would not be ventilated through the tracheal tube. Even though the tube was removed, patient could no longer be ventilated via face mask. The protocol for the management of unexpectedly difficult airways stress was introduced. Facing rapid deterioration of oxygenation surgeon performed a tracheotomy.
Conclusions: The magnitude of the malignancy should have been evaluated before the surgery. It would allow to plan and prepare for the anaesthesia and surgery properly.

Keywords: adenoidectomy, anaesthesia, tonsillectomy, tracheotomy, ventilation

PYONEPHROSIS WITH AFUNCTION, DYSPLASIA AND MEGAURETER OF DOUBLE PYELOCALYCEAL LEFT KIDNEYS' UPPER SEGMENT

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Background: Ureter duplex is a condition in which one kidney consists two pyelocalyceal system and two ureters. About 1% of population do have ureter duplex, but most of the time it's not symptomatic. Females present this condition more often than males.
Case Report: Four-year-old patient was diagnosed with ureter duplex of left kidney during an ultrasound examination. Removal surgery of one pyelocalyceal system was scheduled. Meantime she was admitted to Pediatric Ward due to nocturia. UCM was performed. Patient started complaining for abdominal pain. During palpation of the abdomen big convexness was easily found. Also tenderness and soreness were found in the examination. Ultrasound examination was performed which revealed double pyelocalyceal system in left kidney and 8-centymeter megaureter starting in upper segment, filled with echogenic fluid. Blood tests revealed leukocytosis and high CRP. She was was admitted to the Clinical Pediatric Surg ery and Urology Ward in Provintional Specialistic Children's Hospital in Olsztyn. Removal of the upper segment of the left kidney was scheduled. Procedure was performed from Bergman-Izrael approach. To find orifice of the enlarged upper left ureter cystouretheroscopy was planned right before the surgery, but it was rescheduled to avoid spreading the infection. Megaureter was punctured and over 1000ml of purulent fluid was removed. Then, upper segment of the left kidney was removed and saved for histopathological examination, which revealed dysplasia and acute inflammation of removed kidney and purulent inflammation in ureters wall. Despite intensive antibiotic therapy the patient needed second surgery due to postsurgical empyema of distal end of the upper-segmental ureter of the left kidney. Further postsurgical patient condition was without complications. After five days girl was discharged from the hospital in good health.
Conclusions: Ureter duplex with megaureter filled with huge amount of purulent fluid is a rare condition. Incomplete surgical removal of pyogenical ureter is riddled with risk of complications such as empyema.

Keywords: peditric surgery, ureter duplex, pyonephrosis, double pyelocalyceal system

RESIN INFILTRATION – AN EVALUATION OF A MINIMALLY INVASIVE METHOD OF WHITE SPOTS TREATMENT USING QLF AND DIAGNODENT : A CASE REPORT.

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Background: Nowadays, the number of patients for whom a beautiful, healthy smile is very important has increased. A significant group of patients is concerned because of spots and discolorations of their teeth. Mostly these are caries spots. There are also cases, in which we diagnose fluorosis. In the case where patient has both caries and fluorosis spots in one patient, choosing the treatment method may be problematic, due to different etiology of these lesions. Modern minimally invasive dentistry suggests resin infiltration. The aim of this study was to present case report, where the resin infiltration was performed as a white spots treatment method (for both caries and mild fluorosis).
Case Report: A 22-year-old patient's main expectation was to improve smile aesthetics. In clinical examination the prevalence of both fluorosis (irregular, chalk white spots in incisal edge area and white streaks visible after drying) and white caries spots (around orthodontic brackets and cervical area, as a complication after 3years of orthodontic treatment using fixed appliance) was alleged. In order to assess the character and level of lesions advancement, the photographic documentation was collected, indicato rs (Russel's, Dean's, TF, ICDASII) were specified and 128 tooth surfaces were examined, using devices such as Diagnodent and QLF system (fluorescence phenomenon). Resin infiltration (IconDMG, Germany) was chosen as a treatment method. Before the treatment had started, all surfaces were cleaned, rubber dam was placed and procedure has been performed according to the specific producer's guidelines. Clinical evaluation of undergoing treatment was made after procedure. Russell's, Dean's, TF and ICDASII indicators were defined and photographic documentation was made. Measurements with Diagnodent and QLF system were taken for the second time in order to determine the effectiveness of resin infiltration.
Conclusions: Simultaneous occurrence of caries lesion and fluorosis is not only a diagnostic problem but may also cause difficulties when choosing proper treatment method. Resin infiltration is procedure of early caries lesions treatment. Furthermore, this is min imally invasive method that improves aesthetics through masking white spots and postponing progress of caries lesions. Recently, it is used increasingly to treat fluorosis and other lesions resulting from enamel mineralization disorders e.g. hypomineralization , MIH.

Keywords: resin infiltration, fluorosis, white spots, caries, QLF, Diagnodent

CEREBELLAR TYPE OF MULTIPLE SYSTEM ATROPHY (MSA-C) - CASE REPORT

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Background: Multiple system atrophy (MSA) is a rare, progressive, neurodegenerative disorder that distincts itself by progressive failure of autonomic system e.g. orthostatic hypotension, bowel incontinence, ataxia and parkinsonism. Disease starts typically at 50-60 years old male (55 %) patients and its prevalence is 1,9-4,9:10000. MSA is divided mainly into separate conditions: parkinsonian-type (MSA-P) 65-80% of the cases and cerebellar type (MSA-C) 20% of the cases.
Case Report: Aim of the study is to present a description of a case of a MSA-C and difficulties in diagnosis and its treatment. The patient, who is 55 years old woman, was admitted to Clinic of Neurology in order to extend diagnostics of neurodegeneration in February 2016. First symptoms of progressing weakness of lower limbs and vertigo began 5 years back with speech disorder 2 years back. In 2013 patient was admitted with progressive ataxia, speech and balance disorders. During that stay in the clinic Spinocerebellar ataxia (SCA1, SCA2, SCA3) has been excluded. In 2014 she has been treated because of a Lyme disease. Neurological examination at the admission to the clinic showed: dysarthria, nystagmus, paresis of right lower and upper limb with exaggerated deep tendon reflexes of a right limb, both sides ataxia in finger-nose, heel-knee test, torso ataxia, wide-based gait, tendency of drifting to the left during walking, difficulty in walking independently, positive Rombergâ€™s test result. Patient reported urinary incontinence. Patient negated disability in superficial sensation. During patients stay in the clinic several diagnostic test have been performed including cerebrospinal fluid and MRI of the head. The MRI showed cerebellum and pons atrophy and hot cross bun sign in the pons.
Conclusions: Patient was diagnosed with Multiple System Atrophy with dominating cerebellum symptoms (MSA-C). Progression of the disease is rapid and prognosis is poor. There is currently no causative treatment, only symptomatic. MSA is a great challenge for modern medicine but there is a great hope in clinical trials conducted all over the world.

Keywords: Multiple System Atrophy, cerebellar subtype of multiple system atrophy, hot cross bun sign, cerebellar ataxia.

METABOLIC SYNDROME IN A YOUNG AND ACTIVE MAN – CASE REPORT

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Background: Klinefelter syndrome that occurs in 0.2% live male births is the main genetic cause of male primary hypogonadism. About 64% of the affected individuals are never recognized. A low level of testosterone causes increase in the amount of adipose tissue and decrease of the muscle mass. As a result, frequency of metabolic syndrome is strikingly increased among affected patients.
Case Report: A 27-year-old man was addressed to the Outpatient Diabetes Clinic due to an impaired fasting glucose (twice at an interval of two weeks, fasting plasma glucose levels were 119 mg/dL and 110 mg/dL). The patient, a professional physiotherapist, led a healthy lifestyle: did sport regularly, avoided sweets and salt, did not smoke cigarettes, denied taking narcotics and anabolic steroids. He was not diagnosed with any chronic disease and did not take any drugs. On physical examination overweight (BMI- 25.68 kg/m2) and high normal blood pressure (135/85 mmHg) were diagnosed. Additionally, he had sparse body hair on the legs and chest. The patient admitted that he shaves only once a week. Based on laboratory tests, insulin resistance (HOMA-IR 3.18) and mixed hyperlipidemia were diagnosed. The abdominal ultrasound revealed features of fatty liver. In addition, the concentration of total testosterone was 9 nmol/L (N 9 - 34.7 nmol/L). The patient confessed that he has suffered from decreased libido and erectile dysfunction since his youth and that his sexual maturation was delayed for 1-1.5 year in comparison with his peers. During urological consultation testicular atrophy was found. Scrotum ultrasound revealed that the volume of both testicles was highly reduced. Additional laboratory tests showed elevated levels of LH, FSH, SHBG, normal prolactin and a decreased level of free testosterone. Semen analysis revealed azoospermia. The analysis of karyotype confirmed Klinefelter syndrome as a cause of primary hypogonadism.
Conclusions: Because of the higher risk of metabolic syndrome in patients with Klinefelter syndrome, doctors should pay particular attention to men with early occurrence of metabolic disorders. Careful taking a medical history and detailed physical examination in search of subtle features of hypogonadism target further diagnostic procedures.

Keywords: metabolic syndrome.hypogonadism.Klinefelter syndrome

SUDDEN INFANT DEATH SYNDROME: KEEPING A CHILD SAFE

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Background: Sudden infant death syndrome (SIDS) is defined asthe sudden, unexpected death of an infant of the age from three weeks to one year which cannot be explained by a throughout postmortem examination. Risks and reasons of SIDS have been studied for decades and nowadays there are more than 50 theories explaining SIDS. Thereby it appea rs to be highly important for doctors dealing with children to be aware of the main theories explaining SIDS and be able to define risk groups and risk factors on time.
Case Report: The aim of the current study was to conduct a systematic review of the papers released during the last five years explaining SIDS and to formulate recommendations in defining risk groups based on these papers. Results: The most common risk factors can be separated as modifiable and non-modifiable ones. The most important modifiable risk factors were connected with infant sleeping environment: sleeping position, softness of sleep surfaces, overheating, bed sharing, mother's drug and alcohol use, smoking. Unmodifiable risk factors which include different functional and genetic abnormalities defining a vulnerable child are also interesting in understanding SIDS pathogenesis. Among them there are arrithmogenic ion channel abnormalities, central neural system receptors (5-HTT, myscarinic and kainate receptors) and immune system defects. These abnormalities were found in up to 90% of children who died from SIDS. Also 70-95% of infants who died from SIDS appeared to have lymphatic diathesis. Besides, infants born prematurely or whose mothers had experienced different pathologic conditions (such as chronic fetus hypoxia) were more likely to die from SIDS.
Conclusions: Prophylaxis of SIDS should be started in pregnant women. The most obvious risk groups are formed by children who were born prematurely, have lymphatic diathesis and immune system abnormalities resulting in hypo- or hyperresponsiveness to respiratory infections, possible EKG changes and whose mother experien ced unhealthy conditions during their pregnancy. Moreover, mothers should be instructed by a pediatrician on how to keep sleep environment safe for children.

Keywords: SIDS, sudden infant death syndrome, pediatric emergency care

'HYBRID DIABETES' AS A DIAGNOSTIC AND THERAPEUTIC CHALLENGE - CASE REPORT.

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Background: Over the past decade the incidence of diabetes that is a mixture of the two types of diabetes - type 1 diabetes (T1D) and type 2 diabetes (T2D) significantly increased. So called diabetes type 1/2 or 'hybrid diabetes' is diagnosed in subjects who are obese and/or with signs of insulin resistance as well as positive for markers of autoimmunity to beta cells.
Case Report: 40-year-old woman was referred to the outpatient diabetes clinic with a diagnosis of impaired glucose tolerance. The woman was little physically active, did not comply with the diet, and smoked cigarettes. Over the past five years she put on weight 25 kg. Paternal grandmother and father suffered from T2D, mother of the woman suffered from celiac disease and Hashimoto's disease. The patient was effectively treated with L-thyroxine due to hypothyroidism in the course of Hashimoto's disease. Physical examination revealed abdominal obesity and normal blood pressure. The patient was diagnosed with insulin resistance (HOMA-IR 6.48) and hypercholesterolemia. HbA1C was slightly elevated. Abdominal ultrasound revealed hepatic steatosis. The both anti-GAD65 and anti-IA2 antibodies were positive. Presence of retinopathy, nephropathy, and neuropathy was excluded. Echocardiogram and ECG stress test showed no abnormalities. Patient was diagnosed with impaired glucose tolerance of diabetes type Â 1/2 . Due to dominant insulin resistance and obesity, features of the metabolic syndrome, no evidence of ketoacidosis, and mild hyperglycemia, metformin therapy was implemented in the target dose of 3x500 mg with good tolerance and good effect in self-control. Additionally, atorvastatin treatment was started. The patient implemented intensive behavioral treatment that resulted in reduction of body weight. Autoreactivity to GAD65 and IA2 declined progressively within subsequent three years.
Conclusions: Under the current classification, it is difficult to define the type of diabetes that might be classified as T2D because of obesity and insulin resistance but also as T1D because of the presence of autoantibodies to beta cells. Overlapping phenotype typical of both T1D and T2D suggests that the current classificat ion of diabetes should be revised to take into account the new form of 'hybrid diabetes'.

Keywords: hybrid diabetes, impaired glucose tolerance, insulin resistance, hypercholesterolemia

HYPERINSULINISM ASSOCIATED WITH MENSTRUAL IRREGULARITY – CASE REPORT

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Background: An impaired glucose metabolism called prediabetes includes: impaired fasting glucose (IFG) and impaired glucose tolerance (IGT). IGT is caused by dysfunction of pancreatic beta-cells. Prediabetes does not give the characteristic symptoms, but highly increases the risk of type 2 diabetes as well as cardiovascular disorders development.
Case Report: An overweight 31-year-old woman (the body mass index 27.78kg/m2) was admitted to an out-patient diabetes clinic due to glucose intolerance diagnosed six months ago - in a two-hour 75-gram oral glucose tolerance test (OGTT 75g) plasma glucose levels were 89mg/dL and 172mg/dL, respectively. For an antecedent year the patient had been diagnosed in an out-patient gynecological clinic due to irregular menstruation (30-73 days circuits, abundant and very painful menses). Gynecologist excluded polycystic ovary syndrome. The patient was planning to become pregnant. Half a year ago gynecologist implemente d treatment with metformin, but the drug was discontinued after a week because of the gastro-intestinal side-effects. The patient was effectively treated with L-thyroxine due to hypothyroidism in the course of Hashimoto's disease diagnosed a few months ago. In the out-patient diabetes clinic OGTT 75g with insulin sensitivity estimation was performed. The results confirmed IGT and revealed normal fasting plasma insulin. Low HOMA-IR (2.0) excluded liver insulin resistance. Interestingly, a high (15-fold) increase in plasma insulin after 120 minutes was documented. Due to significant postprandial hyperinsulinemia, metformin extended-release tablets in the increasing doses were implemented to the treatment with a good tolerance. An intensive behavioral treatment (a weight reduction, diabetic diet, lifestyle regulating and intensified physical effort) was also recommended. Additionally, hypercholesterolemia was diagnosed. Three months later the patient observed a tendency for normalization of the length of her circuits that now did not exceed 40 days. In the control OGTT 75g conducted six months later glucose and insulin postprandial plasma levels were normal.
Conclusions: A relatively common cause of menstrual irregularities is hyperinsulinism that should be treated with metformin. If intolerance of classic form of metformin occurs, an attempt to treat with metformin extended-release tablets in increasing doses should be made in accordance with a rule: 'start low, go slow'.

Keywords: prediabetes, impaired glucose tolerance, menstrual irregularity, metformin, hyperinsulinism

CROUSON SYNDOME – DIFFICULTIES IN SURGICAL TREATMENT BASED ON 3-YEAR-OLD BOY CASE REPORT

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Background: Crouzon syndrome is a genetic disorder characterized by premature fusion of certain skull bones and midface hypoplasia, increasing with patient's age (for example: growing bulging eyeballs and obstructive sleep apnea). Surgical treatment is multidisciplinary. First step is craniotomy in order to reconstruct the posterior and anterior craninal fossa and the cranial vault as well. Subsequently we move on to conduct a reshaping procedure for midface hypoplasia. These are LeFort III, II osteotomy or Monobloc procedure which include also anterior cranial fossa. All operations are properly distributed in time
Case Report: A 3-year-old boy treated for Crouzon Syndrome confirmed by genetic test, FGFR2 mutation, who has diagnostic imagining, electroneurological and clinical – fiberoscopy. Boy was operated twice already. Patient underwent cranial vault reshaping in March, 2014, and cranial vault and fossa reshaping in February 2015. Patient status was described as serious based on polisomonography and VEP where we observed increasing respiratory distress, suggesting the beginning of raised intercranial pressure. MRI showed changed in the brain structure as a result of main defect. Based on the test and a clinical course, patient was classified for the next step of the treatment. He underwent the monoblock procedure, which is osteotomy of anterior cranial fossa with midface massif. 8 days after main surgery patient was reoperated. After operation, patient had acute pulmonary failure following the treatment. Additionally, there appeared: ischemia of both hemispheres of the cerebellum, the entire occipital lobe of the left and extreme right occipital lobe, the parietal lobes. Currently patient is rehabilitated with a good prognosis.
Conclusions: Existing treatment protocol should be modified to suit individual patient's needs. Premature atresia of cranial sutures causes pressure on the brain which may lead to changes in its structure and increased intracranial pressure. Midface hypoplasia may cause the rear eye sockets to be shallow, and sometimes occurrence of respiratory disorders is possible. As the results of anatomical changes organs of sight are vulnerable to complications such as optic nerve atrophy. Genetic nature of the disease and the constant development of the child requires periodic consultation in multidisciplinary center. After each operation specific or nonspecific complications may occur.

Keywords: Crouzon syndrome, genetic disorder, craniosynostosis, monobloc osteotomy

UNUSUAL CASE OF MUCOSAL MELANOMA OF THE PALATE. IS RADIOTHERAPY (RT) ALONE SUFFICIENT APPROACH?

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Background: Melanoma usually occurs on the skin. Primary melanomas located in the oral cavity constitute 0,2-8,0% of all melanomas.
Case Report: A 65-year-old men was reported to the oncology department with the suspicion of palate melanoma made by his derm atologist in the course of psoriasis treatment. Physical examination proved black, painless changes scattered over mucous of the palate durum, palate mole, right cheek and right upper alveolus. Pathological examination revealed mucosal lentiginous melanoma. CT proved a thickening of mucosal membrane in area of palate durum, mainly on the right side. PET-CT showed active process mainly in right palate. Chest X-ray examination revealed no metastases in the lungs. Because of patient's disagreement to major surgical treatment, he underwent radical X 6 MV megavoltage photon beam RT to the tumor area at the dose 50 Gy/20 fr./2,5 GyTwo months after RT, the melanoma disappeared from the right cheek's and alveolus's mucous and was slightly reduced at the palate's periphery. The lesion's extent was similar in 3, 4, 5 months after RT, although intensity of the black color was further decreasing. Melanoma decreased and stabilized after 1,5 year after RT. After 1 year and 7 months - two slightly painful, non-healing ulcers appeared on right alveolus and new intensive black spots were observed on the palate. Two months later a thick tumor was found on the palate, and more black spots developed on the mucous of the cheek and alveolus. Because of a fear the patient refused chemotherapy. The recurrent melanoma progressed slowly, but constantly. About 3 years after RT cessation, the patient reported pain. Chest X-rays revealed a suspicious metastatic lesions in the right lung. Head CT revealed enlargement of mucosa of right alveolus and palate, which exceeding midline, and osteolysis of right alveolus and palate durum. He decided to undergo chemotherapy.
Conclusions: General practitioners, dentists and other doctors should be aware of possibility of melanoma occurrence in the oral cavity to diagnose the disease at an early stage when surgical treatment (most optimal approach) is possible.

Keywords: mucosal, melanoma, radiotherapy

VULVODYNIA - STILL A CHALLENGING DIAGNOSTIC PROBLEM

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Background: Vulvodynia is a chronic condition characterized by pain and burning in the vulva in the absence of infection or other disease. It varies in persistence and location - the pain may be constant or intermittent, localized or diffuse. The prevalence of vulvodynia is estimated for 9% to 12% in the general population, rising to 15% of women seen in private gynaecological outpatient clinics. The diagnosis is clinical, based on detailed medical history, physical examination and exclusion of other factors responsible for vulvar pain such as infections, inflammations, neoplastic or neurological diseases. Vulvodynia may significantly impair patients quality of life in a physiological, psychological and social dimension.
Case Report: A 42-year-old female presented in dermatological outpatient clinic with disseminated chronic vulvar pain of 2 years duration. The patient was otherwise healthy and regularly menstruating. She was previously treated by 3 gynaecologists with topically applied antifungal, antibacterial and glucocorticosteroid creams, as well as oral fluconazole, although gynaecological examination revealed no abnormalities. During a year of unsuccessful treatment microbiological examination of vaginal flora, cervical cytolo gy, intravaginal and transabdominal ultrasound and a biopsy of the vulva were performed. All of the listed excluded any pathology. Considering those results and no skin lesions present at the time of dermatological examination, the patient was diagnosed with generalised unprovoked vulvodynia. The intensity of pain was assessed for 9 in Numeric Rating Scale. The pain severely impaired patient's health-related quality of life measured with the Dermatology Life Quality Index. A treatment with 10 mg amitriptyline was introduced and gradually increased up to 45 mg. Oral treatment was supported with topically applied 2% lignocaine gel. After 10 months an improvement was achieved, with NRS reaching 6. Hence, topical therapy was stopped. Another 3 months of amitriptyline therapy led to complete remission of pain. Afterwards the medication was gradually withdrawn - in the follow-up after 7 months the patient remained asymptomatic.
Conclusions: Vulvodynia is a complex disorder and may have numerous presentations. Since its diagnosis requires exclusion of other abnormalities it becomes fundamental to raise awareness of the disease among clinicians, enabling an early diagnosis and adequate treatment.

Keywords: vulvodynia, diagnosis, treatment, multidisciplinary

PARADOXICAL REACTIONS AFTER A SINGLE USE OF HYPNOTICS – TWO CASES OF AN UNEXPECTED OUTCOME

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Background: Sleep is a fundamental biological need of a human organism. Hence, sleep disturbances affect its proper functioning, impairing quality of life of the patients and therefore constituting a compelling problem in the healthcare system. Insomnia, one of the most common sleep disorders, is a widespread condition that affects as much as one-third of the general population. It is especially prevalent in the elderly. In transient insomnia, pharmacotherapy is often indicated, the most commonly used drugs being benzodiazepines and nonbenzodiazepines (zaleplon, zolpidem, zopiclone). Both being GABAA receptor agonists, they share side effects. One of those, only prevalent in less than 1% of the users, is a paradoxical reaction resulting in anxiety, agitation and disinhibition.
Case Report: This study presents two patients who experienced a paradoxical reaction, both after a single dose of medicine. The first patient, a 34 year old woman ingested 5mg of diazepam at home to facilitate falling asleep, after having undergone a minor surgical procedure that day. An hour later she started behaving aggressively and was agitated, which was reported by her family afterwards. The second patient, a 82 year old female with h istory of hypertension and peptic ulcer disease was prescribed zolpidem by her primary care physician, to whom she complained of difficulties falling asleep. Two hours after ingesting 10mg of zolpidem she was found in the neighborhood of her house, presenting with agitation and confusion. Both patients had no previous history of alcohol abuse, had never taken hypnotics and were never treated for psychiatric or neurological disorders. They had never experienced adverse effects similar to those described. After the incidents both patients maintained good health but were disqualified from further treatment with GABA receptor agonists.
Conclusions: Although agents enhancing the GABA effect are generally well tolerated, unexpected reactions might occur. It is therefore relevant to limit their use to cases of unquestionable indications and in the lowest possible dose. Establishing a sleep hygiene, if needed combined with a cognitive-behavioral therapy, should be the pri mary treatment in transient insomnia.

Keywords: paradoxical, reactions, GABA, agonists, hypnotics

OSTEOPETROSIS – CHALLENGE FOR ORTHOPEDICS AND OTHER MEDICAL FIELDS

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Background: Osteopetrosis is a rare inherited metabolic bone disorder characterised by impaired osteoclasts function. Higher density of bones and higher risk of fractures is observed in those patients. Typical for that disease is also visual and hearing impairment, hepatosplenomegaly and anemia, which might cause additional complications during surgery.
Case Report: Patient is 63 year old woman with huge history of fractures and surgeries, since her childhood. She also presents signs of illness such as anemia, impaired sight and hepatosplenomegaly what may lead to diagnosis – osteopethrosis. In addition to that patient suffers from psychiatric, cardio-vascular and endocrynological disothers which make treatment even more difficult, and make orthopedic management more complex. During period between 2007-2012, 5 orthopedic surgeries were performed including life-thretening such as total hip arthroplasty or open reduction and internal fixation using gamma nail.
Conclusions: Patients with osteopetrosis are fraught with higher risk of fractures and complications after fractures. Comorbidities must be treated with special attention. Particular examination and cooperation between different specialists is essential. Proper and complex management of patients with osteopetrosis could result in satisfactory final treatment effects despite initial complications.

Keywords: Osteopethrosis, Orthopedics, Trauma, Metabolic bone disorder

PARAOSTEOARTHROPATHY – MANAGEMENT WITH LONG TERM RESULTS

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Background: Paraosteoarthropathy is a rare condition in para and tetraplegic patients. In extreme cases it may result in total joint ankylosis. The disease is very disabeling for the patients and moreover significantly reduces tha possibility of ambulation. The etiology of the disease is still unknown. The management is complex and difficult. Radiological and pharmacological methods are often unsufficient and the patient may require surgery.
Case Report: We analysed medical documentation and radiological history of our patient from years 1997– 2016, performend x-ray, physical examination, and collect other information to complete our study. It has been noted that paraosteoarthropathy occurs in tetraplegic patients. Our case seems to confirm that statement. In order to complete ossification removal, the surgery was necessary. At the end good results of treatment have been achieved due to combination of pharmacological, radiological and innovative surgical treatment.
Conclusions: Interdiscyplinary treatment methods are obligatory in cases of paraosteoarthropathy. In advanced changes surgical treatment is a necessity. As the disease is a rare condition, it is difficult to analyse the level of radiological and pharmacological impact on patient's condition. The proper management allows to achieve satisfactory clinical outcomes.

Keywords: Paraosteoarthropathy, Trauma, Orthopedics

PANCREATODUODENAL RESECTION WITH THE MARGINAL RESECTION OF THE PORTAL VEIN

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Background: Cancer of pancreas - is one of the most significant problems of medicine. The proof of this lies in the increase in morbidity and complexity of treatment, it is due to anatomical features, which are predisposed to the initial spread of the process even with amount of tumor.
Case Report: Patient K. entered Grodno Regional Hospital with obstructive jaundice, abdominal pain absent. An examination by ultrasound and MRI of the abdominal cavity was set: 110h38mm gall bladder with stagnant content, thick walls. Common bile duct 20mm, intrahepatic ducts 4mm. V.porta - 9mm. MR - signs of additional tissue formation in the head of the pancreas (PH) (28x20x25 mm). The mobilization of the duodenum by Kocher was made. Gastrocolic ligament was dissected, followed by ligation. The right bend of the colon was mobilized. After the ligation of the branches of the right gastro-omental arteries and veins, the right gastric artery and vein, the resection of gastric antrum using a linear device GIA was carried out. The cholecystectomy with separate ligation of arteries and veins was produced. The common hepatic duct above the confluence of the cystic duct was isolated and cut. Jejunum was cut at a distance of 10 cm from the ligament of Treitz via intestinal suture apparatus. The transection of neck of pancreas above v.porta and v.mesenterica superior was peformed. After the mobilization of PH, the tumor invasion into the portal vein of the right semicircle (volume 3x5mm) was noted. The marginal elliptical resection of the right semicircle of the portal vein was made. Pankreatojejunoanastomosis was formed by double-row suture "end to side" by atraumatic thread, at a distance of 8 cm distal of it was imposed gepatikojejunoanastomosis by single interrupted sutures with an atraumatic thread. Gastroenteroanostomosis was formed by 40 cm distal of gepatikojejunoanostomosis using a linear device GIA 60mm.
Conclusions: This clinical observation indicates the complexity of the surgery for PH cancer. The presented variant of operation extends the treatment of PH cancer with invasion in the mainline vessels, allows to perform radical surgery. There was no complaints at observation period till 1 year are not presented.

Keywords: cancer of the head of the pancreas, portal vein, pancreatoduodenal resection, surgery treatment

ARE THERE ANY USEFUL PREDICTORS OF SURVIVAL IN SEPSIS? - CASE REPORT

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Background: Sepsis being a frequent cause of death on the Intensive Care Units is a serious clinical issue. It's caused by an excessive response to bacterial, fungal or viral infection. Because of its high mortality it is very important to diagnose and to start respective therapy as quickly as possible. Even though diagnosis of sepsis is based on strictly defined clinical and laboratory test criteria, it still causes a lot of difficulties even for experienced doctors. Because of that, there is an ongoing search for a marker that could be helpfull in quick diagnosing and estimating the risk of dying from sepsis. One of most frequently used substances that could accomplish this task is not so flawless procalcitonin.
Case Report: 45 year old patient in serious condition, with multiple organ dysfunction was admitted to intensive care unit. Based on his clinical state and laboratory test results he was diagnosed with septic shock that started because of neck tissue phlegmon. The procalcitonin level on admission was 673,76 ng/ml and it continously decreased through next days. Despite of initial good response to the treatment, septic cardiomiopathy emerged and the hemodynamic parameters started to detoriorate at the third day of the teraphy. Thanks to adjusting catecholamin doses and starting Continuous Veno-Venous Hemodiafiltration patients state was stable. In thirtieth day he was released from intensive care unit in a stable condition.
Conclusions: Such a high procalcitonin value (673,76 ng/ml) is regarded to be a nagative prognostic factor. This study does not agree on this thesis. Instead it agrees that decrease or no increase in procalcitonin level through the first days after admission is a positive predictor of survival.

Keywords: Sepsis, Procalcitonin, Predictor of Survival

AGEING OF A PATIENT WITH BIPOLAR DISORDER – CASE STUDY

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Background: Affective disorders are chronic diseases. In their course stretched over many years the illness overlaps with the ageing process. Morbidity of somatic disorders and other illnesses affecting the functions of the central nervous system increases. This creates a considerable diagnostic and therapeutic challenge.
Case Report: Patient – a female aged 66, educated to a degree level, retired several years ago. Hospitalised in a psychiatric ward because of severely depressed mood with symptoms of high anxiety. She reported sadness, a feeling of helplessness, no interests, anhedonia, loss of body mass (12 kg over one year). She complained of progressing difficulties with memorising and concentration. She claimed that 'her intellect had deteriorated' and denied using psychoactive substances. Medical history revealed that she has been suffering from bipolar affective disorder for over 20 years. Due to pharmacological treatment a remission lasting 15 years was achieved. The patient did not meet the criteria for affective episodes until 2015, when her condition deteriorated. Based on medical history and an examination of the mental state carried out on admission, the following were determined: symptoms of a moderate depressive episode in the course of bipolar affective disorder, suspicion of dementia. On admission the patient stated that for the last 15 years she had been diagnosed with and treated for: hypertension, congestive heart failure, psoriasis and asthma. During her stay at the psychiatric ward pharmacological treatment of mood disorders was intensified and the patient was advised to continue taking the drugs prescribed for somatic illnesses. Routine blood tests carried out in the fourth week of hospitalisation showed a significant elevation of liver enzymes levels. Further diagnostics was performed after a consult of an internal medicine specialist, who based on the results and overall clinical picture, diagnosed toxic drug-induced liver damage.
Conclusions: This case indicates the need for conducting a thorough diagnosis even with 'well known patients'. It also emphasises the need for a multidisciplinary approach to treatment of elderly patients with mental disorders – in this particular case cooperation of 4 specialists was required – to establish the permitted pharmacotherapy, taking into account interactions between all drugs taken by the patient.

Keywords: bipolar, affective, disorder, polypharmacy, toxic, liver, damage

PELVIC CONGESTION SYNDROME DIAGNOSED IN A PATIENT ADMITTED TO THE HOSPITAL WITH CHRONIC PELVIC PAIN – CASE REPORT.

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Background: Pelvic congestion syndrome (PCS) is characterized by abnormalities of ovarian, internal iliac or parametrial veins such as: dilation, varices, valvular insufficiency, obstruction or local inflammatory process. Chronic pelvic pain (CPP) is the typical symptom of PCS. Even though differential diagnosis, including gynaecological, gastrointestinal, urological and neurologic disorders, is crucial in the adequate recognition, PCS is one of the most frequently underdiagnosed or misdiagnosed gynaecological conditions.
Case Report: A 41-year-old woman, gravida 3, para 3, was admitted to the hospital due to aggravation of CPP, which was the only complaint reported. CPP had a duration of approximately one year. The patient was primarily diagnosed with a hydrosalpinx and was awaiting laparoscopic treatment. Transvaginal ultrasound examination with colour Doppler option was performed. The uterus appeared normal except for the presence of multiple tortuous arcuate veins in the myometrium, the ovaries were bilaterally unremarkable, the suspicion of hydrosalpinx was not confirmed. A dilated (up to 10.4 mm) left parametrial venous plexus, which was probably mistakenly interpreted as a hydrosalpinx, was also seen. Additionally, slow and retrograde blood flow was noted in the dilated plexus. Basing on the ultrasound examination, the recognition of PCS was made. The patient was qualified for phlebography of the left ovarian vein, which confirmed the diagnosis by visualizing reflux in the abnormal left ovarian vein and left parametrial venous plexus. The abnormal veins were occluded with the use of detachable coils and aethoxysclerol. Immediately after the procedure and at 3 months follow-up the patient did not report any pain.
Conclusions: As shown above PCS is an often overlooked condition, that can mimic other gynaecological diseases. Therefore transvaginal ultrasound is the first line imaging modality to confirm the suspicion of PCS. Dilated pelvic veins > 6mm, reversed blood flow in the pelvic veins, polycystic changes in the ovaries and dilated veins in the myometrium are diagnostic criteria for PCS. In this particular case, despite the fact that 3 out of 4 diagnostic criteria for PCS were met, the initial outpatient diagnosis was false. The diagnosis of PCS is challenging and should not be omitted in the diagnostic investigation of CPP.

Keywords: PCS.Pelvic congestion syndrome. Chronic pelvic pain.

BIPOLAR DISORDER: DIAGNOSTIC AND THERAPEUTIC DIFFICULTIES

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Background: Bipolar disorders (BD) are frequent, severe and often chronic mental illnesses. Long-term pharmacological treatment consists of mood stabilizers including lithium, several antiepileptic drugs and neuroleptics.
Case Report: Patient - a 48 year old male, had his first psychiatric consultation in 2000, after being informed about a serious genetic disorder of his first child. He was diagnosed with an acute stress reaction and prescribed with antidepressants. Due to persistence of depressed mood and decreased activity the diagnosis was changed to adjustment disorder and then depressive episode. Untill 2006 he was repeatedly consulted due to recurrences of depression, diagnosed with major depressive disorder and prescribed with several antidepressant drugs. He also experienced several short episodes of elated mood and increased activity but did not regard them as pathological states. In 2006 the patient experienced a severe manic episode. His diagnosis was therefore converted into bipolar disorder and therapy with a mood stabilizer (valproate) was introduced. In the subsequent years the patient switched between manic and depressive states despite a combined treatment of valproate and other mood stabilizers (carbamazepine or aripiprazole or quetiapine). In 2014 while in depression, the patient attempted suicide by hanging, was hospitalized and developed mania during hospitalization. In July 2015 he developed severe depression and due to its treatment resistance he was referred to the Department of Adult Psychiatry in Poznan in May 2016, where lithium carbonate was added to his treatment regimen as an augmentation strategy. Lithium introduction was associated with a rapid response (50% reduction of the score of Hamilton Depression Rating Scale within the first week), followed by a full remission several weeks later. Since discharge the patient has been in remission of affective symptoms and continued lithium therapy with lithium serum-level monitoring on the ambulatory basis.
Conclusions: The diagnosis of bipolar patients remains a challenge. A significant delay in providing proper diagnosis and treatment is common; reaching the diagnosis usually takes approximately 8 years. In the presented case the diagnosis was difficult since at the beginning depressive symptoms constituted a predominant affective presentation of the illness.

Keywords: bipolar, disorder, differential, diagnosis, augmentation, treatment

ENDARTERECTOMY IN LOCAL ANAESTHESIA – CASE REPORT

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Background: Atherosclerosis is a widespread, chronic progressive disease that mainly involves medium-sized arteries. The risk factors are the same for all affected vascular beds, regardless of location, and can be classified as either causal, conditional or predisposing. The presence of atherosclerosis in a particular vascular bed is frequently associated with disease in other vascular territories. For example stenosis of internal carotid arteries are caused by a buildup of plaque inside the artery wall. Surgical treatment is generally recommended for patients who have suffered one or more TIAs or strokes and who have a moderate to high grade of carotid stenosis.
Case Report: We present a case of a 53-year-old female patient who developed a stroke few months ago. In control head CT small focal loss of tissue was observed. The range of encephalomalacia didn't exceed one-third blood supply of the middle cerebral artery. Hemodynamically relevant stenosis was detected in color Doppler sonography. Qualification for surgical procedure was made based on the results of CT and US as well as neurological examination. In our department we perform carotid endarterectomy under the local anaesthesia. During the surgery we are able to perform clumping test. A haemostatic clamp was put to check cerebral circulation. Immediately our patient has lost consciousness. That information is crucial for the operator because putting an intraluminal shunt and removal of the plaque (which takes 15-20 min) could be dangerous for patient`s health and life when the blood flow is insufficient. Because patients response for clamping was so fast we decided to resign from the surgical approach and change it for intravascular.
Conclusions: Based on that example we can assess that local anaesthesia is a safer method than the general anaesthesia. Avoidance of perioperative strokes might be easier to predict under local anaesthesia. In our department the well-being of the patient is our priority.

Keywords: endarterectomy, TIA, stroke, local enaesthesia

ABDOMINAL AORTIC ANEURYSM – CASE REPORT

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Background: Abdominal aortic aneurysm (AAA), which is a focal dilation 50 percent greater than the normal diameter of the aorta, is a common but potentially lethal condition. The abdominal aorta is the most common site of true arterial aneurysm affecting predominantly the segment of aorta below the renal arteries (intrarenal aorta). Well-defined risk factors are associated with the development of AAA and include older age, male gender, Caucasian race, a positive family history, smoking, the presence of other large vessel aneurysms and atherosclerosis.
Case Report: We present a case of a 69-year-old male patient who visited GP because of abdominal pain located on the right-lower side. An ultrasound of abdomen was made. US showed enlargement of aorta – approximately 10 cm. After that, patient was transported to a hospital with angiology department. Later an abdominal angio CT was made. CT revealed massive AAA extending from the level of renal arteries till common iliac arteries -14cm wide, atherosclerotic plaque in aortic wall and large, round thrombus. Due to CT images acute angiological procedure has been maintained. 2 days after the procedure the patient was paraplegic. Subarchnoidal drainage was performed to prevent other neurological damages. The drain tube was removed after 48h. Although highly unlikely the paralysis regressed after this procedure. Neurologist appraised that the paralysis was at the level of Th8 which could suggest the obstruction of the artery of Adamkiewicz. Control examination hasn't showed that this artery was closed. After 6 weeks of rehabilitation patient started to walk again.
Conclusions: Endovascular procedures, like exclusion of the aneurysm from circulation, allow to diminish the risk of vascular surgeries, which is of great importance especially in difficult cases like the presented one. Futhermore this case may prove the necessity of screen tests for abdominal abnormalities, for e.g. US, that is a simple, cheap and – above all – available examination.

Keywords: aneurysm, aorta, EVAR,

MASSIVE TUMOUR WITH MINOR SYMPTOMS – FRONTAL LOBE OLIGODENDROGLIOMA WITHOUT FRONTAL LOBE DISORDER. A CASE REPORT

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Background: Oligodendrogliomas are one of the most common brain tumours. In majority of cases they are located supratentorial, usually in frontal lobe and involve the cortex. Seizures are the presenting symptom in fifty to eighty percent of cases. Depending on the location of the tumour, any neurological deficit can be induced. Involvement of the frontal lobe often leads to three main categories of symptoms: cognitive, behavioural and emotional. Those symptoms tend to occur together leading to the diagnosis of frontal lobe disorder.
Case Report: A 45-year-old female transferred to the Neurosurgery and Neurotraumatology Department after an episode of nausea and vomiting. She complained of an intermittent headache for 3 weeks prior to admission. CT and MRI scans showed a large tumour involving nearly entire right frontal lobe. Neurological examination on admission revealed drowsiness and slight psychomotor retardation. The patient with adequate verbal response was auto- and allopsychic oriented, without any signs of focal neurological deficits. There was a history of depression but no behavioural changes. The patient was qualified to surgery due to the symptoms associated with increased intracranial pressure. A right frontal craniotomy was performed and the tumour was removed. Detailed neuropsychological assessments were administered before and after the surgery to assess any possible behavioural manifestation. Before the surgery Mini–Mental State Examination score was 28, Luria's learning curve shoved no difficulties with gaining information and Trail Making Test showed slight difficulties with impulses control.The patient was successfully treated without deterioration of condition or any complications.
Conclusions: It is highly unlikely for massive tumours in the frontal lobe to not cause various neurobehavioral deficits such as cognitive changes and mood disturbances, visual loss, motor weakness or particularly - seizures. Nevertheless, it is possible to remain asymptomatic despite the involvement and resection of the majority of the frontal lobe. Subtle symptoms associated with emotions, memory or language skills might be accidentally overlooked without meticulous neuropsychological examination.

Keywords: frontal lobe, oligodendroglioma,frontal lobe disorder

PLACENTA INCRETA PRAEVIA- CASE REPORT.

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Background: Placenta increta arises due to pathological implantation of villi into the myometrium. This is a serious, life-threatening complication and requires multidisciplinary treatment. Cases of placenta increta appear averagely in 1 of 9 pregnancies and this number will increase because more caesarean sections are performed. The risk is greater with the presence of scars after caesarean sections and surgeries on the myometrium.
Case Report: A 27-year-old female patient in the 30th week of pregnancy was diagnosed with placenta praevia and was suspected placenta increta. The ultrasonography did not reveal uterine wall between the bearing and the wall of the bladder. It was only visible in the upper pole of the bearing. The pregnant was given betamethasone to accelerate fetal lung maturation. In the 31st week of pregnancy caesarean section was performed, preceded by cystoscopy that had shown no ingrown villi to the inner wall of the bladder. The patient also underwent puerperal hysterectomy, during which the right uteter was damaged and was immediately obtained. On the 12th day after the surgery, the maternal was discharged home in general condition good.
Conclusions: Early detection of placental pathology reduces the occurrence of complications such as life-threatening perinatal hemorrhage.

Keywords: placenta increta, puerperal hysterectomy, placenta praevia

PAROTID GLAND'S CHOLESTEATOMA – REVIEW AND REPORT OF AN UNUSUAL CASE.

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Background: Cholesteatoma is a non-neoplastic, keratinizing lesion, characterized by the proliferation of epithelium into the middle ear or mastoid cavity. The exact pathogenic molecular mechanisms behind the formation and propagation of cholesteatoma remain unclear. Without timely detection and intervention, cholesteatomas can result in numerous intracranial and extracranial complications. We report an extremely rare case of parotid gland's cholesteatoma in 23 years old male patient. The parotid gland's cholesteatoma is an uncommon entity. It has been mentioned in the literature, but never discussed as a main subject of a study.
Case Report: In 2006 the patient was diagnosed with chronic suppurative otitis media and right ear conductive hearing loss of 55 dB. Consequently, the middle ear cholesteatoma was observed, which was operated on and the tympanic cavity was radically cleared. In 2009 and 2012 recurrent cholesteatomas were diagnosed and radically operated on. In March 2016 a control MRI incidentally revealed an hyperintensive tumor in the right parotid gland. It has become painful since July 2016. Since September 2016 patient presented with dropping of the mouth corner on the side of the tumor . In October 2016 pre-operative examination of ear showed a dry and clear of cholesteatoma postoperative tympanic cavity. While operated the cholesteatoma-like tumor expanding from the styloidmastoid foramen was excised. It lay on facial nerve trunk, in between superficial and deep lobes of parotid gland. Histologic examination confirmed cholesteatoma. In tympanoscopy the tympanic cavity was clear of cholesteatoma.
Conclusions: Although parotid glands cholesteatoma is rare, we should keep in mind the possibility of its presence. The earlier it is discovered, the easier it is to perform surgical removal and to lower the chance of facial nerve involvement. This case was unusual as the disease had extended beyond the ear and we therefore wish to alert clinicians to cholesteatoma as a possible cause of facial nerve palsy or parotid gland's tumors. Also, searching for predictors of aggressiveness might give help to determine the proper timing of intervention and prevent occurrence of complications.

Keywords: Parotid gland's cholesteatoma, tumor

66- YEAR-OLD PATIENT WITH GRAVES' DISEASE- TREATED WITH FOUR DOSES OF RADIOIODINE (I-131)- CASE REPORT.

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Background: Graves' disease is the most common reason (50 to 60%) of clinically active hyperthyroidism. Its' prevalence is estimated at about 0.5% of the general world population. It affects women more often than men, usually between the age of 40 to 60. The exact cause of the disease is not established, but it is thought to be the participation of autoimmune processes, environmental and genetic factors. Most favor theory of pathogenesis is called: "Antigenic mimicry theory", according to which cross-reacting antibodies, arising from bacterial or viral infection, accede TSH receptor. It leads to trigger processed, leading to constant stimulation of the thyroid gland, increasing level of thyroid hormones in peripheral blood and finally to symptoms of hyperthyroidism. The influence of the gene HLA-DR3 on the incidence of Graves' disease has been proved. There are several known methods for treating Graves' disease e.g. pharmacological treatment surgical procedures, treatment of radioiodine (I-131).
Case Report: We present a case of 66-year old patient treated pharmacologically (thiamazole) due to hyperthyroidism caused by Graves' disease. Initially, the volume of patient's thyroid gland, confirmed by ultrasound examination, was 66 milliliters (as the norm for age and sex N = 18 milliliters). Despite the lack of effect of three successive trials of treatment with radioiodine (I-131), it was decided that the patient would receive the fourth dose. This brought the desired effect: the thyroid volume reduced to 18 milliliters and the symptoms of hyperthyroidism disappeared.
Conclusions: The radioiodine therapy (I-131) of Graves' disease hyperthyroidism is one of the methods (in addition to pharmacological and surgical) of treatment of the glide. This is the first choice method in the case of contraindications for surgery and relapse after prior remission. Radioiodine therapy (I-131) leads to a relatively rapid normalization of thyroid hormones level and a reduction in the volume of the thyroid gland.

Keywords: Graves' disease, radioiodine therapy (I-131), thyroid gland surgery, hyperthyroidism

A 2-YEAR-OLD GIRL WITH RECCURENT FEVER– A FEW WORDS ABOUT PFAPA SYNDROME

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Background: Periodic fever, aphthous stomatitis, pharyngitis, cervical adenopathy(PFAPA) is the most common periodic fever syndrome in our geographical area. Most cases occur in children under 5 years of age. PFAPA is one of the autoinflammatory diseases. The causes and risk factors are still unknown. PFAPA is characterized by high fever episodes (>39oC), which occur periodically at intervals of about 25 to 35 days and last 3 to 6 days, accompanied by aphthous stomatitis, pharyngitis and cervical adenopathy. Children do not show any signs of sickness in between episodes. PFAPA syndrome typically subsides spontaneously by age 10.
Case Report: A 2-year-old girl was admitted to the Department of Pediatric Pulmonology and Rheumatology in Lublin due to recurrent fever. The first episode of fever occurred at the age of 11 months. Since that time, during 8 months she had regularly fever lasting 3 days, every 2 weeks. Then febrile episodes occurred every 21-25 days and lasted 4-5 days. During the periods of fever levels of acute phase reactants were elevated. Except of fever, stomatitis, pharyngitis, and cervical lymphadenopathy were observed in different configurations. Between attacks, the child's condition was good and acute phase reactants normalised. The bacteriological, virological and immunological tests excluded other diseases with similar symptoms. She was diagnosed with PFAPA syndrome during the hospitalization associated with the next episode of fever. On physical examination enlargement of the upper jugular and submandibular lymph nodes on the left side and several erosions in oral cavity were found. Additional laboratory tests showed elevated levels of acute phase reactants (WBC-13 700 /mcL; OB-63mm/hr; CRP-15,8 mg/dL). The girl received an initial dose of prednisone (1mg/kg daily) and on the next day she recovered from the fever. Elevated acute phase reactants returned to normal. The patient remains under the care of Outpatient Rheumatology Clinic.
Conclusions: Periodic fever syndromes are still difficult diagnostic problem in children. In the case of exclusion of more common causes, one should consider the occurrence of periodic fever syndrome, especially PFAPA syndrome as the most frequent of them. The diagnosis of PFAPA prevents unnecessary use of antibiotics and other experimental therapies.

Keywords: PFAPA syndrome, periodic fever, pharyngitis, cervical adenopathy

MICTURITION DISORDERS AS THE FIRST SYMPTOM OF MULTIPLE PITUITARY HORMONE DEFICIENCY CAUSED BY CRANIOPHARYNGIOMA - CASE REPORT.

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Background: Polyuria among children frequently manifests as nocturnal enuresis and leads to severe water and sodium imbalance due to urine excrection in excess of 1400ml/m2/24 hours. One of the most common causes of polyuria is central diabetes insipidus which is a condition that results from insufficient production of the antidiuretic hormone (ADH). Central diabetes insipidus may occur as a result of head injuries, genetic disorders, tumors or other lesions. One of them is craniopharyngioma - bening tumor which represents 5-10% of childhood brain tumors. It may cause delayed development, obesity, impaired vision and increased intracranial pressure which can demonstrate as papilloedema. We present a case report in which the only symptom of craniopharyngioma was polyuria.
Case Report: A 3-years-old boy with micturition disorders was admitted to the Department of Pediatrics Nephrology, University Children's Hospital in Bialystok. His main presenting complaints were polyuria, pollakiuria, polidypsia and nocturnal enuresis. This symptoms occurred 2 months ago and intensified gradually. Laboratory tests revealed abnormal balance of fluid intake(2-3 l/d), hypostenuria(< 1,005), low urine osmolality after night (100mOsm/kgH20) and plasma osmolality (296 mOsm/kgH20) normal range. The serum glucose and electrolytes concentration were normal. Water deprivation test indicated impaired urine concentration ability. Subsequently after intranasal administration of 10µg ADH, urine osmolality exceed 50% of the output values suggesting central diabetes insipidus. Hormonal balance tests presented low level of free T4, ACTH and cortisol at 8 am. TSH and PRL levels were normal. Based on results of diagnostic tests multiple pituitary hormone deficiency was diagnosed. Pituitary-Targeted MRI disclosed spindle-change lesion (13,4x23mm) in suprasellar and sellar region, most likely representing craniopharyngioma. The treatment involved resection of tumor in Department of Neurosurgery in Children's Memorial Health Institute in Warsaw and supplementation of hormone deficiency.
Conclusions: Multiple pituitary hormone deficiency is a frequent manifestation of brain tumors. This case shows that simultaneous shortage of many hormones may mask common clinical symptoms of underlying disease. As a result, micturition disorders might be the first and only patient’s complaint that finally leads to the proper diagnosis. It strongly indicates that micturition disorders rank among conditions demanding inordinately detailed and careful diagnostic process.

Keywords: craniopharyngioma.polyuria.diabetes.insipidus.

TREATMENT OF PFEIFFER SYNDROME TYPE 2 - CASE REPORT

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Background: Pfeiffer syndrome type 2 is an extremely rare genetic disorder. Its most characteristic feature is a clover-leaf skull craniosynostosis leading to neurological deficits. Because of its rarity there are no strict treatment guidelines. The aim of this study was to present a case report of a patient with this syndrome and a suggestion of a management protocol.
Case Report: A child was delivered at 36 weeks with no prenatal suspicion of skull or central nervous system pathology. It was born with clover-leaf skull without any sings of increased intracranial pressure or nervous system damage. A neuropsychological evaluation revealed adequate development with no cognitive deficits. Genetic testing confirmed the diagnosis of Pfeiffer syndrome - mutation of fibroblast growth factor receptor (FGFR). At the age of 6 months the child was operated on. Having exposed the anterior part of the skull a cranioplasty was performed. During the surgery bone fragments, pressing on the superior sagittal sinus and deeply dividing both frontal lobes, were removed. The combined length of the bone cut was 100cm. After the surgery the child was evaluated neuropsychologically and the results of the surgery were controlled with a CT-scan. At the age of 9 months the child required a ventriculoperitoneal shunt due to a broadening of the ventricular system manifested by a slight developmental delay. Currently the patient's neurological status and intellectual development are normal.
Conclusions: Cranioplasty is an essential part of treatment for patients with Pfeiffer syndrome type 2. It is believed, that a surgery performed during the patient's first 12 months of life significantly decreases the risk of intellectual disability. To our knowledge this is the second in the world case of normal development of a child with Pfeiffer syndrome type 2 after a successful cranioplasty.

Keywords: Pfeiffer syndrome, cranioplasty, craniosynostosis

PERICARDIAL EFFUSION DUE TO PACEMAKER IMPLANTATION IN PATIENT WITH THIRD DEGREE ATRIO-VENTRICULAR BLOCK-CASE REPORT.

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Background: Permanent cardiac pacing is the treatment of choice in third degree atrio-ventricular block. This is the only treatment, which reduces mortality in patients with advanced A-V conduction disturbances. The treatment is relatively safe. One of rare complications of pacemaker implantation is myocardial wall perforation by endocardial electrode.
Case Report: A 59-year old patient was admitted on 23rd October 2016 to the Department of Cardiology in order to perform control coronary angiography after percutaneous coronary intervention with antiproliferative stent implantation in May 2016. Patient had DDD pacemaker implanted due to third degree A-V block in May 2016. Routine echocardiography revealed the presence of large pericardial effusion to 3,4 cm. Patient did not complain of any symptoms typical of cardiac tamponade/effusion such as dyspnoea, reduced exercise tolerance, fainting. Pericardiocentesis and pericardial drainage was performed. About 1690 ml of hemorrhagic fluid was evacuated. Chest computed tomography revealed unusual location of both ventricular and atrial leads, which perforated the myocardium. Patient underwent ventricular lead replacement and atrial lead reposition on 2nd November 2016. Pacemaker remained the same.
Conclusions: Cardiac tamponade resulting from perforation of the myocardium by endocardial leads should be regarded as a rare complication of permanent cardiac pacing. Despite the perforation of the myocardium clinical signs can be very scarce or not occur at all. This can lead to life threatening condition. Regular cardiological check-ups including pacemaker evaluation are therefore crucial in patient management.

Keywords: pericardial effusion, myocardial perforation , cardiac tamponade, pacemaker

HYPERTENSION AND HYPOTHYROIDISM AS A RISK FACTOR OF PREMATURE DELIVERY- CASE REPORT.

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Background: Hypertension is a common problem among pregnant women. It affects about 6-8% of pregnancies. It may be a cause of many complications: placental abruption, intrauterine hypoxia or even intrauterine fetal death. Owning to this fact pregnancy complicated by hypertension is high- risk pregnancy and in many cases it is necessary to terminate it before the expected date of giving birth. Another risk factor of premature delivery may be untreated or improperly treated hypothyroidism. Hypothyroidism during pregnancy may lead to neuropsychological disorders, lower IQ and future difficulties in studying.
Case Report: 2-months old boy born at 31 week of pregnancy was admitted to the Department of Pediatric Cardiology, University Children's Hospital in Lublin due to the murmur over the entire heart. The pregnancy was complicated by hypertension and hypothyroidism. The infant was born with the characteristics of intrauterine growth restriction, respiratory distress syndrome and congenital pneumonia. In physical examination skin pallor, systolic murmur, hydrocele of the right and the left testicles were found. Laboratory tests have shown anemia. During hospitalization, the infant has had a rotavirus infection of the urinary system. In echocardiography atrial septal defect type ASD II was found. The boy was treated with Verospiron. The Holter monitor has shown a few seconds episodes of bradycardia which often accompanied apnoeas and occurred while feeding the baby and during sleep. The child was treated with a caffeine drugs because of the immaturity of the respiratory system. After the ophthalmology consultation not fully mature retina was diagnosed. During the last few days of hospitalization cardiology monitoring has not recorded any abnormalities. The infant was discharged in good condition with a recommendation for monitoring apnea at home, cardiological, neurological and ophthalmological consultations.
Conclusions: Hypertension and hypothyroidism during pregnancy can lead to complications in the developing fetus. Early detection and appropriate treatment of these conditions in pregnant women is essential. Therefore preventive control of blood pressure and THS level and treatment of potential diseases is essential so as not to lead to mentioned complications in fetus.

Keywords: hypertension, hypothyroidism, high- risk pregnancy

CONGENITAL HEART DEFECT IN INFANT IN HIGH-RISK PREGNANCY COMPLICATED BY GESTATIONAL DIABETES.

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Background: Heart defects are the most common congenital anomalies in infants (circa 8-9/1000 new- born children). It may be caused by multiple factors: genetic, environmental, mother's diseases for example gestational diabetes, infections (TORCH syndrome), chemical substances (alcohol, anti epilepsy drugs, hormones, anticoagulants and more). Some genetic disorders (for example Down syndrome, Turner's syndrome) may also predispose to occurrence of heart defects.
Case Report: The boy, mother's third pregnancy and third delivery complicated by insulin-dependent diabetes mellitus and infection of the vagina, born by Caesarean section at 36/37 weeks of pregnancy in good general condition with body mass 3460 g. Two weeks after delivery hospitalized in the Department of Pediatric Cardiology in University Children's Hospital in Lublin due to persistent fetal circulation and the characteristics of hypertrophic cardiomyopathy followed by diabetes in pregnancy. From seventh to tenth week of age hospitalized in order to evaluate the circulatory system. In the physical examination: head asymmetry- occipital flattening, hypertelorism, periodic convergent squint, absence of left testicle in the scrotum. The ECHO showed left-to-right shunt through the ductus arteriosus which diameter was about 3,6 mm and hemodynamically insignificant shunt of the blood through the ventricular septal defect. Normalization of muscle of the left ventricle with normal systolic function was indicated. USG showed left testicle located in the left inguinal canal and hydrocele testis.
Conclusions: Many factors can lead to congenital heart defects, therefore preventive cardiological inspection should be done in each new born from high- risk pregnancy. Infants which mothers suffered from diabetes during pregnancy present more frequently heart and cardiovascular system defects. The cause of cardiac hypertrophy is related to foetus hyperinsulinemia and increased number of insulin receptors in the cells of the foetal heart. This leads to increased protein, glycogen and fats synthesis, which gives the image of cells hyperplasia and hypertrophy. This process in most cases is fully reversible, however in sophisticated cases hypertrophic cardiomyopathy may lead to congestive heart failure.

Keywords: high- risk pregnancy, gestational diabetes, congenital heart defects

ROLE OF GLUCOSE-FRUCTOSE SYRUP IN DEVELOPMENT OF METABOLIC SYNDROME AND NAFLD IN 12 YEARS OLD PATIENT - CASE REPORT.

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Background: Obesity has become one of the biggest public health issues in child and youth populations. Approximately one fifth of children and adolescents are overweight or obese in Poland today. For many years metabolic syndrome (MS) has been considered a disease primarily found in adults. In 2007 The International Diabetes Federation (IDF) issued a unifying definition of MS in children and adolescents. Recent studies suggest that glucose-fructose syrup ingestion, primarily in the form of soft-drinks, is linked to weight gain and the rise in obesity in children and adolescents and plays an important role in the pathogenesis of non alcoholic steatohepatitis.
Case Report: We present the case of a 12 years old girl patient who was admitted to the Pediatric Endocrinology, Diabetes and Obesity Unit with a history of dyslipidemia, obesity, insulin resistance. Additional workup revealed diabetes insipidus and advanced steatohepatitis. An MRI scan revealed agenesis of the posterior pituitary lobe. Due to polydipsia the patient consumed several liters of juice containing glucose-fructose syrup which led to the development of metabolic syndrome. One glass (250-300 ml) of juice contains the daily recommended intake of simple sugars. The patient's excessive consumption of glucose-fructose syrup is also thought to have induced non alcoholic fatty liver disease.
Conclusions: The concept that excessive consumption of fructose may promote progression of NAFLD is biologically plausible given experimental evidence that glucose-fructose increases ER stress, promotes activation of the stress-related kinase, Jun N-terminal Kinase (JNK), induces mitochondrial dysfunction, and increases apoptotic activity in liver cells. However, large prospective studies that evaluated the relationship between fructose and NAFLD were not yet performed. Obesity rates for children remain a growing concern. Whether it is fructose, glucose, sucrose or glucose-fructose syrup, the average person consumes sugar at least once a day which was not the case 50 years ago. This is an important issue for parents to read the labels, be aware of the products that might contain glucose-fructose syrup, and avoid them in their family diet.

Keywords: glucose-fructose syrup, obesity, metabolic syndrome, NAFLD, non alcoholic steatohepatitis

DEFFERED GONADECTEMY IN A PATIENT WITH PRIMARY AMENORRHEA – A CASE REPORT

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Background: Primary amenorrhea may be a concerning symptom in females over 16 years old. The differential diagnostic of the disorder should include: primary ovarian insufficiency, MRKH syndrome, pituitary or thyroid dysfunction or disorders of sexual development. Final diagnosis and therapy depend on the karyotype. In women with 46, XY dysgenetic gonads may occur. The prevalence of gonads' neoplams reaches 25-35% in the population.
Case Report: 19 - year old female patient presented to the Department of Gynecological Endocrinology (2011) with primary amenorrhea. Physical examination showed: slim body, lack of breast development and low timbre of the voice. The gynecological examination revealed: clitoromegaly, 1 cm of vagina and no uterus. She had increased level of testosterone and FSH in the blood and diminished concentration of oestradiols. The result of karyotype was 46XY. The patient suspected of Partial Androgen Insensitivity Syndrome was admitted to laparoscopy (2012), which stated: lack of uterus and right vestigial appendages. The recent were removed. MRI and CT visualised a formation in the left inguinal canal, what could suggest a presence of the gonad there. In 2014 patient had an emergency surgery of incarcerated inguinal hernia on the left side. The hernia was reduced, but the gonadal tissue after consultation with the gynecologist was sutured. In 2015 after observation in the Department of Gynecological Endocrinology, patient was reffered to repair surgery. During laparotomy m. Pfannenstiel, fragments of the vestigial uterus were excised, left inguinal canal was drained and gonads were removed. The recent were diagnosed as atrophic testes with seminoma by histopathological examination. Currently, the patient is under oncological and psychological care and expected to the reconstruction of the breast.
Conclusions: Disorders of sexual development are the risk factor for developing tumors of the germ cells. Therefore, in order to avoid malignancy, females with chromosome Y are higly recommended to undergo preventive gonadectemy. Beside that, people with that condition should be supported psychologically.

Keywords: Partial Androgen Insensitivity Syndrome, primary amenorrhea, gonadectomy, seminoma

ENDOMETRIAL CARCINOMA IN YOUNG WOMAN WITH PCOS- A CASE REPORT

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Background: Polycystic ovary syndrome (PCOS) is the most common reproductive endocrinopathy. There is increasing evidence that the endocrinologic and metabolic abnormalities in PCOS have effects as infertility and endometrial disorders. It has been reported that 60%–70% of endometrial adenocarcinomas in young women are associated with PCOS. The remaining 30%–40% of cases are estrogen independent. For patients diagnosed with endometrial carcinoma the recommended treatment is hysterectomy and bilateral salphingoophorectomy, which may be unacceptable to young women.
Case Report: A 28-year-old female was admitted to endocrinological gynecology department in Mar 2010 for observation and diagnosis of the menstrual disorders. Patient has been trying to conceive for twelve months. She also complaint about hypertrichosis, seborrhea and menorrhagia. Physical examination In laboratory test androgens, progesterone were found increased. Abnormalities in USG of ovaries presented characteristic image of polycystic ovary syndrome. Polypoid endometrial scratch revealed complex adenomatous hyperplasia with cellular atypia, and squamous metaplasia. Histopathologicaly, she was consulted in Aug 2010 in oncology institute, with diagnosis of endometrial adenocarcinoma G1 and G2 with complex endometrial hyperplasia with atypia. Patient refused hysterectomy, desiring further fertility, and has undergone hormone therapy with megesterol acetace in total for 17 months. Control abrasions did not indicate signs of hyperplasia. In Nov 2012 patient was admitted in emergency to local hospital with suspicion of spontaneous miscarriage. Laboratory tests showed elevated level of ?- HCG. Finally, in Nov 2013 with a diagnosis of progression of endometrial adenocarcinoma, female underwent hysterectomy without salphingoophorectomy.
Conclusions: Total abdominal hysterectomy and bilateral salpingoopherectomy is the most common therapy in patients with endometrial carcinoma. Referring to the case presented above , there is a need for the development of new medical therapies that can reduce the need for surgical intervention so as to preserve the fertility of young women, who refuse the invasive surgery.

Keywords: endometrial carcinoma, PCOS,

A MYSTERIOUS TUMOR IN THE OBTURATOR INTERNUS MUSCLE - A CASE REPORT

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Background: Chondrosarcoma is a malignant tumor composed of cells which produce cartilage matrix. The tumor may arise de novo (primary chondrosarcoma) or develop from preexisting benign conditions like osteochondroma or enchodroma. Chondrosarcoma of the bone is the third most common primary malignancy of bone. Clinical presentation of both mesenchymal and myxoid variants is nonspecific. Typically there is a slow-growing and painless mass. Due to its mentioned features diagnosis and treatment may be delayed.
Case Report: A 33-year-old male was admitted to Nuclear Medicine Department, with suspected femoral head necrosis. His chief complaint was pain located in left inguinal region exacerbating during walking. He was forced to use a crutch. Three-phase bone scan was performed according to the standard protocol used in our department. 99mTc-labelled methylene diphosphonate (MDP) was used, administered activity was 740 MBq. The first, the second and the third scan phases revealed respectively: an area of hyperperfusion located medially to the left iliac blood vessels, radiotracer concentration in the same location as previous indicating significant hyperemia, very high tracer accumulation medially to the left hip joint. Due to this unusual finding which did not correspond to bones SPECT/CT scan was ordered.
Conclusions: Chondrosarcomas are malignant cartilaginous tumours that account for ~25% of all primary malignant bone tumours. Patients usually present with pain, pathological fracture, a palpable lump or local mass effect. Up to 100% of mesenchymal chondrosarcomas present calcification in classical radiography, CT and histopatological examination. The PET scans vary significantly, may show both high glucose metabolism and no abnormal uptake. This is useful in helping to distinguish and accelerates performing treatment in such case.

Keywords: mesenchymal chondrosarcoma, myxoid chondrosarcoma, PET/CT

UNUSUAL METASTASIS OF CLEAR CELL RENAL CARCINOMA: MAXILLARY SINUS

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Background: Distant metastases from malignant tumors to head and neck region are relatively uncommon. Majority of them are localized within the lymph nodes. The metastases to nasal cavity and paranasal sinuses are extremely rare. Among sinuses the most common localization is maxillary sinus (33%).
Case Report: The authors present a case of 78 years old male patient referred to ENT outpatient clinic with suspection of chronic sinusitis. The patient complained about pain and discomfort in projection of left maxillary sinus and recurrent pyogenic rhinitis. The patient underwent right nephrectomy with radical oncological treatment of clear cell renal carcinoma 8 years ago without any feature of recurrence till now. After CT examination mucocele of maxillary sinus was suspected, which should be differentiated with tumor-type lesion with bone destruction. Afterwards patient was qualified to surgical biopsy under general anesthesia. During the procedure a massive bleeding from the tumor appeared. Due to inability to obtain local hemostasis a decision to excise whole lesion was made. Histopathologial investigation confirmed metastases from clear cell renal carcinoma.
Conclusions: Primary tumors of paranasal sinuses are very rare, but distant metastases to nasal cavity and sinuses are real casuistic. According to literature they come from kidneys – the most frequent, followed by prostate and breast cancer. The autors emphasise that those metastases can appear even a long time after primary tumor treatment.

Keywords: distant metastasis, maxillary sinus, clear cell renal carcinoma

SHOULD INFANTILE DIGITAL FIBROMATOSIS BE OPERATED?

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Background: Infantile digital fibromatosis is a benign tumour, caused by the proliferation of the fibrous tissue. The nodule is mostly placed on the dorsal and lateral side of the fingers and the toes. The tumor is usually clinically present in the first month of life and regress spontaneously in 2-3 years. The condition is very rare, up to now there were described 250 cases worldwide.
Case Report: A 4 month- old male infant was admitted to the paediatric Surgery Ward on 22.08.16 because of syndactyly and tumor of the III and IV right toe. The tumor was in the size of a cherry, red and edematous, and painfull. The ultrasonography was performed. Radiological examination showed a developmental defect of the toes, lack of the intermediate and distal phalanges of the V toe, hypoplastic intermedial phalange of the IV toe and the soft tissue adhesion of the toes III and IV. A biopsy performed on 23.08.16 revealed the infantile digital fibromatosis. After one month tumour was resected in general anesthaesia and a whole skin transplantation into the cavity after the resection was performed. Patient was discharged in a good state on 07.10.16
Conclusions: Infantile digital fibromatosis is an extremely rare, harmless and bening tumour, which mostly disappears by itself. Histopathological examination is necessary to diagnose this condition. Surgical or conservative therapy should be taken into consideration.

Keywords: Infantile digital fibromatosis

UNUSUAL SUCCESSIONS OF SURGICAL TREATMENT OF HIRSCHSPRUNG DISEASE

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Background: Hirschsprung disease is a congenital condition characterized by lack of ganglion cells in large intestine. It leads to intestinal obstruction, which is a dangerous, life-threatening complication.
Case Report: A 5-year old patient was admitted to hospital in September 2015 due to chronic constipation. Few months later, an ileostomy was created. In addition, a biopsy was performed. Histopathological examination of the intestinal mucosa revealed typical for Hirschsprung disease aganglionosis. In May 2016 he underwent a colectomy. To provide the continuity of the intestines, J-pouch ileoanal anastomosis was created. After removing the catheter, the urinary retention occured. The patient was admitted to hospital again a month later presenting fever, abdominal pain and dysuria. He was diagnosed with pyelonephritis. The examination was extended with uroflow test which revealed detrusor muscle areflexia. Therefore, a cystostomy was created to sustain the patency of urinary tract and prevent further complications. Despite the coherence of pharmacological treatment with the antibiogram, asymptomatic bacteriuria was still present after the therapy.
Conclusions: Surgical treatment of Hirschsprung disease is the most relevant method in preventing toxic megacolon and intestinal obstruction. However, it is related with several succesions, like stool incontinence, constipation, enterocolitis or urinary retention, that may affect the quality of life and impede child's adaptation skills.

Keywords: Hirschsprung disease, J-pouch ileoanal anastomosis, urinary retention, cystostomy

APTUS ENDOSTAPLING SYSTEM - CASE REPORT

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Background: An endoleak is a common complication of EVAR and is found in 30-40% of patients intraoperatively and in 20-40% during follow-up. It has been referred to as the "Achilles heel" of the endovascular approach to aneurysm treatment. Some endoleaks seem to be unavoidable due to the presence of pre-existing patent branch vessels arising from the aneurysm sac, whilst others occur as a result of poor patient/graft selection. Endoleaks are often asymptomatic, however as flow within the aneurysm sac is at systemic or near- systemic pressure, if untreated, the aneurysm may expand and is at risk of rupture. Endoleak is seen on CT angiography (most common modality for follow up and investigation of potential endoleaks), MR angiography and DSA as contrast opacification of the aneurysm sac outside the graft.
Case Report: Patient (male, 81 years) had a primary uncomplicated EVAR with a Zenith (Cook) endograft in 2006 to treat an aortic aneurysm. At 10-year follow-up, progressive distal migration occurred, including a type IA endoleak. At secondary intervention, the endostapling system was advanced via a left femoral open access. Endostaples were deployed into the Zenith endograft, whereafter a proximal Gore cuff (32x45 mm) was implanted properly. Cuff and primary device were fixated with the use of endostaples. The procedure was uncomplicated. The 2-month postprocedural Doppler ultrasound showed no endoleaks, nor further complications.
Conclusions: Secondary interventions to treat distal migration and type IA endoleaks can be challenging. The Aptus uses a helical staple technology for independent endograft fixation, mimicking the hand suturing performed during open surgical repair. It can be used to repair endovascular grafts that have migrated or exhibit endoleaks, by strengthening the radial fixation and/or sealing to regain or maintain effective aortic aneurysm exclusion. It can also be used at the time of initial endograft implantation to enhance an endograft's inherent fixation and sealing mechanisms This case showed the feasibility of the use of the Aptus Endostapling system for its use in secondary interventions of distally migrated endografts.

Keywords: Aneurysm, endostaples, APTUS, EVAR, secondary intervention

A 22-YEAR-OLD WOMAN WITH CHRONIC ACTIVE EPSTEIN-BARR VIRUS DISEASE PRESENTING WITH PERSISTENT COUGH AND FEVER. CASE REPORT.

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Background: EBV is a lymphocytotropic DNA virus of the Herpesviridae family. Primary infection leads to mononucleosis, mostly in patients aged 15-20. It's a self-limiting disease lasting for no longer than 2-3 weeks. In some rare cases the disease progresses rapidly or transforms into CAEBV - a lymphoproliferative disorder connected with the EBV virus infection present and active for over 6 months. Interstitial pneumonitis in T-cell CAEBV is rare, frequently fatal condition and occurs in about 5% of the patients.
Case Report: Herein we present a case of a 22-year-old Caucasian woman with chronic active EBV disease, presented to the Department of Clinical Immunology 1.5 year after diagnosis with growing cough, clear sputum production, fever and general debility. Patient underwent mononucleosis at the age of 17, followed by the significant health deterioration, extensive diagnostic efforts, splenectomy at the age of 20 and diagnosis of T-cell CAEBV 6 months later. She was treated with thymus peptides since the diagnosis. Patient had 9 million/ml of EBV copies in the sputum. A CT chest scan showed disseminated maculate infiltrative areas in both lungs. She was diagnosed with Interstitial pneumonitis in CAEBV. Patient was treated with IFN-alpha subcutaneously, however no clinical improvement was noted. IFN-alpha inhalation was introduced, being an experimental treatment in this condition and improvement was noted after 10 days, followed by the bone marrow transplantation 6 months later. In the follow-up the patient feels good, there has been no EBV virus detection in the laboratory tests and CT scan has shown further regression of the described changes.
Conclusions: Patients presenting with interstitial lung infiltrations and with other organs' involvement like hepatitis, lymphadenitis, uveitis or splenomegaly should be investigated for CAEBV. Inhaled interferon-alpha might be an option for managing interstitial pneumonitis in CAEBV, although HSCT is showing more promising results.

Keywords: EBV, CAEBV, Clinical Immunology, interferon-alpha

COMMON VARIABLE IMMUNODEFICIENCY MIMICKING CLINICAL MANIFESTATIONS OF MULTIPLE SCLEROSIS. CASE REPORT.

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Background: Common Variable Immunodeficiency (CVID) is an immune disorder characterized by recurrent infections and low antibody levels and affects about 1 in 50,000 people worldwide. CVID is a rare primary immunodeficiency and symptoms vary greatly. The disease is not only phenotypically heterogeneous, but also hard to diagnose.
Case Report: 40-year old Caucasian woman developed first symptoms characteristic for multiple sclerosis (MS) in 2007 - severe low back pain, and weakness of the muscles in the left foot, followed by spastic hemiplegia of the left part of the body. The MRI scan of the head showed malacic cavity in the right hippocampus. Additionally she developed thoracic degenerative disc disease. She underwent neurosurgery with hybrid stabilization of thoracic spine using DIAM followed by the allergic reaction to DIAM and its removal. Laboratory tests revealed IgG hypogammaglobinemia but gamma-globulin supplementation was not initiated. In August 2008 optic neuritis with central vision loss occurred, followed by another left spastic hemiplegia. The diagnosis of multiple sclerosis was established and interferon beta-1b therapy was introduced. After 7 months relapse-free period, further progressive motor symptoms appeared: paresis of left upper extremity with ataxia and disorder of exteroceptive sensation, diplopia, impairment of cranial nerve and polyuria. Unsuccessful treatment leaded to the necessity of wheelchair usage. Interferon therapy was ended. Patient was directed to the Department of Clinical Immunology due to the chronic sinusitis and recurrent urinary tract infections. Tests revealed severe hypogammaglobinemia.
Conclusions: Detailed immunologic assessment, followed by the revision of the diagnosis in Neurology Department were sufficient to change the diagnosis into CVID. Upon receiving appropriate treatment total relief of neurologic symptoms was obtained in 3 months. We show, that CVID is hard to diagnose, yet it is crucial not to disregard early indications of immunological backgrounds of the disease in order to prevent serious consequences and introduce appropriate treatment.

Keywords: Multiple sclerosis, CVID, Clinical Immunology, Neurology

WHEN YOU HEAR "HAEMANGIOMA", DO YOU THINK "KASABACH-MERRIT"?- AN INFANT WITH A VASCULAR TUMOR TREATED SURGICALLY.

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Background: Vascular lesions are the most common congenital and neonatal abnormalities. Sixty percent of these lesions are located on the head and neck area. Haemangiomas usually appear a few weeks after birth and grow more rapidly than an infant does, but after this phase they are slowly involuting. A very rare complication, which could be life-threatening and demanding a proper perioperative preparation, is Kasabach- Merritt syndrome.
Case Report: An infant was admitted to the pediatric surgical ward in his second week of life with a suspicious, probably congenital vascular lesion on his neck, which was temporarily enlarging especially during crying. Clinically, it was diagnosed as haemangioma. Propranolol was provided as the first-line treatment. After temporary improvement the corticosteroid therapy was necessary. Despite the treatment, the tumor had progressed. In the fourth month of the infant's life, intubation was necessary due to lesion location and its mass-effect on the airway. In order to prevent further respiratory failure, the tracheostomy was performed. Kasabach-Merritt syndrome occurred clinically with a very low platelet count and the signs of coagulopathy. The patient needed multiple transfusions. The blood vessels in the tumor were obliterated in order to slow the intralesional blood clothing, reduce the intraoperative bleeding and to make it possible to remove it surgically. Total resection was impossible, which was caused by the infiltration of important anatomical structures. After the surgery, chemotherapy was administrated. The patient was discharged in good condition and still receives pharmacological treatment in order to stop the tumour progression due to its non-radical excision.
Conclusions: Most of haemangiomas can be treated with the use of non-surgical methods. Operative management of these types of tumours should be considered in the case of treatment-resistance or rapidly progressive growth. Kasabach-Merritt syndrome is a rare disease in which a vascular tumor leads to decreased platelet counts and sometimes coagulopathy.

Keywords: haemnagioma, Kasabach-Merritt syndrome, pediatric surgery,

ARTERIOVENOUS FISTULA AS A COMPLICATION OF RENAL ALLOGRAFT BIOPSY

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Background: Renal biopsy is an important intervention that provides infromation regarding the diagnosis, management and prognosis of patients with renal disease. As it is invasive procedure, it can be followed by several complications. The most common are hematoma, hematuria, bleeding. Arteriovenous fistula is rare complications of biopsy. In most cases they remain asymptomatic and resolve spontaneously over the next few months. Indications to procedure allograft renal biopsy are : delayed graft function (DGF) after transplantation, suspicion of acute rejection (AR) and diagnosis of graft dysfunction.
Case Report: 62-years old woman patient after renal transplantation with allograft situated in the left iliac fossa presented symptoms of graft rejection. Ultrasound examination with use of Doppler showed the signs of its poor vascularisation – typical image of acute renal rejection. Biopsy was performed to find the cause of allograft rejection. Postbiospy Ultrasound examination showed arteriovenous fistula in lower pole of kidney. Patient was reffered to arteriography. Examination confirmed presence of fistula and next embolisation procedure was done. Check-up ultrasound showed no signs of lesion.
Conclusions: USG-doppler imagining enables a precise projection of structures of renal allograft, which is crucial for brief diagnosis of possible complications of renal biopsy – in presented case the arteriovenous fistula. Furthermore, the consequence are proper therapy and good prognosis for the patients.

Keywords: kidney transplantation, Arteriovenous fistula, biopsy

MOYA MOYA DISEASE

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Background: Moya moya disease is a rare example of pathology of intracranial arteries. Etiology of this disease is unknown. Moya moya disease can be congenital or acquired. The main and primary changes are constrictions in the internal carotid artery. In advanced stage of disease constriction extends to the middle and anterior cerebral arteries. Clinical manifestations are: transient ischemic attacks, repeated strokes and finally death. The meaning of word Moya moya in Japanese is "puff of smoke", which describes characteristic appearance in imaging examination.
Case Report: 13 year old female patient was reffered to The Neurology Department of University Children Hospital in Lublin due to stroke symptoms. MRI examination was performed using FAST, FSE, FLAIR, T1 and T2 images before and after paramegnetic injection. MRI scans shown the ischemic stroke and obliteration of carotid arteries. The characteristic image of “puff of smoke” was observed in ANGIO.
Conclusions: The most important examination in case of Moya moya disease are computed tomography (CT), MRI, angiograms and eventually single photon emission computed tomography (SPECT). The most accurate examination is contrast-enhanced T1-weighted MRI which depicts the leptomeningeal ivy sign in Moya moya disease. Diffusion-weighted imaging can be also helpful in cases of new focal neurological deficits which can be caused by new infarcts.

Keywords: Moya moya, stroke, MRI, DSA

HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS AS A LIFE-THREATENING CONDITION

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Background: Hemophagocytic lymphohistiocytosis (HLH) is a life-threatening condition associated with disfunction of NK cells. As a result intensified production of proinflammatory cytokines and generalized inflammatory reaction is present. Disorder can be congenital or acquired. Autoimmune diseases, neoplasms and viral infections are main causes of acquired HLH. The major symptoms are: splenomegaly, hepatomegaly, lymphadenopathy, fever, neurological symptoms, exanthema. If HLH is suspected it is needed to perform laboratory tests such as blood cells count, aPTT, D-dimers, ferritin level, liver function tests, level of triglycerides, blood culture and serological tests for viral infections. Bone marrow biopsy and CT should be performed to exclude neoplasm.
Case Report: 2,5 year old boy was admitted to the hospital in Włodawa due to eight-day lasting fever. One week before addmition to the hospital boy was treated with amoxicillin for tonsillitis. 2 days before addmition loose stools and a rash was observed. Physical examination revealed: fever, macular rash on face and lower limbs, tonsillitis and enlargement of cervical lymph nodes. C-reactive protein was elevated. Hepatomegaly and splenomegaly were observed in ultrasound. Boy was transferred to the Infectious Diseases Ward in Jan Boży Hospital in Lublin after 2 days. Treatment with antibiotic was ineffective as fever and rash were still present. Boy was consulted with hematologist, cardiologist and rheumatologist. EBV infection was diagnosed and macrophage activation syndrome (MAS) was suspected. Boy was transferred to Paediatric Pulmonology and Rheumatology Ward for further diagnosis. A number of laboratory tests and bone marrow biopsy were performed and the diagnose was MAS. Treatment was continued in Department of Hematology, Oncology and Transplantology.
Conclusions: There are many difficulties to diagnose MAS because of variety of symptoms. Rapid diagnosis and early implementation of treatment are very significant due to the seriousness of the condition. The prognosis is unfavorable if the diagnosis is made too late.

Keywords: Hemophagocytic lymphohistiocytosis, HLH, macrophage activation syndrome, MAS

BRADYCARDIA AS A SIDE EFFECT OF VINCRISTINE THERAPY – DESCRIPTION OF TWO CASES

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Background: Vincristine(VCR) is a phase specific cytostatic drug designed to act on the M phase. It binds to tubulin, inhibits microtubule formation, distorts the structure of the spindle apparatus and stops the cell cycle in metaphase. VCR selectively inhibits DNA repair mechanisms and RNA synthesis in cancer cells. Indications concerning the use of VCR mainly focus around the following cases: acute lymphoblastic leukemia, Hodgkin lymphoma, non-Hodgkin lymphoma, neuroblastoma, Wilms tumor, Ewing's sacroma, parvocellular lung cancer and breast cancer. Apart from bradycardia, the most common adverse affects of using are: neurotoxicity, convulsion, miction disorders, parasthesis, progressive tetraparesis and intestinal paralysis.
Case Report: A 16 year old girl was admitted to hospital because of anaemia and abnormalities in blood smear tests. Bone marrow was sampled and ALL was recognized. Chemotherapy was introduced and in the 8th day VCR was given. Chemotherapy was continued up to the 14th day. In the 15th day the patients state deteriorated and chemotherapy was postponed. During the 19th day bradycardia (40-50 bpm) was recognized, and it was present for a few days. After consulting a cardiologist, teofiline was given, but had no effect on the patient. It was then decided that the patient should be given atropine 0,5mg in a bolus, or a smaller dose in case of a pulse below 50 bpm. If bradycardia would not have subsided, the patient would be qualified for a heart stimulator implantation procedure. A 15 year old girl was admitted to hospital because of ALL recurrence. Chemotherapy was introduced and one day after VCR application, bradycardia was recognized. A cardiology specialist was consulted and the patient was given 0,3mg of atropine intravenously. Heart rate increased to 100-105 bpm but after a few hours fell back down to 40-50 bpm. Vital parameters were constantly monitored. After 5 days the patients heart rate normalized.
Conclusions: Currently applied programmes of treating children with ALL allow 80% of all patients to be cured. However this method is connected with aggressive chemotherapy which may cause multiple complications. That is why it is necessary to constantly monitor the patients state and react rapidly in case any complications arise.

Keywords: Bradycardia, Vincristine, side effects, chemotherapy, ALL

THE UNEXPECTED CAUSE OF CHRONIC COUGH IN PREGNANT WOMAN

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Background: A chronic cough is an extremely interdisciplinary symptom. The most common causes of the chronic cough are: asthma, non-asthmatic eosinophilic bronchitis and gastro-oesophageal reflux. However chronic cough in pregnant woman, especially when it appears for the first time during pregnancy, requires precise diagnostics.
Case Report: 32 years old women in 13Hbd visited gynaecologist for a control. Patient has already undergone miscarriage and premature birth in 23Hbd. She was not reporting any medical problems and had no deviations in physical examination besides scars on her abdomen. As reported, they were caused by abdominal trauma during an assault with a knife in 2006. Due to the problems with pregnancy maintenance and suspicion of cervical incompetence, she was admitted to hospital for an establishment of cervical suture. The treatment was postponed because patient reported cough. She notified that in the previous pregnancy cough also appeared. Therefore, she was consulted by pulmonologists. Basing on bronchial hyperreactivity test, she was diagnosed with asthma. Chest X-ray showed elevation of the left half of the diaphragm. Accordingly, MRI of the diaphragm was made. It revealed 3cm-wide wane in the diaphragm and a hernia. Doctors council was essential to determine further treatment. She was qualified for a surgery. In the meantime, cough became milder and the operation was not held. After a few weeks the cough unexpectedly returned. As there was a risk of premature birth, in 27Hbd patient underwent a full cycle of steroid therapy. Surgeons decided to undertake the re-attempt of the operation but anaesthesiologists refused it because of the high risk of complications. For the rest of gestation, the patient was intensively monitored. In the 39Hbd doctors performed elective cesarean section. The patient gave birth to healthy newborn, Apgar score of 9.
Conclusions: Cough can be caused by wide spectrum of factors. The detection of a single cause should not lead to withdrawal from the detailed diagnostic procedures. Carefully gathered medical history can be incredibly helpful in determining the diagnosis. We should always have in mind substantial anatomical changes in the body of pregnant women, which can potentially exacerbate symptoms of certain diseases.

Keywords: pregnancy, cough, diaphragm, hernia

THE CONSERVATIVE SURGERY THE BEST SOLUTION IN OVARIAN TUMORS TREATMENT IN INFANTS

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Background: Ovarian tumors are very uncommon in newborns. The most common are nonneoplastic cystic lesions. Benign neoplastics, such teratomas, are characterized by lower frequency. The incidence of malignant lesions in this age group constitutes less than 1%.
Case Report: We present a case of a 3-days- old, term, female newborn who was admitted to the Department of Pediatric Surgery, Traumatology and Urology due to ovarian mass located on the left side which was diagnosed postnatally. Abdominal ultrasonography showed a well definied, solid lesion 19x17x19 mm of the left ovary. The laparoscopy and minilaparotomy in general anesthesia were performed. The tumor tissue was completely excised with ovarian preservation. Histopathological examination of a sample is in progress. After 7 days of hospitalization the patient was discharged from the hospital without any further complications.
Conclusions: Conserving surgery treatment is the best solution for newborn age group in view of preservation their fertility. Because of the fact that malignancies are so rare condition, radical resection can be also impetous procedure. That is the reason why we want to emphasize the importance of conservative surgery treatment in such cases when it is possible.

Keywords: ovarin tumor, conservative surgery, infants

LATE ONSET LEIGH SYNDROME VARIANT ASSOCIATED WITH THE M.9185T>C MUTATION IN THE MTATP6 GENE.

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Background: Leigh syndrome (LS) is a progressive neurodegenerative disorder based on genetic mutations. The population prevalence is 1:32 000 – 1:40 000. It was first described on a 6-month-old child case, who presented the symptoms associated with neurodegenerative disorders. The signs usually reveal in children between 6 months and 2 years old but the symptoms can expose much later. The oldest patient with recognized LS was a 74-year-old man. The most frequent background of the disease are mutations in the nuclear genes concerning both autosomes and sex chromosomes. Nevertheless 25 % of cases are associated with mitochondrial mutations. They are usually related to the defect of the MTATP6 gene coding proteins of the complex V of the respiratory chain. The most repeated single mutation is m.8893T>C, which is responsible for 5 - 10 % of cases of LS. The m.9185T>C mutation is rarely diagnosed. The symptoms of mitochondrial inherited variant of LS are the result of the high level oxygen metabolism tissues dysfunction, such as nervous tissue or striated muscles.
Case Report: Female patient, aged 33, hospitalized because of an exacerbation of neurological symptoms in the shape of walking disability, presented since the childhood. Firstly there were diagnostic difficulties. After the electromyography (EMG), congenital sensory-motor demyelinating polyneuropathy was identified. Patient's daughter has been monitored towards LS since 2012. During the Neurology Ward stay, there was an exacerbation of the clinical condition. The respiratory insufficiency developed. Inpatient required mechanical ventilation. The patient was transferred to the Intensive Care Unit (ICU). Meanwhile, genetic analysis results concerning the whole-exome were attached to the patient's medical history. Familiar prevalence of the m.9185T>C mutation was confirmed. Female patient was transferred to the Rehabilitation Ward. After the clinical improvement, the patient was discharged from the hospital.
Conclusions: Leigh syndrome is extremely difficult to diagnose. Patients represent the full gamut of signs. They require extended diagnostics exceeding standard examinations, such as whole-exome sequencing. Despite the lack of the therapy possibilities oriented on this very disorder, symptomatic treatment can be run. It contains the medical interventions in the field of intensive care, which can lead to beneficial clinical results.

Keywords: Leigh syndrome, mitochondrial disease, neurodegenerative disorder, m.9185T>C

HIV/HCV CO-INFECTION– AN INCREASING TREND AMONG HIV-POSITIVE PATIENTS IN POLAND. A CASE OF 51 YEARS OLD MALE PATIENT WITH HIV/HCV CO-INFECTION.

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Background: Hepatitis viruses and human immunodeficiency virus (HIV) co-infection is a major cause of liver diseases worldwide. 10-50% of people living with HIV/AIDS are co-infected with hepatitis C virus (HCV). HIV/HCV co-infection leads to accelerated liver damage and increased both liver-related and unrelated morbidity and mortality.
Case Report: We present the case of 51 years old male patient who was admitted to Infectious Diseases Department of Poznan University of Medical Sciences due to check up lab tests results suggesting acute liver decompensation (ALT 1521 IU/L, AST 640 IU/L). The patient was diagnosed with HIV infection a year before. The infection had been successfully treated with the ARV therapy (Truvada, Triumeq) for 4 months. Patient's medical record includes immune thrombocytopenia purpura, iron deficiency anemia, syphilis, hepatitis type A. On admission a full acute viral hepatitis panel of lab tests was performed and it revealed positive anti-HCV and positive HCV RNA. In February 2016 anti-HCV was negative in this patient. The symptomatic treatment was initiated and eventually lead to liver function normalization.
Conclusions: By presenting this case we want to mark the general trend observed in the clinical work that the number of HIV/HCV co-infected patients – especially male - is steadily rising. The earlier the co-infection is diagnosed the better is the prognosis for the patient at the point of therapy initiation. Early start of cART and wider HCV treatment markedly reduce HCV-related mortality and thus increase survival overall for HIV-infected populations. Clinicians should recognize that co-infected and mono-infected individuals are different groups regarding different management. Especially the attention should be put to prevent cardiovascular and renal complications.

Keywords: AIDS-related opportunistic infections, hepatitis, co-infection

ONE HEART, TWO LUNGS AND TWO STOMACHS? – AN INTERESTING CASE OF A GASTRIC DUPLICATION IN A 15-YEAR-OLD PATIENT.

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Background: Gastric duplication is a rare congenital abnormality, usually found in infants. It can be manifested in gastric outlet obstruction, abdominal mass and hemorrhage. This condition requires surgical treatment in order to reduce the risk of possible complications.
Case Report: A 15-year-old boy was admitted to the oncology ward due to a suspected adrenal gland tumor, or pancreas tumor. Three weeks before, he was examined by his GP because of the abdominal pain and an erythrocyturia episode. An ultrasound examination revealed a fluid-filled cyst in the pancreatic region. In the oncology ward, a physical examination revealed no abnormalities. The second ultrasound and computed tomography proved the presence of a 57x47x37 mm size, thin-walled lesion, nearby the left adrenal gland. No calcifications and septa were detected the in sac. A differential diagnosis excluded a pheochromocytoma. Enterogenic cyst as an initial diagnosis needed the surgical excision and histological verification. The patient was transferred to the pediatric surgery ward, where the laparoscopic operation was performed. The lesion was localized by ultrasonography, that is when the gastric duplication was diagnosed intraoperatively. Due to the possible connection between the lesion and the gastrointestinal tract, it was necessary to convert the procedure into open abdomen surgery. The lesion was dissected and removed through the incision in the epigastric region. Histopathological examination confirmed gastric duplication. The recovery was uneventful.
Conclusions: Gastric duplication is a rare condition, which may manifest itself as a tumor in epigastrium. It should be taken into consideration during a differential diagnosis of lesions in this area. Surgical removal and histopathological examination are necessary to confirm the diagnosis.

Keywords: Gastric duplication. Enterogenic cyst. Pediatrics surgery. Child.

THE DIRECT ACTING ANTIVIRAL (DAA) THERAPY IN HCV POSITIVE PATIENT SUFFERING FROM HEPATOCELLULAR CARCINOMA – A CASE REPORT.

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Background: Hepatocellular Carcinoma (HCC) represents the fifth most common malignancy and the third cancer-related cause of death worldwide. Hepatitis B (HBV) and C (HCV) viral infections and alcohol abuse are the principal etiological factors for HCC. The goal of chronic hepatitis C (CHC) treatment is to achieve a sustained virologic response (SVR). The new generation of direct-acting antivirals (DAAs) offers 90-100% SVR rates.
Case Report: We present the case of 63 years old patient suffering from chronic hepatitis C. He was first diagnosed in October 2014 with positive HCV RNA, genotype 1b. Consequently, in 2015 hepatocellular carcinoma (HCC) was diagnosed and managed by thermal ablation procedure. The patient suffers also from chronic thrombocytopenia, esophageal varices, hypertention and heart failure (NYHA II). In April 2016 the patient was put on 12 weeks DAAs therapy (ledipasvir+sofosbuvir) achieving rapid virological response (RVR) defined as undetectable levels of HCV RNA within four weeks of treatment. Even though the treatment turned out to be successful the patient continued to develop acute liver decompensation. On admission in October 2016 he presented with ascites, bilateral basal crackles and petechiae on the skin. Laboratory tests revealed thrombocytopeny, anaemia and multiple coagulation disorders. The ultrasonography showed the spread of hepatocellular carcinoma in liver, whereas the CT scan found possible metastatic tumors in lungs. On the other hand on DAA therapy regimen the patient achieved SVR12 and ETR.
Conclusions: The management of hepatitis C virus (HCV) infection in patients with decompensated liver function has changed lately mainly due to the newly developed direct acting antiviral (DAA) therapies. They are associated with greater rates of drug compliance and fewer adverse effects than interferon-based therapies. Because of the cost of the current DAA we need to find out the predictors assuming which patients with decompensated liver disease are likely or not to benefit from viral eradication and whether patients with advanced HCC should be treated before or after possible liver transplantation.

Keywords: DAA, hepatocellular carcinoma, SVR, ETR

SYSTEMIC LUPUS ERYTHEMATOSUS MIMICKING ERYTHEMA MULTIFORME – CASE REPORT OF ROWELL'S SYNDROME.

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Background: Lupus erythematosus (LE) is an autoimmune disease with a wide spectrum of systemic manifestations. Skin is one of the most frequently affected organs in LE. Besides the characteristic classical forms such as systemic LE (SLE), subacute cutaneous LE (SCLE) and discoid LE (DLE), there are uncommon variants that often mimic other diseases and lead to diagnostic difficulties.
Case Report: A 25-year-old female was referred to the Department of Dermatology at Medical University of Warsaw due to diffuse annularerythematous and well-defined papules, some resembling "atypical" target lesions.This skin eruption was located on her back, chest, extremities, and face. Patient complained offlu-like symptoms. There were no precipitating factors for erythema multiforme in the anamnesis. Laboratory tests revealed microcytic anemia, leucopenia, hypocomplementemia and increased erythrocyte sedimentation rate. Anti-nuclear antibody was positive and showed a speckledpattern (1:320). The presence of anti-Ro/SS-A antibodies has also been confirmed. Conversely,anti-ds-DNA and anti-La/SS-B antibodies as well as rheumatoid factor were negative. To clarify the above-mentioned skin lesions, 4 mm punch biopsy from the back was obtained for histopathologic analysis. Hematoxylin–eosin staining showed basket weave hyperkeratosis of the epidermis with single apoptotic keratinocytes resembling erythema multiformeand a dermal perivascular lymphocytic infiltrate with slight interstitialmucinosis, characteristic for lupus dermatitis. On the basis of clinical, immunological, and histological findings, a diagnosis of Rowell's syndrome was made. The patient was treated with a combination of oral chloroquine(250 mg/d) andprednisone (30 mg/d) that led to resolution of the dermatosis.
Conclusions: Rowell's syndrome is a rare but often misdiagnosed condition defined as the association of lupus erythematosus and erythema multiforme-like lesions. Correct diagnosis of this disease requires precise exploration of medical history and clinical examination of the patients.

Keywords: Rowell's syndrome, Systemic lupus erythematosus, erythema multiforme

ADRENOLEUKODYSTROPHY IN AN 11-YEAR-OLD PATIENT

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Background: Adrenoleukodystrophy (ALD) is an X-linked genetically determined disorder caused by mutation in ABCD1 gene (Xq28) encoding a peroxisomal membrane transporter, which is responsible for importing Very Long Chain Fatty Acids (VLCFA) into the peroxisomal lumen. The consequence is accumulation of esterified VLCFA, particularly in adrenocortical cells, Leydig cells and nervous system macrophages. The childhood cerebral form of ALD, the most common subtype, manifests in hyperactivity disorder, academic difficulties, disturbance of vision, hearing, gait and writing, adrenal insufficiency, often accompanied by seizures. MRI is the preferred method of determining the severity of brain lesions. Treatment includes hormone replacement therapy and bone marrow transplant.
Case Report: 11-year-old boy, was admitted to hospital with a year long history of hyperactivity, handwriting changes, diminished learning performance and impairment of eye-hand coordination. Worsening of behavior and involuntary facial muscles contractions had occurred two weeks before. The patient had been previously diagnosed with psychomotor hyperactivity, hyperopia and a depressive episode. On the day of the admission patient presented with general malaise and skin hyperpigmentation. Primary adrenal insufficiency was diagnosed based on serum cortisol and serum ACTH levels before and after steroid administration. Hydrocortisone was prescribed. MRI scan showed white matter lesions suggesting ALD (Loes score = 14 points). Due to advanced stage of the disease, the patient was not a suitable candidate for bone marrow transplant. Four months later, a follow-up examination showed signs of neurological and radiological progression (Loes score = 18).
Conclusions: Although ALD is a rare disease (1:20 000 newborn males), it should be taken into consideration when diagnosing children with adrenocortical insufficiency, MRI brain changes and behavioral disorders. Newborn screening programs could lead to early diagnosis of ALD, which is crucial in bone marrow transplant.

Keywords: adrenoleukodystrophy, ALD, peroxisome, fatty acids, ABCD1, adrenal insufficiency, Addison's disease

PATIENT WITH GESTATIONAL CHORIOCARCINOMA - CASE REPORT

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Background: Choriocarcinoma is a highly malignant tumor that arises from trophoblastic cells. It metastasizes early to the lungs. Gestational choriocarcinoma occures 1 in 40000 pregnancies.
Case Report: 37-year-old patient was admitted to the hospital because of coughing, hemoptysis, haematuria, weakness and body weight loss. Although she denied pregnancy, an ultrasound scan and reveled single, alive, intrauterine fetus (EFW 2200g, 32 gestational weeks) and hepatomegalia with numerous liver lesions. Chest X-ray showed numerous round shadows which were suspected to be metastases. Lab tests revealed anaemia and HCG ? >20000 IU/ml. Because of fetal distress a caesarean section was performed and baby boy was born in good general condition. Due to heavy liver bleeding emergency liver packing was done. During futher examination of mamma the diagnosis of choriocarcinoma was confirmed with metastases in the lungs, liver, breast and brain. Chemiotherapy of Etoposide, Methotrexate, Cyclophoshamide & Vincristine (EMACO0 was started. The patient received 6 treatment cycles but unfortunately she was in progression of the disease. After falling HCG ? raised from 839mIU/ml to 8770 mIU/ml.
Conclusions: HCG ? >40000 and metastases other than to the lungs and the vagina are risk factors of chemotherapy bad outcome.

Keywords: choriocarcinoma, pregnancy

"TREATMENT OF TONSILLAR CANCER IN A 50 YEAR OLD FEMALE – CASE REPORT"

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Background: Palatine tonsil carcinoma is the most common malignant neoplasm of the oral pharynx. It is more common in males and known risk factors are smoking, excessive use of alcohol and HPV infection. At first syndromes (sore throat, dysphagia, otalgia) are scarce. Later in the course of the disease lockjaw, hypersalivation and fetor oris can appear. Metastases in regional cervical lymph nodes develop early.
Case Report: This case presents a 50 year old woman diagnosed with right palatine tonsil planoepithelial carcinoma (G2, T3N2b), who underwent a mastectomy in 2011 (treatment of carcinoma ductale invasivum of the right breast). The patient was admitted to the Department of Otolaryngology in Independent Public Teaching Hospital No 4 in Lublin and scheduled for surgical treatment. The first surgery included resection of the tumour and reconstruction of the area with a radial forearm free flap. In the following months the patient received adjuvant radiotherapy, which lead to osteoradionecrosis of mental protuberance. The patient, tired of surgeries and radiotherapy, refused reconstruction of the necrosis affected bone, therefore the sequestrum was removed and remaining parts of the mandible were connected. Unfortunately this resulted in rotation of condyles in the temporomandibular joints and in the end in lockjaw. After ruling out recurrence the patient was proposed with a surgery to minimize the lockjaw. The performed procedure included removal of postoperative adhesions in both masticator muscles and in the left pterygoid muscles, horizontal osteotomy of the mandible at the mandibular notch level and creation of artificial joints. In this way the ability to fully open the oral cavity was brought back and the lockjaw was treated.
Conclusions: • Radiotherapy is one of the basic methods of treating tonsillar carcinoma. The complications it may cause, including osteoradionecrosis, should not be overlooked. Diagnosing and treating these complications may be difficult and requires excluding recurrence in every case; therefore the patients should be thoroughly monitored.
• Recommended treatment of choice for osteoradionecrosis of the mandible is a vascularized bone graft, but due to general condition of oncological patients it is not always an option.
• Treating necrosis without reconstruction may lead to lockjaw.

Keywords: tonsillar cancer, forearm free flap , bone graft , laryngology

THE EXPERIENCE OF LAPAROSCOPIC PLASTICS OF HIATAL HERNIA OF ESOPHAGUS

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Background: Laparoscopic intervention in the treatment of hiatal hernias of esophagus (HH) almost completely replaced the traditional ones. Making laparoscopic and fundoplication plastics allows to get good results with low-traumatic and fewer complications in comparison with 'open' operations.
Case Report: In 2014-2016 in Grodno Regional Hospital were made 26 laparoscopic interventions for HH. Indications for surgery at these patients werethe presence of HH with reflux esophagitis the second and third degree and the ineffectiveness of conservative therapy. The age of patients was 52 ± 12 years. The distribution depends on gender: there were 14 men and 12 women. The patients were carried out general clinical and special methods of investigation in the clinic. EGD, X-ray of the esophagus and stomach in the Trendelenburg position were obliged to fulfill. The diagnose with HH was confirmed radiologically and endoscopically. The operation was performed from 5 accesses located in the upper quadrant of the abdominal wall 3 - 10 mm, 2 - 5 mm. The mobilization of the stomach and the esophagus was carried out by using ultrasonic scalpel and the LigaSure device. Back krurorafiya was made by two seams. Nissen fundoplication was carried out to form a cuff on the probe with a diameter of 1 cm from the fundus of the stomach using 2-3 seams with fixation to the wall of the esophagus to prevent displacement. Laparoscopic cholecystectomy + laparoscopic plastic of hiatal hernia: one patient was carried out such a simultaneous operation. The duration of operation was 218 ± 56 min. Intra- and early postoperative complications were not remarked. All patients were discharged from the hospital in satisfactory condition. There was not the recurrence of reflux esophagitis, patients do not need medication treatment, no complaints at observation period till 1 year are not presented.
Conclusions: Laparoscopic plastic of hiatal hernia requires further implementation, development and accumulation of sufficient experience, that allows to improve the results of treatment of this pathology.

Keywords: Hernia of esophagus,laparoscopic plactics, surgery

ACROFACIAL DYSOSTOSIS - NAGER SYNDROME CLINICAL FEATURES IN NEWBORN- CASE REPORT

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Background: Approximately 1% of all live births exhibit a minor or major congenital anomaly. Roughly one third of them displays craniofacial abnormalities which are a significant cause of infant mortality. These disorders arise as a consequence of abnormal development of the first and second pharyngeal arches and their derivatives during embryogenesis. Facial dysostosis can be further subdivided into acrofacial dysostosis and mandibulofacial dysostosis. Acrofacial dysostosis syndromes are a clinically heterogeneous group which encompasses malformations of the craniofacial skeleton and the limbs. Nager syndrome is the best known example of this group.
Case Report: We describe the case of a 7-days-old male child who was referred to the Neonatology Department with congenital anomaly syndrome. The patient was born at 40 weeks of gestation by c-section. In the delivery room he required positive pressure ventilation performed by Neopuff. For the next 8 hours the patient was treated with Infant flow, and then he was put on noninvasive ventilation (NIV) for two days. The chest X-ray was normal. He received breast milk in enteral and parenteral nutrition. Craniofacial anomalies that the patient present include micrognathia, retrognathia, high-arched palate, hypoplastic soft palate, down-sloping of the opening of the eyes, microphthalmia, hypoplasia of zygomatic bone and dysplastic ears. There were also anomalies of the upper limb development that resulted in radial dysplasia, radio-ulnar synostosis and abnormalities of the digits. The patient exhibits coexisting bone abnormalities in the lower limbs such as wide feet, gap between the big toe and the second toe and a hypoplastic overlapping fourth toe. The aforementioned clinical features in our patient resembled Nager syndrome. The final diagnosis however needs to be confirmed by the identification of a mutation in SF3B4.
Conclusions: The prevalence of Nager syndrome is unknown. The syndrome is rare and mostly sporadic. Patients with this syndrome are found worldwide among all racial and ethnic groups. Up to now approximately 100 cases of Nager syndrome have been published. The quality of life of patients with Nager syndrome can be improved by early intervention, intensive education, and new surgical techniques. Multidisciplinary management by a craniofacial team is needed.

Keywords: Acrofacial dysostosis, Nager syndrome, Facial dysostosis, craniofacial abnormalities

USE OF FREE DIEP FLAP TO SAVE LIMB WITH DEEP INFECTION AND TISSUE NECROSIS.

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Background: Limb infections with tissue necrosis can produce a direct threat to patient's health and life. Often advanced cases resistant to antibiotics and surgical treatment can lead to limb amputation. Using free flaps to cover large tissue defects can be an option to save the limb.
Case Report: 62 years old female underwent radiation therapy of the left knee in her childhood to treat nevus pigmentosus. At the age of 58 she suffered a rupture of her rectus muscle which was surgicaly repaired. Two years later she underwent a second surgery of her thigh and knee region. It was complicated by wound infection and massive necrosis of surroundings tissues. In 2016 surgical team from Department of Orthopaedics and Department of Otolaryngology of Medical University in Lublin carried out a surgery to repair extensive loss of limb tissues using a DIEP flap. Wound of the left leg was debrided of necrotic tissues. Bilateral DIEP flap was harvested based on left epigastric vessels. The pedicle was anastomosed to descending branch of lateral circumflex femoral artery and comitant vein. The skin island of the flap was used to cover tissue defect of the left knee region. Patient recovered without complications and she was able to walk using walking stick.
Conclusions: Microvascular free flaps can be used to cover large tissue defects of the limbs to avoid amputations.

Keywords: limb amputation, DIEP flap, massive necrosis, skin island,

RECIST CRITERIA AND POSSIBILITY OF INTRODUCTION OF EGFR TKI THERAPY IN ADENOCARCINOMA PATIENTS WITH EGFR MUTATION - CASE REPORT.

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Background: Lung cancers are classified according to clinical characteristic into: small-cell lung carcinoma (SCLC) - chemo- and and non-small-cell lung carcinoma (NSCLC). Molecular tests detecting EGFR gene mutations and rearrangement of ALK gene are performed routinely in patients with advanced NSCLC for their qualification to molecularly target therapies. According to RECIST criteria, all target lesions must be measured in their longest dimension, except for the lymph nodes, whose shortest diameter is used to define pathologic enlargement. To be considered measurable, target lesions must be at least 10 mm in longest diameter and lymph nodes must be at least 15 mm in the short axis. Lesions less than 10 mm in longest diameter and lymph nodes less than 15 mm in the short axis were not considered to be target lesions. If the primary tumor doesn't exist (as a result of lung resection or inability to identify primary lesion), it is necessary to identify measurable metastases or non-measurable lesions.
Case Report: 64 years old female patient with left lung adenocarcinoma underwent left lower lobectomy and lymphadenectomy in November 2013 and following adjuvant chemotherapy in December-Januray 2014. Deletion in exon 19 of EGFR gene was detected in surgical material. Subsequent CT scans showed mediastinal lymph node (13 mm in smaller diameter) that enlarged 1-2 mm during 2 years of observation (2013-2015). Moreover, small nodules appeared in 10th segment of the right lung. The enlarged lymph node and small nodules carried no signs of dynamic. On 11.01.2016 the patient had EBUS with biopsy (TBNA) which showed metastases in lymph nodes. According to RECIST 1.1 no measurable changes were ascertained in CT of the thorax and the abdomen thus the patient still haven't met the inclusion criteria of EGFR TKI treatment. After several consultations, further ambulatory observation was decided. Despite this, the patient was qualified to radiotherapy, which she received in another hospital.
Conclusions: The RESCIST 1.1. criteria are universal and should be applied to such types of anticancer therapy. It seems that the patient can benefit from the observation and subsequent treatment with EGFR TKI, when measurable lesions is present.

Keywords: EGFR TKI therapy, RECIST criteria, lung carcinoma

MENINGITIS IN THE COURSE OF TREATMENT 7-YEAR OLD GIRL AFTER CRANIOPHARYNGOMA RESECTION-CASE REPORT.

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Background: Craniopharyngiomas are histologically benign neuroepithelial tumors of the CNS predominately observed in children aged 5-14 years. Although being benign histologically, they can have significant neurological and endocrinological consequences and may require treatment that will cause further morbidity. Craniopharyngioma causes symptoms by: increasing pressure on the brain, usually from hydrocephalus disrupts hormone production by the pituitary gland leading to plurihormonal pituitary deficiency, decreases vision due to pressure or damage to the optic nerve. Behavioral and learning problems may be present. These defects are often permanent, and may get worse after surgery to remove the tumor.
Case Report: We would like to present the case of 7-year-old girl, being under the supervision of the Department of Neurology University Children Hospital in Lublin due to headaches, vomiting, muscle weakness, imbalance symptoms for about 2-3 months. She had some problems with concentration. Further examination of the head CT and MRI confirmed the presence of CNS tumor of a craniopharyngioma. Because of the increasing massive hydrocephalus and the deteriorating condition of the patient was operated on urgently. After a postoperative period in Intensive Therapy Department- without complications, patient was further hospitalized in the Department of Endocrinology because of hypopituitarism. Antibiotic and antifungal treatment (Wankomycin, Meronem, Diflucan) administered primarily at the ICU, was continued. Water and electrolyte disturbances were controlled due to thyroid and adrenal hormones supplementation. In the eighth day patient's condition began to deteriorate: reported headache, high fever began again, then became sleepy, apathetic, on the re-transfer to the ICU - without contact, observed clonies in the range of upper and lower limbs, lasting 15 seconds. Neurological examination: stiff neck, marked positive Kernig symptom especially on the right side, positive Babinski on right side, hyperreflexia of knee joint and Achilles tendon. described earlier convergent strabismus. After neurosurgical consultation it was decided to take lumbar puncture, fluid examination confirmed neuroinfection. Girl again treated with antibiotics, in good condition referred to the Department of Neurology for rehabilitation.
Conclusions: We would like to present a case of cranopharyngioma due to its rare occurrence and consequently, possible post-operative complications despite benign histological origin.

Keywords: craniopharyngioma,meningitis

CARBON MONOXIDE POISONING IN 53- YEAR-OLD PATIENT WITH DEMENTIA SYNDROME-

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Background: Carbon monoxide (II) arise during half – incineration of landfill gas in faulty gas jets, especially in gas stoves and rooms, which aren`t ventilated properly. Carbon monoxide is more likely to connect with hemoglobin about 250 times more than oxygen. As a result of this connection arise carboxyhemoglobin(HbCO), which is unable to transport oxygen to all cells and tissues of our body. Annualy we can observe about 2000 cases of carbon monoxide poisoning and in 100 cases this poisoning is mortal.
Case Report: 58 –year-old patient was admitted o the Unit of Toxycology and Cardiology because of carbon monoxide poisoning. The patient was found by the husband in the bathroom with the gas stove inside. After arrival of emergency service patient was in serious condition, confused, without logical contact, making incomprehensible sounds. The level of carboxyhemoglobin in blood was 39,5%.The patient`s circulation and respiratory system were in good condition. In the beginning of hospitalization the women had memory loss, she remembered her name and surname, but she didn`t remember her date of birth. During the first and the last day of hospitalization the Mini-Mental State Examination was made: first day – 12 point, last day – 22 points. Moreover doctors made Choynowski`s Memory Scale and the result of this test was the same in first and the last day. Patient has a loss of auditory and visual memory and lack of possibility to learn. The women was tearful and had instability of mood. All this signs show us that this patient had a cognitive function disorder.
Conclusions: Carbon monoxide is responsible for arising carboxyhemoglobin, but also it stimulates production of free radicals, which destroy cell membrans. The most common symptoms are tachycardia, nausea, low blood pressure, confusion, problems with balance, but it also can be mortal. This case report shows us that carbon dioxide poisoning can mainly be manifested by neurological and psychological disorders such as loss of memory, confusion.

Keywords: carboxyhemoglobin,dementia, carbon monoxide

MULTIPLE CORONARY ARTERY ANEURYSMS DIAGNOSED IN ECG-GATED CARDIAC COMPUTED TOMOGRAPHY: A CASE SERIES STUDY

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Background: Coronary artery aneurysms are dilatations of arterial segments and could be found in 0,15-4,9% of patients undergoing coronary angiography. The main cause of coronary aneurysms in adults is atherosclerosis, while in children and adolescents it is Kawasaki disease. Other causes of coronary artery aneurysms are rare and include iatrogenic (coronary artery revascularyzation), inflammation of arteries (follicular vasculitis, systemic lupus erythematosus), chest injuries, connective tissue disorders (Marfan syndrome, Ehlers-Danlose syndrome) or primary aldosteronism. Coronary aneurysms commonly involve the right coronary artery (RCA), followed by the left anterior descending (LAD) and circumflex (CX) artery. Current literature exploring this issue is limited.
Case Report: We present six cases of coronary artery aneurysms in males of different ages. The age of patients ranged from 14 months to 64 years old. ECG-gated cardiac computed tomography (CT) showed segments of aneurysmatic dilatations and segments of coronary artery stenosis. All patients had multiple coronary artery aneurysms, which were not limited to the one artery. Patient with the largest number of aneurysms had nine aneurysms in five different vessels. In a patient with Kawasaki syndrome virtually total regression of the coronary artery aneurysms was observed in a follow-up ECG-gated cardiac CT four years after the first examination.
Conclusions: ECG-gated cardiac CT is a valuable method allowing excellent imaging of coronary artery aneurysms and may be used in the diagnosis, assessment of anatomical morphology and monitoring the course of disease.

Keywords: ECG-gated cardiac computed tomography, coronary artery aneurysms, Kawasaki disease

THE ACUTE BLEEDING DURING TREATMENT OF A MASSIVE NEUROBLASTOMA IN 2-YEAR-OLD GIRL – CASE REPORT

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Background: Neuroblastoma is one of the most common tumours in children. Up to 90% of cases are diagnosed by age 5. The patients can present a wide spectrum of symptoms depending on the localisation of the neoplasm. The treatment options include surgery, chemotherapy, radiotherapy, stem cells transplantation, retinoid therapy and immunotherapy. The survival rate varies from 50% to 90%, depending on age, location, histology, metastases and response to treatment.
Case Report: Two-year-old girl was admitted to the Department of Paediatric Surgery, presenting strong, intensifying abdominal pain and distension. On physical examination, the upper abdomen was firm, with perceptible solid, huge mass. In CT scan, the massive solid tumor in retroperitoneum was visualised. It reposited other abdominal organs and vessels. The tumor inflitrated left kidney. The patient underwent angioCT scan, which helped to visualise the mass of the tumour. After trepanobiopsy, a massive blood loss occured. An emergency laparotomy was performed. The patient underwent the resection of the tumor with the left kidney and a fragment of ascending colon. After that, the girl was transferred to Paediatric ICU and next to the oncology department for further chemotherapy.
Conclusions: A hemorrhage is an acute and possibly life-threatening complication, which can occur after the biopsy of neuroblastoma. It may require quick and drastic change in the treatment schedule and demand performing the surgery under unfavorable circumstances. The protection from further blood loss is the priority in such situation. AngioCT is a helpful method in visualisation both the tumour and the topography of its vasculature. The variety of treatment methods in neuroblastoma can possibly increase chances for reducing the tumor mass or even remission, yet still the long-term outcomes of the treatment are highly unpredictable.

Keywords: neuroblastoma, children, paediatric surgery, bleeding, hemorrhage, laparotomy, tumour, angioCT

3D-PRINTED LIVER MODEL AS A TOOL FOR PREOPERATIVE PLANNING IN COMPLEX LAPAROSCOPIC LIVER RESECTION CASE

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Background: Surgery is a primary radical treatment selection for patients with liver tumors. However, liver resections can be very complex, especially with the laparoscopic approach, and they require an extensive preoperative planning procedure, including analysis of available digital imaging. This is a reason to look for new technologies as tools to improve surgeons' preparedness. Three-dimensional printing is the state-of-the-art technique that has been shown in recent years to be useful in some surgical areas. General surgery, however, still has very few reports of 3D-printing usage. This case is one of the very first in Europe that reports to facilitate surgical preparation with this kind of models.
Case Report: 58-year-old male diagnozed with colorectal liver metastases was scheduled for partial hepatectomy with prior chemotherapy. Computed tomography scan was performed before surgical proceure. However, it did not show pathologies in areas previously visible as tumors in formerly performed PET scan. As a result, for this complex case, authors prepared a 3D-printed, transparent liver model, which presented all of patient's important anatomical structures (hepatic veins, portal system, tumors, parenchyma) visualized based upon PET/CT fusion images. Model was printed using polylactic acid (PLA) and silicone was casted into printed scaffold. A team of surgeons have received the model days prior to the surgery, analyzed the anatomy and planned best possible approach.
Conclusions: Three-dimensional printing is a feasible way of developing very accurate, patient-specific anatomy projections, especially for complex procedures. It gives ability to combine traditional medical imaging, such as PET and CT scans, and merge them into one physical model. According to surgeons' opinions, it is easier to plan the surgery with the use of this technique, and some papers report shorter operative time and reduced blood loss. However, randomized control trials are needed to prove statistical significance and clinical relevance.

Keywords: 3d printing; Preoperative planning; Laparoscopic surgery; Partial hepatectomy; Colorectal metastases

CARBON MONOXIDE (CO) INTOXICATION OF 23 YEARS OLD WOMAN IN 26TH WEEK OF PREGNANCY- CASE REPORT

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Background: Carbon monoxide is one of the most common reason of death caused by toxins. It is odorless , colorless and non-irritating gas. That is why it is called as a “silent killer”. It is hazardous especially for a pregnant women, because of contributing to hypoxia of fetus which can cause development disorders or even death. The number of intoxications increases during autumn and winter. It is connected with insufficient ventilation or damaged heating system. Data from The National Headquarters Of The State Fire Service shows that since 01.09.2015 2229 people have been intoxicated with carbon monoxide, of which 50 caused death.
Case Report: 23 years old women In 26 week of pregnancy was brought to the Department of Toxicology in Lublin with carbon monoxide intoxication. Patient reported headache, dizziness and pain behind the sternum, RR 90/60 mmHg, HR 80/min. In exhaled air carbon monoxide was detected. The women had been transported to Emergency Department in Zamość, where blood test indicated HbCO 33,3%. After gynecology consultation patient was moved for treatment in hyperbaric chamber in SPSK4 in Lublin. After 90 minutes of oxygen therapy HbCO decreased from 10,6 % to 1,6%. Afterwards was transferred to the Department of Toxicology. At the admission time she was cardiovascularly, respiratorily stable, with moderate headache ,in logical verbal contact, without stenocardia, HbCO in blood test= 1,10%. After examination patient was signed out in good general condition with a recommendation of control tests in next 3 weeks.
Conclusions: CO intoxication is a serious threat especially for pregnant women, because even insignificant hypoxia may contribute to fetus dysfunctions. Due to rapid use of hyperbaric oxygen therapy patient was able to prevent gynecological and neurological complications. Applied method of treatment has brought a significant improvement of health status in the form of decreasing HbCO in blood test.

Keywords: Intoxication, carbon monoxide, pregnancy

HEADACHE AS A SIGN OF CEREBRAL VEIN THROMBOSIS- CASE REPORT OF 10-YEAR OLD PATIENT

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Background: Cerebral vein thrombosis accounts for an estimated cause in 0.5% of all strokes. It remains a major clinical concern that is still too rarely diagnosed. The causes of CVT vary, with differences occurring in the history and prognosis of patients condition. Cerebral sinovenous thrombosis should be considered in patients who present headache and focal neurological deficits. Appropriate usage of imaging studies is necessary for the diagnosis. Detailed ear, nose and throat examination should be performed to detect mastoiditis. It is recommended that genetic risk factors should be investigated, because hereditary thrombophilia factors may play a role in children.
Case Report: We would like to present the case of 10-year-old boy, being under the supervision of the Department of Neurology University Children Hospital in Lublin due to headache and vomiting. For two days the antibiotic therapy due to inflammation of the right ear. Head CT suspicion of thrombosis of the right transverse sinus and part of the sigmoid sinus. Patient complained of severe headache, conscious, present stiff neck without clear deficits in the neurological examinations. Angio - MR described the lack of signal flow in the right transverse sinus, with the increased signal on T2-weighted images of sinus corresponds to thrombosis.Within treatment, wide spectrum antibioticotherapy, tympanectomy of right ear and anticoagulative therapy were administered, along with systematic control of the blood coagulation parameters. In control studies, MRI angio visible partial recanalization of thrombus in the transverse sinus, with withdrawal of clinic symptoms. Neither cardiolipin antibodies nor lupus anticoagulant were detected . Homocysteine levels in the serum was normal.ECHO hearts and Doppler ultrasound of carotid and spinal arteries without irregularities.
Conclusions: MR venography in children with acute neurological symptoms is essential. Nutritional deficiencies may be modifiable risk factors. A paediatric anticoagulation trial may be required, after the natural history has been further established from registries of cases with and without treatment. Within literature, cerebral thrombosis has been usually manifested with seizure and focal signs in infants and young children, whereas headache has been reported with a higher rate and altered consciousness and seizures have been reported more rarely in older children.

Keywords: cerebral venous thrombosis, headache, CVT

SEVERE OPIUM INTOXICATION DERIVED FROM THE OPIUM POPPY IN 24 YEAR-OLD MAN - A CASE REPORT

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Background: Opium is a chemical substance extracted from the juice of immature capsule of the opium poppy. In its composition it has both phenanthrene derivatives, like morphine and codeine, and izohioline derivatives such as papaverine. Morphine since the dawn of history was used in medicine as an analgetic substance as well as a strong hypnotic drug. Currently, codeine derivatives are used as antitussives and papaverine medicaments as parasypathomimetics. In this specific case, poisoning with both the extract from 4 kg of edible poppy seeds, and 60 tablets of dextrometorphan.
Case Report: Male, 24 years old was brought by the Emergency Unit at night to the Toxicology Department in Lublin in a very heavy condition. At the time of admission he remained unconscious, he received 6 points in the GCS, pale with the presence of hypotension, narrow pupils and tetraplegia. The ECG revealed atrial fibrillation with wide QRS complex and characteristics of hyperkalemia resulting from acute renal failure and rhabdomyolysis. The patient was treated in the past with antipsychotic drugs due to personality disorders and addictions to psychoactive substances. After having regained consciousness the patient confirmed abuse of alcohol, opiates, marijuana and other drugs for about 10 years. The department ordered laboratory tests and started intensive fluid therapy. In addition, glucocorticosteroids, furosemide, dopamine and naloxone were given. In the following days the condition of the patient has stabilized. Patient regained consciousness after about 14 days of hospitalization and started kinesiotherapy. The patient was transferred to the Neurology Department for further observation and rehabilitation. After about six weeks, there has been a return of motor function and the withdrawal of tetraplegia.
Conclusions: Severe opioid poisoning has led to the development of full-blown shock with impaired motility of the organism and arrhythmia. A drug reversing the effects of opioids, is naloxone. Note, however, that in case of poisoning with a large amount of substance, and if a patient develops a tolerance, antidote may not be effective. Then, the only treatment is maintaining vital functions and detoxification. In this case, despite the poor prognosis, there was almost complete remission of symptoms, including the recovery of mobility.

Keywords: intoxication, poppy seeds, opium

HAEMOPHAGOCYTIC SYNDROME AND MYELOID SARCOMA IN THE CASE OF 15 YEARS OLD BOY- DIFFICULT DISEASES AND SIMPLE TEST THAT CAN SAVE ONE'S LIFE.

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Background: Haemophagocytic syndrome (HLH) is a rare disease with sever hyperinflammation caused by uncontrolled proliferation of immune cells. Due to etiology, we can distinguish primary and secondary HLH- the last one occurs with systemic infection, immunodeficiency or underlying malignancy. The blood count typically shows pancytopenia, while the bone marrow may show hemophagocytosis. Markedly elevated serum ferritin level is sensitive and specific for HLH diagnosis, especially in paediatric population. Without the therapy, mortality rate equals 100%.
Case Report: In October 2015, a 15-years old boy was referred to SUM clinic with suspicion of leukaemia. In medical history- non-productive cough, high fever resistant to antibiotics. Hospital examinations revealed splenomegaly, pancytopenia, hyperferritinemia, elevated inflammatory and hepatic markers. Due to preliminary diagnosis of haemophagocytic syndrome, the boy received immunoglobulin, but his condition got worse. With cardiopulmonary failure he was transferred to the intensive care unit. Doctors decided to implement HLH-2004 program of chemotherapy based on Cyclosporine, Etoposide and Solumedrol. Boy's condition stabilized and he continued the courses for 29 weeks without serious adverse effects. In May 2016 physical examination revealed 1,5cm in diameter, reddened tubercle over the left costal arch. In histopathology- Myeloid sarcoma, which is a very rare extramedullary manifestation of acute leukaemia or myelodisplastic syndrome. HLH-2004 protocol was exchanged with AML-BFM-2012. Chemotherapy was complicated by bone marrow aplasia and required intervals, but the boys continues the protocol.
Conclusions: „Cytokin storm syndrom" is still a non-well-known disease, often misdiagnosed with septic shock, while marking the serum level of ferritin may easily differ these conditions. A proper recognition leads to an effective treatment and saving patient's life. A strict controll and individualisation of the therapy is required as it was showed in the case of boy, who demanded a change of curative protocol due to the recognition of myeloid sarcoma during the chemotherapy of hemophagocytic lymphohistiocytosis.

Keywords: Haemophagocytic syndrome, myeloid sarcoma, pancytopenia, hyperferritinemia,

PITUITARY MACROADENOMA: A CASE REPORT

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Background: Ptuitary gland tumors are located at the base of the brain upon the hypophysial fossa of the sphenoid bone surrounded by sella turcica. Pituitray tumors compise approximately 10% of all primal brain tumors. They can be divided into several criteria. Due to local invasiveness and malice - non-invasive adenomas, invasive and cancers. Due to the hormonal activity (prolactinoma, somatotropinoma, thyrotropinoma, corticotropinoma) and tumors without hormonal activity. Because of the size - microadenomas (<1 cm) and macroadenomas (> 1 cm).
Case Report: A 58-year-old female patient after transsphenoidal microsurgery. Tumor was showed by MRI of the brain in the course of diagnosis of headache in 2008. The patient was again admitted to the hospital in 2012, due to severe headache, dizziness and vomiting. Control MR examination showed the progression of tumor's growth (35x23x21mm) in comparison to previous examination (20x18x22mm) and the tumor's stroke was excluded. The hormonal analysis showed no hormonal activity observed change. In connection with the emerging visual impairment, patient was qualified for surgery and operated in 01.2014. After the operation, hydrocortisone treatment was implemented. Assessment of function of the hypothalamic-pituitary was performed during the next hospitalization in 02.2014. It was found the correct alignment of hypothyroidism and observed high blood pressure. In connection with the high blood pressure, the treatment with Lacipil was included. On the grounds of proper secretion of ACTH and cortisol, the substitution with hydrocortisone was stopped. The next MR examination in 2016 showed no perceptible focal changes. Distortion and displacement of the pituitary and the crossing of the optic nerves. The patient is currently reported headaches of uncertain location, billateral tinnitus and persistent globus hystericus sensation.
Conclusions: Tumors of the pituitary gland can cause many symptoms resulting from hormonal activity and the effect of "tumor mass". It needs carrying out many of the necessary additional tests and medical consultations. Pituitary tumors are diagnosed by imaging methods and the assessment of hormone secretion. The most pituitary adenomas are benign with a small growth rate. The treatment of pituitary gland tumors depends on hormonal activity, size and the presence of other diseases or patient's age.

Keywords: macroadenoma, pituitary tumor

THE TREATMENT OF UNCONFIRMED HEPATOCELLULAR CARCINOMA RECURRENCE IN LIVER GRAFT WITH EVEROLIMUS - A CASE REPORT.

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Background: According to the European Association for the Study of the Liver and the European Organization for Research and Treatment of Cancer guidelines on management of hepatocellular carcinoma (HCC) liver transplantation is the first treatment choice for patients with small multinodular tumors (?3 nodules ?3 cm) or those with single tumors ?5 cm and advanced liver dysfunction. However, good outcomes in these patients are diminished by the problem of HCC recurrence or redevelopment in about 1 of 5 individuals.
Case Report: A 53 - year old man who underwent orthotopic liver transplantation for cirrhosis caused by chronic hepatitis C, which was complicated with hepatocellular carcinoma (HCC), was admitted to the hospital a year after the procedure due to decreased liver function in the last three months (GOT/GTP from 25/31 U/L to 180/226 U/L; GGTP from 45 to 369 U/L) and an isolated increase of AFP serum concentration detected in routine tests (from 1.8 ng/mL - 34.1 ng/mL). The patient had also a history of HCV infection recurrence in the graft. During next two months the significant elevation of tumor markers was observed: AFP - to 737.8 ng/mL, CA 19 - 9 to 418.9 U/mL and CA 125 to 230.9 U/mL. The liver biopsy and imagining scans (CT, MR, and USG of the testicles) were performed to verify the diagnosis of HCC recurrence or other neoplastic disease. However, none of them proved any visibile sign of neoplasia. In the meantime the immunosuppression regimen was modified by switching from tacrolimus to everolimus. The decrease of tumor markers was observed – to 15,7 ng/mL in two months. Five months after the first discussed hospitalization the patient was qualified to HCV recurrence treatment, which resulted in virus eradication.
Conclusions: The most commonly used conventional immunosuppressive drugs are calcineurin inhibitors, which have specific tumor-promoting activities, whereas mammalian target of rapamycin (mTOR) inhibitors, are an exceptional class of immunosuppressants with activities that can inhibit tumor growth, including antiangiogenic and antiproliferative effects. In this case of unconfirmed HCC recurrence the immunosuppression regimen modification - from calcineurin inhibitor to mTOR inhibitor - proved to be the most suitable clinical decision.

Keywords: HCC recurrence, liver transplantation

CHELADONIUM AND ALCOHOL INTOXICATION – A CASE OF 40 YEAR OLD MAN.

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Background: Chelidonium majus L., commonly known as tetterwort, or greater celandine is a herb that is very popular in Poland. The whole plant is toxic in moderate doses as it contains a range of isoquinoline alkaloids, however when used at the correct dosage it may show numerous therapeutic uses. The main alkaloid presented in the herb and root is coptisine that may cause liver damage. The main symptoms of Chelidonium intoxication are: pain and burning in the oral cavity, ptyalism, abdominal pain, diarrhoea (sometimes bloody). The most severe symtpoms like hypotension comes from cardiovascular system. Intoxication may also cause loss of consciousness. There were recorded some cases of death, when victim was a kid.
Case Report: We report a case of a 40 – year old male with a history of alcohol addiction, and a mild mental retardation who was brought to the ER by the rescue service at night. Patient told, that this night he was drinking alcohol and decided to pick some tetterwort in the garden and eat it, because as he said ,,something told him to kill himself". Admitted to hospital, he was conscious, remained hemodynamically stable, and didn't report any complaints, however he was very stimulated. The Blood Preasure was 130/85. Blood alcohol content was 2.61 g/l. Talking to psychiatrist patient was jesting, uncritical and denied the fact that he wanted to kill himself. A blood count test showed a mild anemia (HGB 12.5). Blood chemistry, gasometry, the level of liver enzymes and Electrocardiogram were normal, but AST/ALT ratio was on the level of 4, which confirmed alcohol addiction. The Patient was treated with: Dexaven, Multielectrolyte fluid, NaCl, 5 % Glucose, Midanium, Relanium, KCL and MgSO4. The patient was discharged home after two days, with recommendation of a later psychiatric treatment.
Conclusions: Cheladonium is a toxic herb, and eaten by children may even cause death. The patient, presented in a report was difficult to diagnose and cooperate because of the mental retardation but had luck not to suffer from any severe symptoms of intoxicatin such as liver damage, especially that he mixed Chelidonium with an alcohol.

Keywords: intoxication, Cheladonium, alcohol, toxicology

THE ONE DOES NOT PRECLUDE THE OTHER: DIABATES IN AN 12-YEAR-OLD PATIENT.

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Background: Diabetes is a chronic disease which, although heterogenous in etiopathogenesis, is always connected with detrimental impact on metabolic pathways in organism. In western world last decades regrettably saw a rise in the proportion of children suffering from overweight and obesity. As a result there is a remarkable growth in the numer of young patients diagnosed with diabetes type 2. Neverthless, without ignoring this trend, diabetes type 1 is still found significantly more often in the paediatric population.
Case Report: A 12-year-old boy with excess weight was admitted to the clinic in order to verify diabetes type 2 suspicion and to investigate further for metabolic disorders. Since he was 7 years old, incommensurate weight gain was observed. In the same age the patient was diagnosed with hypothyroidism- L-thyroxin replacement was ordered. Both parents suffer from diabetes type 2, a family history is also positive of arterial hypertension, dyslipidemia and obesity. Acanthosis nigricans- skin hyperpigmentation peculiar to insulin-resistant diabetes was visible in the area of the neck and the axillas. During his stay in the clinic the patient had oral glucose tolerance test (OOGT) with insulinemia measurement conducted. The analysis showed high blood glucose and hyperinsulinemia, what indicated insulin resistance and diabetes type 2. Serologic status typical for diabetes type 1 was also checked and revealed elevated antibodies level. Metformin therapy, balanced diet, glycemia monitoring and regular physical activity was ordered. During the follow-up visit significant weight loss was recorded (22 kg within 11 months). Additional testing revealed decreased insulin level and increased concentration of glycated hemoglobin. The patient was again admitted to hospital. Conducted tests showed the fall in pancreas' endocrine function. Intensive insulinotherapy was applied, followed by comprehensive diabetes education.
Conclusions: In children diagnosed with carbohydrate metabolism disorders it is vital to unveil the etiology of the defect. It must not be forgotten, that although the clinical picture corresponds with the diabetes type 2, with the passing of time insulin-dependent diabetes might also develop, especially when diabetes- specific antibodies were previosly present.

Keywords: diabetes, insulin-resistant, insulin-dependent, pediatrics, diabetology

AGGRESSIVE THERAPY IN AUTOAGGRESSION? THE WAY OF SURGICAL TREATMENT OF AUTOIMMUNE DISORDER

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Background: Hypoganglionosis is a rare disorder that is seen in about 5% of all neuronal intestinal malformations. It can coexist with Hirschprung disease (HD) or be an isolated condition. Among scientists there is a broad agreement that within Hirschprung disease and allied disorders (ADHD) hypoganglionosis is the most difficult entity to be diagnosed and distinguished from HD. The etiology of the pathological condition is not clear. It may be connected not only with defect in enteric neuronal precursor migration but also with later cells' death of unknown origin, for example autoimmunitive process. The condition has poor prognosis and often needs multiple surgeries. Enterocolitis of the newborn has been reported to be the most serious complication of isolated hypoganglionosis.
Case Report: 2,5-year-old boy was admitted to Department of Paediatric Surgery, Traumatology and Urology in Poznań due to recurrent gastrointestinal obstruciton episodes. During infancy he was diagnosed with HD and transanal rectosigmoid resection was performed. At the age of 18 months the patient presented with a few episodes of acute enterocolitis. Due to repeating entercolitis and subileus episodes the decision on performing laparotomy and exposuring end ileostomy was made. On admission in January 2016 the patient presented with strong abdominal pain and constipation. The next laparotomy was performed. Peritoneal adhesions were released and purulent intestinal content was evacuated. Mapping of the colon was performed because of suspicion of hypoganglionosis. During postoperative period there were no complications. Despite problems in feeding patient's diet was expanded. The boy also suffers from diabetes mellitus and celiac disease. It can enhance enterocolitis and leads to consideration of autoimmunitive origin of hypoganglionosis.
Conclusions: ADHD are complex problems and need advanced treatment delivered by experienced clinicians. In the presented patient the autoimmune etiology of coexisting problems cannot be excluded and affect the enteric nervous system contributing to hypoganglionosis. Not only hypoganglionosis but also suspected celiac disease can escalate entercoloitis and influence the condition of the patient.

Keywords: hypoganglionosis, Hirschprung disease and allied disorders (ADHD), autoimmune disorders, subileus epizodes, enterocolitis, diabetes mellitus, celiac disease

CONVERSION DISORDERS AS A DIAGNOSIS CHALLENGE – CASE REPORT.

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Background: According to the ICD -10 classification, conversion disorder is a psychiatric diagnosis among the dissociative disorders. In the current DSM - 5 classification, conversion disorder was retained, but given the subtitle: functional neurological symptom disorder. In both systems it is defined as a condition with neurological symptoms where no organic cause of the disease is detected. The most common motor deficits in patients with conversion disorder are tremors, weakness of limbs and gait disturbance. Psychogenic gait disturbance corresponds to approximately 3% of the movements' disorders but remain largely underdiagnosed, partially because its mechanisms are still unknown.
Case Report: We would like to present the case of a 17-year-old teenager being under the supervision of Department of Neurology University Children Hospital in Lublin due to clinical manifestations of a conversion disorder. At the time of admission conscious, fully oriented, no cardio-respiratory irregularities, without any signs of focal damage to the CNS with no evidence of neurological disorders, presenting periodic gait disorders imitating atactic gait. Diagnostics included CT and MRi of CNS, MR of spine LS, EMG, CK levels, spine X-ray, orthopedic and neurosurgical consultation - did not reveal any abnormalities. The psychological evaluation revealed: patient with a high level of anxiety related to recent life challenges, symbiotic mother – daughter relationship, high intensity of psychological denial mechanism. Patient had psychiatric treatment history with diagnosis of panic disorder (episodic paroxysmal anxiety),comorbid depressive symptoms. A detailed identification and measurement of the severity of the psychopathological symptoms were made with clinical interview and use of test methods: State Trait Anxiety Inventory – STAI, Questionnaire HSPQ (High School Personality Questionnaire) Belloff and Cattell, version B.
Conclusions: The purpose of our study is to highlight the importance of team approach between the pediatricians, neurologists, psychiatrists and psychologists in diagnosis and successful management of patients with conversion disorder. Collaborative management not only reduces the risk of missing an organic etiology by wrongly labeling illness as functional but at the same time involvement of mental health workers at the earlier stages of diagnosis helps in planning an appropriate psychotherapeutic intervention based on patient's needs.

Keywords: conversion disorder, dissociative disorder,

LUMBAR PAIN DIAGNOSTIC PROBLEM-CASE REPORT OF 17-YEAR OLD PATIENT WITH CHONDROSARCOMA MESENCHYMALE G2

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Background: Low back pain is a common symptom in the pediatric population; approximately 50% of children experience at least one episode of low back pain. The majority of cases are due to nonspecific causes such as musculoskeletal trauma with spontaneous regression. On some occasions, however, life-threatening diseases have to be considered. Sarcomas that arise from within the spinal canal are rare, particularly within the pediatric population. In general, these primary intraspinal sarcomas are highly aggressive, posing unique treatment challenges with respect to surgery and choice of adjuvant therapy. The goal must be to obtain the most complete resection possible to minimize the risk of recurrence and metastasis, while preventing potential neurological deficits.
Case Report: We would like to present the case of 17-year-old girl, being under the supervision of the Department of Neurology University Children Hospital in Lublin due to pain in the right lower extremity radiating to the back of the thigh, lower leg to the plantar surface of the foot (reported burning sensation feet), which appeared while walking for about three months, treated in outpatients with NSAIDS - no improvement. After 7 days, worsening of the clinical conditions was observed with bilateral gluteus paresthesia. Complained of urination and defecation disorders for several weeks .Medical history: presence of headaches. The girl at the admission suffering, with significant severe ailments, neurological examination: positive Laseque on the right side, gait disturbances, normal symmetrical upper and lower limbs tendon reflexes, no paralysis. During the hospitalization urgently done CT spine LS, and confirming MRI revealed on the right side of the S1-S2 pathological change of Tu character with massive calcifications, covering the soft tissue parts located outside the sacrum, adhearing to them from the right side and penetrating the right side of the spinal canal. The consultation showed the need for neurosurgical treatment. Diagnosis was chondrosarcoma mesenchymale G2.
Conclusions: Our case demonstrates the importance of prompt identification of diagnostic "red flags" in childhood low back pain, indicating the need for diagnostic investigations such as MRI and blood tests.

Keywords: chondrosarcoma mesenchymale, lumbar pain

DANDY-WALKER SYNDROME - CASE REPORT.

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Background: Dandy-Walker syndrome is a group of congenital brain malformations,described for the first time in 1921 by pioneer of posterior skull cavity surgery, Walter Edward Dandy. Its characteristic include an enlargement of the fourth ventricle which may lead to increased intracranial pressure, complete absence of the cerebellar vermis and the posterior midline area of cerebellar cortex resulting in problems with muscle coordination, and cyst formation near the internal base of the skull. Recently the syndrome is also associated with disorders which include absence of corpus callosum and other congenital malformations. Caused by genetic mutation in locus 3q22-q24, Dandy Walker syndrome is suspected to be highly related to ciliopathies, class of genetic disorders of the cellular cilia or basal bodies of the cell, such as policystic kidney disease, Kartagener syndrome.
Case Report: 8 year old boy with epilepsy, cerebral palsy, microcephaly, profound mental retardation was admitted to the Department of Neurology of Children University Hospital in Lublin in order to perform CNS MRI under general anesthesia. During admission in good general condition, physical examination without evidence of infection, neurological examination spastic quadriparesis with dominance in lower extremities, patient doesn't walk, sit, speak. MRI of CNS revealed hydrocephalically broadened ventricular system, asymmetric (especially prominent dominant left temporal horn extended to 22mm, the right to 12mm, 3rd ventricle 10mm diameter). Thinning of the layer of periventricular white matter. Increased fluid space in the posterior skull cavity. Aplasia of the vermis and the two hemispheres of the cerebellum. Visible only residually preserved vermis and the right hemisphere of the cerebellum. Very narrow corpus callosum, strained by extended ventricular system. The image corresponds to the Dandy-Walker syndrome. Expanded fluid space in area of the frontal, parietal and temporal lobes. Hippocampus structure without pathological signals. Within the intracranial structures no evidence of pathologic strengthening after the administration of paramagnetic contrast agent. The patient consulted neurosurgically - at the moment no proposals for surgery.
Conclusions: We would like to present this case of Dandy-Walker syndrome due to its rarity (1 case for 30 000 live births), difficulties in prenatal diagnosis and current rapid development in correlations with other genetic diseases.

Keywords: Dandy-Walker syndrome, genetic disorder, ciliopathy

POST-OPERATIVE COMPLICATIONS AFTER CRANIOPHARYNGIOMA RESECTION - CASE REPORT

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Background: Craniopharyngioma - rare in occurrence (2/100 000), usually suprasellar neoplasm, which develops from Rathke's cleft - the nests of epithelium derived from Rathke's pouch, the embryonic precursor of the anterior pituitary. Although the name "cranopharyngioma" was used for the first time by Harvey Cushing in 1932, the first cases of this benign tumor were described by Friedrich Albert von Zenker in 1857. Craniopharyngioma is one of the most challenging tumours for neurosurgeons, with history of multiple controversies regarding pathophysiology, surgical approaches and peri-operative care throughout history. With the introduction of modern technologies mortality rates improved from 100% to less than 5%, and the complete resection from 20% to 90% in less than a century. We also must underline the importance of neurologists, endocrinologists, opthalmologists, who are often the first ones to suspect the diagnosis of the intracranial neoplasia due to the patients symptoms, such as bitemporal hemianopia, symptoms of hypopituitarism and increased intracranial pressure.
Case Report: We would like to present the case of 13-year-old patient, complaining for 1.5 years before the first hospitalization of periodic headaches. Since June 2012, a significant increase in pain, nausea, vomiting, problems with vision, especially on the right side was observed. Head MRI revealed a large tumor, most likely of a craniopharyngioma type, filling the third ventricle, coming down the clivus, compressing the pons and entering the sella turcica,hardly compressing the nerves and optic chiasm, especially on the right side, and causing large obstructive hydrocephalus . Boy operated in Department of Neurosurgery in Lublin on 11/28/2012, with a surgery -fronto-temporo-pterional craniotomy, where the tumor was completely removed. The patient is under the care of the Department of Endocrinology Children Hospital in Lublin because of hypopituitarism and Department of Neurology Children Hospital in Lublin because of observations in the direction of epilepsy.
Conclusions: Due to the rare occurrence of the craniopharyniomas, difficult treatment, as well as inevitable post-operative complications requiring multidisciplinary approach (anterior pituitary hormone deficiency in 76%, diabetes insipidus in 45%, seizures in 16% of patients) we would like to present this case report.

Keywords: craniopharyngioma, hipopituitarism, epilepsy

CONGENITAL MALFORMATIONS OF CNS - CASE REPORT.

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Background: CNS malformations occur during embryonic life and period of differentiation of organs at the time of the exposure of teratogenic factors on migratory rapidly dividing cells. These defects are determined by many factors, mutations are most commonly associated with effect of the exogenous factor on the embryo. Pachygyria - thick convolutions of brain cortex, and polimicrogyria - excessive folding of the brain gyri, are defects which lead to mental retardation, epilepsy, muscle weakness. Polimicrogyria comprises a genetic mutation of microtubules -TUBA1A TUBB2B, pachygyria is associated with mutations LIS1 - responsible for autosomal form of lissencephaly and doublecortin mutations associated with X-linked disorders.
Case Report: 4-year-old girl, patient history: IUGR, respiratory syndrome disorder, hyperbilirubinemia, hematoma of right adrenal gland, congenital urinary and CNS defects, right hip dysplasia. dysmorphic facial features, delayed psychomotor development, neurological examination: left-hand spastic paresis, increased tension of left upper and lower limbs, laxity in the axis, walks with help for 3 months, crawls and sits alone, delayed speech development. The MR of CNS revealed defects of the brain in the form of: brain cleft (diam. 6mm) open on the right side, shows a connection with the right frontal horn, probably lateral cleft of the brain. Heterotopy of gray matter along the right lateral ventricle, left side of the brain cleft- closed type. Changes of polimicrogyria and pachygyria. Expanded right lateral ventricle width. 22 mm, III ventricle narrow. Expanded temporal horn of the left lateral ventricle up to 17mm. Without pathological strengthening after the administration of contrast agent. EEG - in the normal range to the age. Neurosurgically consulted - no indication for surgery. Genetic diagnostics revealed the presence of duplication of the short arm of the X chromosome in locus Xp21.3, in second exon of the gene ARX, previously described in patients with hypotension, intellectual disability, dysarthria, epilepsy.
Conclusions: We would like to present a case of a patient with the syndrome of congenital anomalies to draw attention to the need for a detailed diagnosis of patients with CNS defects, in order to prevent future consequences and the implement appropriate rehabilitation treatment and control the progression of neurological disorders.

Keywords: congenital malformations, pachygyria, polimicrogyria

GORLIN-GOLTZ SYNDROME– A RARE CASE OF COMPLEX RIB ANOMALIES

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Background: Gorlin-Goltz syndrome is a autosomal dominant genetic disorder, it occurs at a rate of 1 in 150 000 to 1 in 50 000. It involves numerous and complex anomalies including osseous, cutaneous, dental deformation and ophthalmic, neurological and sex organs abnormalities. The genetic basis of this disease involve abnormalities within the long are of the 9th chromosome (q22.3-q31) with PTCH1 gene involved. Patients with Gorlin-Goltz syndrome are at higher risk of developing malignant carcinomas and therefore this syndrome should be readily diagnosed.
Case Report: 51 years old male patient was referred to Nuclear Medicine Department for PET/CT due to skin cancer – 4 lesions were surgically removed prior to the imaging. Pathomorphological analysis revealed carcinoma basocellulare. A routine base of the skull – mid thigh PET/CT was performed. It revealed multiple abnormalities on both sides of the thoracic cage, namely three bifurcated ribs on the right and three bifurcated, one rudimentary rib and one bridge on the left. Additionally a significant scoliosis of thoracic vertebrae was noted as well as one cyst in maxilla and two in mandible. No sites of increased glucose intake were present – all malignant lesions were surgically excised.
Conclusions: Rib anomalies are quite frequent, occurring at a rate of about 1-1.5% of general population. Those related to Gorlin-Goltz syndrome comprise only small portion of this group, but unlike most of rib abnormalities those cases are connected with additional anomalies and what is the most important increased risk of cancer.

Keywords: Gorlin-Goltz syndrome, PET/CT, carcionoma basocellulare, bifurcated ribs

Doctoral students` session

THE OPG/RANKL SYSTEM AND BONE GEOMETRICAL PROPERTIES IN GROWING RATS WITH EXPERIMENTAL CHRONIC KIDNEY DISEASE.

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Introducion: The extremely important complication of kidney diseases is the chronic kidney disease-mineral and bone disorder (CKD-MBD). Recent studies have shown that CKD-MBD appears to have an adverse impact on bone quality through alternations in bone turnover and mineralization whereas bone quantity is affected through changes in bone volume. Growing body of evidence revealed that the osteoprotegerin (OPG) and receptor activator of NF-?B ligand (RANKL) play a significant role in the pathogenesis of CKD-MBD. The aim of the study was to determine the association between OPG/RANKL system and bone geometrical properties in growing rats with experimental CKD.
Methods: The animals were randomly divided into two groups: sham-operated and subtotal nephrectomized rats. One and three months after surgery serum samples were obtained for biochemical analysis and left femurs were collected for determination of bone geometry. Soluble RANKL (sRANKL) and OPG were measured in serum, homogenates from trabecular and cortical bone tissue.
Results: : Trabecular and cortical OPG was increased in CRF in comparison to control three months after surgery, whereas trabecular sRANKL was increased one month after nephrectomy. We observed positive correlation between trabecular OPG and femur weight, femur length, anterior-posterior periosteal diameter (H), medial-lateral periosteal diameter (B), anterior-posterior endosteal diameter (h), medial-lateral endosteal diameter (b), wall thickness (WT), cross-sectional area (CSA) and cross-sectional moment of inertia (CSMI), whereas trabecular sRANKL was negatively correlated with femur weight, femur length, H, B, h, b, WT, CSA, CSMI, cortical index (CI) and mean relative wall thickness (MRWT). Cortical OPG was positively associated with femur weight, H and h, whereas cortical sRANKL inversely with femur weight, B, WT, CSA, CI, CSMI and MRWT.
Conclusions: In young, rapidly growing rats OPG and sRANKL exerts opposite effect on bone geometrical properties in experimental CKD.

Keywords: Osteoprotegerin, RANKL, mineral and bone disorder, chronic kidney disease

ANTHRANILIC ACID – UREMIC TOXIN CONTRIBUTING TO ALTERATION OF FIBRINOLYSIS IN PATIENTS WITH CHRONIC KIDNEY DISEASE ON CONSERVATIVE TREATMENT.

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Introducion: Chronic kidney disease (CKD) promotes the occurrence of hemostatic disorders. The effect of continuous loss of renal function is a progressive accumulation of uremic toxins. Anthranilic acid (AA) is derived from tryptophan uremic toxin exerting proinflammatory and prooxidative properties, which affects proper maintenance of hemostatic balance. We examined the association between AA concentrations and alteration of the fibrinolytic system in predialysis patients with CKD.
Methods: Studies have been conducted on a group of 48 patients with CKD on conservative treatment and 18 healthy volunteers. For the determination of parameters of fibrinolysis ELISA-immuno-enzymatic kits were used, whereas the AA levels were determined by HPLC. The hematological and biochemical parameters were assessed using standard laboratory methods.
Results: AA concentration was several times higher in CKD patients compared to controls ($p<0.0001$). Parameters of fibrinolysis: urokinase receptor (uPA), soluble urokinase-type plasminogen activator receptor (suPAR), tissue plasminogen activator (tPA), plasminogen activator inhibitor-1 (PAI) and plasmin-antiplasmin complex (PAP) in a uremic group were significantly higher than in control group ($p<0.05$; $p<0.0001$). AA levels were positively correlated both with CKD markers and uPA, suPAR, as well as PAI-1 ($p<0.05$, $r>=0.3$), and negatively correlated with levels of tPA and this result was also statistically significant ($p<0.05$, $r>=0.3$). Moreover, we found an inverse correlation between AA and some hematological parameters and biochemical parameters.
Conclusions: The results demonstrate a strong relationship between AA and fibrinolytic activity in CKD patients. It opens a new idea that tryptophan metabolites can play an important role in the occurrence of thrombotic cardiovascular events in CKD patients.

Keywords: anthranilic acid, fibrinolysis, chronic kidney disease, hemostasis, kynurenine pathway

PROTHROMBOTIC PROPERTIES OF INDOXYL SULFATE IN ANIMAL MODEL OF ARTERIAL THROMBOSIS.

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Introducion: Retention of uremic toxins in patients with chronic kidney disease negatively affects cardiovascular system. Indoxyl sulfate (IS) is one of uremic toxins that exerts aggressive and multidirectional impact on the body, and is linked with higher risk of cardiovascular disorders occurrence. However, mechanism underlying IS association with thrombotic cardiovascular events is not fully understood. The purpose of the study was to evaluate the impact of IS on thrombus formation in animal model and aggregation in vitro
Methods: We evaluated IS effect on parameters of blood morphology and hemostasis, and collagen-induced platelet aggregation. We also assessed impact of three IS doses: 3, 10 and 30 mg/kg b.w. i.v. on arterial thrombosis induced by direct electric current in Wistar rat's model.
Results: Blood morphology parameters were not affected by IS. In turn, IS doses 10 and 30 mg/kg b.w. decreased activated partial thromboplastin time (APTT) ($p<0.01$; $p<0.0001$) and only 30 mg/kg b.w. influenced fibrinogen ($p<0.01$), prothrombin time (PT) ($p<0.05$) and thrombin time(TT) ($p<0.01$). None of tested IS doses affected ATIII. Collagen-induced platelet aggregation was exacerbated by IS. We noticed increase in amplitude ($p<0.05$), slope (p?0.05) and AUC ($p<0.001$), and drop in lag time of aggregation ($p<0.05$; $p<0.001$). Moreover, we observed that two highest IS doses increased weight of arterial thrombus in a dose-dependent manner ($p<0.001$).
Conclusions: : Our results suggest that IS affects hemostatic system and its effect is dose-dependent. In addition, IS activity is directed toward creating prothrombotic state. Thus, we hypothesize based on obtained data that IS is one of crucial toxins promoting thrombotic events in uremic patients. This work was supported by funds from Polish National Science Centre 2015/17/N/NZ4/02334.

Keywords: indoxyl sulfate, coagulation cascade, thrombosis, rats, chronic kidney disease

DO STANDARD THERAPIES AFFECT MDSC IN PATIENTS WITH PROSTATE CANCER?

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Introducion: Myeloid derived suppressor cells (MDSC) are a heterogeneous population characterized by their myeloid origin, immature state, and ability to suppress immune response, revealed by suppression CD4+ and CD8+ T cells and induction of regulatory T cells. Among others, MDSC contain populations of monocyte (Mo-MDSC) and granulocyte (Gr-MDSC) origin, identified within the PBMC (peripheral blood mononuclear cells) as CD11b?HLA-DR-CD14+CD15- or CD11b?HLA-DR-CD14-CD15+ respectively. In cancer, MDSC are often associated with poor prognosis and reduction the effectiveness of therapies. Prostate cancer (PC) is the second commonest male`s malignancy in Poland. The treatment strategy for PC depends on the stage of the tumour and covers surgery, radiotherapy, chemotherapy and hormone therapy. Unfortunately, the available treatment options are still not giving satisfactory results.
Methods: Flow cytometry analysis of PBMC isolated by density gradient centrifugation of peripheral blood in BD CPTTM tubes from 21 adult patients with PC and 17 adult healthy controls was performed. Immunophenotyping of MDSC was conducted using the following monoclonal antibodies: anti-CD11b-BV510, anti-CD14-FITC, anti-CD15-PECY7, anti-HLA-DR-PerCp. Populations of MDSC were characterized as HLA-DR-, CD11b+, CD15+ or CD14+, describing granulocyte and monocyte MDSC, respectively.
Results: This study demonstrated the expansion of Mo-MDSC subset in peripheral blood of PC patients. There was no difference between the untreated and treated patients (surgery, radiotherapy, chemotherapy), however patients with hormone therapy had higher level of Mo-MDSC in peripheral blood when compared to other groups.
Conclusions: The standard treatment of PC has no effect on the level of Mo-MDSC in peripheral blood. Increased amount of Mo-MDSC in patients with hormone therapy may be related to the advanced stage of disease in this group of patients (palliative therapy). These preliminary results indicate that MDSC could be taken into consideration as a potential biomarker in the treatment of PC.

Keywords: Prostate cancer, myeloid-derived suppressor cells, flow cytometry

PROTECTIVE EFFECT OF AN EXTRACT FROM ARONIA MELANOCARPA BERRIES AGAINST CADMIUM-INDUCED DNA DAMAGE IN RAT LIVER

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Introducion: Cadmium (Cd) is a heavy metal belonging to the most dangerous environmental and occupational pollutants in industrialized countries. Oxidative damage to DNA is one of the adverse effects of Cd exposure. Due to the strong antioxidative properties of polyphenols, these compounds are considered as an effective method to prevent against Cd-induced oxidative injury of cellular macromolecules, including DNA, and cellular structures. The aim of this study was to examine if consumption of a polyphenol-rich extract from Aronia melanocarpa berries may prevent Cd-induced DNA damage in the liver of rats chronically exposed to this toxic metal.
Methods: Female Wistar rats were administered a 0.1% aqueous extract from Aronia melanocarpa berries as a drinking fluid and/or Cd in a diet (1 and 5 mg/kg) for up to 24 months. The isolation of hepatocytes' DNA was performed by using Nuclear Extraction Kit (Cayman Chemical). The concentration of 8-hydroxy-2'-deoxyguanosine (8-OHdG; the main marker of oxidative DNA damage) was measured by using Bioxytech 8-OHdG EIA Diagnostic Kit (Percipio Biosciences).
Results: The low exposure to Cd (1 mg/kg diet) resulted in an increase in the concentration of 8-OHdG after 17 and 24 months of exposure, whereas the application of the aronia extract completely prevented this xenobiotic-induced elevation of 8-OHdG concentration. The exposure to 5 mg Cd/kg diet led to an increase in 8-OHdG concentration after 10, 17, and 24 months of exposure. The administration of the polyphenol-rich extract from Aronia melanocarpa berries during the higher exposure to Cd also completely prevented this metal-induced increase in the liver 8-OHdG concentration.
Conclusions: Based on the results of this study, it can be concluded that administration of the polyphenol-rich extract from Aronia melanocarpa berries under low and moderate exposure to Cd may prevent from oxidative damage to DNA and thus the injury of the liver.

Keywords: cadmium, Aronia melanocarpa, liver, oxidative stress, DNA damage

THE EXPRESSION OF RECEPTOR FOR ANGIOPOIETIN (TIE-2) ON THE SUBPOPULATIONS OF MONOCYTES IN CHRONIC LYMPHOCYTIC LEUKEMIA (CLL)

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Introducion: Among the population of circulating monocytes, the subpopulation characterized by the expression of receptor for angiopoietin (Tie-2) are worthy of noticing. These monocytes named TEM constitute about 20% of the population of monocytes in physiological conditions. Their number may increase under conditions of immune dysregulation such as cancer. TEM migrate to increased concentrations of Angiopoietin 2 (Ang-2), a growth factor released by activated endothelial cells and newly formed blood vessels of the tumor, but also neoplastic B lymphocytes in CLL. TEM cells exhibit proangiogenic properties. They release bFGF - a cytokine involved in process of angiogenesis. In this way they contribute to tumor progression. The aim of this study was to evaluate the expression of CD14+Tie-2+ molecules on the classical, intermediate and non-classical monocytes of patients with CLL.

Methods: The study included 50 patients with CLL and 15 healthy volunteers. The subpopulations of Tie-2 expressing monocytes were analyzed by the flow cytometry. The material for the study, a peripheral blood, was collected into tubes Heparin.

Results: The percentage of CD14+Tie-2+ monocytes in CLL patients was significantly higher compared to the proportion of these cells in control group ($p<0,001$). The median number of CD14+Tie2+ monocytes in CLL patients reached the value of 8,85%, in contrast to 2,74 % in the control group. In addition, it has been shown statistically significant positive correlation between the percentage of CD14+cells Tie-2+, and the percentage of intermediate monocytes (CD14++CD16+) ($p<0.05$). The highest percentage of monocytes with the expression of Tie-2 has been shown among the intermediate monocytes CD14++CD16+(median: 16,85%) and the lowest among non-classical monocytes CD14+CD16++ (median: 3,83%).

Conclusions: The percentage of TEM among monocyte population is significantly higher in the case of CLL patients compared to healthy subjects. In patients with CLL, monocytes can be an important source of factors that may affect the survival of leukemic cells. Recent studies have demonstrated that intermediate monocytes are a subpopulation with angiogenic properties. To sum up, TEM cells are a subpopulation of monocytes, which favors the development of cancer. The outcomes of this study seem to confirm the major role that TEM monocytes play in the pathogenesis of CLL. They indicate the immunosuppressive and tumor promoting properties of this subpopulation of monocytes.

Keywords: chronic lymphocytic leukemia, TEM, subpopulations of monocytes

NOVEL SALICYLAMIDE DERIVATIVE WITH POTENTIAL ANTIPSYCHOTIC-, ANTIDEPRESSANT- AND ANXIOLYTIC-LIKE ACTIVITY

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Introducion: Schizophrenia is a severe mental disorder which affects more than 21 million people worldwide, resulting in considerable disability. Moreover, depression and anxiety are symptoms very often coexist with psychosis. The main limitations of available antipsychotic drugs are their undesirable side effects as well as inadequate treatment efficacy. Consequently, there is an urgent need to develop novel antipsychotic agents. The aim of this study was to evaluate potential antipsychotic-, antidepressant- and anxiolytic-like activity of novel salicylamide derivative with high affinity against 5HT1A, 5HT7, 5HT2A and D2 receptors.
Methods: The hyperlocomotion induced by amphetamine and MK-801 were performed to evaluate the potential antipsychotic-like activity of tested compound. To develop potential antidepressant-like activity the forced swim test and the tail suspension test were carried out. Moreover, potential anxiolytic-like activity was investigated in the four plate test and the plus-maze test. The locomotor activity test was conducted to verified if obtained results were specific. All experiments were performed using adult male mice and approved by Local Ethics Committee.
Results: The tested compound reversed the hyperlocomotion induced by amphetamine and MK-801 in mice, which indicate its potential antipsychotic-like activity. Moreover, it reduced the immobility time in forced swim test and tail suspension test in mice, suggesting potential antidepressant-like activity. Additionally, it showed potential anxiolytic-like effect in performed experiments. The compound did not affect locomotor activity in mice, what suggest that observed effects were specific.
Conclusions: The obtained results suggest that the tested compound possesses potential antipsychotic-, antidepressant- and anxiolytic-like activity in behavioral tests in mice. Further studies are necessary to develop full pharmacological profile and mechanism of action of novel salicylamide derivative, which could be a new candidate for the schizophrenia treatment.

Keywords: schizophrenia, depression, anxiety, salicylamide derivative, behavioral studies

MONITORING OF KIDNEYS FUNCTION IN KIDNEY TRANSPLANT RECIPIENTS USING CONCENTRATION OF URAEMIC TOXINS: P-CRESOL SULPHATE AND INDOXYL SULPHATE

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Introducion: Chronic kidney disease (CKD), recently named as one of the disease of affluence, is a challenge for the twenty-first century medicine. CKD often leads to irreversible kidney injury and in consequence to kidney transplantation. Nowadays, monitoring of patients condition after transplantation is mainly based on evaluate of estimated glomerular filtration rate (eGFR). eGFR is calculated by using concentration of serum uraemic toxin – creatinine, excreted from human body mainly through glomerulus. eGFR is parameter with many limitations. Decrease of eGFR occurs after damage of 50% of active nephrons. Moreover, eGFR depends on e.g. muscle mass, age, sex, race and diet. P-cresol sulphate (pCS) and indoxyl sulphate (IS) are different kind of uraemic toxins, concentration of which in serum correlate with the stage of chronic kidney disease. In contrast to creatinine, these substances are excreted only through proximal tubule. The aim of this study was to monitored kidneys function in renal transplant recipients uraemic toxins concentrations: pCS and IS.
Methods: Material used in this study was serum collected from 60 kidney transplantation recipients. Patients who belongs to the study group had transplantation between one and five years before examinations. Procedure was repeated about six months after first collection. Concentrations of uraemic toxins were determined using the mass spectrometer QTRAP®4000 (AB SCIEX, Framingham, Massachusetts, U.S.).
Results: The concentration of IS in serum decreased after six month from 2.0±2.6 μg/ml to 1.6±2.4 μg/ml ($p<0.0001$). There was no statistically significant differences between the concentration of pCS.
Conclusions: Decreasing concentration of indoxyl sulphate shows that kidney functions in patients after kidney transplantations are improve in time. Further researches on the appropriateness of extending the monitoring in this group of patients for an additional parameter: pCS and IS are required.

Keywords: kidney, renal transplantation, uraemic toxins, p-cresol sulphate, indoxyl sulphate

Gynaecology and Obstetrics

THE DIFFERENT RESPONSE OF MALE AND FEMALE FETUSES TO VIBRATORY ACOUSTIC STIMULATION TEST

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Introducion: There are various clinical tests for assessment of fetus condition to diagnose endangered fetuses and prevent from fetal and neonatal death. One of the tests used to assess the health of fetus is Non Stress Test (NST); Vibratory Acoustic Stimulation (VAS) is applied to reduce nonreactive cases and the time of NST and to wake the fetus up while sleeping. This study aims to investigate the different response of male and female fetuses to VAS test in the Clinic of Gynecology and Obstetrics in Tonekabon, Iran, in 2015.
Methods: One hundred women (56 male and 44 female fetuses) with gestational age of 32-40 weeks were included in this study through random sampling. The pregnant women lay on the flank and NST was carried out before the VAS, then fetus's head was stimulated for 3 seconds from over the uterus by using an electric toothbrush and NST was performed again. The time required to achieve the result of NST was recorded in the prepared checklist. The data analyzed with paired T-test and one-way ANOVA in SPSS19.
Results: The average reaction time of NST in female fetuses proved to be lower (108.2 seconds?) than male fetuses (50.26 seconds?). Paired T-test indicated that there was a more statistically significant difference between the mean reaction time of NST before and after VAS in women with female fetuses (P=0/014). However, in women with male fetuses there was no statistically significant difference between the mean reaction time of NST before and after VAS (P=0/175).
Conclusions: The hearing center in the brain of the fetus is formed at 26-28 weeks of pregnancy, thus VAS's response indirectly confirms the health of brain stem and the auditory nerves in the fetus, especially in the female fetus which plays an important role in the prediction of fetal health and can replace Biophysical Profile.

Keywords: Vibratory Acoustic Stimulation, Non Stress Test, fetus

THE RELATIONSHIP BETWEEN SOCIODEMOGRAPHIC FACTORS AND THE QUALITY OF LIFE PATIENTS TREATED FOR INFERTILITY.

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Introducion: The problem of infertility affects a growing number of couples. Many of these people decide to use methods of assisted reproduction, which change the natural process of fertilization. The problem with getting the child, the treatment process and its costs can significantly affect the balance in the lives of patients. The aim of the research was to study relationship between quality of life and sociodemographic factors such as age, sex, place of residence and education.
Methods: The study included 80 people using the methods of assisted reproduction. The research was performed by diagnostic poll via our own questionnaire and the questionnaire Polish version FeriQoL International. In the study group was 76.3% of women and 23.8% men. In the group of respondents urban residents consisted 67.5% of the respondents, while the village was 32.5% of the respondents. The average age of all respondents was 33.26 years. The main part consists of FertiQoL subscales such as: emotional, biological, social and partnership.
Results: Place of residence and education significantly affect the lives of patients receiving treatment for infertility. Higher scores on all subscales achieved, patients living in the city and having a higher level of education. The study shows that there was no correlation between sociodemographic factors such as age or gender and quality of life of people treated for infertility.
Conclusions: Scientific reports from around the world report about growing problem of infertility. It is obvious that these patients need help. According to our research these couples should be approached individually because it is not a homogeneous group.

Keywords: infertility, quality of life, assisted reproduction

TRANSFORMATION OF ENDOMETRIOSIS INTO ENDOMETRIOSIS-ASSOCIATED CANCERS: MICROENVIRONMENTAL, MOLECULAR AND GENETIC ASPECTS

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Introducion: Endometriosis is an estrogen-dependent, benign, chronic inflammatory disease. It affects up to 15% women of reproductive-age. The etiology of the disease is unclear and is in focus of many studies. Although it's a benign condition, certain characteristics of endometriosis are shared with malignancies specifically: local and distant metastasis, attachment, unrestrained growth, damage of affected tissues, invasion and angiogenesis. Numerous studies and researches have evaluated the risk of these gynecological cancers deriving from endometriosis. Our aim is to understand the relationship between endometriosis and endometriosis related cancers in the microenvironmental, molecular and genetic aspects. Comprehension carcinogenic related mechanisms can be valuable in understanding the nature of the disease. Carcinogenesis in endometriosis should be also further studied in order to develop more accurate biomarkers to predict or detect carcinoma in endometriotic women and distinguish cancer risk group for prevention.
Methods: PubMed database were searched, until September 2016. The terms combined in the database were "endometriosis", "cancer", "ovarian cancer", "endometrial cancer", "gene mutation", "TNF', in variable combinations. Additional relevant articles and hand searches of reference lists were also performed.
Results: Two main histologic types of cancer are observed as a result of transformation of endometriosis: endometrioid and clear cell carcinoma. The link between endometriosis and carcinogenesis in endometrium and ovary has been well-established. Several significant genetic biomarkers and molecular changes have been discovered and have the potential to be applied in the future so that to serve as cancer predictive biomarkers. These potential biomarkers of predictive and simultaneously protective value include: ARID1A, BAF250a, PTEN in ovarian cancer; TNF-alpha, COX-2, ratio of ER beta/alpha and PR beta/alpha, TNF p55 and p75 receptors.
Conclusions: The patients with endometriosis are at higher risk and have higher rate of cancer than those free of the disease. The are several significant genetic, immune and molecular alteration in this group of patients. We must advise and stress the need of regular gynecological examination especially in endometriotic patients.

Keywords: Endometriosis, ovarian cancer, endometrial cancer, genetic mutation, carcinogenesis

SOCIAL AND ECONOMIC FACTORS DETERMINING SUPPLEMENTATION DURING THE PREGNANCY

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Introducion: Proper diet during pregnancy is vital for health of mother and child. Unfortunately, only small percentage of pregnant women use dietary supplementation. It becomes important to determine factors, which are related with women's attitude to supplementation and its quality during the pregnancy. The objective of this study was to assess supplementation in pregnant women depending to their socio-economic status and education level.
Methods: A population based study was performed on a group of 450 pregnant women in Silesian Voivodship. The questionnaire, created for the purpose of the study, included questions about pregnant women feeding habits.
Results: Completed questionnaires were obtained from 327 women (72,6%), average age 30±5,6 yrs. Dietary supplementation during the pregnancy were declared by 84,5% of pregnant women. 85,7% of women begun supplementation after conversation with doctor, 13,3% did it independently. Most of supplements were folic acid, vitamin specimens, iron and omega-3 acids specimens. A woman holding a university degree, compared to not having higher education, applied supplementation more often (91% vs. 80%; p=0,003) and took more preparations (11% vs. 1%; p=0,0001). Among pregnant women 93% state, that diet has an impact on child development. Internet, as a source of information was used more often by women with satisfactory (64%) and moderate (63%) economic status, in comparison to women in poor economic status (40%; p=0,04).
Conclusions: Socio-economic factors and education level of pregnant women are important determinants of patients' attitude and frequency of supplementation during pregnancy. Pregnant women with higher education and better material status more frequently and consciously took supplements.

Keywords: pregnant women, dietary supplementation, social and economic factors

ORAL HORMONAL CONTRACEPTIVE PILLS AMONG JAGIELLONIAN UNIVERSITY COLLEGIUM MEDICUM MEDICAL STUDENTS - THE USE AND THE LEVEL OF KNOWLEDGE COMPARING DIFFERENT YEARS OF STUDY

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Oral hormonal contraceptive pills among the Jagiellonian University Collegium Medicum medical students - the use and the level of knowledge comparing different years of study

Introducion: To estimate the use and the knowledge about oral hormonal contraceptive pills among the Jagiellonian University Collegium Medicum medical students, the authors carried out a questionnaire among 589 students from each year of the six-years course concerning those two topics.
Methods: The authors carried out a two-parts questionnaire among 589 students (voluntary participation): informative (sex, self-estimated level of knowledge about OCPs, use of OCPs in student or student's partner, approach towards recommending to the patients, student's satisfaction from the number of facts concerning OCPs presented during university classes, opinion on the necessity of increasing the number of hours dedicated to the topic during courses) and test of knowledge (12 multiple choice questions with 5 possible answers, one correct – each awarded with 1 point, maximum score 12 points). In the statistical analysis chi2 test and method of ordinary least squares in a linear regression model were used. The level of statistical significance was $p<0,05$.
Results: The number of students declaring that they or their partner had been using OCPs was: 12 Ist year [13,19%] (of which 6 female), 24 IInd [24%] (of which 15 female), 29 IIIrd year [29,59%] (of which 19 female), 24 IVth year [24%](of which 15 female), 56 Vth year [56%] (of which 40 female) and 53 VIth year [53%] (of which 41 female). Mean result in the test of knowledge was: Ist year - 7,4 points [61,63%], IInd year - 8,23 [68,58%], IIIrd year - 10,89 [90,73%], IVth year - 9,54 [79,50%], Vth year 10,31 - [85,92%], VIth year - 11,38 [94,83%] ($p<0,05$); average men: 9,04 [75,33%]s, women 9,96 [83%]($p<0,001$).
Conclusions: The number of Jagiellonian University Collegium Medicum medical students using or having partner which used OCPs rises with the year of study. The knowledge about OCPs shows positive correlation with more advanced year of study, female sex, positive attitude towards recommending method to the patients, personal use or having a partner which used OCPs.

Keywords: oral hormonal contraceptive pills, OCPs, medical students, Jagiellonian University, Collegium Medicum

EVALUATION OF STEROID PROPHYLAXIS AND THEIR INFLUENCE ON CTG AND MONAKO PARAMETERS AND CONDITION OF FETUS IN IUGR COMPARED TO EUTROPHIC FETUSES.

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Introducion: Administration of steroids during pregnancy before 34 hbd accelerates fetus'es lungs maturity and stimulates surfactant production, therefore it protects premature neonates against infant respiratory distress syndrome. The question to consider is: how steroids affect fetal heart rate fluctuations and for how long period these changes are harmless to fetus. The aim of the study was to compare influence of steroids on CTG and MONAKO records performed after following doses of steroids in IUGR and eutrophic fetuses and reffering to adequate gasometric samples of neonatal blood.
Methods: The survey was conducted on 153 patients divided into two groups: control group (A) 110 pregnancies with fetus body mass adequate to its age; study group (B) 43 cases with IUGR. Including criteria was: pregnancy between 28-35 hbd and steroids prophylaxis performed.
Results: Study group was additionally defined by biometric maturity below the 10th percentile. Bradycardia after steroids occured more frequently in control group 26,6% vs 18,6% in gruop A. After the first dose of steroids significantly lower bradycardia was noticed in group B 106 vs 113 b/min; in group A; p=0,0001). FHR decrease after first dose of steroids was bigger in control than in study group (141vs 133 u/min; p=0,0001). Average STV value after second dose of steroids was significantly lower in group B than in group A(3,88 vs 8,13ms; p=0,006). Oxygen partial pressure was higher in study group(59,35 vs 38,5 mmHg; p=0,001).
Conclusions: In the light of the results, it seems that chronic intrauterine oxygen deficiency that IUGR fetus undergo, translates into better tollerancy of prophylactic steroidotherapy as softer FHR changes and less often bradycardia.

Keywords: IUGR, Steroidotheraphy, CTG, MONAKO

EVALUATION OF CTG AND DIGITAL FETAL MONITORING MONAKO RECORDS DURING PREGNANCIES WITH INTRAUTERINE GROWTH RESTRICTION (IUGR) WITH NEONATAL OUTCOME.

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Introducion: Over the last few years the computerized fetal surveillance system - CTG, has revolutionized the perinatal care. Digital CTG permits the fetus state evaluation to be more precise and faster. The estimated frequency of hypotrophy in the world neonate population is 3-10%. Perinatal mortality among hypotrophic neonates is 4-10 times higher than in eutrophic neonates. The question to consider is: if the usage of digital CTG MONAKO systems in IUGR cases is beneficial to the neonatal outcome?
Methods: 143 pregnancies with IUGR from 2013-2016 were analyzed. The survey was conducted on a group of 90 women with CTG and MONAKO records. 47 of the patients were made the digital CTG MONAKO and CTG with visual evaluation. The control group consisted of 43 patients, who only had the CTG with visual evaluation made. The inclusion criteria were: pregnancy between 28-40hbd and biometric maturity below the 10th percentile.
Results: Asphyxia occured with lower frequency in the study group than in the control group (10,64%vs 20,94%). Asphyxia unveiled in the correct records of CTG more often in the control group than in the study group (0%vs 9%)(n=41; p=0.03). IMV was carried out more often in the control group than in the study group (14%vs8%). The number of STV' records < 3.0ms was (44.7%). STV' < 3.0 ms correlated positively with IMV (r=0.89; p=0.02), RDS (r=0.84; p=0.04) and respiratory failure of neonate (r=-0.43; p=0.005). BD was statistically significantly higher in the control group than in the study group (p=0.04). Time of hospitalization after labour was shorter in the study group for the range of 34-37hbd and average was (7.9vs12.7 days, p=0.004), whereas in other age groups there were no statistically significant differences.
Conclusions: In the light of the results, it seems that the digital analysis of CTG MONAKO recordings eliminates errors occurring during the visual evaluation of CTG. MONAKO record allows faster assessment of the life-threatening conditions of the fetus and quicker decision to perform a caesarean section

Keywords: MONAKO, IUGR, cardiotocography

EVALUATION OF HISTOLOGICAL MALIGNANCY AND A PRESENCE OF NODAL METASTASES AND THEIR INFLUENCE ON THE AREA OF LYMPHADENECTOMY IN PATIENTS WITH CERVICAL CANCER

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Introducion: There are 3000 new cases of cervical cancer in polish population yearly. The dynamic development of oncological surgery procedures in the last 20 years made it possible to use more radical treatment in high-grade cancer. The most common surgical procedure in treating cervical cancer (FIGO stages IA2 – IIA2) is Wertheim procedure. In cervical cancer, metastases in paraaortic lymph nodes are present in 16% of patients. Basing on this information, it is suggested, that Wertheim procedure should be accompanied by paraaortic lymphadenectomy in cervical cancer treatment. Because of the morbidity, there is a question of patients' selection for lymphadenectomy. Is it really necessary in all of the cervical cancer cases?
Methods: The group of 400 patients with cervical cancer, who underwent Wertheim procedure between 2003 and 2015 in the referential oncological center, has been analyzed. 233 patients have been included in further analysis. Mean age was 51,69 (SD +/- 11,55). Most of the patients-94,4%, had squamous cell carcinoma, 5,6% had adenocarcinoma. Patients have been divided into two groups: low-grade (G1andG2) and high-grade(G3) cervical cancer and the frequency of aortal and pelvic lymph nodes metastases have been compared. Statistical analysis was performed with Statistica 12.
Results: The low-grade cervical cancer has been found in 83,26% (194) of patients and high-grade in 16,74% (39). In patients with low-grade cancer 18% (35) had metastases in all analyzed localizations, 8,76% (17) in paraaortic lymph nodes and 16,49% (32) in pelvic lymph nodes. In patients with high-grade cancer metastatic lymph nodes have been found in 30,8% (12), 15,4% (6) and 30,77% (12) respectively. The difference in frequency between high and low-grade groups has been statistically significant (p=0,04) in pelvic lymph nodal metastases, but not in the paraaortic ones.
Conclusions: In the light of above results, it seems paraaortic lymphadenectomy should accompany every Wertheim procedure, because the frequency of aortic metastases was not related to the histological grade of cancer. Diagnosis of low-grade cancer is not enough to exclude the possibility of aortic metastases.

Keywords: Lymphadenectomy, cervical cancer, metastases

PAP SMEAR ADEQUACY AND ACCURACY IN WOMEN THAT UNDERWENT ANTI – INFLAMMATORY TREATMENT.

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Introducion: Test for cervical cancer screening (Pap test) is usually obtained by conventional smear. The adequacy of smear depends on presence of inflammatory cells or erythrocytes. Cooperation of gynaecologists and pathologists is necessary to minimize false negative and false positive results.
Methods: We reviewed conventional smears from 581 women that had Pap test repeated after anti – inflammatory treatment in years 2013 – 2015. In all these patients the initial smears were inadequate for diagnosis due to intense inflammation. In 63 cases the infective agent was identified in initial smear.
Results: In a group of 93/581 (16%) patients smears were still inadequate for diagnosis due to intense inflammation. In 488 smears the adequacy was obtained for proper diagnosis. 471/488 smears (96,5%) were diagnosed as negative. 90/488 (18,44%) were within normal limits. 314/488 smears (64,34%) were adequate for diagnosis with benign reactive changes associated with inflammation. In 52 women (10,65%) presence of erythrocytes, cytolysis of low cellularity were observed. 17 smears in group of 488 were diagnosed as positive (3.48%). ASCUS was diagnosed in 3 women, LSIL was diagnosed in 9 cases, ASC-H and HSIL were equally diagnosed in 2 cases each and in one smear squamous cell carcinoma was present.
Conclusions: Our analysis showed that anti – inflammatory therapy in cases where smears were inadequate for diagnosis improved adequacy and accuracy of conventional cytology. Diagnosis of positive smears (including cancerous cells) suggests that employment of anti – inflammatory treatment followed by repeated cytology is highly reasonable.

Keywords: cytology, Pap smear, adequacy, cervical cancer

THE INCIDENCE OF DEPRESSION AND METABOLIC DISORDERS AMONG PATIENTS WITH POLYCYSTIC OVARY SYNDROME

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Introducion: Polycystic ovary syndrome (PCOS) is the most common reproductive endocrinopathy. It has been postulated that the incidence of depression among patients with PCOS could be related to metabolic disorders.The aim of the study was to asses correlation of prevalence and severity of the depressive symptoms and matabolic disorders among women with PCOS.
Methods: 73 patients aged mean 28 years with BMI mean 25,7 kg/m2 with the diagnosis of PCOS according to the Rotterdam 2003 criteria hospitalized in the Department of Gynecological Endocrinology. Exclusion criteria: history of depression, antidepressive medications, other causes of hiperandrogenism (non- classic adrenal hyperplasia, hypercortisolemia, virilising tumors), diabetes mellitus, hypogonadotropic hypogonadism. The diagnostic methods included: standard laboratory and ultrasonography testing necessary for the PCOS diagnosis, body mass index (BMI) calculation, Homeostatic model assessment (HOMA factor), Oral Glucose Tolerance Test (OGTT). The study and control groups completed questionnaries: Quick Inventory of Depressive Symptomatology (Self-report), PHQ9, Beck Depression Inventory (BDI).
Results: The frequency of depressive syndrome among patients with PCOS was from 25% (PHQ98) to 55% (QIDS). The study group was divided into: PCOS group with depressive symptoms and PCOS group without depression. BMI>25 kg/m2 was detected in 61,9% of depressive patients and only in 25% of group without depression. Impaired glucose tolerance was found in 9,52 % and 13,52% pts in those subgroups respectively, not statistically significant. There was no significant difference between the subgroups in the following parameters: HOMA factor, insulin and glucose at 0’ and 120’ of OGTT. The only statistically significant correlation was found between the BMI values, which were higher among pts diagnosed depressive according to BDI: median 28.0 (Q1=23.5, Q3=33.0) vs 23.0 (Q1=20.0, Q3=24.5), p=0.0047 in the Mann-Whitney-Wilcoxon test.
Conclusions: Disorders of glucose metabolism do not correlate with occurrence of depression among patients with PCOS. The only significant difference was higher BMI among patients with depression. Thus, it should be further investigated whether patients' satisfaction with their appearance is not the factor influencing the occurrence of depression.

Keywords: PCOS, depression, metabolic disorders

INFLUENCE OF PRE-PREGNANCY BODY MASS INDEX ON THE OBSTETRIC OUTCOMES AND BIOELECTRICAL IMPEDANCE ANALYSIS IN WOMEN IN THE POST-PARTUM PERIOD

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Introducion: There has been an alarming rise in the incidence of overweight and obesity worldwide. Over-weight is defined as the body mass index (BMI) 25–29.9 kg/m2, whereas obesity is BMI >=30 kg/m2. The number of overweight and obese women at reproductive age is also increasing in many countries. The prevalence of maternal obesity has more than doubled from 7.6 to 15.6% over the last two decades.The aim of the study is to compare the obstetric outcomes and bioelectrical impedance analy-sis (BIA) in women in the postpartum period in relation to pre-pregnancy BMI (PPBMI).
Methods: The study participants (76 mothers, who delivered in the Chair and Department of Obstetrics and Perinatology, Medical University of Lublin) were divided into two groups: 1. group (n=59) -mothers with PPBMI<24.9 kg/m2 2. group (n=17) -mothers with PPBMI >=25 kg/m2 The methodology includes the results of questionnaires conducted among mothers regarding their lifestyle, activities, and medicaments used during pregnancy. Maternal body composition and hydration status were assessed by BIA (BCM; Fresenius Medical Care) at 48-72 hours after delivery. Statistical analysis was performed using the Mann-Whitney, ?2 test, and cross tabulation. A p-value <=0.05 was considered statistically significant.
Results: The comparison of maternal age (29,3 vs. 30,9 years), birth weight (3303,7g vs. 3467,6g), Apgar score (9,5 vs. 9,4 points), mode of delivery (vaginal or Cesarean delivery), body cell mass (18,0 vs. 18,3) as well as free fat mass index (12,1 vs. 12,2) did not reveal statistical significance between two groups. Lower fat tissue index (13,8 vs. 18,9; p<0,0001), adipose tissue mass (33,8 vs. 53,2; p<0,0001), and total body water (32,0 vs. 37,5; p< 0,001) as well as larger related free fat tissue mass (i.e. free fat tissue mass/weight; 49,7% vs. 39,5%; p<0,001) were observed in the group of patients with PPBMI<24,9 kg/m2.
Conclusions: BIA is a standardized technique, which is non-invasive, fast and, therefore, well tolerated by patients. BIA seems to be a valuable and useful tool in the assessment of maternal body com-position and hydration status. Larger concentration of fat mass was observed in the mothers with PPBMI >=25 kg/m2.

Keywords: Bioelectrical impedance analysis (BIA), Body mass index (BMI), overweight, pre-pregnancy BMI (PPBMI), postpartum period

MATERNAL AND NEONATAL OUTCOMES AS WELL AS BIOELECTRICAL IMPEDANCE ANALYSIS IN THE EARLY PUERPERIUM DEPENDING ON GESTATIONAL WEIGHT GAIN

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Introducion: The Polish Gynecological Society and the Institute of Medicine recommend to measure the weight of the pregnant patient during outpatient visits. Gestational weight gain (GWG) should be calculated according to pre-pregnancy body mass index (PPBMI), i.e.: • for underweight women (PPBMI < 19.8): 12.5-18 kg, • for patients with normal weight (PPBMI of 19.8 to 24,9): 11.5-16 kg • for overweight women (PPBMI of 25 to 29,9): 7-11.5 kg, • for obese patients (PPBMI > 30): GWG should not exceed 7 kg. The aim of the study is to compare the obstetric outcomes and bioelectrical impedance analysis (BIA) in women in the postpartum period in relation to GWG.
Methods: The study participants (72 mothers, who delivered in the Chair and Department of Obstetrics and Perinatology, Medical University of Lublin) were divided into two groups: 1. group (n=38) -mothers with normal GWG 2. group (n=34) -mothers with excessive GWG The methodology includes the results of questionnaires conducted among mothers regarding their lifestyle. Maternal body composition and hydration status were assessed by BIA (BCM; Fresenius Medical Care). Statistical analysis was performed using the Mann-Whitney, ?2 test, and cross-tabulation analysis. A p-value <=0.05 was considered statistically significant.
Results: The comparison of maternal age, number of pregnancies, Apgar score, and free fat tissue index did not reveal statistical significance. Lower neonatal birth weight (3132,6g vs. 3575g; p<0,01), fat tissue index (11,9 vs. 18,2; p<0,0001), total body water (31,2 vs. 35,5; p<0,0001), adipose tissue mass (33,0 vs. 43,3; p<0,0001) and body cell mass (17,6 vs, 18,8; p<0,05) were observed in the group of mothers with normal GWG. Eating habits during gestation period were changed by 60,5% women in the first group and only 38,2% patients with excessive GWG (p<0,05).
Conclusions: Despite diagnostic significance and safety BIA is rarely used in women in the postpartum period. Due to high prevalence of excessive gestational weight gain this method seems valuable in promoting healthy lifestyle and proper weight reduction after delivery in those patients. Normal gestational weight gain was connected with proper modification of diet during pregnancy.

Keywords: Gestational weight gain, bioelectrical impedance analysis, postpartum period, eating habits, fat tissue index, total body water, adipose tissue mass, body cell mass

LAPAROSCOPIC ISTHMOCELE TREATMENT – SINGLE CENTER EXPERIENCE.

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Introducion: A cesarean section is the most often performed surgery in the modern obstetrics. In case of incorrect wound healing process there is a risk of persistent uterine wall defect. Nowadays, due to so many cesarean sections, obstetricians have to deal with the threat of uterine rupture due to the pathological wound healing. It has been also proven that isthmocele can cause abnormal uterine bleeding (AUB), pelvic pain (PP), secondary infertility (SI) and can be a place of improper pregnancy placement.
Methods: In this manuscript we present the single center experience of isthmocele therapy. We operated 16 patients who suffered from abnormal uterine bleeding, pain disorders or secondary infertility possibly due to cesarean scar defect. In each of the patients we implemented a special diagnostic and therapeutical algorithm. Patients filled out the questionnaire with an emphasis on gynaecological and obstetric history. Each patient was examined by palpation and after that referred for a detailed transvaginal ultrasound scan in order to confirm the diagnosis. After obtaining an informed consent each patient was offered a surgical, laparoscopic isthmocele repair.
Results: Results obtained in our center are promising. In 9 of 11 (81.8%) women with abnormal bleeding we obtained complete resolution of symptoms. We have slightly worse results in case of pelvic pain. In 4 of 6 (66.6%) patients the pain resolved completely. We have obtained 7 pregnancies in 11 (63.6%) patients operated due to secondary infertility.
Conclusions: In our opinion, laparoscopic treatment seems to be currently one of the most effective methods in isthmocele therapy, especially when thinking about patient with multiple complaints as pain, infertility of AUB. The presented laparoscopic technique allows the complete correction of isthmocele and improves patient well-being. Further investigations are needed to better determine the indications for surgery, suitable treatment strategies, and appropriate care.

Keywords: isthmocele, cesarean scar defect, cesarean section, laparoscopy

THE IMPACT OF INFERTILITYON MENTAL HEALTH AND FEMALE SEXUALITY OF THE WOMEN UNDERGOING THERAPY OF ASSISTED REPRODUCTIVE TECHNOLOGY.

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Introducion: Depression is an important problem all over the world as well asin Poland. More than 1 million couples struggle with infertility. The aim of the study is to evaluate infertile women'sfrequency of depression and theirsex life quality.
Methods: The studyinvolved 191 female out-patients of Gyncentrum,aninfertility treatment clinic,andthe patients were divided into two groups: (A) 135 infertile women without any symptoms ofdepression and (B) 56 infertile women with symptoms of depression. The authorsused BeckDepression Inventory (BDI), The Female Sexual Function Index (FSFI) and demographic information. The studywas conducted with permission of the Bioethical Committee of Medical University of Silesia. Statistical analysis usedStatistica 12.0. Interpretation of statistical significance was based on criterion $p< 0,05$.
Results: The survey revealed the presence of depression in 56 women (29%) and sexual dysfunction in 41 women (21.5%). The group of women who presented symptoms of depression was observed more frequent sexual dysfunction ($Chi2 = 21,51$; $p = 0.00001$). In addition, negative Pearsons' correlation wasreported between the amount of test Beck and the average pointsnumber in FSFI scale. Among the FSFI domains scale, significantly lower scores were in group (B) than (A) ($p>0.5$). Sexual dysfunction was significantly more frequent in women who had undergone miscarriage (34% vs 20%, $p <0,05$). The results of our study showed a significantly higher frequency of endometriosis among women in group (B) (21%) than (A) (9%) ($p = 0,03$).
Conclusions: Depression isasignificant problem among infertile women. Sexual dysfunction affects mostly women with depression.

Keywords: infertility treatment, depression, sexual satisfaction

PREVALENCE OF PREMENSTRUAL SYNDROME AND PREMENSTRUAL DYSPHORIC DISORDER AMONG POLISH WOMEN.

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Introducion: Physical discomfort or dysphoria in the weeks before menstruation affects most women of reproductive age . Symptoms vary from mild to severe enough to substantially affect daily activities. About 5–8% of women from other countries suffer from severe premenstrual syndrome (PMS); majority of these women also meet criteria for premenstrual dysphoric disorder (PMDD). Tha aim of the study was to asses the prevalence and severity of PMS and PMDD among polish women.
Methods: Collected data from an online survey of 1,412 regurarly menstruating women aged between 18-44 years (mean 24,3 ± 4) with access to social media was used in analysis. In the first part of questionnaire we collected the sociodemographic data. The second part consist of questions about daily symptoms of PMS and PMDD according to American College of Obstetricians and Gynecologists (ACOG) criteria and the criteria included in Diagnostic and Statistical Manual of Mental Disorders 5 (DSM 5). Women rated symptoms on a six-point scale from 1 (absent) to 6 (extreme amount of symptom).
Results: Of the 1412 participants, 1344 women (95.2%) complained of some of the premenstrual symptoms during the last 12 menstrual cycles. About 10,6% of them suffer from other psychiatric disorders including major depressive disorder, panic disorder, dysthymic disorder, or a personality disorder. According to ACOG criteria the frequency of severe PMS was 17,1%, while the frequency of PMDD according to DSM-5 criteria was 7,4%. The prevalence of moderate to severe PMS was 38,4%, however 55,6% women asses subjectively that they need medical intervention, but only 5,5% consulted a doctor. The most frequent were physical complaints (breast tenderness, headache, weight gain, bloating), which occurred in 94,6% of women, followed by tearfulness (94,1%) and irritability (93,8%).
Conclusions: In the present study, the prevalence of PMDD was 7,4%, which allows us to estimate that 1 milion 471 thousand women may suffer from this syndrome, while moderate to severe PMS affects almost 8 milion polish women. Surprisingly, only 78 out of 785 participants who has at least moderate PMS sought specialist consultation. Appropriate recognition of disorder and its impact should lead to treatment of more women with PMS/PMDD

Keywords: Premenstrual syndrome, premenstrual dysphoric disorder

Head and Neck Diseases, Dentistry

THE QUALITY OF LIFE AND HEARING AMONG PATIENTS AFTER BONE ANCHORED HEARING AID IMPLANTATION (BAHA)

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Introducion: Hearing loss is a major health problem in the XXI century. According to the World Health Organization hearing loss affects about 5.3% of general population, 91% of which are adults. There are lots of ways of hearing aid, one of which is bone anchored hearing aid (BAHA). Currently 110,000 users with a BAHA implant are registered worldwide. The aim of this study is to assess the quality of life and hearing of patients with BAHA.
Methods: Medical records of 34 patients who underwent surgery between 2008-2015 at the A. Mielęcki Department of Otolaryngology SPSKM have been analyzed. The study group consisted of 19 women (56%) and 15 men (44%) at age of 26-75 years old. The average age of patients was 49.7 years. The following questionnaires were used: The Abbreviated Profile of Hearing Aid Benefit (APHAB) and The Glasgow Health Status Questionnaires (GHSQ) which have been modified and adapted to the study group. Subjective feelings of patients were compared with results of audiometry tests before and after implantation, which consisted of comparing the hearing thresholds for air conduction at 250Hz, 500Hz, 1 kHz and 2 kHz. The following factors: age, elapsed time since the implantation, time of daily usage, degree of hearing loss to the quality of hearing after procedure and questionnaires results were correlated.
Results: The average time of use of the implant was 7.32 hours per day. The implant hasn't been used in last 12 months by 5 patients. Average benefit in the APHAB questionnaire was 20.48 %. Average satisfaction level with the results of operation according to the GHSQ questionnaire was 25,41 %. It was estimated that the higher subjective gain from BAHA the higher was satisfaction from procedure. Results of questionnaires compared with audiometric results have not shown correlation.
Conclusions: The study exhibited significant increase of life quality among patients with BAHA despite lack of correlation of threshold tonal audiometry’s results with subjective improvement of hearing.

Keywords: BAHA, hearing, loss, temporal, bone

AWARENESS OF THE OCCURRENCE OF ANTERIOR TEETH DAMAGE AND DENTAL PROTECTOR USAGE AMONGST MUSICIANS PLAYING WIND INSTRUMENTS.

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Introducion: Musicians playing wind instruments (WI) are exposed in particular to anterior teeth damages. Incautious insertion or applying mouthpiece into the mouth may cause excessive toothwear, cracking of enamel, incisal edge chipping, fractures or even excessive tooth mobility. To protect anterior teeth, proper dental protectors are therefore being recommended. The aim of this study was to evaluate both the frequency of damage occurrence in anterior teeth and the level of awareness of using dental protectors amongst musicians playing WI.
Methods: A survey was conducted among 1,067 musicians playing WI, from 49 countries. Detailed questions were asked about damage and excessive tooth mobility in anterior teeth (caused by WI playing) and incidence of the need for fixed restorations. Respondents also replied questions about the ability of making dental protectors and if they own one what kind of protector is it.
Results: 1,067 people aged between 10-80 participated in the survey. 86% of respondents have been playing a WI for at least 6 years. 49,7% practice everyday, of which 32,6% play 1-2h a day and 47,9% play 2-4h a day. Excessive tooth mobility was noted by 27,2%. 9,3% claim that playing a WI caused damage to their anterior teeth. 26,1% confirmed they have fixed restorations in their anterior teeth. Among respondents 19% knew about the possibility of making a dental protector, but only 11,3% (2,2%of the total) of them actually own one. Most of them are individual protectors. Statistical analysis was performed.
Conclusions: Musicians playing WI are at higher risk of earlier and more frequent damage to their anterior teeth. The prevalence of these problems could be minimalized by appropriate prophylaxis (e.g. creating an individual dental protector). This study indicate, however, that this method of preventing teeth damage is used by only a small group of respondents. Musicians playing WI require specific dental care.

Keywords: anterior teeth damage, dental protector

DISEASES AND DISORDERS OF THE TEMPOROMANDIBULAR JOINTS AMONGST MUSICIANS PLAYING WIND INSTRUMENTS.

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Introducion: There are different kinds of wind instruments (WI). Playing them requires muscle tension and also the need to maintain the mandible in unusual, forced position, both of which may cause problems in the area of temporomandibular joints (TMJ). Regardless of the type of WI played, all disorders remain similar. The aim of this study was to understand problemsa and disorders, which musicians playing WI around the world suffer from, linked to the TMJ.
Methods: 1,067 musicians from 49 countries participated in a survey. Questions regarding time of playing, method for blowing into a mouthpiece, TMJ symptoms e.g. occurrence of pain in area of TMJ, limitation of mandible movement, crunches or popping in the TMJ and also about excessively worn down teeth, grinding or habitually clenching teeth as well as frequency of headaches, muscular pain around head and neck were asked in order to determine disorders of TMJ among musicians playing WI.
Results: Musicians aged 10-80 participated in the survey. 86% respondents have been playing WI for at least 6 years. 49,7% practice everyday, of which 32,6% play 1-2h a day and 47,9% play 2-4h a day. 19,3% of respondents complain of daily TMJ problems with 7% admitting to feeling TMJ pain while playing their instruments, 15% notice mandible movements limitation while playing and 8,5% notice crunches, popping in TMJ. About 16,1% reports worn down teeth. 31% confirms to grind or habitually clench teeth. 68% report having headaches and 24,7% of those have them once a week or more
Conclusions: The study revealed that musicians who play WI are a group of patients who may present disorders of the TMJ or head and neck muscle movement system. Reported symptoms indicate that playing a WI may predispose the individual to the occurrence of disorders within the TMJ, including myofascial pain as well as degenerative conditions.

Keywords: temporomandibular joints, wind instruments, problems

INFLUENCE OF BACKGROUND ON VISUAL MATCHING PRECISION

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Introducion: Accurate restoration colour matching to tooth shade is important during conservative and prosthetic treatment in order to obtain satisfying aesthetic effect. Factors that may influence colour matching precision are matching person' gender, age, experience and defects of vision, temperature and light intensity during colour matching, and also the background (BG) on which the shade was chosen. The aim of this study was to determine the influence of gender and age of the subject being examined, as well as BG colour, on colour matching precision.
Methods: Examinee's (50 people) were asked to match into pairs compatible colours from three VITA Classical shade guides (2 out of 3 were used during each matching), one by one on five BG corresponding to different clinical situations (white, beige, red, green, black). The study was conducted in identical lighting conditions.
Results: The examined group consisted of 35 women (70%) and 15 men (30%), aged 19-31 (M=23,3; SD=1,85). Overall, the proportion of correctly recognized shades was 51.1%. Depending on the BG colour, correct recognition ranged from 43.4% (red BG) to 62.6% (beige BG). The effectiveness of fifth year students and trainees was found to be significantly higher in comparison to their younger colleagues (p=0,029). Representatives of both genders made the best matching of colours on a beige BG. The worst results were shown by women on black and red BG (p=0,0018), and by men on red and green BG (p=0,0031).
Conclusions: The best BG colour for matching shades is beige. Colour should therefore be matched against a BG of other teeth or beige tiles. Colour matching on a red BG (e.g. lips or tongue) should be avoided. In spite of common convictions, gender has no significant impact on precise colour matching. Broader experience is far more conducive to proper colour matching.

Keywords: BACKGROUND, VISUAL MATCHING PRECISION, COLOUR, TOOTH SHADE

DEEP NECK SPACE INFECTIONS.

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Introducion: The infections of head and neck area can spread among deep space neck. For correct assessment of inflammatory changes and providing the risk of spread the infectious is very important to know their location and connections. Head and neck inflammation can be life- and health-threatening situation. They are characterized by dynamics and can imitate a lot of different disease. For that reason, image diagnostics is the most important part of the treatment.
Methods: 14 sufferers from a variety of deep neck area infection were admitted to the Otolaryngology and Laryngological Oncology Department in Lublin in 2014 - 2015. The group of patients consisted of 11 men and 3 women at the age of 18-69. Each of them had at least one typical clinical exponent of inflammation: increased body temperature, redness, swelling, pain and increased CRP. All patients had similar symptoms such as pain and swelling of the neck. Dysphagia developed in 12 patients and respiratory distress in 4 patients. The patients were referred for CT scans of the head and neck. All examinations were carried out using a contrast medium in the layers of 1.2 mm in the tissue and bone window from the base of skull to the level of aortic arch.
Results: The exact location and size of inflammatory lesions was determined on the base of CT scan with contrast. In 6 patients diagnosed with an abscess, in 1 an infiltration of the retropharyngeal space, in 4 cases an inflammatory process in the parapharyngeal space. All patients received antibiotic therapy. In 10 patients surgical treatment was introduced. Consequently, in all cases the local and general recovery were obtained. The mortality rate was 0%.
Conclusions: Thanks to CT scan, the patients suffered from deep neck space infections can be properly diagnosed and included in appropriate treatment.

Keywords: head and neck, inflammation, CT scans, deep neck

SPECTROPHOTOMETRIC SHADE ANALYSIS OF ANTERIOR TEETH OF DIFFERENT ETHNIC GROUPS OF DENTISTRY STUDENTS

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Introducion: The study of tooth color is an integral part of esthetic dentistry and therefore it should be given the highest importance in dentistry in order to achieve the esthetic requirements of patients. The research was conducted in order to evaluate the most frequent tooth color shade among three distinct populations of dentistry students and its relationship with gender and type of tooth.
Methods: Ninety volunteers (40 females, 50 males) aged 19 - 32 years; all of them students (Polish, Saudi and Taiwanese) at the Dental Faculty of Medical University of Lublin in Poland were recruited in this study. The teeth selected for color measurements were the maxillary and mandibular central incisors, lateral incisors and canines. The subjected teeth were scanned via the spectrophotometric device to measure Vita Classical shades of each examined tooth. All 16 shades which had been documented, were categorized based on their frequencies in nationality, gender and group of teeth examined.?
Results: For the Vita Classical shade guide, A3.5 shade was the most frequently chosen in Taiwanese and Saudi students' teeth with a number about 75 teeth in Saudis and 82 teeth in Taiwanese. However, the most common shade observed for the anterior teeth of Polish students was A3 with 54 teeth. The most common shade among males was A3.5 with 122 teeth. However, in females A3 was the most frequent shade and the least common C4. In contrast, D4 was the least common shade among males. The least frequent shade for central incisors was B4. In all 360 lateral incisors, D3 was the most frequent shades for this group of teeth. Almost half of the number of canines in this study was measured with A3.5 shade.
Conclusions: Based on this representative nationality of dentistry students' population it was observed that Polish students tend to have brighter teeth than Saudis which in turn shows also brighter teeth than Taiwanese students. It was also noted that men are more likely to have darker shade values than women. Central incisors have higher values of tooth color than other teeth.

Keywords: tooth color, spectrophotometer, anterior teeth

THE INFLUENCE OF PLAYING WIND INSTRUMENTS ON THE CONDITION OF THE STOMATOGNATHIC SYSTEM – A SURVEY AMONG MUSICIANS

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Introducion: Playing wind instruments may cause numerous abnormalities affecting the stomatognathic system. Such abnormalities involve various afflictions within the temporo-mandibular joint increasing the tooth mobility, and also changing the position of anterior teeth. The pressure of air blown out while playing may also cause inflammatory changes in dental pulp.
Methods: The anonymous online survey performed between April and October 2016 consisted of demographic questions, information about oral hygiene among the musicians and abnormalities affecting the stomatognathic system that may be caused by playing wind instruments.
Results: In total, 112 musicians (16 to 45 years of age), 66 women and 46 men, from 16 provinces in Poland were surveyed.. In the sample group, 74 subjects (66%) declared playing an instrument at least 4 times a week from 1 to 8 hours a day (a mean of 2 hours and 48 minutes a day). In the sample group, 5 subjects (4.5%) brushed their teeth less than once a day whereas 50% of them regularly attended follow-up dental appointments. Furthermore, 102 (91%) subjects assessed their knowledge of oral health with at least 3 in the scale from 1 to 5. Clicks and pain in the parotid region related to instrument playing occurred in one-third of the subjects. In addition, 40 subjects (36%) have noticed changes in the position of anterior teeth since they have started playing an instrument, and 20 subjects (18%) declared an increased tooth mobility. Finally, 22 subjects (20%) declared a decrease in the sensitivity of anterior teeth to hot/cold food.
Conclusions: A significant part of surveyed musicians reported symptoms affecting orofacial structures which may be caused by playing wind instruments.

Keywords: musicians, wind instruments, stomatognathic system

QUALITY OF LIFE OF PATIENTS WITH COCHLEAR IMPLANT

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Introducion: Profound hearing loss has a significant impact on quality of life of the deaf. Cochlear implant (CI) is one of the common ways of hearing prosthesis in patients with profound sensorineural hearing loss or deafness. The aim of the study is to assess the quality of life of patients after cochlear implant surgery on the basis of audiological results and subjective feelings of the patients.
Methods: 32 patients with cochlear implants, of which 26 previously used hearing aids, were included in the study. Glasgow Benefit Inventory – GBI and Abbreviated Profile of Hearing Aid Benefit – APHAB questionnaires were applied to assess quality of life of patients with assistive listening devices and the benefits of their usage. Audiological results before and after the surgery were analysed. The socio-demographic variables, cause of deafness, time of its occurrence and elapsed time since the implantation were assessed. The results were analyzed using Statistica programme.
Results: The results show that speech understanding has improved in most patients. They positively assess their decision to implant a CI and its usefulness in everyday life.
Conclusions: This analysis indicates that the use of cochlear implant made it possible for the patients to achieve tangible hearing benefits, which contributed to improving the quality of life and self-esteem. However, some technical problems, that need to be solved in the near future, still occur.

Keywords: hearing loss, cochlear implant, hearing aids, audiometry, quality of life

STRUCTURE AND PROPERTIES OF TEETH ORIGIN HYDROXYAPATITE – POTENTIAL AUGUMENTATION MATERIAL IN SMALL BONE DEFECTS.

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Introducion: Augmentation of alveolar bone process loss is more commonly used surgical procedure, from here the great interest of researchers concerning on new technological solutions in that area.
Methods: 16 teeth were included into examination in accordance with selection criteria. Tooth were preparated using authors' standards (cleaning, rinsing, sintering) and divided into two separate research groups. First group of tooth material was grinded, the second was grinded and sintered into powdered form. Control group was commercially available HA-based augumentation material. Material's structure and features were examined by scanning electron microscope (SEM), spectrophotometry and differentia calorymetry.
Results: The difference in electrical conductivity was observed. For the samples obtained from synthetic hydroxyapatite, conductivity was lower than from natural hydroxyapatite. Teeth orgin composites samples had 26,1 % weight loss in calorimetry. The observations using a scanning electron microscope confirmed that with increasing milling time reduces the grain size of the powder but the structures of composites (teeth vs synthetic) are totally different.
Conclusions: The main aim is to find materials which are cheap, easy to manufcture and autogenic. Teeth origin hydroxyapatite shows a hopeful prospect in clinical use.

Keywords: augumentation material, alveolar bone loss, hydroxyapatite, teeth

THE NEED FOR ENDODONTIC TREATMENT IN PATIENTS UNDERGOING INTEGRATED DENTAL TREATMENT

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Introducion: Integrated treatment of patients, that is cooperation of dentists of various specialties in the treatment and rehabilitation of masticatory apparatus, is becoming a standard work. The patient undergoes a complex therapy in the field of periodontics, surgery, conservative dentistry and endodontics, prosthodontics, and in some cases, orthodontic treatment.
Methods: The basis for the study was the medical documentation of 100 patients who came to the clinic of the Chair and Department of Conservative Dentistry with Endodontics of the Medical University of Lublin in the period from 2014 to 2015 and were classified for the integrated dental treatment. Among the examined patients there were 49 men and 51 women. The following age groups were defined: 0-20 years – 3 patients; 21-40 years – 38 patients; 41-60 – 48 patients; 61-80 years – 11 patients. 71 patients lived in the country and 29 in the city. The total number of teeth classified under conservative treatment was 451. Teeth with pulp diseases and complications were classified for endodontic treatment.
Results: During the study, the medical documentation of 100 patients who underwent integrated treatment and rehabilitation of masticatory apparatus was analyzed. In the examined group , 59 (59.00%) patients were recognized with the need for endodontic treatment. Among the examined group, 451 teeth needed conservative dentistry, including 89 (19.73%) teeth which were classified for endodontic treatment. The most frequent diagnosis was denudatio pulpae cariosa (25.84%) and pulpitis irreversibiles (22.47%). The least frequent indications for endodontic treatment were prosthetic indications (5.62%). The endodontic intervention was most often applied to premolars (37.10%) and molars (29.21%), and least often to canines (9.00%).
Conclusions: The endodontic treatment is a significant step in the integrated dental care which enables the rehabilitation of the stomatognathic system.

Keywords: stomatology, root canal treatment, endodontic treatment, integrated treatment

Internal Medicine

HIGH NORMAL FASTING GLUCOSE LEVELS IN PATIENTS WITH ELEVATED BODY WEIGHT AS A POSSIBLE INDICATOR OF EUGLYCEMIC HYPERINSULINEMIA

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Introducion: Euglycemic hyperinsulinemia (EH), defined as normal fasting glucose with elevated fasting insulin, frequently develops in individuals with increased body weight. An interesting question arises as to whether there is any difference in fasting glucose levels between overweight/obese patients with EH and their age - and body weight - matched normoglycemic/normoinsulinemic counterparts. Aim of the study was to investigate fasting glucose levels in patients with elevated body weight, which were classified into three groups: 1/with both normal fasting insulin and glucose (NFG); 2/with EH; 3/with impaired fasting glucose (IFG).

Methods: A total of 39 non-smoking individuals (30 females-F and 9 males-M) with the body mass index (BMI) higher than 25 kg/m2 were enrolled in the study (the median BMI was 29.8 kg/m2). None of the individuals presented any subjective feeling of any disease (particularly any cardiovascular disorder), nor had they been previously diagnosed with any disorder. None admitted to drug treatment for any condition. For screening hyperglycemia a two-hour 75-gram oral glucose tolerance test was performed. Plasma insulin levels in the fasting state were evaluated by enzyme-linked immunosorbent assay (ELISA). The data were analyzed using STATISTICA 10.0 software.

Results: Six patients were classified into IFG group, 10 patients into EH group, and 23 into NFG group. In both EH and NFG groups fasting glucose levels were normal (within the range 70-99 mg/dL), whereas IFG group apparently presented higher values (median 115 mg/dL, lower quartile 101 mg/dL, upper quartile 122 mg/dL). Interestingly, in overweight/obese patients with EH fasting glucose levels there was a strong trend ($p=0.07$ approaching to the significance level) for higher glucose values (median 96 mg/dL, lower quartile 92 mg/dL, upper quartile 97 mg/dL) in comparison to normoglycemic/normoinsulinemic subjects (89 mg/dL, lower quartile 85 mg/dL, upper quartile 96 mg/dL).

Conclusions: Patients with elevated body weight and high normal fasting glucose should be actively screened for fasting hyperinsulinemia that is associated with a higher risk of cardiovascular disorders.

Keywords: euglycemic hyperinsulinemia, normal fasting glucose, high normal fasting glucose, impaired fasting glucose

HEPATOCYTE GROWTH FACTOR, HIGH-SENSITIVITY C-REACTIVE PROTEIN, INTERLEUKIN-6 AND ALBUMIN AS INDICATORS OF CARDIOVASCULAR-RELATED DEATH IN CHRONIC KIDNEY DISEASE PATIENTS TREATED WITH RENAL REPLACEMENT THERAPY UNDER 60 YEARS OF AGE

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Introducion: Chronic kidney disease (CKD) is associated with a proinflammatory state despite the absence of clinical symptoms and an excess risk of cardiovascular (CV)-related death. The aim of the study was to assess the effect of inflammatory markers on CV-related mortality in patients with 5 stages of CKD treated with renal replacement therapy <60 years of age during six-year follow-up.
Methods: The study included 166 patients (67 women and 99 men) with age ranging 38.0-77.0 years treated with renal replacement therapy (68 peritoneal dialysis and 98 hemodialysis). Serum levels of HGF, IL-6, IL-18 and transforming growth factor beta 1 (TGF-?1), hsCRP, white blood cell (WBC) count, percent of neutrophils (neut%), albumin, fibrinogen levels were measured. Mortality data was collected over a period of six years. We divided patients into 2 groups: <60 (n=98), >=60 years (n=68). Ultrasonography was performed to assess intima-media thickness (CCA-IMT).
Results: During six-year follow-up, 60 patients (36.1%) died, including 51 (30.7%) patients who died due to CV reasons. In multivariate Cox regression analysis independent predictors of CV–related death were: age (hazard ratio [HR]=1.023 [1.003-1.044]; p=0.022), presence of infarct in medical history (HR=1.913 [1.074-3.409]; p=0.028) and cigarette smoking (HR=2.014 [1.141-3.555]; p=0.016). Differences in the patients above and below 60 years of age include: mean CCA-IMT (p=<0.001), presence of atherosclerotic plaque (p=0.024), ischemic heart disease (p=<0.001), venous thromboembolism (p=<0.001). The factors negatively affecting patients' survival in univariate Cox regression analysis included for CV death were: HGF (p=0.015), IL-6 (p=0.001), hsCRP (p=<0.001), fibrinogen (p=<0.001), WBC count (p=0.016), neut% (p=0.014) and albumin (p=0.001) for group <60 years.
Conclusions: The increased level of HGF, IL-6, hsCRP, fibrinogen, WBC count, neut%, decreased concentration of albumins may be predictors of CV-related death in patients <60 years with 5 stages of CKD treated with renal replacement therapy.

Keywords: cardiovascular mortality, renal replacement therapy, inflammatory markers

INCREASED RISK OF ARTERIAL HYPERTENSION IN HYPERINSULINEMIC SUBJECTS WITH NORMAL FASTING GLUCOSE

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Introducion: The burden of fasting hyperinsulinemia in patients with elevated body weight and normal fasting glucose is increasing worldwide. There are data suggesting that euglycemic hyperinsulinemia (EH), defined as normal fasting glucose with elevated fasting insulin, may contribute to the risk of cardiovascular diseases. However, this condition remains usually undiagnosed as individuals with EH are asymptomatic, and the fasting insulin level assessment does not belong to routine blood tests.
Methods: A total of 39 non-smoking individuals (30 females - F and 9 males - M) with the body mass index (BMI) higher than 25 kg/m2 were enrolled in the study (the median BMI was 29.8 kg/m2). None of the individuals presented any subjective feeling of any disease (particularly any cardiovascular disorder), nor had they been previously diagnosed with any chronic disorder. None admitted to drug treatment for any condition. All of the patients were screened for arterial hypertension. For screening hyperglycemia a two-hour 75-gram oral glucose tolerance test (OGTT) was performed. Plasma insulin levels in the fasting state were evaluated by enzyme-linked immunosorbent assay (ELISA). The data were analyzed using STATISTICA 10.0 software.
Results: Six patients were classified into IFG group (3F, 3M), 10 patients into EH group (9F, 1M), and 23 into NFG group (18F, 5M). Arterial hypertension was diagnosed in 17 patients: 3 individuals (50%) with IFG; 8 patients (80%) with EH; and only 6 subjects (26%) with NFG. The systolic pressure (p=0.02), the diastolic pressure (p=0.003), and the mean arterial pressure (p=0.003) were significantly higher in patients with EH or IFG than in NFG subjects.
Conclusions: High incidence of arterial hypertension and the higher values of the systolic and diastolic pressures in subjects with euglycemic hyperinsulinemia show that these patients develop a significantly higher risk of cardiovascular disorders. For identifying such patients, fasting insulin level assessment should be added to routine blood tests.

Keywords: euglycemic hyperinsulinemia, arterial hypertension, normal fasting glucose, impaired fasting glucose, blood pressure, cardiovascular disorders

LIPID PROFILE ABNORMALITIES IN PATIENTS WITH ELEVATED BODY WEIGHT AND NORMAL FASTING GLUCOSE

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Introducion: Patients with elevated body weight frequently develop fasting hyperinsulinemia that has been identified as cardiovascular risk factor. An interesting question arises on incidence of lipid profile abnormalities in such individuals since fasting insulin level assessment does not belong to routine blood tests.
Methods: A total of 39 non-smoking individuals (30 females-F and 9 males-M) with the body mass index (BMI) higher than 25 kg/m2 were enrolled in the study (the median BMI was 29.8 kg/m2). None of the individuals presented any subjective feeling of any disease (particularly any cardiovascular disorder), nor had they been previously diagnosed with any disorder. None admitted to drug treatment for any condition. All of the patients were screened for lipid profile abnormalities. For screening hyperglycemia a two-hour 75-gram oral glucose tolerance test was performed. Plasma insulin levels in the fasting state were evaluated by enzyme-linked immunosorbent assay. The data were analyzed using STATISTICA 10.0 software.
Results: Six patients were classified into IFG group (3F, 3M), 10 patients into EH group (9F, 1M), and 23 into NFG group (18F, 5M). A total of 39 patients presented elevated levels of both low-density lipoprotein (LDL) cholesterol (median level 134 mg/dL) and total cholesterol (median level 224 mg/dL). Atherogenic dyslipidemia was diagnosed in 8 patients: 1 patients (16.67%) with IFG; 4 patients (40%) with EH; 3 subjects (13%) with NFG. High-density lipoprotein (HDL) cholesterol levels were significantly lower (0.007) in patients with EH. There were no significant differences in total cholesterol, LDL cholesterol and triglycerides between IFG, EH and NFG groups.
Conclusions: Patients with elevated body weight and normal fasting glucose that develop HDL cholesterol abnormalities seem to be at increased risk of fasting hyperinsulinemia. High incidence of LDL cholesterol abnormalities in screened patients indicates an urgent social need for wide and active screening for hypercholesterolemia.

Keywords: euglycemic hyperinsulinemia, hypercholesterolemia, atherogenic dyslipidemia, low-density lipoprotein (LDL) cholesterol, normal fasting glucose, impaired fasting glucose

INFLUENCE OF PROTON- PUMP INHIBITORS ON METABOLIC ACIDOSIS IN CHRONIC HEMODIALYSIS PATIENTS.

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Introducion: Proton- pump inhibitors (PPIs) are a class of drugs which main action is irreversible H+/K+ APTase inhibition in the parietal cells of the stomach and cause long-lasting reduction of gastric acid secretion. This effect enables healing of dyspepsia, peptic ulcer disease or gastroesophageal reflux disease. Last years, PPIs are one of the most commonly prescribed medications, and it has been estimated that between 25% and 70% of these prescriptions have no appropriate indication. Some adverse effects have been assigned to these drugs including hip fracture, community acquired pneumonia, Clostridium difficile infection, hypomagnesemia, acute interstitial nephritis. Because of their efficient reduction in acid secretion there is a concern of its influence on metabolic acidosis, especially in end stage kidney disease patients.
Methods: The study was performed in 67 (mean age of 65 years; 10 males) prevalent HD patients being on chronic dialysis program in Ist Department of Nephrology with Dialysis Centre (Medical University in Bialystok). The study was based on medical history taken individually from patients (survey about drugs they took with intention of revealing PPIs). Information was verified and complemented by medical documentation. Laboratory results were obtained from regular monthly lab check-up.
Results: Twenty one of examined patients (31%) were on PPIs treatment. Sixteen of them (76%) use omeprazole and four pantoprazole (19%). There were no statistical significant differences between patients taking PPIs and the others in terms of pH and HCO3. Both groups reveled similar levels of serum calcium, phosphate, creatinine as well as hemoglobin concentration.
Conclusions: Results of this cross- sectional study reveal that chronic administration of PPIs has no influence on metabolic acidosis in hemodialysis patients being in chronic (three times per week) dialysis program.

Keywords: PPI, hemodialysis, proton- pump inhibitors, metabolic acidosis

FEATURES COMPLEX IMPACT CHONDROPROTECTOR FOR THE TREATMENT OF OSTEOARTHRITIS OF THE DIFFERENT TYPES OF COMORBIDITY

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Introducion: Osteoarthritis is one of the most common age-dependent diseases with predominantly degenerative joint lesions with inflammatory component and one of the common causes pain and temporary disability of middle, elderly and senile. For this category of patients is important comorbidity research as one of the promising solutions to personalized treatment, improve overall treatment results and reduce the massive socio-economic consequences of population character, particularly cardiovascular and gastrointestinal risks.
Methods: Examined 80 patients with primary Osteoarthritis aged 37-76 years in acute, II and III radiological stages. Among patients dominated women (65 persons - 81.25%). Disease duration ranged from 7-19 (14,1 ± 3,2) years. The Osteoarthritis diagnose by the recommendations of EULAR (2010). Comorbid diagnoses of diseases verified by the relevant professional protocols and confirmed by specialized experts. Basic medical complex included: nonsteroidal anti-inflammatory drug, chondroprotectors, proton-pump inhibitor, local treatment of joints, if needed additionally antihypertensive, anti-ischemic, antidiabetic drugs and other. 30 patients instead of the standard chondroprotective drug (Teraflex) received Osteoartisi Max 1 capsule twice a day for two months.
Results: Found that more younger patient, more better effectiveness of the use Osteoartisi Max on the Osteoarthritis. In the age group 60 years frequency and severity of comorbid events was greater than in patients 51-60 years and manifested the least effect of the use in treatment of selected drug. Osteoartisi Max was appropriate in patients with Osteoarthritis in the dominant cluster of failure the digestive system, and lesser it can prophylaxis cardiovascular comorbidity.
Conclusions: Chondroprotector Osteoartisi Max in treatment of osteoarthritis patients with high comorbidity has little clinical benefit of treatment joint pain, significant advantages in cluster comorbid diseases of the hepatobiliary system, digestive tract and average reduces cardiovascular and gastrointestinal risks.

Keywords: Osteoarthritis, Chondroprotector, Osteoartisi Max

WHAT ARE THE PREDICTORS, SYMPTOMS AND CONSEQUENCES OF DEHYDRATRION IN TERMINAL CANCER PATIENTS?

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Introducion: Dehydration is a common problem in patients with terminal cancer. It worsens the quality of life and increases the amount of complications. The factors associated with dehydration in terminal patients need further exploration. The aim of our study was to determine the predictors, symptoms and consequences of dehydration.
Methods: 242 terminal cancer patients admitted to Palliative Care Unit were retrospectively analyzed. Detailed physical examination, medical history including history taken from family and care givers was taken upon admission. Laboratory parameters including morphology, sodium, potassium, total and ionized calcium, LDH were taken on admission. We used univariate and multivariate logistic regression analysis to determine possible predictors, symptoms and consequences of dehydration.
Results: On admission 65,45% of patients were dehydrated. They had higher PS scale score (OR=Odds Ratio=1,389, CI95%=Confidence Interval 95%=1,044-1,848; p=probability value=0,0243), had more often constipation during hospitalization (OR=1,751, CI95%:1,036-2,959; p =0,0366) and more often nausea at admission (OR=1,847, CI95%:1,075-3,174; p=0,0262). Dehydrated patients had lower level of albumin (OR=0,921, CI95%:0,878-0,967; p=0,0009), lower level of potassium (OR=0,990, CI95%:0,984-0,997; p=0,0021), they were treated more often by iv fluids (OR=4,524, CI95%:1,525-13,424; p=0,0065). They died more frequent than properly hydrated patients (OR=2,533, CI95%:1,459-4,397; p=0,001). Multivariate logistic regression analysis after adjustment for possible confounders reviled that occurrence of nausea and vomiting at discharge (OR:4.866, CI95%:1.973-12,0; p=0.001), higher sodium concentration (OR:1.009, CI95%:1.002-1.016; p=0.013), occurrence of dyselectrolytemia (OR:3.357, CI95%:1.716-6.571; p=0.0004), shorter duration of treatment (OR=0,954, CI95%:0,923-0,986; p=0,005, because of the higher risk of death), higher stage of cancer (OR:3.943, CI95%:1.373-11.323; p=0.011) and weightloss>30% (OR=1,009, CI95%:1,002-1,016; p=0,013) remained independently associated with dehydration.
Conclusions: Occurrence of nausea and vomiting at discharge, higher sodium concentration, shorter duration of treatment, higher stage of cancer and weightloss>30% are risk factors of dehydration. Patients with dehydration are more likely to develop dyselectrolytemia.

Keywords: dehydration, cancer patients

INFLUENCE OF SOCIAL FEAR LEVELS AND PERSONALITY ON CREDIBILITY OF SERUM CORTISOL MEASURMENTS IN COMPARISON WITH SALIVARY METHOD.

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Introducion: Precise measurment of hormones' levels, is crucial for a proper diagnosis and treatment of endocrinological diseases. Methods used, should be primarily credible, quick, cheap and comfortable for patient. Widely used assessment of cortisol levels in the patient's blood sample, focusing on the free cortisol in a whole blood, serum and plasma, is an invasive method, which may induce significant stress in patients. Conducting indispensable analyses from saliva, on the other hand, is much more comfortable for a patient, safer and cheaper. There is practically no risk of complications, and can be performed few times in a short period of time. Available literature suggests high, comparable to measurements from blood, credibility of this method.
Methods: The study included 38 healthy people, with no history of endocrine disorders, who gave an informed consent to participate in a study. Blood and saliva samples were obtained from each of them between 7.30 and 8 am, and tested for cortisol levels. Examination of the saliva was performed using radioimmunoassay tests (CISBIO France) from samples gathered in the morning, before breakfast and oral hygiene. Thereafter 2 cm3 of blood and 24-hour urine samples were collected. Finally all participants had to fill in authors' own questionnaire concerning basic demographical data, Leibowitz's inventory and Morningness-Eveningness Questionnaire. Acquired data was analyzed using the StatSoft Statistica version 12.0 software.
Results: People with higher probablity of social fear development, tend to have increased levels of cortisol in blood; such effect was not observed on a 24h urine cortisol sample and in saliva.
Conclusions: Social fear may increase the levels of cortisol evaluated during stress. Salivary cortisol seems to be a promising method of examination due to the resistance to sudden changes in cortisol levels. Also it does not induce as much stress as obtaining a blood sample.

Keywords: cortisol. salivary cortisol. serum cortisol. 24-hour urine sample. endocrinology

THE EVALUATION OF LYMPHOCYTE SUBSETS BEFORE AUTOLOGOUS PERIPHERAL STEM CELL TRANSPLANTATION IN MULTIPLE MYELOMA PATIENTS WITH SEVERE INFECTIOUS COMPLICATIONS

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Introducion: Autologous peripheral blood stem cell transplantation is now established therapy for patients with multiple myeloma (MM). This disease and its therapy result in immune suppression, intensified by APPBST procedure. A lot of infectious complications in aplastic phase after APBSCT are consequence of these disorders. In the study we analyzed the influence of lymphocyte subsets changes, evaluated before APBSCT in patients with MM on the incidence of severe infections.
Methods: A total of 50 (27 male and 23 female; median age 58.0) consecutive patients with MM at the Department of Haematooncology and Bone Marrow Transplantation, Medical University of Lublin were recruited to the study. The day before myeloablative regimen samples for flow cytometry analysis were taken. In the transplantation procedure patients were received melphalan (140 or 200 mg/m^2) followed by infusion of haematopoietic cells (median number 4.5x10^6/kg; 2.2-9.0). Patients received standard prophylaxis of infection (ciprofloxacin, fluconazole, aciclovir) and G-CSF. The incidence of severe infectious complications (sepsis) was referred to lymphocyte subset number before AHSCT.
Results: The median days to ANC >0.5×10^9/L recovery was 13.0 days (10-48). Five patients developed sepsis in neutropenic phase. The etiology of infections was following: Stahyloccoccus eipdermidis in 1 patient, Staphylococcus aureus in 1 patient, Klebsiella pneumoniae in 1 patient ad Escherichia coli in 2 patients. There was no case of death in any patients. Analysis of flow cytometry results showed in these 5 patients reduced number (with statistical difference compared to patients without sepsis and control group) of following subsets of lymphocytes: T helper cells (CD3+CD4+CD45RA+; p=0.005), lymphoid dendritic cells (BDCA2+CD123+; p=0.02) and NKT-like cells (CD3+CDD56+; p=0.04). There was no statistical relationship between sepsis incidence and other analyzed lymphocyte subsets (B cells, suppressor T cells, myeloid dendritic cells and NK cells; p>0.05). Frequency of severe mucositis, the most common cause of sepsis was associated with higher CD4+CD25+ cells, evaluated before transplantation (p=0.04).
Conclusions: Analysis of lymphocyte subsets before AHSCT is useful for defining of patients group with high risk of severe infection. In this selected group special antibiotic therapy and infusion of higher number of mononuclear cells may be helpful in prophylaxis of infection.

Keywords: APBSCT, AHSCT, multiple myeloma, lymphocyte subsets

CAN IMPULSE OSCILLOMETRY BE USEFUL IN FUNCTIONAL GRAFT MONITORING IN PATIENTS AFTER LUNG TRANSPLANTATION?

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Introducion: After successful lung transplantation patients must be subjected to regular checkups in order to perform functional graft monitoring determining possibility of GvHD. Such examination is typically based on spirometry and 6-Minute-Walk-Test (6MWT). These methods may be difficult to apply in patients uncapable of strenuous activity. Contrarily, Impulse oscillometry (IOS) is a non-invasive method that using the forced oscillation technique, requires minimal patient cooperation and is suitable for use in patients unable to perform a forced expiration or with effort intolerance. AIM OF STUDY: We aimed to determine whether IOS may be important in the functional evaluation of the lung graft in comparison with commonly used spirometry and 6MWT Also, if correlation between those tools is strong enough for IOS to substitute spirometry and 6MWT in case of patients failing to perform them.
Methods: This prospective, observative study covered 26 consecutive patients (19 men/ median age 54,5 years) admitted to SCCS in Zabrze from 01.2016 to 10.2016 for periodic, post-transplantation checkups (double-lung=13, single-lung=13). Patients were assessed using spirometry, IOS and 6MWT. Results were recorded and compared.
Results: 88% patients reached considerably high resonance frequency (Fres) and in 84% the value of Ax (Area of reactance) was increased above norm (N<0,33kPa/l) indicating obstruction of peripheral airways. High resistance of small airways, measured with R5-R20 difference, followed higher Ax values. Increase of resistance at 5Hz in 31% patients (R5>150% predicted value) also determined small airway obstruction. Airway obturation in patients with elevated Ax and R5 was confirmed by significantly decreased FEV1 (<75% pred. value) and FEV1/FVC ratio in 38% patients.
Conclusions: In patients with regular spirometry results, IOS parameters either rule out possibility of post-transplantation obstruction or reveal the problem. In patients with suspicious spirometry results, performing IOS helped to confirm the graft tissue not possessing correct elasticity. Affirmation of increased R5 values with unchanged R20 limited the incorrect elasticity and obstruction to peripheral segments. Thus the IOS method could be more adequate than spirometry in determining the occurrence of bronchiolitis obliterans(BO)-which is often the manifestation of GvHD episode.

Keywords: impulse oscillometry, spirometry, lung transplantation

HOW AGE AFFECT YOUR HEALTH? - ANALYS OF 3291 PATIENTS WITH STABLE CORONARY DISEASE.

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Introducion: Nowadays the population of all highly-developed countries is getting older. That is why, the general medicine is focusing on the geriatry. The problem of senior patients is a especially visible in the cardiology. The age over 55 is connected with increased risk of myocardial infarction. It means that these patients require special care in order to prevent cardiovascular accident.
Methods: The goal of this study is to evaluate the influence of the age to the health and prevalence of the risk factors. The 3291 patients, with stable coronary disease, admitted to the Invasive Cardiology Department from 2007 to 2016 were included in this study. Average age was equal to 66,71 years. The clinical parameters were analyzed and statistic tests were performed using Statistic 12 (the Spearman and the Chi square tests). The p value of 0,05 was considered significant.
Results: Significant correlation between age and some risk factors was found. The increase in age causes higher levels of creatinine, LDL cholesterol and fibrinogen. It is also connected with lower level of BMI, hemoglobine, leucocytes, platelets and creatinine clirens. What is more, we observed elevated levels of Neutrophils to Lymphocytes ratio and Platelets to Lymphocytes ratio in older patients.
Conclusions: The age has an impact on many fields of human health. The decrease in LDL cholesterol level is interesting and have to be precisely evaluated in further studies.

Keywords: Cardiology. Stable coronary disease.

CAN WE USE BLOOD MORPHOLOGY TO STRATIFY ADVANCEMENT OF HEART FAILURE?

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Introducion: Neutrophile to Lymphocytes ratio (NLR) has already confirmed impact on the total mortality in oncology and cardiology.
Methods: The goal of the study was to look for relation between level of Natriouretic peptide type B (BNP) and Neutrophile to Lymphocytes ratio. The 3291 patients, with stable coronary disease, admitted to the Invasive Cardiology Department from 2007 to 2016 for invasive diagnostic were included into study. The patients were divided into 4 quarters according to level of Neutrophile to Lymphocytes ratio (NLR). The subgroup of patients with measured BNP level was created (n=386).
Results: This study shows that there is weak correlation between BNP and NLR ($p<0,0001$). The BNP level differences in various quarters ($p=0,0023$).
Conclusions: The NLR may be used to stratify risk of the patients. Therefore We need further study to check its relationship with the mortality in patients with heart failure.

Keywords: Cardiology. Stable coronary disease.

INFLUENZA VACCINE THERAPY IN CHRONIC LYMPHOCYTIC LEUKEMIA PATIENTS - NEW POSSIBILITIES OF RESPONSE EVALUATION BASED ON A STUDY OF PERIPHERAL BLOOD.

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Introducion: Chronic lymphocytic leukemia leads to significant immune system dysfunction. The predominant clinical presentation in 50% of patients involves recurrent, often severe, infections. Infections are also the most common (60-80%) cause of deaths in CLL patients. The scope of infections varies with the clinical stage of the disease. Treatment-naive patients typically present with respiratory tract infections caused by influenza. Immune system disturbances in CLL are still not well defined. Clinical data indicates that despite normal serum immunoglobulin (Ig) level, treatment-naive patients may not respond to influenza vaccination. The aim of the study was to investigate changes in B-cell subpopulations in CLL patients, including plasmablasts, in peripheral blood by flow cytometry after influenza vaccination and to evaluate if plasmablasts may serve as a diagnostic tool for assessing response to vaccination.
Methods: Forty treatment-naive CLL patients and twenty healthy volunteers were immunized with influenza vaccine. Specific antibody levels and frequencies of plasmablasts were measured before vaccination and on day 30 by ELISA assay, and day 7 by flow cytometry after vaccination, respectively. Both groups were also evaluated for levels of IgG and IgG subclasses, and the frequencies of selected peripheral blood lymphocyte subpopulations before and 30 days after immunization.
Results: Of the forty CLL patients studied, 100% lacked detectable changes in the serum level of specific anti-influenzae IgG antibodies before and after vaccination (mean: 122.41-41.94 mU/ml vs. mean: 128.37-52.13 mU/ml, respectively; p=0.24). In none of patients an increase of the percentages and absolute counts of plasmablasts was noted. In the control group, an increase in circulating plasmablasts on day 7 post immunization corresponded with the appearance of specific antibody levels on day 30 post immunization (r=0.823, p=0.000001) and was statistically significantly higher than before a dose of influenza vaccine (before vaccination: 20.12-14.93%, 0.46-0.36x10^3/mm^3; after vaccination: 46.81-26.87%, 1.15-0.77x10^3/mm^3; p=0.01). In contrast, CLL patients failed to increase plasmablasts significantly in peripheral blood after antigen challenge.
Conclusions: Our findings indicate that treatment-naive CLL patients have a block in terminal B-cell differentiation and that flow cytometry-based assessment of plasmablasts in peripheral blood after vaccination serves as a surrogate diagnostic marker for assessing in vivo antibody response in patients with CLL.

Keywords: Influenza, vaccination, plasmablasts, Clinical Immunology, CLL, Hematology

A CASE REPORT OF PATIENT WITH ERYTHROMELALGIA – POSSIBLE CAUSES OF THE CONDITION.

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Background: Erythromelalgia is a rare condition which etiology is still not elucidated. It is characterized by episodes of erythema, pain and warmth of the extremities. The diagnosis is based on patient's medical history and physical examination. Simultaneously, diagnostic procedures should be taken in order to differentiate between other conditions.
Case Report: 48-year-old patient diagnosed with seronegative arthritis HLA B27+ (2000) and erythromelalgia (2007). In 1990 patient suffered from inflammatory back pain (lumbosacral region). In 1998 swelling in the right knee led to diagnostic knee arthroscopy, synovectomy and rehabilitation. Later, patient was diagnosed with cervical osteoarthritis and dactylitis. In 2000 patient was diagnosed with seronegative arthritis HLA B27+ and treated with gold salts, methotrexate and sulfasalizine without good response. Afterwards, patient was diagnosed coxitis, osteoarthritis of left knee and elbow joints. From 2004 to 2009 patient was treated with leflunomide. In 2007 patient was diagnosed with erythromelalgia due to the symptoms: warmth, burning pain and erythema of feet. From 2010 to 2015 biological therapy was conducted. In 2016 symptoms of erythromelalgia has developed.
Conclusions: Conclusion: It was concluded that condition of patient with erythromelalgia should be througly analysed due to uncertain etiology of the disease. Erythromelalgia may be associated with intake of the certain medicaments, genetic predisposition or undiagnosed neoplastic development.

Keywords: erythromelalgia

OCCURRENCE OF PSEUDOMONAS AERUGINOSA IN ADULT PATIENTS WITH CYSTIC FIBROSIS IN DEPARTMENT OF PULMONOLOGY AT POZNAN UNIVERSITY OF MEDICAL SCIENCES AGAINST OTHER CENTERS WORLDWIDE

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Introducion: Cystic fibrosis (CF) is a genetic susceptible, incurable disease, which always leads to premature death. Chronic bronchopulmonary disease develops into respiratory insufficiency which is the most common cause of death in this group of patients. Dynamics of CF course depends mostly from an infection of Gram-negative bacterium Pseudomonas aeruginosa (PA). This pathogen is one of the most frequent isolated bacteria from respiratory tract secretion in adult CF patients.
Methods: Epidemiological data concerning PA infection frequency in adult CF patients treated in Department of Pulmonology PUMS was compared with the most recent results (from years 2010-2014) obtained from eight national registry reports (Australia, Belgium, Brazil, France, the Netherlands, New Zealand, the UK, the USA) and eleven overview references. The study included 115 adult CF patients (F=64) treated in Department of Pulmonology in years 2011-2015 (Average age=28,8 ; Min=18,6 ; Max=52,1). The patients were divided into groups depending on presence or lack of chronic PA infection. This division, in accordance with Leeds definition, was created on microbiological tests' results which were based on secretions from respiratory tract. The PA colonization occurred in 76 patients (66,1% ; F=45).
Results: Percentage of PA positive patients in Department of Pulmonology was higher than in mean obtained from 8 national reports (56,8%). Number of PA positive patients was insignificantly higher only in 2 countries (Australia 74,4%, Belgium 70,0%). The results obtained from references were more comparable to our results. In 11 analyzed references approximately 66,8% of patients were colonized with PA and it was insignificantly higher than the mean of our results. In detail 6 were higher and 5 were lower.
Conclusions: Comparing our results to the two most numerous registries (from USA and UK) percentage of PA chronically infected patients is significantly higher. However comparison of means from all of the reports and references indicates similar amount of PA positive patients as in Department of Pulmonology PUMS.

Keywords: Pulmonology, Cystic fibrosis, Pseudomonas aeruginosa

IGHV GENE STATUS: CLINICAL OUTCOME AND CORRELATION WITH NEW PROGNOSTIC MARKERS OF CLL

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Introducion: Chronic lymphocytic leukaemia (CLL) is a malignancy of B lymphocytes accumulating in blood, bone marrow and lymphatic system. The disease presents highly heterogenous course with the overall survival ranging from 1-2 years to above 15 years. In CLL there are several prognostic markers with important clinical significance including: IGHV gene status, chromosomal aberrations, TP53 mutation, or ZAP70 and CD38 expression. Due to strong and independent prognostic value, IGHV mutational status is being considered one of the most important prognostic factors to stratify patients. Besides currently available biomarkers, previously unknown genomic alterations such as NOTCH1, SF3B1 and MYD88 mutations have been recently revealed. Potentially, they might improve current stratification of CLL and, consequently, facilitate treatment decisions. In the present work, we analyse correlation between newly described mutations and IGHV gene status. To the best of our knowledge, it is the first report on new mutations in CLL in representative population of Central Europe.
Methods: The study was conducted on 367 blood samples of CLL patients. The IGHV gene status was detected by Sanger sequencing (n=367). NOTCH1 (n=316) and MYD88 (n=323) mutations were analyzed by ARMS PCR. Screening for SF3B1 (n=364) mutations was performed using HRM analysis and the results were confirmed by Sanger sequencing.
Results: Patients with unmutated IGHV gene status were characterized by significantly shorter Time To First Treatment (TTFT) than patients harbouring the mutation ($p<0.0001$). Unmutated IGHV gene status was significantly more frequent in group of NOTCH1-mutated (n=18/19) than NOTCH1 wild type (n=146/293): 94.7% vs. 49.8%. Similarly, IGHV unmutated gene status was revealed in n=12/17 (70.5%) SF3B1 mutated vs n=177/343 (51.6%) in wild-type SF3B1 group. In the end, IGHV unmutated gene status was nearly equally distributed in patients with mutated/unmutated MYD88 groups (58.3% vs 52.6%).
Conclusions: IGHV unmutated gene status was observed more frequently in groups harbouring NOTCH1 and SF3B1 mutations. Therefore, these two mutations seem to be new negative biological prognostic markers of CLL. The role of MYD88 remains under scrutiny. The results are promising for creating improved stratification of CLL which could be the tool for clinicians in choosing adequate, personalized strategy of treatment.

Keywords: chronic lymphocytic leukaemia, IGHV gene status, NOTCH1, SF3B1, MYD88, prognostic factors

THE INFLUENZAE VIRUS VACCINE ANTIGENS EFFECT ON CD69 AND CD25 EXPRESSION ON CD3+ T-LYMPHOCYTES AND CD19+ B-LYMPHOCYTES AMONG CHRONIC LYMPHOCYTIC LEUKEMIA PATIENTS

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Introducion: Chronic lymphocytic leukemia (CLL) is a non-Hodgkin's B-cell leukemia, which is particularly frequent type of leukemia in adulthood. Infections are the most common complications, therefore prevention such as vaccination is of great importance for the patients with CLL and those who are undergoing treatment. The recommendations emphasize the need of administering vaccines against bacteria and seasonal influenza in such high risk group.
Methods: The study included 15 untreated patients with chronic lymphocytic leukemia (age: 66.9 ± 5.8). The control group consisted of 5 patients (age: 65 ± 6.8). From the 30 ml of the collected peripheral blood mononuclear cells were isolated by density gradient centrifugation. Cells were stimulated by antigen vaccine Influvac Abbott Biologicals BV. Three-color immunofluorescence analyzes were performed using a FACS Calibur Flow Cytometer (Becton Dickinson) equipped with 488 nm argon laser. Statistical analysis was performed using Statistica 10 PL. The study was a positive opinion of the Bioethics Committee of the Medical University of Lublin.
Results: Before growing the cell lines it was stated that there was statistically significant lower CD19 + / CD69 +, CD19 + / CD25 +, CD3 + / CD69 + and CD3 + CD25 + lymphocytes rate, and lower expression of theese antigens [MFI] too, in the experimental group in comparison to control one($P < 0.05$). The experimental group presented statistically significant differences in CD69 and CD25 antigens expression on CD3+ and CD19+ lymphocytes($p < 0.05$).
Conclusions: The results of the study indicate deceleration of CD3+ and CD19+ T-lymphocytes early activation in the experimental group comparing to control one. This research confirms immune response impairment appearing in patients with CLL.

Keywords: Influenzae virus, vaccination, chronic lymphocytic leukemia

PRIMARY AND SECONDARY PREVENTION IN ICD AND CRT IMPLANTATION – HOW DO THE PATIENTS DIFFER? – A SINGLE TERTIARY CENTER ANALYSIS.

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Introducion: Patients implanted with implantable cardioverter-defibrillators in primary and secondary prevention of sudden cardiac death differ not only in their cardiovascular history, but also their demographical, and general medical background needs a separate approach.
Methods: In our retrospective study we included 805 patients who underwent ICD implantation in a tertiary center. We collected demographic, clinical, and device characteristic at the time of implantation and during follow-up period. We received medical documents stored in the patients' health records. The patients were subjected to regular control in intervals from 3 to 12 months depending on the type of device, leads, and clinical state. The mean length of follow-up was 34,4 months (±31,94). Associations in our study we have measured with STATISTICA 12.5 software (StatSoft Inc.) using Pearson correlation-coefficient and ANOVA Kruskal-Wallis test for parametrical variables.
Results: In our group 421 (52,3%) patients were implanted in primary prevention. The first implantation in our group was performed from July 1994 to September 2015 in mean age of 64,93 years (64,78 for primary, 64,60 for secondary prevention, p=0,85) with male subjects making up 80,35% (82,19% in primary, 78,12 for secondary prevention, p=0,15) of the studied population. Significantly more patients in secondary prevention were implanted with ICD-DR than with CRT-D (p= 0,01), whereas in primary prevention more frequently were they implanted with CRT-D than with ICD-VR (p=0,003). Significant discrepancy regarding health state can be observed in serum creatinine concentration nearly two times higher in primary prevention (1,23 mg/dL vs 0,67 mg/dL, p<0,001), but eGFR relation was reversed (70,71 vs. 77,13 mls/min/1.73m2, p=0,09). LVEF measured at implantation was also lower in primary prevention group (28% vs. 32%, p=0,001), and LVDD was higher (62 mm vs. 59 mm, p=0,015). Discrepancies are observed at significant level in greater burden of heart failure (NYHA stages), pectoral angina (CCS stages) and prevalence of arterial hypertension in primary prevention group.
Conclusions: Patients implanted in primary prevention present a greater burden of concomitant diseases than those implanted in secondary prevention.

Keywords:

COMPLICATIONS OF IMPLANTABLE CARDIOVERTER-DEFIBRILLATORS AND CARDIAC RESYNCHRONIZATION THERAPY DEVICES – A SINGLE TERTIARY CENTER ANALYSIS.

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Introducion: The number of patients implanted with cardiac implantable electronic devices (CIED), including implantable cardioverter-defibrillators increased dramatically over last years. The burden of complications associated with holding an ICD or CRT-D rises accordingly and the catalogue of them encompasses sensing dysfunction, increase of the pacing threshold, inadequate ICD shock and intervention or lead malfunction (dislocation or failure).
Methods: In our study we included 851 patients who underwent ICD implantation in a tertiary center. We collected demographic, clinical, and device characteristic at the time of implantation and during follow-up period. We have also studied adverse events stored in the patients' electronic and analogue health records. The patients were subjected to regular control in intervals from 3 to 12 months depending on the type of device, leads, and clinical state. The mean length of follow-up was 34,4 months (±31,94). Associations in our study we have measured with MedCalc v15.2 software using Pearson correlation-coefficient.
Results: Patients underwent their first implantation in time period from July 1994 to January 2016 in mean age of 64,93 years [range 13-90] with male subjects making up 80,35% (n=683) of the studied population. In the group 52,17% (n=444) patients were holding a single-chamber ICD (ICD-VR), 24,56% (n=209) were holders of double-chamber implantable cardioverter-defibrillator (ICD-DR), and 23,267% (n=198) received cardiac resynchronization therapy defibrillator (CRT-D). Mostly affected by any of the complications were double-chamber ICDs (19,23%) with ventricular lead oversensing (5,24%, $p<0,0001$). A strong statistical significance was reached by lead failure, which occurred with relatively lower incidence in double-chamber ICD (1,90%, $p=0,001$), however lead dislocation occurred in 2,87% of patients with ICD-DR, it reached lower significance (0,011). What should be noted, T-wave oversensing was observed in all devices, but only in CRT-Ds it reached statistical significance (1,72%, $p=0,015$).
Conclusions: Complication related to implantable cardioverter-defibrillators and resynchronization devices are rare phenomenon. Ventricular lead oversensing was the most frequently aberration observed. Double-chamber ICD seems to be more commonly affected with specific disfunction than other device types.

Keywords:

THE TREATMENT OF POLYGLANDULAR AUTOIMMUNE SYNDROME TYPE II (PGA-II)

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Introducion: Polyglandular autoimmune syndrome type II is characterized by the obligatory occurrence of autoimmune Addison disease in combination with thyroid autoimmune diseases and/or type 1 diabetes mellitus. PGA-II affects 10-20 people per million, the syndrome is more prevalent among women. Due to type 1 diabetes patients with PGA receive lifelong insulin therapy.
Methods: A retrospective study of medical records of 5 patients with confirmed PGA-II syndrome, treated in the Endocrinology Department of Medical University of Lublin between years 2010-2014.
Results: Retrospective studies have shown that there are a lot of problems in the treatment of PGS II. Diseases that are characteristic to this syndrome may appear in a different order, of all ages and can require replacement therapy in various forms and doses.
Conclusions: Polyglandular autoimmune syndrome type II occurs primarily in adulthood. Pattern of inheritance is associated with HLA-DR3 and/or HLA-DR4 haplotypes. The treatment is dictated by the individual disorders and is based on hormonal replacement therapy. Complex hormonal replacement therapy can cause therapeutic difficulties. A decreasing insulin requirement in patients with type 1 diabetes mellitus can be one of the earliest signs of adrenal insufficiency.

Keywords: Polyglandular Autoimmune Syndrome type II, PGA-II,

THE EVALUATION OF INFLUENZAE VIRUS VACCINE ANTIGENS IMPACT ON PD-1 AND PDL-1 EXPRESSION ON CD3+ T-LYMPHOCYTES T AND CD19+ B-LYMPHOCYTES AMONG CHRONIC LYMPHOCYTIC LEUKEMIA PATIENTS

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Introducion: Chronic lymphocytic leukemia (CLL) is the most frequent type of leukemia in adults. CLL is characterized by a heterogeneous process and various clinical symptoms, which can be absent for a long time. The disorders of the immune system in patients with CLL depends on both humoral and cellular response impairment. The role of the programmed cell death receptor (PD-1) and its ligand (PD-L1) is to maintain the proper interaction of T cells and dendritic cells and regulate the anti-infectious and antineoplastic immune response.
Methods: The study included 15 untreated patients with chronic lymphocytic leukemia (age: 66.9 ± 5.8). The control group consisted of 5 patients (age: 65 ± 6.8). From the 30 ml of the collected peripheral blood mononuclear cells were isolated by density gradient centrifugation. Cells were stimulated by antigen vaccine Influvac Abbott Biologicals BV. Three-color immunofluorescence analyzes were performed using a FACS Calibur Flow Cytometer (Becton Dickinson) equipped with 488 nm argon laser. Statistical analysis was performed using Statistica 10 PL. The study was a positive opinion of the Bioethics Committee of the Medical University of Lublin.
Results: Before growing the cell lines it was stated that there was statistically significant lower PD-1 expression on CD3+ T-lymphocytes [Mean Fluorescence Intensity] in the control group, as well as lower total CD19+/PD-1 B-lymphocytes rate and higher PD-1 expression on CD19+ B-lymphocytes [MIF] in experimental group. Furthermore, experimental group presented statistically significant differences in PD-1 and PDL-1 antigens expression on CD3 + lymphocytes and antigen PD-1 lymphocytes CD19 + ($p < 0.05$) in comparison to the results obtained before and during growing unvaccinated cell line.
Conclusions: The high expression of both the PD1 and PDL1 indicates the immune response inhibition at early stage of the CLL. The results may explain the aberrant activation markers expression on the surface of stimulated cells in CLL patients.

Keywords: Influenzae virus, vaccination, chronic lymphocytic leukemia

THE EVALUATION OF EBV VIRUS IMPACT ON COMPLETE BLOOD COUNT AND ANTIBODY TITER AMONG IMMUNOCOMPROMISED PATIENTS

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Introducion: EBV virus is an ubiquitous infectious agent. The estimate of contact with this pathogen among infant and adolescent groups is about 90%. EBV as a latent virus persists in the B cells for the rest of life. Once infected person may be affected by reactivation of EBV while immunodeficiency, which promotes the development of EBV infection. Thus, EBV virus is extremely dangerous infectious agent for transplant patients and is associated with higher risk of lymphoproliferative disease in such group.
Methods: The EBV DNA detection was performed among the diseased (50) and healthy (15) groups of people. Diseased group was divided according to their diagnosis into two groups: leukopenia-group and lymphoproliferative-disease-group. From collected blood samples there were isolated mononuclear cells using density gradient centrifugation method. Such prepared material was used to perform real-time PCR. Real time amplification of the product enabled the assessment of EBV DNA prior concentration. Complete blood count was done in each person as well as antibody titer. The usefulness of method was assessed on the collected results and statistical analysis was performed using Statistica 10 PL programme.
Results: EBV DNA product concentration has significant impact on monocytes, eosinophils and erythrocytes rate in EBV-infected group with leukopenia. The higher DNA product titer was detected, the lower monocytes, eosinophils and erythrocytes rate was observed. However, in the lymphoproliferative disease patients EBV DNA product increase is associated with higher IgG titer.
Conclusions: The bood concentration of EBV DNA product has significant impact on some laboratory parameters among leukopenia patients as well as lymphoproliferative disease patients.

Keywords: EBV, real-time PRC, mononuclear cells

ASSESSMENT OF BASIC SUBPOPULATIONS AND ACTIVATED LYMPHOCYTES AFTER PPV23 STIMULATION AMONG PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA (CLL).

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Introducion: Chronic Lymhocytic Leukemia (CLL) is an example of secondary immunodeficiency. Leukemic lymphocytes in CLL are characterized by CD19, CD20, CD25, CD 23 and low expression of immunoglobulines on surface. Activation of B lymphocytes in CLL is achieved by antigen stimulation on specific receptor but usually it does not cause proliferation of cells. Ability to induce apoptosis is reduced in the leukemic cells and CD95 expression is lowered.
Methods: A study group of 15 subjects with CLL, with an average age of 64.9±9.1 years, patients of Immunology Dept. at Clinical Hospital No. 4 in Lublin was recruited. 10 of them was in stage 0 and 5 of them in stage 1 in Rai classification. None of them was taking immunosuppressive, immunomodulative or steroid treatment within the last 2 months and complained of ailments characteristic of the current infection. Blood sample (30 ml) taken from basilica vein into EDTA tubes was research material. Assesment of immunophenotype and isolation was perform immediately. Three-colour immunofluorescence analyses were performed using a FACS Calibur flow cytometer (Becton Dickinson) equipped with 488 nm argon laser. Statistical analysis was performed using Statistica 10.0 (Stat Soft Inc.) software. The Local Ethical Committee at the Medical University of Lublin approved the research and patients gave their prior written consent.
Results: There was significant higher amount of CD3+CD69+ lymphocytes in PPV23 stimulated cell culture (p=0.004 after 24h, p=0.012/48h, p=0.022/72h). The same relation occur in CD3+CD25+ subpopulation (p=0.021/24h, p=0.01/72h), CD19+CD69+ (p=0.003/24h, 0.025/48h, 0.012/72h) and CD19+CD25+ (p=0.003/24h). Expression of CD95 was significantly higher in CD3+ lymphocytes after PPV23 stimulation (p=0.003/24h, p=0.016/48h) and in CD19+ lymphocytes after PPV23 stimulation (p=0.003/24h, p=0.015/48h, 0.006/72h).
Conclusions: PPV23 stimulation lead to increase of immunological activation markers especially on T lymphocytes which may indicate their function preserved despite leukemia. PPV23 stimulation caused increase of CD3+CD95+ and CD19+CD95+ compared to non-stimulated cell cultures which may indicate induction of leukemic cells apoptosis by PPV 23 stimulation.

Keywords: chronic lymphocytic leukemia, PPV23 stimulation, lymphocyte activation

Neurology and Neurosurgery

THE LATEST NEUROBIOLOGICAL DISCOVERIES IN BIPOLAR DISORDER'S ETIOLOGY.

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Introducion: Bipolar disorder (BD) belongs to a recurrent mood disorders. It is characterized by the presence of opposing mood and activity disorders: depressive and manic syndromes. In etiology of BD we can point exogenous factors, such as personality disorder - caused by environmental factors or traumatic event which sometimes trigger the disease. A common endogenous factor occurring in affective diseases is disorders of neurotransmission. In the pathogenesis of such irregularities, both - the structural changes in the brain and genetic factors affecting to neurotransmission should be taken into account. In our presentation we will try to introduce new theories on the neurobiological substrates of BD.
Methods: An overview and study of the recent neurobiological reports within the scope of the bipolar disease, in the professional medical literature.
Results: Patients with BD were noticed to have some deviations from the norm, in the functioning of the nervous system. There has been an increase in the activity of NRG3 (neuregulin 3) isoforms (in classes I and II) of post-mortem tissue examination. An increase in the concentration of cytokines sIL-1RA was observed - as a potential marker of disease, and correlation of high levels of sTNFR80 with severity of depressive phase of disease. Studies of genes CACNA1C and ANK3 shown an association of variants of these genes with the presence of BD, which may indicate that BD is in part an ion channelopathy. Interestingly, a higher frequency of cigarette smoking were demonstrated among patients with BD.
Conclusions: There are many subtle differences in the functioning of the nervous system of people with BD compared with the general population. Understanding these differences will help us to understand the disease better, improve diagnostics, and perhaps in the future will help to create drugs based on new drugs' targets.

Keywords: bipolar disorder, manic depression, etiology, mania, depression

COMPARISION OF THE INFLUENCE OF TOPIRAMATE AND VALPROATE ON THE LONG-TERM MEMORY IN MICE EXPOSED TO CAFFEINE IN THE PERI- AND PRENATAL PERIOD OF LIFE.

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Introducion: Brain is the most complex structure of human body. Epilepsy is a disease affecting over 60 million people in the world. Epileptic attacks come from abnormal and synchronized activity of neurons. Drugs, nowadays used to cure this disease are very often not fully effective. Caffeine is one of the methyloxantine derivatives. It is an antagonist of adenosine receptors. In human brain, activation of A1 receptor results in sedation and anticonvulsant reaction. Topiramate (TPM) is one of the antiepileptic drugs. It decreases the excitatory effects of glutamic acid by blockade of NMDA receptors. It also blocks sodium channels and increases the sensitivity of GABA-A receptors. Valproate (VPA), another antiepileptic drug, blocks sodium and calcium channels and increases the level of gamma-aminobutyric acid concentration in the brain. It is also used as a mood stabilizer in psychiatric diseases.
Methods: Pregnant mice were divided into two groups. Pregnant mice in the exposed group received drinking water with caffeine in a concentration of 0.3g/l for three weeks of pregnancy. After birth, young mice still received water with caffeine in the same concentration for three weeks. Pregnant mice and after birth, in the control group drank caffeine-free water. When males reached their adulthood, they were administered with TPM in dose of 94.8 mg/kg or VPA in dose of 175.5 mg/kg. After drug administration, passive-avoidance task was carried out.
Results: In neither control nor exposed groups, both TPM or VPA impaired long-term memory.
Conclusions: Exposure to caffeine in the pre- and perinatal period, did not modify the effects of VPA or TPM on long-term memory in mice.

Keywords: caffeine, topiramate, valproate, mice, long-term memory

ASSESSMENT OF COMPLEX INTRACRANIAL ANEURYSMS' TREATMENT TECHNIQUES, PROPOSED CLASSIFICATION GUIDELINES AND RISKS RELATIVE FOR PATIENTS

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Introducion: Complex Intracranial Aneurysms (CIAs) together form a very heterogeneous group of vascular malformations. Usually, they require a more thorough and cautious approach because of their uncommon localisation, size or morphology. Their treatment process is inevitably linked with a higher risk for patient, which means that the therapeutic team must possess great expertise to perform medical procedures relatively safely. This retrospective study was carried out to evaluate typical treatment methods of CIAs and their outcomes among our Clinic's patients.
Methods: From the overall number of patients who were hospitalised in the Clinic from 2008 till 2014, we separated a group of subjects who presented Complex Intracranial Aneurysms and were qualified for treatment. While working with medical records we had to create a classification method to designate CIAs from more regular aneurysms. Next step was to create a subgroup of subjects who suffered a subarachnoid haemorrhage (SAH). Both of the divided groups' outcomes were assessed using the Glasgow Outcome Scale (GOS). Moreover, all of the CIAs were thoroughly measured by students who were supervised by interventional radiologists.
Results: In almost 70% of cases, the preferred treatment method was an endovascular embolization of an aneurysm. About half of these cases required the placement of stent inside the lumen of the vessel. Complete embolization was possible in approximately half of the interventions. About 23% of patients qualified for CIA treatment, suffered from a subarachnoid haemorrhage.
Conclusions: Complex Intracranial Aneurysms pose a difficult challenge for therapeutic team. CIAs are lacking clear classification guidelines, which may hinder their comparison between different studies. According to our research endovascular embolization is an effective treatment method.

Keywords: Complex, intracranial, aneurysm, classification, guideline, endovascular, embolization, subarachnoid, hemorrhage

Orthopaedics, Physical Therapy and Rehabilitation

DIFFERENCIES IN FUNCTIONAL RESULTS AFTER TOTAL HIP REPLACEMENT WITH WATSON-JONES AND MINI INVASIVE ANTERIOR APPROACHES

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Introducion: Hip replacement as a surgery is performed in numerous approaches including the most popular anterior Smith-Petersen and modified by Heuter, anterolateral designed by von Sprengel and Bardenheuer and modyfied by Watson-Jones and posterior von Langenbeck and Kocher and modyfied by Moore and Gibson. There are many publications which compare both these approaches. Unfortunately it is still not clear which one of these two have better impact on postoperative results .We decided to perform our own studies based on patients from Infant Jesus orthopedic clinic.
Methods: We examined 124 patients after THA performed with two different approaches: anterior mini invasive and anterolateral Watson-Jones in our clinic . The average follow up was 3,12 years. We performend X-ray, phsical examination, WOMAC and HKASS questionaire to compare treatment results.
Results: We observed differencies in HKASS. The other differencies although appear, are not statistically important ($p>0.05$).
Conclusions: Minimally invasive anterior approach although muscle preserving, is more challenging for surgeon than Watson-Jones. Due to adventages and disadventages, totalhip replacements both approaches should be considered as good treatment method. The difference between groups may result from operational technique as well as other factors, that haven't been taken into account.

Keywords: Hip replacement, Trauma, Orthopedics, Approaches

COMPARISON OF OVERALL OUTCOMES AFTER TOTAL HIP ARTHROPLASTY IN DIFFERENT AGE GROUPS

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Introducion: Total hip arthroplasty (THA) is one of the most commonly performed surgery in orthopaedics. There are many indications for that including coxoarthrosis, aseptic necrosis of femoral head or developmental hip dysplasia. Those diseases often make even young adults disabled. We design our study to compare self-assesed functional outcomes between different age groups to find out how important is the age factor and what is the main reason for that.
Methods: We examined 72 patients after THA performed in our clinic, devided into two groups: A under 55 y.o. and B over 55 y.o. The follow-up varied between 1.01 year to 7.17 years with average follow-up 5.25 years. In addition to physical examination patients were asked to fill in few questionnaires including WOMAC, HKASS and HHS
Results: We observed statictically important differencies in our age groups ($p<0.05$) in HKASS questionnaries, what indicates more satisfactory results in elder group. No other statistically important differencies were seen.
Conclusions: There are many factors that have an impact on overall results after total hip replacement. Not only good operation results and well performed rehabilitation decides on overall result of treatment. We should always take into account psychological effects of operative treatment

Keywords: Hip replacement, Orthopedics, Trauma, THA

RESULTS OF MEDIAL PATELLOFEMORAL LIGAMENT RECONSTRUCTION USING AUTOLOGUS GRACILLIS TENDON WITHOUT PATELLAR SCREW FIXATION

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Introducion: Lateral patella dislocation is quite a common problem among skelletaly immature athletes. During such injury, medial patellofemoral ligament (MPFL) is almost always injured at its femoral attachment. Failure of nonoperative treatment is an indication for surgical reconstruction of MPFL, which is a prefered option for stabilization of the patella against lateral displacement.
Methods: We have prospectively evaluated 22 patients (14 females and 8 males with an average age of 14,95 in the time of surgery, range: 13-16, and/or at least 2 lateral patella dislocation, mean: 4,18, range 2-10, 11 left and 11 right knees, trochlear dysplasia 11 A, 10B, 1 A/B type). All patients were qualified, treated and controlled by the same surgeon at 2, 6, 12, 24 and 48 weeks postoperatively and rehabilitated in different centers at their home places. Kujala scoring questionnaires were filled during qualification for surgery and postoperatively during March 2016 (mean follow up: 2,65 years, range: 1,3-3,83). All of patients underwent MPFL reconstruction using autologous gracilis tendon graft, transmitted through 3mm drills in the patella on its medial side in the native patellar attachment of the MPFL with oblique tunnels tangent to them, what allowed to fix the graft in the patella without screws with typical femoral fixxation with Millagro Adavnce Interference screw.
Results: While mean Kujala score before surgery was: 70 (+-10,1), such MPFL reconstruction let Kujala score to rise to 94,3 (+-4,4), $p<0,001$. Results of this surgery, such as patellofemoral joint stabilization with no cases of recurrent dislocation, restoration of full knee range of motion, muscle strength and its reactivity, sum up to very satisfying for patient final outcome.
Conclusions: This study indicates that MPFL reconstruction with autologous gracilis graft, fixed in the patella through 3mm drills in the native attachment with tangent to them oblique tunnels without screw fixation should be considered a valuable alternative to other MPFL reconstruction techniques.

Keywords: Medial Patellofemoral Ligament, patellar dislocation, MPFL, immature, children, reconstruction

Paediatrics and Neonatology

OCCURRENCE OF INTESTINAL ALERT PATHOGENS IN CHILDREN UNDERGOING CANCER THERAPY.

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Introducion: Infections caused by multi-drug resistant alert pathogens are especially dangerous in children undergoing antineoplastic treatment. These patients, undergoing chemotherapy, are exposed to infectious complications due to its immunosuppressive character, which include gastrointestinal infections caused by pathogens. Therefore, the broad-spectrum antibiotics are usually additionally applied, which plays a tremendous role in the development of bacterial resistance. Aim of the study: Evaluation of the influence of antimicrobial treatment length on occurrence of intestinal alert pathogens in children undergoing cancer therapy. Evaluation of selected antimicrobial agents groups influence on occurence of intestinal alert pathogens.
Methods: Patients' medical records (January 2013- July 2015) (n=108),including fecal antimicrobial cultures data, from Department of Pediatrics, Oncology, Hematology and Diabetology of Medical University of Lodz were used. All patients were receiving antineoplastic and antimicrobial treatment. Each patient was observed for 12 months of therapy. Patients that changed treatment centre during observation were excluded. Patients (of average age 6,99 ± 5,40) were divided into 5 groups, based on cancer diagnosis: leukemia (n=47), lymphomas (n=9), CNS tumors (n=23), solid tumors (n=16) and other tumors (n=13).
Results: Multiple episodes of antimicrobial therapy, both empirical and based on microbiological culture data results, correlated positively with the frequency of alert pathogens infections ($p<0,05$). As the microbial therapy lengthens, the alert to non-alert pathogen ratio increases ($p<0,05$). Among groups of patients based on diagnosis, there was no particular one that would present increased occurrence of alert pathogens or increased ratio of alert to non-alert pathogens. Among groups of antibiotics, carbapenems and aminoglycosides correlated positively ($p=0,0156$ and $p=0,0015$) with occurrence of alert pathogens after usage.
Conclusions: The prolongation of the treatment process can influence on appearance of the alert pathogen, regardless of type of neoplasm diagnosed. Carbapenems and aminoglycosides can influence significantly on development of multi-drug resistant bacteria, thus there is basis to consider their use very carefully.

Keywords: alert pathogens, children, oncology, bacteria, resistance

FRACTURE

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Introducion: Children are often very active. Because of that they more often than adults had got fracture. The most common pediatrics lower limb fracture is foot bones fracture.The goal of this study was to describe the most common lower limb fracture in the school kids.
Methods: The author analyzed pediatrics lower limb 500 radiograms. The data was collected and obtained in Statistica 12.0.
Results: In this group boys are dominated (61,38 %), the average age was 13 yo. In the first position of children's fracture was ankle joint trauma (34,7 %), next was lower bone (17,25 %). The fractures fissure the most often was located in the middle of the ankle joint (85,31 %). In a lower leg the fracture, was located in the tibia bone (53,4 %). The right patients side was slightly dominated -54,9 %. During treatment, standard stabilization was popular nevertheless a new way for treatment eg. Stabilization with wires etc. was also used. Fracture was diagnosed using classic radiography, radiology protection was used to decrease the level of radiation for the patients.
Conclusions: Children the most often has got ankle bone trauma. New stabilization techniques may be better option for fracture treatment in this group of patients.

Keywords: fracture, pediatric radiology

IMPACT OF GROWTH HORMONE TREATMENT ON GLUCOSE AND LIPID METABOLISM PARAMETERS IN GIRLS WITH TURNER SYNDROME.

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Introducion: : In Turner syndrome (TS) congenital short stature and a predisposition to metabolic syndrome development is observed. Growth hormone (GH) it is responsible for stimulating glycogenolysis and increases insulin secretion, accelerates lipolysis and inhibits lipogenesis. In patients with GH deficiency, beneficial effect of GH substitution on carbohydrate and lipid metabolism is seen. The aim of our study was to evaluate the effect of GH treatment on parameters of glucose and lipid metabolism in girls with TS.
Methods: We retrospectively studied 31 patients with TS treated with GH. Study compared the ratio of the height and weight standard deviation score (HSDS/WSDS), the profile of carbohydrate, lipid and TSH, before the initiation and after one year of GH treatment.
Results: Fasting blood glucose (FBG) before the treatment was significantly lower than FBG after one year (74,7 ± SD 8,497 mg/dl vs. 80,2 ± SD 7,386 mg/dl, p= 0,029), as did fasting insulin concentration 3,1 ± SD 2,207 uIU/ml vs. 6,2 ± SD 5,034 uIU/ml, p= 0,0001) and HOMA-IR (0,55 ± SD 0,440 vs. 1,12 ± SD 1,086 , p= 0,001). Six girls presented insulin resistance (HOMA-IR>2,5) after one year of the treatment, whereas before the treatment it was not observed. The level of HbA1c was comparable in the studied points of time, not exceeding normal ranges. During the GH treatment a reduction of total cholesterol and LDL-cholesterol was observed (171,3 ± SD 28,844 mg/dl vs. 162,6 ± SD 26,898 mg/dl, p= 0,000001 and 103,8 ± SD 24,175 mg/dl vs. 89,9 ± SD 19,087 mg/dl, p= 0,0004, respectively), however triglycerides level increased (79,4 ± SD 34,326 mg/dl vs. 104,4 ± SD 44,362, p= 0,005) and HDL-cholesterol did not changed.
Conclusions: GH therapy improves the lipid profile, however causes insulin resistance, that may lead to impaired glucose tolerance.

Keywords: Turner syndrome, growth hormone, metabolic syndrome

CORRELATION BETWEEN THE CONCENTRATION OF FAECAL CALPROTECTIN AND BIOCHEMICAL MARKERS OF INFLAMMATION IN CHILDREN WITH CROHN'S DISEASE AND ULCERATIVE COLITIS

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Introducion: First discovered in 1980s, calprotectin has now become a widely used biomarker helpful in the diagnosis and monitoring a large number of gastrointestinal disorders such as Inflammatory Bowel Disease (IBD), including ulcerative colitis (UC) and Crohn's disease (CD), and Irritable Bowel Syndrome (IBS). Calprotectin is small calcium and zinc binding protein that belongs to the S100 family. When inflammatory process occurs, calprotectin is released due to the degranulation of neutrophils. Faecal calprotectin (FC) is non-invasive, inexpensive and specific biomarker and its elevation indicates the presence of gastrointestinal inflammation. Aim The aim of the study was to evaluate the correlation between the concentration of faecal calprotectin (FC) and biochemical markers of inflammation, such as C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), white blood cells (WBC) and ferritin in children with Crohn's disease and ulcerative colitis.
Methods: Stool and blood samples were obtained from 370 children. Faecal calprotectin was analyzed by the immunochromatography assay. CRP, ESR, WBC and ferritin were measured in the clinical laboratory. This is a retrospective study in which demographic, clinical and laboratory data of patients have been collected from our database. Statistical analysis was performed using Microsoft Office Excel.
Results: The study group consisted of 370 patients and included children diagnosed with CD (n=122), UC (n=97) and other gastrointestinal disorders (n=151). There was a positive correlation between concentration of FC and biomarkers such as CRP (r=+0,16; p=0.03), ESR (r=+0,38; p<0.0001) and WBC (r=+0,24; p=0.0008) in patients with IBD. There was also a negative correlation between concentration of FC and ferritin (r=-0,24; p=0.0009) in patients with IBD.
Conclusions: In this study, ESR turned out to be more adequate than CRP and WBC in detecting inflammation in patients with IBD associated with increased concentration of faecal calprotectin. In conclusion, ESR is the most accurate marker of intestine inflammation when measuring of calprotectin is unavailable.

Keywords: calprotectin, inflammatory markers, Crohn's disease, ulcerative colitis, inflammatory bowel diseases

INTRODUCTION OF PERSONAL INSULIN PUMP 640G WITH THE FUNCTION OF SUSPENDING INSULIN DELIVERY AND PREDICTION OF HYPOGLYCEMIA TO THE THERAPY REDUCES THE NEGATIVE IMPACT OF DIABETES ON THE QUALITY OF LIFE OF PATIENTS WITH TYPE 1 DIABETES.

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Introducion: The quality of life (QoL) became a very important parameter in the XXI century which often decides about the type of treatment. The spectrum of treatment possibilities is constantly expanding due to the rapid technological development. Currently most up-to-date insulin pump MiniMed 640G which is able to predict hypoglycemia episode, flexibly and transiently stop insulin delivery before approaching programmed low glucose limit and automatically resume it (SmartGuard technology) can become a way to improve the QoL of diabetic patients.
Methods: 21 women and 20 men with well-controlled DM1 (mean HbA1C was 7.26%) were examined, mean age 15 years. The mean time from diagnosis was 5.2 years. Patient were previously treated with IP with or without hypoblocade (Medtronic MiniMed REAL-TIME/ Veo). 2-11 months after introducing 640G pump therapy two surveys were conducted: PedsQLTM 3.0 Diabetes which measured the QoL in diabetic patients (Survey I) and the authorial questionnaire (Survey II) which measured the satisfaction of 640G therapy (consisted of 11 questions, 2 closed and 9 semi-closed-ended). The main inclusion criteria was the therapy with 640G pump.
Results: The mean scores of QoL in Survey I regarding communication (59%), concerns (51%), treatment (57%) and diabetes (54%) which according to our scale (0-19% no impact, 20-39% low, 40-59% moderate, 60-79% high, 80-100% very high) mean QoL was intact. The results of Survey II showed gladness and assurance of the patients with 640G pump therapy. Over a half of participants (34 people) certified a serious reduction of both hypo/hyperglycemia episodes. 24 patients/caregivers highlighted a better coherence between blood glucose measured by sensor and glucose meter which enabled them to decrease the frequency of pricking fingers. 27 patients considered management of DM1 to be easier, they also noticed better cooperation with 640G.
Conclusions: Patients with DM1 using 640G pump are satisfied with the effects of the therapy, they feel safer and their QoL measured by PedsQL is relatively high regarding this group of patients.

Keywords: type 1 diabetes, insulin pump, quality of life, hypoglycemia, SmartGuard technology, PedsQLsurvey

ANALYSIS OF CORRELATION BETWEEN STEM CELLS (CD133+/CD45+ AND CD133+/CD45-) AND ANTHROPOMETRIC PARAMETERS OF CHILDREN WITH GROWTH HORMONE/PRIMARY INSULINE LIKE GROWTH FACTOR 1 DEFICIENCY

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Introducion: Hematopoetic progenitor stem cells (HSCs, CD133+/CD45+) and very small embryonic-like stem cells (VSELs, CD133+/CD45–) are types of progenitor cell which can differentiate into specific immune cells. Some studies suggest that levels of HSCs and VSELs change during therapy with growth hormone (GH) or insulin-like growth factor 1 (IGF-1). GH deficiency (GHD), an endocrine disease connected with insufficient production of GH by pituitary gland, is treated with synthetic GH. IGF-1 is main growth factor, secreted under the influence of GH. Primary IGF-1 deficiency syndrome (PIGFDS) may be caused by genetic defects and it is treated with IGF-1 administration. The aim of study was to assess whether GH and IGF-1 therapies can mobilize specific stem cells and if there is any correlation between the level of HSCs and VSELs and anthropometric parameters.
Methods: Anthropometric parameters (height, weight, BMI) and HSCs and VSELs levels were measured in 32 children with GHD during GH therapy and 4 with PIGFDS during IGF-1 therapy. Mean age 12 years old. The control group comprised 16 healthy, age and sex matched children. HSCs and VSELs levels were determined with flow cytometry.
Results: In the study group higher levels of both HSCs and VSELs were noted. Comparing to control group HSCs level increases statistically significant ($p<0,05$) in the group treated with GH but tendency to increase without statistical significance was demonstrated by VSELs in both study groups and by HSCs in IGF-1 treated group. Statistically significant correlations ($p<0,05$) between stem cells levels and anthropometric parameters were observed in both GH (HSCs and weight, VSELs and height) and IGF-1 (VSELs and BMI, VSELs and height) treated patients.
Conclusions: GH and IGF-1 mobilize stem cells. VSELs and HSCs could be monitoring markers of patients response to therapy.

Keywords: stem cells, VSELs, HSCs, growth hormone, insuline-like growth factor 1

ARE THE CHILDHOOD CANCER SURVIVORS AT RISK OF VITAMIN D DEFICIENCY?

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Introducion: Recent studies indicate that childhood cancer survivors (CCS) have increased risk for vitamin D deficiency, which is associated with the prevalence of immune dysfunction, diabetes and malignancy itself. Assessment and adequate replacement of vitamin D status is important in this group of children and might improve the quality of life of oncological patients. However, data on 25-hydroxyvitamin D (25(OH)D) status among CCS are limited. The aim of the study was to evaluate the serum level of 25(OH)D in CCS depending on: age, gender, diagnosis, TSH and cholesterol level.
Methods: The study group included 124 CCS (male:71, female:53) between the age 3-24 (mean age at the study-13.37±4.26). Patients were treated due to: acute lymphoblastic leukemia (n=66; 53.23%), lymphoma (n=13; 10.48%) and solid tumors (n=45; 36.29%). Mean time from diagnosis and mean age at diagnosis were 7.58± 3.96 and 5.75± 4.25 years, respectively. The results were compared with control group consisted of 60 healthy children (35 boys, 25 girls). The 25(OH)D level was assessed using immunochemical method. The Mann-Whitney U test and t-Student test were used. The statistical significance was defined as $p<0.05$.
Results: We found statistically significant differences in serum level of 25(OH)D between study and control groups (mean:16.64± 8.21 vs. 20.84± 10.23 ng/ml, p=0.013). Almost seventy percent of the patients (n=84) had vitamin D level below the range norm [20-60 ng/ml]. The 25(OH)D status was similar in both sexes (male:17.18±8.62 vs. female:15.91±7.65 ng/ml, p=0.398). No statistical differences between level of 25(OH)D in patients with ALL (16.19± 8.79 ng/ml), lymphoma (16.82± 7.34 ng/ml) and solid tumors (17.25± 7.69 ng/ml) were found (p=0.801). Serum level of 25(OH)D in patients under 10 years old (mean:19.44± 8.95 ng/ml) was statistically significant in comparison to patients between 10 and 15 years (mean:15.23± 7.23 ng/ml; p=0.026). There was no correlation in the level of vitamin D and TSH (r= -0.144) or cholesterol (r= -0.117).
Conclusions: We found high prevalence of 25(OH)D insufficiency in childhood cancer survivors. Half of the patients in the control group also had level below the range norm. Adequate supplementation of vitamin D seems to be important in CCS. Additional studies, especially on larger groups are needed.

Keywords: paedriatrics, oncology, 25(OH)D, survivors

USING METHODS OF COMPLEMENTARY AND ALTERNATIVE MEDICINE AMONG PEDIATRIC ONCOLOGICAL PATIENTS.

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Introducion: Complementary and Alternative Medicine (CAM) involves various therapeutic and prophylactic treatment methods which effects have not been scientifically confirmed or are considered negligible. The use of CAM therapies has increased in recent years especially among pediatrtic oncological patients. However, limited Polish data exist on the frequency of its use in this patients population.
Methods: A questionnaire survey was performed among 165 parents of pediatric patients after the completion of oncological treatment and during the follow-up in the Pediatric Oncology and Hematology Outpatient Clinic of Medical University of Silesia in Katowice.
Results: According to our initial results 86% of parents were familiar with CAM therapies and 26,7% declared applying these methods along with oncological treatment in their children. The most commonly used CAM modalities include: herbs, plant extracts, diets, Noni juice. The primary reasons for using these forms of therapy were: to do “everything possible for the sake of the child” and to boost the immune system. Furthermore, the majority of those surveyed (60%) did not inform the attending physician about implementing CAM therapies in the treatment of their children. 63% of parents found this form of treatment effective. Only 1/3 (%) of those questioned declared awareness of potential side effects, that occurred in 2 patients.
Conclusions: CAM is commonly used among pediatric oncological patients, mostly without their physician's knowledge. Therefore, it seems important to raise awareness of potential side effects of CAM treatment and interactions that can occur between this form of therapy and oncological treatment, making the latter less effective.

Keywords: complementary and alternative medicine, paediatrics, cancer

INTRODUCTION OF PERSONAL INSULIN PUMP 640G WITH THE FUNCTION OF SUSPENDING INSULIN DELIVERY AND PREDICTION OF HYPOGLYCEMIA TO THE THERAPY REDUCES THE NEGATIVE IMPACT OF DIABETES ON THE QUALITY OF LIFE OF PATIENTS WITH TYPE 1 DIABETES.

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Introducion: The quality of life (QoL) became a very important parameter in the XXI century which often decides about the type of treatment. The spectrum of treatment possibilities is constantly expanding due to the rapid technological development. Currently most up-to-date insulin pump MiniMed 640G which is able to predict hypoglycemia episode, flexibly and transiently stop insulin delivery before approaching programmed low glucose limit and automatically resume it (SmartGuard technology) can become a way to improve the QoL of diabetic patients.
Methods: 21 women and 20 men with well-controlled DM1 (mean HbA1C was 7.26%) were examined, mean age 15 years. The mean time from diagnosis was 5.2 years. Patient were previously treated with IP with or without hypoblocade (Medtronic MiniMed REAL-TIME/ Veo). 2-11 months after introducing 640G pump therapy two surveys were conducted: PedsQLTM 3.0 Diabetes which measured the QoL in diabetic patients (Survey I) and the authorial questionnaire (Survey II) which measured the satisfaction of 640G therapy (consisted of 11 questions, 2 closed and 9 semi-closed-ended). The main inclusion criteria was the therapy with 640G pump.
Results: The mean scores of QoL in Survey I regarding communication (59%), concerns (51%), treatment (57%) and diabetes (54%) which according to our scale (0-19% no impact, 20-39% low, 40-59% moderate, 60-79% high, 80-100% very high) mean QoL was intact. The results of Survey II showed gladness and assurance of the patients with 640G pump therapy. Over a half of participants (34 people) certified a serious reduction of both hypo/hyperglycemia episodes. 24 patients/caregivers highlighted a better coherence between blood glucose measured by sensor and glucose meter which enabled them to decrease the frequency of pricking fingers. 27 patients considered management of DM1 to be easier, they also noticed better cooperation with 640G.
Conclusions: Patients with DM1 using 640G pump are satisfied with the effects of the therapy, they feel safer and their QoL measured by PedsQL is relatively high regarding this group of patients.

Keywords: type 1 diabetes, insulin pump, quality of life, hypoglycemia, SmartGuard technology, PedsQLsurvey

Pharmacology, Dietetics and Genetics

MIR-223 – IMPORTANT MICRORNA IN PATHOGENESIS OF MULTIPLE SCLEROSIS – META-ANALYSIS

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Introducion: MicroRNA (miRNA) is a small and non-coding RNA. It is involved in regulation of gene expression by inhibition of translation or mRNA degradation. MicroRNA shows high conservation across species and specimen. Deregulation of miRNA was noted in various autoimmune diseases. Multiple sclerosis (MS) is a complex inflammatory demyelinating disease of the central nervous system. Despite years of research its pathogenesis is still a mystery and therefore the results of MS treatment are at least unsatisfactory.
Methods: A search in PubMed and GoogleScholar was performed for keywords „mir-223 multiple sclerosis" and „mir-223 MS". As a result 8 original articles were collected. Data involving mir-223 was extracted from each of them and analysed. Those 8 studies comprised total 218 MS patients and 145 healthy controls.
Results: Deregulation of miRNA was observed in the group of MS patients versus healthy control (HC). Level of mir-223 was significantly decreased in serum of MS patients while it was increased within PBMCs (average: 1.77 times higher in MS vs. HC). The increase was observed in total PBMCs, Tregs, MDSCs and Th cells. Stat3 is probably a target gene for mir-223 as it inhibited activity of luciferase in test array. Inhibition of Stat3 was linked with decreased suppressive capacity of MDSCs.
Conclusions: Deregulation of miRNA is one of important pathological mechanism in the course of MS. Recent studies showed that levels of numerous different miRNAs are either increased or decreased. The resulting change in gene expression is related to abnormalities in immune cell function. Therefore miRNAs should be sighted as a novel treatment target. Mir-223 is a good example as it is severely deregulated and its implication in the clinical course of the disease had been reported.

Keywords: mir-223, multiple sclerosis, microRNA, miRNA

P-CRESOL SULPHATE AND INDOXYL SULPHATE CONCENTRATIONS IN SERUM OF OBESE PATIENTS

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Introducion: Obesity is a civilisation disease associated with functional and morphological changes in kidneys. There are some reports describing differences in urate and creatinine level in the group with body mass index (BMI) over 30. These substances are eliminated mainly by glomerular filtration. On contrary ureamic toxins, such as p-cresol sulphate (pCS) and indoxyl sulphate (IS) are eliminated in proximal tubule by the organic anion transporter (OAT). Their levels are associated with diet composition, renal function and can be a risk factor of renal failure progression and cardiovascular diseases. Since there is no information how obesity influence the pCS and IS level, the aim of this study was to assess the concentration of the ureamic toxins in obese and non-obese individuals.
Methods: The analysis included 60 patients with severe obesity (BMI over 35) and control group of 60 volunteers with normal BMI. The serum samples were collected and analysed using liquid chromatography coupled with mass spectrometry (LC-MS) (QTRAP®4000, AB SCIEX).
Results: Statistically significant differences were observed between concentrations of pCS ($p<0.001$) and IS ($p<0.001$) between patients and controls. The level of toxins was almost two times lower in obese patients than in non-obese people.
Conclusions: Patients with obesity have lower concentrations of p-cresol sulphate and indoxyl sulphate in blood than non-obese individuals. It can be a result of increased renal blood flow, which affects the substance elimination by OAT.

Keywords: ureamic toxins, obesity, kidney dysfunction

ZEBRAFISH AS A NOVEL ANIMAL MODEL IN CHRONIC MYELOID LEUKAEMIA TREATMENT.

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Introducion: Chronic myeloid leukaemia (CML) is a type of cancer affecting almost 20% of adult leukaemic patients. CML is characterized by increased and unregulated growth of mostly myeloid cells in the bone marrow and accumulation of these cells in the blood. CML is a clonal bone marrow stem cell disorder in which proliferation of mature granulocytes and their precursors is detected. This myeloproliferative disease is associated with a characteristic chromosomal translocation known as the Philadelphia chromosome (Ph) or t (9;22) translocation (BCR-ABL). Zebrafish (Danio rerio) is an excellent model for the investigation of haematopoiesis due to its advantages such as small size, large number of progeny, transparent embryos and rapid development. More importantly approximately 84% of the human genes that cause diseases have a zebrafish orthologue.
Methods: Zebrafish of the AB and WIK strains were maintained according to standard procedures. Tol2-mediated transgenesis method for creating transgenic zebrafish was used. A green fluorescent protein was used as a marker for detecting if mammalian promoters and ubiquitous drove downstream transgene expressions in zebrafish.
Results: The zebrafish share significant homology with the BCR and ABL genes of humans. Therefore, it is possible to produce CML transgenic zebrafish lines expressing the P210 BCR-ABL fusion protein under control of a promoter/enhancer element. These promoters mainly include three types, the ubiquitous CMV promoter, the inducible heat shock protein (hsp) promoter, or the specific coro1a (coronin-1a) promoter, which is a specific promoter for myeloid cells.
Conclusions: The zebrafish CML model is useful for in-vivo observations of the development and transformation of leukemic cells, and for the analyses of pathophysiology of signalling pathways of the fusion gene. The model is very useful for improved evaluation of the effects of leukemic pharmacological treatment, by observing the reduction of the green leukemic cells marked by enhanced green fluorescent protein. The zebrafish CML model also provides a unique forward genetic screening for specific disease- related genes affecting the process of leukaemia, such as genes related to tumorigenesis, cell specificity, disease progression rate and metastatic processes.

Keywords: zebrafish. chronic myeloid leukaemia. CML. Philadelphia chromosome

CONSUMPTION OF PRODUCTS THAT PREVENT DETERIORATION OF COGNITIVE FUNCTION (ACCORDING TO MIND DIET- MEDITERRANEAN – DASH INTERVENTION FOR NEURODEGENERATIVE DELAY) AMONG POLISH SOCIETY.

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Introducion: Alzheimer's disease is the most common cause of dementia nowadays- every 4 seconds a new case of this disease is diagnosed in the world. Over the following years we might predict that the number of patients with this disease will increase. It motivates to find new ways to improve cognitive function. According to the latest reports that may be the MIND diet. It is combination of Mediterranean diet with DASH diet and supplemented with products which beneficial effect on slowing the progression of deterioration of cognitive function has been proved in cohort study-green leafy vegetables (kale, spinach, lettuce) and berries.
Methods: We created on- line survey. It contained 20 questions (with short answer and multiple choice). 95 people answered.
Results: The majority of interviewees try to follow the healthy diet (77.9%). Anyway, analysis of the survey showed that diet of our respondents is not perfect, especially when it comes to products that, according to MIND diet, can improve cognitive function. 48.4% of respondents eat nuts only few times per month, 27.4% few times per six months and 8.4% do not eat nuts at all. About half of respondents add green leafy vegetables to their meals only from a few to a dozen times per six months. However, consumption of butter and margarine which affects badly our cognitive function is huge among our respondents- 63% of them eat this products every day. In addition 57.9% of respondents eat sweets every day or a few times per week. Knowledge about products that can improve cognitive functions among respondents is small.
Conclusions: The number of patients with diagnosed Alzheimer's disease is constantly growing. Scientists are forecasting that in 2050 year there will be 3 times more patients with this disease. Our survey showed that people do not know a lot about diet as a prevention of worsening cognitive functions. It is important to learn more about proper diet that can slow down or even protect against dementia.

Keywords: Dementia, cignitive functions, diet, MIND

INFLUENCE OF VALPROATE ON THE MOTOR COORDINATION IN MICE EXPOSED TO CAFFEINE IN PRE- AND PERINATAL LIFE.

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Introducion: Caffeine is a stimulant of the central nervous system and belongs to methylxanthine group. Caffeine-containing drinks such as coffee, tea and cola are very popular and about 90% of adults consume caffeine daily in pharmacologically relevant doses. Valproate (VPA) is a drug prescribed for the treatment of epilepsy and bipolar disorder. It is one of the most frequently used antiepileptic drugs worldwide for the therapy of generalized and focal epilepsies. VPA is a broad-spectrum antiepileptic drug and is usually well tolerated.
Methods: The experiment was carried out on Swiss male mice. Pregnant mice were divided into two groups. Mice in the exposure group received water with caffeine in a concentration of 0.3g/l for three weeks of pregnancy. After birth, young mice still received water with caffeine in the same concentration for three weeks. In control group pregnant mice, and young mice after birth, drank water without caffeine. After this time (3 weeks), young mice were separated from their mothers and divided into groups of 8 mice each. At 8th week of life, chimney test was used to examine disorders of motor coordination. Before the chimney test, mice received VPA and the test was conducted when the peak activity VPA was reached to determine its median toxic dose (TD50).
Results: In control group which received water to drink, the average TD50 of VPA was 426.1 mg/kg, and in exposed to caffeine group, the average TD50 of VPA was 411.8 mg/kg.
Conclusions: The results indicate that caffeine exposure during pregnancy and breastfeeding did not influence the effect of VPA on motor coordination in adult mice.

Keywords: caffeine, valproate, VPA, motor coordination, mice

THE INFLUENCE OF CAFFEINE (AN ADENOSINE RECEPTOR ANTAGONIST) EXPOSURE ON THE EFFECT OF VALPROATE ON LONG-TERM MEMORY IN MICE.

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Introducion: Epilepsy is one of the most known neurological diseases in the world. It comes from abnormal, excessive and synchronized neuronal discharges in the brain. The number of people suffering from it reaches over 60 million. Valproate (VPA) is used as an antiepileptic drug mainly for grand-mal epilepsy attacks and juvenile myoclonic epilepsy. It blocks voltage-gated sodium and calcium channels, and increases brain GABA concentration by restraining its disintegration. Moreover, VPA is also used in psychiatric diseases, as a mood stabilizer. Caffeine is one of the most common stimulants and is found mainly in drinks such as coffee, tea, and yerba-mate tea. It is also an adenosine receptor antagonist with affinity for A1, A2A, A2B, and probably A3 adenosine receptors. Caffeine, mostly induces specific brain effects by binding to A1 and A2A receptors. By blockade of A1 receptors, it causes depression of motor activity, sedation and anticonvulsive activity.
Methods: Swiss mice were used. Pregnant mice were divided into two groups. During their pregnancy and lactation period they received drinking water – first group with caffeine in a concentration of 0.3g/l, and the second one, caffeine-free water. When born mice reached their adulthood, they were administered VPA in ranged doses from 155 to 175 mg/kg. Then passive-avoidance task was performed.
Results: Caffeine administered in prenatal and lactation period in a concentration of 0.3g/l, did not influence the effects of VPA (in ranged doses of 155 – 175 mg/kg) on the long-term memory deficits in mice.
Conclusions: Exposure to caffeine, an antagonist of adenosine receptors, did not change the influence of VPA on long-term memory in mice.

Keywords: caffeine, valproate, long-term memory, mice

THE EFFECT OF TOPIRAMATE ON LONG-TERM MEMORY IN MICE EXPOSED TO CAFFEINE IN PRE- AND PERINATAL PERIOD

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Introducion: Epilepsy is one of the most common neurological disorders. It is characterized by unpredictable seizures which are recurrent. There are a few ways to treat epilepsy like surgery and ketogenic diet but the most convenient seems daily medication with antiepileptic drugs. Selection of the appropriate medication depends on seizure type, comorbidities and the patient lifestyle. Topiramate is an antiepileptic drug (also used for the treatment of migraine) which enhances GABA-activated chloride channels and inhibits excitatory neurotransmission via kainate and AMPA receptors. Caffeine is an adenosine receptor antagonist, stimulating the central nervous system.
Methods: The experiment was conducted on mice and it has demonstrated the impact of topiramate on the long-term memory. Pregnant mice were divided into two groups. The first group (an exposed group) received water with caffeine in a concentration of 0.3 g/l during 3 weeks of pregnancy and 3 weeks during breast-feeding. Whereas pregnant mice and after birth, in control group, received drinking water without caffeine. After this time, young mice were separated from their mothers and divided by gender. At 8th week of life, experiments were conducted on both groups of mice (each experimental group comprised 8 mice). The control group of animals received topiramate (at a dose of 87.6 mg/kg). The exposed group received topiramate (at a dose of 94.8 mg/kg). Different dosed of topiramate reflect its ED50 values against maximal electroshock-induced seizures in control and exposed groups.
Results: Topiramate did not influence long-term memory neither in the control group (only water to drink) nor exposed to caffeine group.
Conclusions: Caffeine, following exposure during pregnancy and breastfeeding did not modulate the effect of topiramate upon long-term memory in the adult offspring in comparison with the control group.

Keywords: Caffeine, Topiramate, Mice, Epilepsy

Poster Session

THE EFFECT OF CAMELINA OIL ON ANGIOTENSIN II CONTENTIN ABDOMINAL AORTA OF ORCHIDECTOMIZED RATS

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Introducion: The cardiac disorders and atherosclerosis are popular diseases in the human population. More studies have documented association of lower testosterone levels with cardiovascular diseases events and the role of angiotensin II in these disorders. In recent years the higher of interest in supplementation of diet withPUFAs in the prevention and treatment of cardiovascular diseases was observed. Therefore, the aim of this study was to investigate if the camelina oil, which is an interesting source of PUFAs, has effect on angiotensin II content in aorta of orchidectomized rats.
Methods: Forty male Wistar rats (initial BW approximately 220-250 g) were used for experiment.After 7-d of acclimatization in controlled experimental conditionsthe control animals (n=10) underwent a sham testes repositioning operation (SHO) and thirty animals were orchidectomized (ORX). After 7-d of convalescence, during the 8 weeks of the experiment, SHO rats (n=10)and ORX1 rats (n=10) were given intragastrically 1 ml physiological saline, while treated rats received intragastrically camelina oil at doses of 5 g/kg/BW (ORX2; n=10) and 9 g/kg/BW (ORX3; n=10), once a day.At the end of experiment the animals were euthanized and the fragment of abdominal aorta wereisolated, fixed in 4% paraformaldehyde, dehydrated, and embedded in paraffin blocks. Sections obtained using a microtome were subjected to immunohistochemistry procedure (marked localization of angiotensin II in tissues; Ultra Vision Quanto Detection System HRP) and photograph using light microscope. The resulting stainings has been given numerically as positive values(+1, slight; +2, moderate; +3, intense).
Results: Analysis of photographs showed the intense reaction for angiotensin II in all part of aorta in orchidectomized rats compare with SHO group (for media +3 and +1, respectively). The IH reaction for angiotensin II was lower in artery of orchidectomized rats after camelina oil supplementation (+2 for media).
Conclusions: Camelina oil may prevent negative changes connected with atherosclerosis by reducing angiotensin II content in aortawall in the animals with hormone imbalance.

Keywords: Rat, aorta, angiotensin II, camelina oil

THE INFLUENCE OF NESFATIN-1 ON THE CONTENT OF ANGIOTENSIN II IN ABDOMINAL AORTA IN OVARIECTOMIZED RATS

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Introducion: The nesfatin-1 is the hormone discovered by Oh and all in 2006. This hormone was find among others in brain, spinal cord, digestive system, bones, and heart. However, some studies indicated the negative influence of nesfatin-1 on the blood pressure. The hypertension is one of the major risk factors in formation and progression of atherosclerosis. The recent data indicated that angiotensin II may also participate in pathogenesis of atherosclerosis.To date, there is no research on the relationship between nesfatin-1and angiotensin II. Therefore, the aim of the experiment was check the content of angiotensin II in abdominal aorta of ovariectomized rats after nesfatin-1 treatment.
Methods: Twenty-one female Wistar rats (initial BW approx. 220g) were used and housed in controlled experimental conditions. After 7-d of acclimatization the rats were subjected to sham operation SHO (n=7) and ovariectomy OVX (n=14). After 7-d of convalescence OVX rats were divided randomly into two groups which for 8 weeks received by i.p.injection physiological saline (OVX-PhS group, n=7) or nesfatin-1 in dose of 2 ?g/kg BW (OVX-NES group, n=7), once a day. The animals in SHO group received physiological saline. After 8 weeks of experiment the animals was euthanized.The fragments of abdominal aorta were isolated, fixed in buffer formalin,dehydrated, and embedded in paraffin blocks. Sections obtained using a microtome were subjected to immunohistochemistry procedure using antibody anti-angiotensin II and chromogen DAB (Ultra Vision Quanto Detection System HRP) and stained with Weigert hematoxylin and then analysed under a light microscope. The resulting stainings has been given numerically as positive values (+1, slight; +2, moderate; +3, intense).
Results: Ovariectomized rats (OVX-PhS) characterized by higher content of angiotensin II in all part of aorta wall, especially in media (+3)and intima (+2) in comparison with SHO (media +1; intima +1) and OVX-NES(media +2; intima +1) groups.The nesfatin-treated rats had much less of angiotensin II in aorta compare with OVX-PhS animals.
Conclusions: The administration of nesfatin-1 may decrease negative changes in the aorta of female rats associated with a disturbed homeostasis of sex hormones.

Keywords: Rat, aorta, angiotensin II, nesfatin-1

DETERMINATION OF ASCORBIC ACID ON THE BORON-DOPED DIAMOND ELECTRODE (BDDE) IN URINE SAMPLES AND DIETARY SUPPLEMENTS.

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Introducion: Vitamin C (ascorbic acid) occurs naturally in many plants and animals and has many important functions in human body: protects against diseases caused by free radicals, strengthens the immune system and helps treat colds. In addition, ascorbic acid affects the metabolic processes: synthesis of hemoglobin, hormones and collagen. Vitamin C is an antioxidant and is therefore used in food products, drinks and medicines. The aim of this study was to optimize the procedure for the determination of ascorbic acid on the boron-doped diamond electrode by differential pulse voltammetry and its use in the analysis of human urine samples and dietary supplements.
Methods: For the measurements used three-electrode system, consisting of a working electrode – boron-doped diamond electrode, reference electrode – Ag/AgCl and auxiliary electrode – platinum wire. All measurements were carried out in a classic quartz cell which volume was 10 mL. Composition of the solution: 0.05 mol L-1 acetate buffer pH 4.6 and 10-2 mol L-1 ascorbic acid. The differential pulse voltammograms were recorded in the range from -1.45 to 1V with amplitude 50mV and a scan rate 20 mV s-1.
Results: All measurements were performed under optimized conditions. This method allows for the determination of ascorbic acid in a wide concentration range (5 × 10-7 to 2 × 10-3 mol L-1) and the detection limit is 1.63 × 10-7 mol L-1. Preparation of the electrode to measure is simple and fast. The procedure allows for the determination of ascorbic acid in the presence of many interferents: metal ions and organic substances. The proposed procedure is applicable to the determination of ascorbic acid in human urine, pharmaceutical preparations and dietary supplements.
Conclusions: This work presents new voltammetric procedure allows to the determinate ascorbic acid on the boron-doped diamond electrode in human urine samples and food supplements.

Keywords: ascorbic acid, boron-doped diamond electrode, differential pulse voltammetry

GENDER DIFFERENCES IN NUTRITION PARAMETERS OBTAINED BY BIOELECTRICAL IMPEDANCE ANALYSIS

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Introducion: There is an increasing discussion in the recent literature about usefulness to assess nutritional status by bioelectrical impedance analysis (BIA). BIA is an accurate and fast method to monitor changes in body composition. The purpose of this study is to show gender differences in nutrition parameters obtain by BIA in the healthy Polish population of students.
Methods: We evaluated a group of 38 healthy Polish students from Lublin (N=38) which was divided into two subgroups by sex. The first group included 16 men with an average age of 19,87±2,91 years. The second group was consisted of 22 women with an average age of 18,50±1,22 years. The study was performed by using Impedimed SFB7 BioImp. The following parameters were obtained: membrane capacitance (M. cap.), phase angle 50kHz (PA50), free fat mass % (FFM%), fat mass % (FM%), body cell mass (BCM), total body water % (TBW%), intracellular water % (ICF%), and extracellular water % (ECF%).
Results: The value of BMI was the same for both groups, 22,85±3,27 kg/m2. The group of men were characterised by higher values of: membrane capacitance 2,73±0,95 nF in men versus 1,58±0,52 nF in women ($p<0,001$), phase angle 50 kHz 7,31±0,78 degrees' in men vs 5,97±0,72 degrees' in women ($p<0,001$), FFM% in men 87,76±6,63 and 73,21±5,95 in women ($p<0,001$), BCM in men 38,70±9,08 vs 23,98±5,68 in women ($p<0,001$), TBW% in men 64,24±4,85 vs 53,59±4,36 in women ($p<0,001$). There was only one parameter which had a higher value in women than in men - FM% 12,23±6,63 vs 26,78±5,95 ($p<0,001$), respectively. The amount of water in the extracellular and intracellular space was comparable in both groups - men and women: ECF% 41,58±1,95 vs 41,41±1,72 and ICF 58,41±1,95 vs 58,59±1,72, respectively.
Conclusions: This study shows a clear gender difference in nutrition parameters obtained by BIA. The group of male volunteers had a greater body hydration due to more developed muscle tissue, and female group showed a significant amount of fat tissue.

Keywords: Bioelectrical impedance, body composition, nutrition, gender differences

INFLUENCE OF COMBINATIONS OF CAFFEINE WITH VALPROATE ON SKELETAL MUSCULAR STRENGTH IN MICE.

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Introducion: Caffeine is one of the commonly used stimulants of the central nervous system. In 2005 in North America, 90% of adults consumed caffeine daily in caffeine-containing drinks such as coffee, tea and cola. Valproate (VPA) is an antiepileptic drug which causes a rise in GABA levels in the synaptic cleft, inhibits voltage-dependent sodium channels and to a moderate degree inhibits T-type, voltage-operated calcium channels.
Methods: Pregnant mice were divided into two groups. Pregnant mice in study group received water with caffeine in a concentration of 0.3g/l for three weeks of pregnancy. After birth, young mice still received water with caffeine in a dose of 0.3g/l for three weeks. Pregnant mice and after birth, in control group received drinking water without caffeine. After this time, young mice were separated from their mothers and divided by gender. At 8th week of life, experiments were conducted on mice chosen randomly by gender. Each experimental group comprised 8 mice. Control group received VPA in dose of 155.5 mg/kg, and the study group received VPA in dose of 175.5 mg/kg. The doses of VPA referred to its ED50 values (50% effective doses in caffeinated and non-caffeinated mice) necessary to protect against seizures induced by maximal electroshock. The muscle strength was checked in defensive reaction with the use of grip-strength test and measured in Newtons (N).
Results: In control group which received VPA and only tap water to drink, the average muscle strength was 99.13±8.37 N. And in study group which received VPA and was exposed to caffeine, the average muscle strength was 88.5±3.89 N.
Conclusions: The muscle strength in mice given VPA was not significantly decreased when mice were exposed to caffeine in prenatal and early life.

Keywords: caffeine, valproate, VPA, skeletal muscular strength

INFLUENCE OF EXPOSURE TO COFFEINE ON THE EFFECT OF TOPIRAMATE ON SKELETAL MUSCULAR STRENGTH IN MICE.

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Introducion: Topiramate (TPM) is a new generation antiepileptic drug with a complex mechanism of action: it blocks voltage-operated sodium channels, enhances GABA-ergic transmission and blocks AMPA and kainate receptors , L-type calcium channels and excitatory mediator release, as well as stimulates potassium channels. TPM currently carries indications for first line and add-on therapy in focal epilepsy, first line and add on therapy for generalized tonic clonic seizures. TPM has been found to be effective in the treatment of neuropathic pain syndrome, hyperkinetic movement disorders, and other psychiatric conditions. Caffeine belongs to the class of methylxanthines. It act as an antagonist of the adenosine receptors, inhibitor of phosphodiesterase enzymes, and sensitizer of calcium liberation channels. Caffeine is a well-known stimulant of the central nervous system, the cardiovascular and the respiratory systems. The aim of the study was to assess the influence of exposure to caffeine on the effect of TPM on long-term memory in offspring of mice exposed to caffeine.
Methods: Pregnant mice were divided into two groups. Pregnant mice in exposed group received caffeine in drinking water in a concentration of 300mg/L during 3 weeks of pregnancy and 3 weeks of breastfeeding. Pregnant mice and after birth, in control group drank water without caffeine. After that time (3 weeks) the young mice were separated. Eight weeks later, the adult oddspring was separated by gender and divided in 2 groups comprising 8 males. The exposed group received TPM in a dose of 94.8 mg/kg and the control group - TMP at 87.6 mg/kg. The doses of TPM were equal to the respective ED50s of TPM, estimated in exposed and control groups, against maximal electroshock-induced seizures.
Results: In the exposed group, pretreated with TPM at 94.8 mg/kg, the average muscle strength was 113.4±4.23 N. In the control group, pretreated with TPM at 87.6mg/kg, the average muscle strength was 112.5±6.71 N.
Conclusions: The effect of TPM on the muscle strength did not differ in exposed to caffeine and control mice.

Keywords: topiramate, caffeine, muscle strength

COMPARISON OF THE INFLUENCE OF EXPOSURE TO CAFFEINE ON THE EFFECT OF TWO ANTIEPILEPTIC DRUGS: VALPROATE AND CARBAMAZEPINE ON MOTOR COORDINATION IN THE CHIMNEY TEST IN MICE.

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Introducion: Valproate (VPA) is commonly used for the treatment of epilepsy, anxiety, bipolar disorder, and prevention of migraines. It reduces neuronal activity in the human brain by blocking sodium and calcium channels and enhancing ?-aminobutyric acid function by inhibiting GABA transaminase. Carbamazepine (CBZ) is an anticonvulsant drug. It is widely used to treat epilepsy, depression, and trigeminal neuralgia. CBZ stabilizes membranes by inhibiting voltage-gated sodium channels. The ability of CBZ to interfere with GABA-ergic and somatostatinergic mechanisms enhances its antinociceptive effects. CBZ also blocks voltage-operated calcium channels. Caffeine from natural sources has been consumed and enjoyed by people throughout the world for centuries. Its presence in coffee, tea and many drugs makes it the most commonly consumed stimulant drug. Initially, caffeine increases blood pressure, plasma catecholamine levels, plasma renin activity, serum free fatty acid levels, urine production, and gastric acid secretion. The aim was to evaluate the influence of exposure to caffeine on CBZ and VPA effects on motor coordination in mice.
Methods: Pregnant mice were divided into two groups. Pregnant mice in the exposed group received caffeine in drinking water in a concentration of 300 mg/L during 3 weeks of pregnancy and 3 weeks of breastfeeding. Pregnant mice and after birth, in control group, drank tap water without caffeine. After that time (3 weeks) the young mice were separated. Eight weeks later, the adult offspring was separated by gender and divided into 2 groups comprising 8 males.
Results: Toxic dose 50 (TD50 - which impaired motor coordination in 50% of the animals) of VPA, is lower in the exposed group (411.8 mg/kg) than in the control group (462.1mg/kg), but this result was not statistically significant. The effects of CBZ on motor coordination did not differ in the exposed and control groups.
Conclusions: The exposure to caffeine did not significantly modify the effects of either VPA or CBZ on motor coordination in mice.

Keywords: valproate, carbamazepine, caffeine, chimney test

THE INFLUENCE OF CARBENOXOLONE, AN ANTAGONIST OF GAP JUNCTIONS, ON THE ANTICONVULSANT EFFECT OF CARBAMAZEPINE IN 6HZ PSYCHOMOTOR SEIZURE TEST IN MICE.

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Introducion: An epileptic seizure is an episode of abnormal, excessive or synchronous neuronal activity in the brain, which leads to effects such as uncontrolled jerking movement or as subtle as a momentary loss of awareness. Carbamazepine is an antiepileptic drug that inhibits sustained repetitive firing by use-dependent blockade of voltage-dependent sodium channels. The action of carbenoxolone reduces excitatory synaptic currents through a presynaptic effect, blockade of postsynaptic NMDA receptors and reduction of inhibitory synaptic currents through a direct effect on GABAA receptors. It may also suppress action potentials, decrease input resistance and block calcium channels. Among 1 % of the world's population suffers from epilepsy, 30% of patients with epilepsy being drug-resistant. Consequently, there is a need for discovering new possibilities useful in the treatment of refractory epilepsy.
Methods: The aim of the study was to evaluate an impact of carbenoxolone, an antagonist of gap junctions, on the anticonvulsant activity of carbamazepine in 6 Hz psychomotor seizure test in Swiss male mice. Carbenoxolone (100mg/kg) was co-administered with carbamazepine in doses ranging from 12.5 to 50 mg/kg and the antagonist of gap junctions at 150 mg/kg was combined with carbamazepine in a dose range of 6.25-50 mg/kg. Then, the convulsant activity was induced with 6 Hz current delivered via corneal electrodes. An end point for the occurrence of seizure activity was immobilization of a mouse and an evident Straub tail.
Results: Carbenoxolone (100 and 150 mg/kg) did not influence the anticonvulsant activity of carbamazepine against 6 Hz psychomotor seizure test.
Conclusions: Carbenoxolone did not modify the anticonvulsant action of carbamazepine. It may lead to a conclusion that the blockade of gap junctions is of no importance in the expression of the anticonvulsant action of this antiepileptic drug in this convulsive test. An intriguing possibility that carbamazepine itself could behave as an inhibitor of gap juctions has to be also considered, however, there are no data available on this issue.

Keywords: carbenoxolone, carbamazepine, epilepsy

THE INFLUENCE OF CAFFEINE ADMINISTERED TO MICE DURING PREGNANCY AND FEEDING PERIOD ON THE ACTION OF CARBAMAZEPINE IN THE CHIMNEY TEST.

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Introducion: Caffeine is a central nervous system world's most famous stimulant. Certain drugs and supplements may interact with this substance. At high doses, similarly to other methylxanthine derivatives, caffeine induces seizure activity in rodents. The existing clinical data confirm the experimental results in that caffeine intake in epileptic patients results in increased seizure frequency. It may be concluded that epileptic patients should limit their daily intake of caffeine.
Methods: The aim of the study was to evaluate an impact of caffeine, administered to female mice during pregnancy and feeding period, on the disorders of motor coordination of mice cubs - both sexes, examined using the chimney test following carbamazepine administration. Pregnant female mice were split into 2 groups. The first group drunk water with caffeine in a concentration of 0.3 g/l during 3 weeks of pregnancy and 3 weeks in the feeding period. The second group was given tap water. The other raising conditions stayed the same in both groups. When the animals were 8 weeks old, they were divided into two groups, each consisted of 8 adult mice-males and females. The control group was not exposed to caffeine and the other 8 mice were. Following injection of carbamazepine, disorders of motor coordination were examined using the chimney test and the neurotoxic potential of carbamazepine was evaluated as TD50 (a 50% toxic dose responsible for the impairment of motor coordination in 50% of the mice tested).
Results: TD50 value of carbamazepine administered to mice which were not exposed to caffeine was 43.9 mg/kg and this value was not significantly modified in mice exposed to caffeine.
Conclusions: The neurotoxic action of carbamazepine was not modified with the exposure to caffeine of mice in their pre- and perinatal period, whose motor coordination served as a criterion for the evaluation of neurotoxicity.

Keywords: carbamazepine, caffeine, neurotoxicity

Public Health

CREATING HEALTH THROUGH PHYSICAL ACIVITY

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Introducion: Participation in physical activity, particularly among children, supports anumber of life-long benefits: (1) development of fundamental motor skills (2) improvement of current health and fitness (3) contribution to long-term health and the prevention of chronic disease
Methods: Participants and recruitment As part of a cross-sectional research design all second level schools in a rural Irish town (two mixed schools, one all male school, and one all female school) were targeted and provided consent.
Results: Findings indicate that the majority of youth (67%) were not accumulating the minimum 60 minutes of physical activity recommended daily for health, and that 99.5% did not achieve the fundamental movement skill proficiency expected for their age.
Conclusions: Data show a need for targeting low levels of physical activity in youth through addressing poor health related activity knowledge and low fundamental movement skill proficiency.

Keywords: Physical activity, Adolescents, Intervention, Fundamental movement skills

IDEOLOGISATION OF PSYCHIATRY IN POLISH PEOPLE'S REPUBLIC 1950-1956

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Introducion: 1950s was time, when soviet infuence in Poland became stronger. Pavlovism and diamat were promoted in sciences. Psychiatry were exposed to the most intensive ideological actions. The aim of work is to present psychiatry's ideologisation issue in Poland in first half of 1950s as example of political pressure to scientific world, including medical, during that period.
Methods: Written sources and archival documents were used as work's material. Primary method was analysis of available sources.
Results: Centralized planning of researches, censorship, imposing of methodology and subverted theories (soviet pavlovism) as only acceptable ones clearly indicates to psychiatry's subordination to Marxist ideology propaganda at the time. It is apparent due to former scientific works and special pavlovism-promoting meetings. Especially strong ideological actions took part 1950-54 and afflicted also physicians in Łódź.
Conclusions: Ideologisation of science results in no scientific advances. Despite communist authority's trying, polish psychiatry faced unfavorable impact of politics on factual scientific achievements.

Keywords: history, psychiatry, ideologisation, communism

RELATIONSHIP BETWEEN PM2,5 ,PM10 CONCENTRATION AND LUNG CANCER MORBIDITY IN LUBELSKIE VOIVODESHIP COMPARED TO WHOLE POLAND'S POPULATION.

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Introducion: According to WHO, clean air is considered as one of the basic criterium influencing human health. Concentration of particulate matters (PM2.5 and PM10) is one of the parameters determining the purity of the air, because of its negative effect on respiratory and cardiovascular systems. Elevated concentrations of PMs may also be among factors leading to the development of lung cancer.
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 lubelskie voivodeship PM2.5 kept at a similar concentration, with a decrease in the value of the national average, while the PM10 was growing with similar values of the national average. The morbidity of lung cancer in the analyzed period increased both in lubelskie voivodeship and Poland's populations. This trend is maintained in the forecast for 2016 and 2029. Lubelskie Voivodeship: Lung cancer morbidity (ICD10: C33+C34): 2009-1065, 2010-1175, 2011-1111, 2012-1213, 2013-1078, 2016-1550, 2029-1788. PM2,5 annual mean µg/m3: 2009-23,4; 2010-25,5; 2011-24,1; 2012-21,3; 2013-21,4; 2014-23,9; 2015-24,7 PM10 annual mean µg/m3: 2009-26,1; 2010-31; 2011-34,1; 2012-28,3; 2013-29,6; 2014-34,1; 2015-36,5. Poland: Morbidity of ICD10: C33+C34: 2009-20643, 2010-20871, 2011-20837, 2012-21870, 2013-21556, 2016-27685, 2029-32521. PM2,5 annual mean µg/m3: 2009-30; 2010-34,2; 2011-31,7; 2012-27,9; 2013-26,5; 2014-26,3; 2015-24,5 PM10 annual mean µg/m3: 2009-31,5; 2010-37,6; 2011-36,7; 2012-34; 2013-32,1; 2014-34,5; 2015-32,9. WHO Guideline: PM2,5-10µg/m3 annual mean; PM10-20µg/m3 annual mean.
Conclusions: Concentration of PM2.5 and PM10 is correlated with the morbidity of lung cancer. Level of pollution in lubelskie voivodeship is surprisingly similar to the national average. This finding seems to be odd considering agricultural character of lubelskie voivodeship, without heavy industry and large urban agglomerations. Explanation of this fact may be heavy migration which influences the sort of inhaled air. Therefore we can not forget about reducing the concentration of PM2.5 and PM10 in the global air.

Keywords: Lung cancer, air pollution, PM2,5 PM10

THE DANGEROUS EFFECTS OF CADMIUM(II) ON HUMAN HEALTH AND A SIMPLE VOLTAMMETRIC METHOD FOR ITS QUANTITATIVE DETERMINATION

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Introducion: In recent years the problem of environment pollution has appeared and still raises. It is caused by development of industry and anthropogenic activities such as production processing, fossil fuels combustion or the use of artificial fertilizers. Cadmium(II) is very toxic even in low concentration. Its negative influence is observed on nearly all systems in the body. It causes damages of bones, kidneys, eyes, brain, cardiovascular and reproductive systems. The aim of study was to optimize a new, simple and rapid voltammetric procedure for the determination of cadmium(II) using lead film plated screen-printed electrode (PbF/SPCE) in water samples.
Methods: All measurements were carried out in a classic quartz cell which volume was 5 mL and they were performed in 0.1 mol L-1 solution of acetic buffer (pH = 4.6), 2 × 10-5 mol L-1 Pb(II) and 1 × 10-5 mol L-1 Zn(II). The square wave voltammograms were registered from -1.6 to 0.5 V with amplitude 50 mV and frequency of 10 Hz.
Results: All measurements was carried out under optimal analytical conditions. The calibration plot was linear from 5 × 10-8 mol L-1 to 5 × 10-6 mol L-1 Cd(II). Linearity is confirmed by correlation coefficient (r), which is 0.9983. The limit of detection estimated from 3 times the standard deviation from the lowest determined concentration of Cd(II) were 6.6 × 10-9 mol L-1. The procedure was applied for the determination of Cd(II) in water sample from the 'Bystrzyca' river. Recovery studies were done for concentration 5 × 10-8 mol L-1 and 2 × 10-7 mol L-1 and the percentage amounts were 102.7 % and 99.0 % respectively.
Conclusions: This work presents new, simple and fast voltammetric procedure for the trace analysis of cadmium(II) using lead film plated screen-printed carbon electrode (PbF/SPCE).
The project was financed from resources of the Polish National Science Centre awarded on the basis of decision No. DEC-2013/08/M/ST4/00286.

Keywords: cadmium, voltammetry, screen-printed electrode

DIETARY SUPPLEMENTS AND OVER THE COUNTER DRUGS CONSUMPTION AMONG HYPERTENSIVE PATIENTS

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Introducion: Dietary supplements are frequently advertised for the natural treatment and management of many disorders. Dietary supplements (DS) and over the counter drugs (OTC) can interfere with biotherapeutic action of prescribed medication and this is of particular concern in patients with cardiovascular disease, many of whom are on long term treatment. The aim of the study was to analyze the frequency of use of DS/OTC among patients with arterial hypertension as well as factors determining its use and patients' knowledge about possible interactions with conventional medication.
Methods: The study was conducted in the Outpatient Hypertensive Clinic in the Tertiary Cardiac Center. Self-prepared questionnaire was administered among 151 hypertensive patients (58% females, age range 18-80 years). Regular DS/OTC use was defined as taking them at least 3 times per week.
Results: In the examined population of hypertensive patients regular use of DS/OTC was declared by 67% subjects (n=101). The most commonly, regularly used substances were minerals and microelements (n=61, 60,4%) and vitamins (n=49, 48,5%). Responders also indicated regular use of analgesics (n=19, 18,8%) drugs increasing the immunity (n=19, 18,8%), relieving the gastrointestinal symptoms (n=19, 18,8%) and containing omega acids (n=19, 18,8%). There were no differences in the frequency of DS/OTC use in relation to age, education level and income. Women are more frequent regular users of DS/OTC than men (n=65 vs n= 36, p=0.03). Only 37% of responders consulted the use of DS/OTC with a doctor. Over half of responders (52%) is not aware of possible influence of DS/OTC on antihypertensive medication or blood pressure control. Cost of DS/OTC in 23% of responders is equal or higher than cost of prescribed drugs.
Conclusions: Two thirds of hypertensive patients are regularly using DS/OTC. Half of them is not aware of their possible interactions with antihypertensive therapy and influence on blood pressure control. The perception that nonprescription therapies are unnecessary to report during medication history taking should be changed. DS/OTC are the important position in the responders budget.

Keywords: dietary supplements, over the counter drugs, hypertension

THE INDICATORS OF INNOVATION ACTIVITY AND THE INTRODUCTION OF THE RESULTS OF RESEARCH ACTIVITIES IN THE FIELD OF PUBLIC HEALTH OF UKRAINE FOR THE PAST THREE YEARS.

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Introducion: The indicator innovation activity of the key indicators technological development of countries or regions. The implementation of the medical results is finall and the most impotent stage of scientific and research paper. And here the results of the research are practically tested.
Methods: The indicators innovation activity of 20 scientific and research in the sphere of public health service of Ukraine was analysed. The following methods as system analysis, statistical, structural and logical analysis are applied.
Results: During the process of research it was received 187 intellectual property rights (IPR) by research institutions, including: patents - 27 (14.4%), patents for the utility model - 142 (75.9%), copyright registration certificates - 11 (5.9%) applications for patents - 6 (3.2%), current - 104 (55.6%) not applicable - 37 (19.8%). The total number of public health service establishments, where it was introduced the researches of institutions, is 243, depending on the structural and organization a separation of levels of health care, primary care is provided by 86 health care establishments (35.4%), secondary (specialized) medical help - 77 (31.7%) and tertiary (highly specialized) medical help - 133 (54.7%).
Conclusions: Criteria of scientific and research activities includes the degree of innovation of the results of research and development of requirement for them. Distribution of scientific and research paper's results in health care by practical way is the key to improving indicators of population's health.

Keywords: Health care, public health, innovation activity.

IMPLEMENTATION OF MANDATORY VACCINATION AND RECOMMENDED BY SELECTED DOCUMENTATION OUTPATIENT POZ

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Introducion: Vaccinations are a common form of prevention of infectious diseases. They protect not only children, but the entire population against the development of disease. High vaccination implementation requires effective educational activities mainly medical workers POZ. Aim: To evaluate the implementation of compulsory vaccination and recommended on the basis of documents selected PHC clinics.
Methods: The study was conducted in 2016 in the Family Doctor Clinic at the Regional Center of Occupational Medicine in Lublin. An analysis of children's immunization cards (at number 271), born in 2000, 2010 and 2012, and the annual reports on immunization (MZ-54) in 2010-2015. The work was used method of analysis of medical records and research tools were standardized medical records. Statistical analysis was performed using STATISTICA 12.0 StatSoft Poland.
Results: The number of children vaccinated with vaccines mandatory remains constant, with only minor deviations (1-2%) for the years 2010-2015. The number of children vaccinated with vaccines recommended by the year 2012 grew (from 248 children to 708), and since 2013, gradually decreasing (from 708 children to 267). Implementation of the recommended vaccinations for vaccines against Streptococcus pneumoniae infections (53.9%), varicella (41.3%), infections Neisseria meningitidis (28.8%) and rotavirus (22.1%). Significantly more children were vaccinated from the city than the countryside for rotavirus vaccination ($p=0.039$), and Streptococcus pneumoniae infections ($p=0.003$). Vaccination coverage attached (5 to 1) was 36.2% and 25.5% 6 to 1.
Conclusions: 1. In the period under 5 years of implementation of compulsory vaccination is at a very high level, while the vaccinations recommended for average. 2. The most common vaccinations recommended elected by the parents of vaccination against Streptococcus pneumoniae infections, varicella infection, Neisseria meningitidis, and rotavirus. 3. A small percentage of parents use the possibility of replacing the compulsory vaccination of monovalent, immunization associated (5-in-1 or 6-in-1).

Keywords: vaccinations mandatory and recommended, documentation analysis

SMOKING BY PARENTS A HEALTH CHILDREN YOUNGER

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Introducion: Active and passive smoking and the associated risks apply to each age group. Exposure of children to tobacco smoke leads to various respiratory diseases, neurobehavioral disorders and cardiovascular disease in adulthood. Aim: To determine the association between parental smoking and health of younger children.
Methods: The study was conducted in 2016 among 152 parents of children aged 1 month to 4 years, the University Children's Hospital in Lublin. The study method was used diagnostic survey, a research tool was the original questionnaire. Statistical studies were carried out on the basis of computer software STATISTICA 10.0 (StatSoft, Poland).
Results: Most respondents (84.21%) were aware that smoking in the presence of children has a negative effect on their health, because most do not smoke in front of children (92.11%). It was found that pneumonia (66.67%, p=0.009) and sleep disorders (21,82%; p=0.009) related to significantly more children whose parents smoked in their presence. Abnormal appetite, nausea and vomiting also found slightly more often among children of parents smokers, but these differences were not statistically significant (p>0.05). The respondents with secondary education (57.45%) and professional (57.14%) significantly more likely to smoke cigarettes than parents with higher education (11.43%; p>0.00001). Respondents from rural areas frequently smoked cigarettes (41.27%) compared to respondents from the city (32.58%, p=0.27). Men significantly more likely to smoke cigarettes (62.90%) than women (17.78%; p <0.00001).
Conclusions: 1. The vast majority of parents are aware of the health consequences of exposure of children to tobacco smoke. 2. Most often parents do not smoke tobacco in the presence of children and protect them from passive exposure to tobacco smoke, avoiding staying surrounded by smokers. 3. Children whose parents smoke tobacco significantly more frequent pneumonia and sleep disorders. 4. Education and gender had a significant impact on the habit of smoking by parents of younger children. More often smoked men and people with lower education.

Keywords: smoking, parents, children younger

ORTHOREXIA - A REAL PROBLEM ? ANALYSIS OF EATING HABITS AMONG STUDENTS OF POLISH UNIVERSITIES.

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Introducion: Orthorexia is relatively new definition for being pathological obsessed with quality of food and other products. Nowadays, when we are attacked almost from each side by fitness coaches, dietitians, perfect celebrities' look created by mass media or different wholesome trends, it is easy to fall into the healthy motion.
Methods: In the research participated 1600 students from 53 polish universities. They were asked to fill in the authorial and validated questionnare 'ORTO - 15' by Donini. The original survey consisted of 24 questions, while 'ORTO - 15' included 15 questions both pertaining to eating habits.
Results: The biggest amount of points collected in the 'ORTO-15' questionnaire was 57, the lowest was 18 and the medium result was 38,7 ± 8,62 . 816 people gained result below 40 points, what is connected with increased tendency to fall down with orthorexia. Being long interested in healthy eating, spending more money on groceries, not eating meat, reading the labels and regular meal consumption have influence on gaining lower score in the survey. Age, weight , BMI and amount of meals per day have not significant impact for ortorexia tendency.
Conclusions: There exist a predisposition to falling into orthorexia among students of polish universites. According to this fact, we consider that more attention should be paid to the problem of orthorexia, because it could be as dangerous as others eating disorders.

Keywords: orthorexia, eating habits, food, healthy , organic ,

FINANCIAL SITUATION OF PREGNANT WOMEN AS FACTOR DETERMINING DIETARY HABITS DURING PREGNANCY

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Introducion: Properly balanced diet and delivering enough quantity of nutrients during pregnancy is very vital not only for young mother. It is also important for fetus, a newborn baby and in first few years of child development. The aim of this study was to investigate relationship between financial situation of pregnant women and type of food eaten by them.
Methods: A population based study was performed on a group of 450 pregnant women in Silesian Voivodship. The questionnaire, created for the purpose of the study, contained questions concerning feeding habits of pregnant women.
Results: Women with unsatisfactory financial situation definitely more often ate fast foods (10%) in comparison to women with moderate economic status (0.6%) and satisfactory economic status (1.4%, p=0.001). Women unsatisfied with their financial situation were characterized by more often (13.3%) consumption of frozen food in comparison to these with moderate (4%) and satisfactory (2%, p=0.001) economic status. Raw or processed fruit as snacks between meals were chosen less often by wealthy women (68.4%) than women with moderate (92%) and poor (84%; p=0.01) economic situation. What is interesting, less wealthy women (63%) more often ate vegetables than these with moderate (31%) and satisfactory 23.5%; p=0.002) financial situation.
Conclusions: Worse financial status of pregnant women affects negatively on proper diet balance and on its qualitative and quantitative shortages. What is vital to focus on, less wealthy women more frequently ate vegetables than their wealthy counterparts. It is important to promote balanced diet among pregnant women.

Keywords: pregnant women, diet, financial situation

SOCIAL FACTORS IMPACT ON THE LEVEL OF ANXIETY AND DEPRESSION BEFORE SURGICAL PROCEDURES

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Introducion: Surgical treatment brings severe emotional burden for the patients. They are accompanied by feelings of anxiety, fear and depressed mood. The psychophysical state of a patient before surgery may have the impact on intensifying post-surgical pain, prolonged convalescence and presence of complications. The aim of the study was to identify groups of patients that are especially in the risk of high level of anxiety and depression, with special emphasis on factors like sex, age, marital status and having children.
Methods: Between July and October of 2016, an author's questionnaire, State-Trait Anxiety Inventory (STAI) and Beck Depression Inventory has been delivered to 300 patients of surgical wards. Those who were included in the study were the patients being prepared for the surgeries at the wards of: orthopedics, thoracic, cardiac, gastrointestinal and plastic surgery.
Results: The answers were collected from 281 patients (response rate – 93,6%); the mean age 54 +/- 16,08 years old. The mean level of state-anxiety (according to STAI) was 57,61 points; 54,91pts and 60,24pts for women and men respectively. The mean level of state-trait for the whole study group was 52,11pts; 52,08pts for women and 52,14pts for men. In 33,9% of the patients mild episodes and in 8,4% severe episodes of mayor depressive disorder has been observed. Higher level of state-anxiety has been shown in people who are either in informal relationships or divorced and in people who have children.
Conclusions: Among the study group, the highest level of anxiety has been observed in men staying in informal relationships or being divorced and having children. Additional psychological support should be provided and pharmacotherapy should be considered in patients who are at risk of higher level of stress before surgery.

Keywords: depression, anxiety, surgery, stress

PROGNOSTIC FACTORS, SYMPTOMS AND CONSEQUENCES OF CACHEXIA IN STOMACH CANCER PATIENTS.

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Introducion: Cachexia is a common problem in patients with terminal stomach cancer. It worsens the quality of life and increases the amount of complications. The predictors, symptoms and consequences of cachexia in terminal stomach cancer patients need further exploration. The aim of our study was to determine factors connected with cachexia in patients with stomach cancer.
Methods: 110 terminal stomach cancer patients admitted to Palliative Care Unit were retrospectively analyzed. Detailed physical examination, medical history including history taken from family and care givers was taken upon admission. Laboratory parameters including morphology, sodium, potassium, total and ionized calcium, LDH were taken on admission. We used univariate and multivariate logistic regression analysis to determine possible predictors, symptoms and consequences of cachexia.
Results: On admission 65,45% of patients were cachectic. They less frequently administered NSAID before admission (OR=Odds Ratio=0,393, CI95%=Confidence Interval 95%=:0,168-0,92; p=probability value=0,0313), had more often constipation at admission (OR=3,033, CI95%:1,324-6,95; p=0,0087), had more often constipation during hospitalization (OR=2,41, CI95%:1,078-5,388; p=0,0322), more often suffer from dyspnea (OR=6,594, CI95%:1,846-23,561; p=0,0037) and more often had dyselectrolytemia (OR=2,764, CI95%:1,17-6,526; p=0,02). They were treated more often by iv fluids (OR=4,312, CI95%:1,014-18,347; p=0,0479). They had lower level of hemoglobin (OR=0,769, CI95%:0,61-0,97; p=0,0268). Multivariate logistic regression analysis after adjustment for possible confounders reviled that lower level of hemoglobin (OR:0,473, CI95%:0,286-0,781; p=0,003), male sex (OR:0,085, CI95%:0,016-0,448; p=0,004), occurrence of nausea and vomiting at admission (OR:9,397, CI95%:1,813-48,72; p=0,008), occurrence of dyspnea (OR=12,01, CI95%:1,481-97,367; p=0,02) and occurrence of constipation at discharge (OR:19,212, CI95%:1,422-259,598; p=0.026) remained independently associated with cachexia.
Conclusions: Lower level of hemoglobin, occurrence of nausea and vomiting at admission, occurrence of dyspnea and male sex are risk factors of cachexia. Patients with cachexia are more likely to develop constipation at discharge.

Keywords: cachexia, stomach cancer patients

HPV- VACCINE. ATTITUDES, KNOWLEDGE AND OPINIONS TOWARDS CERVICAL CANCER EPIDEMIOLOGY AND PREVENTION OF POLISH MEDICAL UNIVERSITIES STUDENTS.

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Introducion: Cervical cancer is one of the most frequent neoplasms of female genital organs. According to United States Cancer Registry (2000- 2009), approximately 18.6/ 100.000 women are diagnosed each year. In 2012, there were 530.000 new cases recognized ended with 270.000 deaths. Hopefully, in Poland the declining amount of new cases can be noticed (since 2013). However, we have to take more effort to improve the awareness of cervical cancer prevention. Most of cervical cancer cases are related to Human Papilloma Virus (HPV) infection; the most cancerogenic types are HPV- 16 and HPV- 18. There are three vaccines available on the EU market- Silgard, Gardasil 9 and Cervarix. All of them are focused on the most cancerogenic types. The study was conducted to assess the knowledge about the cervical cancer prevention and attitude of Polish medical universities' students towards HPV vaccination.

Methods: Students of medical universities were asked to fill an online questionnaire sent via social media. 721 students from 13 Polish medical universities took part in the survey. The majority of them (N= 113; 15.67%) study at the Medical University of Lublin. The average age of responders was ±22 years. All of the calculations were carried out with Statistica 12 (StatSoft®, USA) package with the level of significance set at $P<0.05$.

Results: 62.83% (N=453) of responders are willing to be vaccinated. However, only 20.53% (N=148) declares to have already been vaccinated. 82.52% (N=595) know what the base of cervical cancer prevention programme is in Poland. 90.29% (N=651) of responders consider the HPV vaccine to be safe.

Conclusions: Polish medical universities' students are rather well informed about the problem of cervical cancer on the public health ground. However, resolute steps should be taken to convince and assure more young people why the HPV vaccination is necessary. The greater role in this field should be undertaken by healthcare workers.

Keywords: cervical cancer, prevention programme, HPV- vaccine, medical education

CULTURAL DIVERSITY IN NURSING CARE AS A CHALLENGE FOR NURSING EDUCATION AND PRACTICE IN POLAND

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Introducion: The progressing globalisation process creates new challenges for healthcare in Poland, which are related mainly providing cultural security for patients from different culture circles. The objective of the study is to analyse challenges for education and nursing practice in Poland based on a study among the representatives of the Islamic culture.
Methods: A qualitative analysis of the material from interviews conducted among five followers of Islam who live in Lublin. The survey was carried out from 20 June to 8 July 2016 at the Islamic Cultural Centre in Lublin. The process of sampling the representatives of Islamic culture involved the snowball sampling method. The interviews were recorded and transcribed. The research material was subjected to contextual analysis.
Results: The qualitative analysis of the data obtained made it possible to specify the following categories of issues related to care for patients representing the Islamic culture in nursing practice: prayer in the hospital environment, fasting in hospital conditions, meals in hospitals, care and nursing and the carer's sex, treatment and medications, challenges in care for patients from different culture circles.
Conclusions: Developing the cultural competence of medical students and occupationally active medical professionals is an important issue. This competence not only involves knowledge on different cultures and skills related to care for patients from different culture circles, but first of all an attitude of cultural sensitivity and readiness to mutually develop an approach which provides a sense of cultural safety, which is possible to implement in the Polish healthcare system.

Keywords: Islam, nursing, care, transculturalism

THE LEVEL OF KNOWLEDGE ABOUT HAEMATOPOETIC STEM CELL TRANSPLANTATION AMONG STUDENTS IN THE AGE OF 19-26 YEARS AND THEIR ATTITUDE TOWARDS BEING POTENTIAL DONOR.

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Introducion: HSCT is the transplantation of multipotent hematopoietic stem cells, usually derived from bone marrow, peripheral blood, or umbilical cord blood. It is a medical procedure most often performed for patients with cancers of the blood or bone marrow. In Poland there were 1137 collects stem cell to treatment of blood diseases in 2016 and there are nearly a million of potential stem cells donor but it is still not enough.This paper aimed at determining of knowledge about haematopoetic stem cell transplantation among students and assessment dependency of this knowledge and their attitude towards being potential donor.
Methods: There was 123 students in the age of 19-26 years. The research tool of the study was anonymous questionnaire disseminated through the internet, which included 14 questions with single or multiple choice.
Results: According to the result, 15,4% of student are honorary blood donor and 38% of respondents are potential stem cell donors. 70,7% of them deem that cell donation is not dangerous. 92% rightly considered who could be donor – healthy person who weigh more than 50 kg and is between 18 to 55 years old. Students could characterize diseases which exclusive to donating. Students know where they could volunteer to donate bone marrow – 70% of them indicate internet, 92,7% choose Donor's Days and 73,2% select donation center. Interviewees know about methods of collect the stem cells – 76,4% of them have chosen apheresis, 84% indicated biopsy of bone marrow. 41 % of students believes that stem cells are collected from spine or spinal cord. More than half of interviewees know that donor hospitalization after apheresis last one day and 87,7% of them true said that donor can not miss bone marrow. The examined student mostly learn about transplantation from internet (91,1%).
Conclusions: The outcome of research shows that the knowledge of students about transplantation is not bad but there are lots of myths. There is a farily large group who believes in this. Despite the known only one per six students is honorary blood donor and less than two per five people are potential stem cells donors.

Keywords: stem cell transplantation, potential stem cell donors

SMOKING CESSATION WITH VARENICLINE. IS IT WORTH?

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Introducion: One of the methods supporting smoking cessation is pharmacotherapy. A common accepted drugs include nicotine replacement therapy (NRT), cytisine, bupropion and varenicline. Varenicline is the newest of these measures. This is a nicotinic receptor partial agonist on the ?4?2 receptor subtype. The bindings of varenicline to these receptors causes weakening of symptom of nicotine withdrawal and reduces the “reward effect” caused by smoking. Associated with this drug are high hopes. Addicted patients are willing to pay a lot of money for such therapy, much more than for other forms.
Methods: Adducing the results of studies on varenicline therapy based on professional medical literature. Evaluation of the effectiveness of treatment, side effects and the cost-effectiveness. Comparison with other methods of nicotine addiction pharmacotherapy.
Results: All analyzed test results indicate a more effective treatment of nicotine addiction with varenicline than with placebo. It is more effective than treatment with bupropion and with NRT, although there are studies that suggest similar efficiency in case of combination of many forms of NRT. Varenicline treatment is more profitable for women than for men. There are no reliable studies comparing the effect of varenicline and cytisine. According to some reports varenicline increases the risk of suicide, however clinical studies do not indicate an increase suicidal tendencies in comparison with placebo.
Conclusions: Varenicline treatment of nicotine addiction is probably the most effective of pharmacological methods. Interestingly, there are significant differences regarding the efficacy of varenicline between men and women. Given this fact and available cost-effectiveness analysis one must consider whether varenicline is not a better choice for women due to its much higher efficacy in this group of patients. In men group the effectiveness of varenicline advantage over other drugs is much smaller, so it is worth to consider cheaper treatment methods.

Keywords: varenicline, bupropion, nicotine, nicotine replacement therapy, cytisine, smoking cessation, addiction

HPV VACCINATION – KNOWLEDGE AND ATTITUDE OF MEDICAL AND NON-MEDICAL UNIVERSITIES' STUDENTS

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Introducion: Cervical cancer still remains a significant issue in Poland. Its prevention can not be stressed enough. Most of cervical cancer cases are related to HPV (Human Papilloma Virus) infection and the majority of them is caused by the most carcinogenic types – HPV-16 and 18. We have 3 HPV vaccines available in Poland: Silgard, Cervarix and Gardasil-9. The study was designed to assess knowledge about cervical cancer and HPV vaccine and attitude towards the vaccine among students of medical, technical and other universities.
Methods: Students of different universities were asked to fill an online questionnaire via facebook groups of different universities and their degrees. As a result 1824 fully-filled questionnaires were gathered. Most of them from non-medical and non-technical universities (44.5%; N=812). The majority of respondents were female (nearly 86%; N=1568).
Results: Generally positive attitude towards HPV vaccine was observed. Most of the students believe the vaccination should be compulsory (73.5%; N=1341), but only 16.4% (N=299) of them were vaccinated. The most popular reason for not getting the vaccine was its high price. Most of polled students declared they would vaccinate their child no matter what sex (60.8%; N=1109) As many as 79.7% (N=1453) of students were not informed by the physician about the possibility of vaccination against HPV. Most of the students knew the current programme of cervical cancer prevention: 82.6% from medical, 55.5% from technical and 60.2% from other universities. This data was statistically significant ($p<0.0001$).
Conclusions: Although attitude towards HPV vaccine was mostly positive it is important to convince more young people why the vaccination is necessary. In addition we believe doctors should inform their patients about cervical cancers risks, HPV infection and HPV vaccination as currently information provided by them is not satisfactory.

Keywords: online questionnaire, cervical cancer, HPV vaccination

RELATIONSHIP BETWEEN PM2,5 ,PM10 CONCENTRATION AND LUNG CANCER MORBIDITY IN POLAND.

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Introducion: Airborne particulate matters (PM) 2,5 and 10 are mixtures of organic and inorganic particles smaller than 2.5 µm and 10 µm. They have broad negative effect on health especially on respiratory and cardiovascular system. They could increase the sensitivity to pneumonia, worsening: allergic diseases of the lungs, hypertension, myocardial infarction and also increase the risk of cancer.
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: Concentration of PM10 was similar in analyzed years (excluding period between 2010-2012 when it was statistically higher). PM2.5 had a downward trend. The morbidity of lung cancer in the analyzed period increased and this trend is maintained in the forecast for 2016 and 2029. Lung cancer morbidity (ICD10: C33+C34): 2009- 20643, 2010-20871, 2011-20837, 2012-21870, 2013-21556, 2016-27685, 2029-32521. C45: 2009-255, 2010-266, 2011-260, 2012-200, 2013-210. PM2,5 annual mean µg/m3: 2009-30; 2010-34,2; 2011-31,7; 2012-27,9; 2013-26,5; 2014-26,3; 2015-24,5 PM10 annual mean µg/m3: 2009-31,5; 2010-37,6; 2011-36,7; 2012-34; 2013-32,1; 2014-34,5; 2015-32,9. WHO Guideline: PM 2,5 - 10 µg/m3 annual mean; PM10 - 20 µg/m3 annual mean.
Conclusions: After analyzing the available information, we can notice a growing tendency of morbidity of cancers of the respiratory system. It may be caused by high levels of PM2.5 and PM10. Despite declining concentrations of these pollutants in the air, in Poland their accumulation still exceeds the standards set by WHO in 2005. Unfortunately we can not clearly indicate how decreasing of the concentrations of these pollutants will affect to the dynamics of the incidence of lung cancer. According to forecasts of the Polish Ministry of Health lung cancer morbidity will be continue to grow, thereforefurther reduction of pollution is needed.

Keywords: Lung cancer, air pollution, PM2,5 PM10

KNOW YOUR OWN BODY. A REPORT OF TESTICULAR SELF-EXAMINATION KNOWLEDGE AMONG YOUNG ADULTS AND ADOLESCENTS.

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Introducion: Testicular cancer (TC) is one of the most common male neoplasms in the age group 15-35 years old. Estimated amount of newly diagnosed cases exceeds 1000 and death toll reaches 150 each year in Poland. Increasing public awareness of young men would improve the statistics.
Methods: The aim of study was to assess the level of knowledge and public awareness about testicular cancer and testicular self-examination among medical students of the Medical University of Lublin and high school students of Lubelskie Voivodeship. The query was conducted among 777 medical students of the Medical University of Lublin and high school students of Lubelskie Voivodeship. Participants filled out an anonymously original survey.
Results: 89.2% of participants have met with the term "testicular cancer" before. 39.8% of them knew correctly, the most common age group in which TC occurs is 15-35 years old. Fact, that at an early stage diagnosis of testicular cancer is curable in most cases, was known to more than a half of students (56.8%). The most popular answers about recommended methods for early detection of testicular cancer were: visiting the physician 66.8% and self-examination 63.7%. Symptoms of TC which participants chose the most often were a palpable mass on the surface of testicle 70.27% and palpable induration on the surface of testicle 68.34%. Most of the students (62.5%) heard about TSE before, but 51.4% of them do not know how to perform it.
Conclusions: Knowledge of students is very diverse. It can be said that most of them have a basic knowledge about TC and TSE, but even then they do not have practical skills to carry out TCE. To reduce the number of new cases, it is necessary to increase public awareness.

Keywords: testicular cancer, testicular self-examination, TC, TSE

RELATIONSHIP BETWEEN NO2 ,SO2 CONCENTRATION AND LUNG CANCER MORBIDITY IN LUBELSKIE VOIVODESHIP COMPARED TO WHOLE POLAND'S POPULATION

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Introducion: Pollution arises mainly during burning of fossil fuels, while NO2 concentration is related to road transport. SO2 On the basis of numerous scientific research, it is believed that the NO2 and SO2 are linked to increased morbidity of many health problems and among them lung cancer
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 lubelskie voivodeship concentration of NO2 and SO2 had decreasing tendency while national average of NO2 was at similar level In this period concentration of SO2 was decreasing. The morbidity of lung cancer in the analyzed period increased both in lubelskie voivodeship and Poland's populations. This trend is maintained in the forecast for 2016 and 2029 Lubelskie voivodeship: Lung cancer morbidity (ICD10: C33+C34): 2009- 1065, 2010-1175, 2011-1111, 2012-1213, 2013-1078, 2016-1550, 2029-1788. NO2 annual mean µg/m3: 2009-17,5; 2010-20; 2011-15,9; 2012-16,4; 2013-16,3; 2014-15; 2015-14,5 SO2 24 hour-mean µg/m3: 2009-3,4; 2010-3,2; 2011-3,9; 2012-3,9; 2013-3,3; 2014-2,9; 2015-2,4. Poland: Morbidity of ICD 10: C33 + C34: 2009- 20643, 2010-20871, 2011-20837, 2012-21870, 2013-21556, 2016-27685, 2029-32521. NO2 annual mean µg/m3: 2009-18,8; 2010-19,7; 2011-19,7; 2012-1,5; 2013-18,3; 2014-18,1; 2015-18,4 SO2 24 hour-mean µg/m3: 2009-3,9; 2010-6,1; 2011-4,6; 2012-6,6; 2013-2,4; 2014-2,1; 2015-1,6. WHO Guideline: NO2 - 40 µg/m3 annual mean; SO2 - 20 µg/m3 24-hour mean.
Conclusions: The data show us that the situation of air quality in the Lubelskie voivodeship e is better then average of our country. On this background increasing incidence of lung cancers, despite the decreasing concentration of NO2 and SO2 remains a distressing fact. This may suggest that incidence of lung cancer can be weekly influenced by pollution. However it must be stressed that modern life is connected with heavy migration which can blur the whole picture.

Keywords: Lung cancer, air pollution, NO2, SO2

RELATIONSHIP BETWEEN NO2 ,SO2 CONCENTRATION AND LUNG CANCER MORBIDITY IN POLAND.

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Introducion: Pollution arises mainly during burning of fossil fuels, while NO2 concentration is related to road transport. On the basis of numerous scientific research, it is believed that the NO2 and SO2 are linked to increased morbidity of lung cancer. Beside neoplasm's they can cause: conjunctivitis disease, aggravate asthma, reduce immunity.
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: We can see that the concentration of NO2 is similar in analyzed years while SO2 had a downward trend. The morbidity of lung cancer in the analyzed period increased and this trend is maintained in the forecast for 2016 and 2029. Lung cancer morbidity (ICD10: C33+C34): 2009- 20643, 2010-20871, 2011-20837, 2012-21870, 2013-21556, 2016-27685, 2029-32521. NO2 annual mean µg/m3: 2009-18,8; 2010-19,7; 2011-19,7; 2012-1,5; 2013-18,3; 2014-18,1; 2015-18,4 SO2 24 hour-mean µg/m3: 2009-3,9; 2010-6,1; 2011-4,6; 2012-6,6; 2013-2,4; 2014-2,1; 2015-1,6. WHO Guideline: NO2 - 40 µg/m3 annual mean; SO2 - 20 µg/m3 24-hour mean.
Conclusions: After analyzing the available information we can notice that the state of air quality in the country for these parameters is at the standard set by the WHO in 2005. Moreover, there is the tendency of decreasing NO2 and SO2 concentration, it may suggest that they have week influence to the incidence of lung cancer. Another possibility is that the current incidence of lung cancer caused by previous higher levels of SO2 and NO2.

Keywords: Lung cancer, air pollution, NO2, SO2

OPINION RESEARCH OF THE CONSCIENCE CLAUSE AMONG MEDICAL STUDENTS OF THE FINAL YEAR

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Introducion: Dynamics of changes in health care and making often by doctors momentous decision on the borderline of ethics drawn attention to the conscience clause- a legal regulation, which allows to refusal of medical activities inconsistent with the beliefs of medical personnel. Students in their final year of medical studies as a future medical staff have some knowledge of the conscience clause and situations where thay can quote on it.
Methods: The research instrument was an anonymous questionnaire approved by the Bioethical Commission, and conducted among students of sixth year of medicine. The study group consist of 120 students. The aim of the study was to investigate the views and opinions on respondent's conscience clause.
Results: Students are the group that contact already with the theme of conscience clause. The majority of the study population were women. According to the respondents the most accurate definition of the conscience clause is found in Article. 39 of the Act on the profession of doctor and dentist. Respondents assessed the impact study of legal regulation versus its role in the medical profession, compliance with medical oath, the patient's autonomy and its relation to the professional ethics of the doctor.
Conclusions: There is no correlation between the opinions of the respondents, and the size of their place of residence. Students report a different evaluation criteria, which shaped their worldview and heterogeneous evaluation conscience clause, followed by the doctor in the specified diagnostic and therapeutic dilemmas.

Keywords: conscience clause, students, questionnaire

BLOOD PRESSURE IN LUBLIN COUNTY POPULATION

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Introducion: Blood pressure (BP) is one of most important modifiable cardiovascular risc factors. Normal resting blood pressure in adults is below 140 mmHg systolic (SYS) and 90 mmHg diastolic (DIA). For diagnostic purposes blood pressure is measured with sphygmomanometer by non-invasive auscultatory technique. The aim of the study was to estimate the blood pressure in Lublin county population.
Methods: Examinations were performed during several prophylactic actions runned in Lublin county from 2014 to 2016. Aneroid sphygmomanometer with standard arm cuff size was used. The BP was measured in upright sitting position after 5 minute rest. The median value of two measurements taken 2 minutes apart was calculated. Participation in the study was voluntary and anonymous.
Results: Data from 144 patients was gathered (86 female and 57 male). The average age was 45 years. 44% of examined patients were treated for hypertension. Among patients with no history of hypertension 20% had optimum BP (below 120/80 mmHg), 22% normal BP (SBP 120-129 mmHg and DBP 80-84 mmHg), 36% high normal BP (SBP 130-139 mmHg and DBP 85-89 mmHg). 22% of this population had elevated BP (above 140/90 mmHg). 68,75% of patients treated for hypertension had normal BP (below 140/90 mmHg).
Conclusions: Only 44% of Lublin county population with no hypertension history turned out to have optimal or normal BP. In 22 % BP was elevated, suggesting the diagnosis of hypertension. In 36 % BP was high normal, which also requires further investigation. On the other hand only 2/3 of hypertensive patients were effectively treated.

Keywords: blood pressure, epidemiology, cardiology,

THE ASSESSMENT OF YEAR ITINERACY AND WEEK PERIODICITY OF FATAL OUTCOMES DURING HOSPITALIZATION IN DIFFERENT HOSPITAL DEPARTMENTS IN OPOLE LUBELSKIE HOSPITAL.

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Introducion: The aim of the work is ascertainment of the biological rhythms in deaths of patients being hospitalized in Opole Lubelskie Hospital in chosen years, 1978 to 2002. The rhythms correlated with month seasonality and week periodicity were investigated in particular. Another area of the study was the assessment of dependency between the day of death and both - type of hospital department and period of the hospitalization.
Methods: The data consisted 2200 cases, including 350 (15.9%) from the period 1978-1981, 662 (30,0%) from years 1986-1991 and 1203 (54.1%) from period 1996-2002. The main objective of the study was the analysis of year itineracy and week periodicity of patients death. This analysis was conducted in different hospital departments; 352 surgery departments (15.9%), 1122 (50.5%) internal medicine departments, 348 neurological departments (15.7%), 294 palliative care departments (13.2%) and other - 104 (4.7%). The results were proceeded through the statistical analysis that included frequency tables with percentage values, descriptive statistics and parametric tests. The mentioned parametric tests; t-Student test (for independent variables) and variance analysis (ANOVA) were used for the assessment of statistical significancy of the correlation between the patients death and time of hospitalization.
Results: The mean age of death of the patients in the relation to the department was differentiated from 46.55 to 75.02. According to the data, the highest mean was observed in the department of palliative care. The differentiation was statistically significant ($p<0.0001$). Considering the average time of hospitalization of the patients (until death) varied from 11.99 (neuorology) to 30.22 (other departments). As previously, the differentiation was statically significant ($p <0.0001$).
Conclusions: The research proved that there exist the seasonality through the year and periodicity during the week in deaths of the patients in all hospital departments analyzed. It may indicate on the occurrence of such phenomena in the whole hospital. Simultaneously, the differentiation of such itineracy and periodicity of death can be the result of the varied work organization of particular departments.

Keywords:

THE ASSESSMENT OF YEAR ITINERACY AND WEEK PERIODICITY OF HOSPITALIZATION OF DEATHS DUE TO DIFFERENT CAUSES IN THE OPOLE LUBELSKIE HOSPITAL.

Marta Sprawka, Anna Orzeł, Justyna Wysocka, Agnieszka Grygiel, Jakub Rokicki
Scientific supervisor: Dr. Beata Rybojad, M.D., Ph.D.
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Introducion: The aim of the study was the assessment of the death rhythms of the patients hospitalized in Opole Lubelskie Hospital in chosen years from 1978 to 2002. The death rhythms in relation of months seasonality and week periodicity were analyzed according to the reasons of death and the period of hospitalization.
Methods: The data consisted of 2200 cases that involved 350 (15.9%) from the period 1978-1981, 662 (30,0%) from years 1986-1991 and 1203 (54.1%) from the period 1996-2002. The analysis of the months seasonality and week periodicity in death rhythms in the relation to the cause of death was divided into: diseases of circulatory system - 1469 (66.2%), tumors - 347 (15.6%), injuries and poisoning - 82 (3.7%) and other cases- 332 (14.5%). The statistical analysis involved the frequency tables with percentage value, the descriptive statistics and parametric tests. The mentioned parametric tests; t-Student test (for independent variables) and variance analysis (ANOVA) were used for the assessment of statistical significancy of the correlation between the patients death and time of hospitalization.
Results: According to the results, the mean age of patients death was estimated to 70.03 years. It was differentiated due to various fatal causes- with the highest value 72.23 years (diseases of circulatory system). On the other hand, deaths at the lowest age (63.12) was observed in group with „other fatal causes". All results obtained were statistically significant ($p<0.0001$). The mean time of hospitalization (until death) was assessed as 16.11 days. As previously, the data varied in given groups - 13.52 days (injuries and poisoning) to 25.17 days (tumors). Once again, processed values were statistically significant ($p<0.0001$).
Conclusions: The study indicates the existence of relation between year seasonality and weekday periodicity of death and its cause. It is probable that such relation is the most significant in area of circulatory diseases due to physiological changes in period of autumn and winter. On the other hand, in group of injuries and poisoning, more important may be the influence of the environment and changing habits.

Keywords:

THE MORBIDITY OF SYSTEMIC LUPUS ERYTHEMATOSUS IN POLAND IN THE YEARS 2008-2012.

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Introducion: Systemic lupus erythematosus is an autoimmune disease, and the cause of SLE is not fully known. Hormonal, environmental, and genetic factors may be responsible for the occurrence of SLE. The global rates of SLE are approximately 1 per 2000 people. The incidence depends on: sex, age, ethnicity. SLE is difficult to diagnose and because of this the rates of SLE can be undervalued.
Methods: The material used for epidemiological analysis are data, collected by Andrzej Śliwczyński, Melania Brzozowska-PetreIltchev, Tomasz Czeleko, Zbigniew Teter, Witold Tłustochowicz, Michał Marczak, and MałgorzataTłustochowicz. The authors analysed the databases of National Health Fund. The number of morbidity of SLE was calculated based on ICD-10 code and the patient's personal identity number. Morbidity was defined per 100,000 inhabitants.
Results: During the five years the number of patients with SLE remained stable and amounted approximately 20 thousand patients annually. This means, that the morbidity amounts 52 patients per 100,000 inhabitants and not diverge from the average for EU. Authors observed more than twofold difference in morbidity between provinces: Kujawsko –Pomorskie (77.8 per 100,000) and Podlaskie province (32 per 100,000). They observed difference also between the number of patients from rural and urban areas: occurrence of SLE in cities is 1.64 times more frequent than in rural areas. Women suffered from SLE 5.2 times more than men, and the incidence among women was approximately 85 cases per 100.000 inhabitants while for men this number amounted ca. 17.4. The largest number of patients with SLE was in the age range of 48-56 years.
Conclusions: The inhabitants of Poland are ethnically homogenous , so the observed difference in morbidity between provinces may be result of availability of doctors in various areas of the country. The same reason may result in difference of occurrence of SLE between urban and rural areas. Women diagnosed with SLE were 5.2 times numerous than men, and compared to another data for general population this ratio is lower. The age group of 48-56 years was the largest one to have SLE, which could be caused by increases in the survival of SLE patients.

Keywords: SLE, lupus erythematosus, morbidity

POTENTIAL BONE MARROW DONORS IN POLAND- WHAT DOES THE SOCIETY KNOW?

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Introducion: At this moment, there are over 920 thousand potential bone marrow donors. At the same time, many Polish patients are still waiting for a matching donor. There are billions of possible combinations of factors that qualify for a match of a donor to a recipient; in fact, there are more possible combinations that there are people on Earth. That is why there is a risk of not everyone finding a „genetic twin". However, the more people register, the higher the chance for finding a donor for every patient.
Methods: The survey has been completed by 346 respondents, aged 18-42, in late October and early November 2016. An author's questionnaire including 20 questions was used as a research instrument. Participation in the research was voluntary and anonymous.
Results: Up to 80,3% of respondents know, that registering in the base requires the potential donor to be at least 18 years of age. It is a highly optimistic finding that almost all of the respondents possess the knowledge current methods used for collecting stem cells.
Conclusions: The knowledge of the respondents regarding becoming a potential bone marrow donor is advanced; several of them are already registered in the database. They report high level of satisfaction from being able to selflessly help in the uneven fight against cancer.

Keywords:

LEUKEMIA – THE KNOWLEDGE AMONG MEMBERS OF THE SOCIETY.

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Introducion: In Poland, every hour a diagnosis is stated: blood cancer. Annually, that diagnosis is heard up to 10 000 times. Among all types of blood cancer, leukemia is the most common.
Methods: The survey has been completed by 346 respondents from all over Poland, aged 18-42, in late October and early November 2016. An author's questionnaire including 20 questions was used as a research instrument. Participation in the research was voluntary and anonymous.
Results: Up to 85% of respondents are aware that the cells used for transplantation in treatment of leukemia are stem cells. Slightly over a half of the respondents (56,4%) have correctly answered to the question: „what is the norm of leukocytes in the blood?".
Conclusions: The respondents have shown satisfactory level of knowledge about the problem of leukemia. However, educational programs are recommended in order to broaden the knowledge about leukemia.

Keywords:

EVALUATION OF THE DIGESTIVE SYSTEM FUNCTIONS IN ORAL CANCER GROUP.

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Introducion: The maintenance digestive system's normal functions such as swallowing, chewing, eating solid food is indispensable element of high quality of life after extensive oncological treatment in the head and neck area.
Methods: Between August 2014 and September 2015, 20 patients were enrolled to the prospective study. All patients undergo radical surgery treatment, 18 patients had adjuvant radiotheraphy. QLQ-C30 questionnaire was performed before, 10 days and 3 months after surgery. Karnofsky scale was used in results interpretation.
Results: Statistically significant differences between treatment periods related to the scope of opening his mouth and eating foods of different consistency have been found in the study group ($p < 0.005$). There were no differences in the subjective feeling of dry mouth and appetite problems.
Conclusions: The need for individualization of post-operative care, depending on the time of the surgery and implemented adjuvant treatment has been suggested by differences in patients' subjective feelings on the functions of the digestive system in particular periods of treatment.

Keywords: head and neck cancer, quality of life, oncological treatment

STAGE-DEPENDENT CHANGES OF PREOPERATIVE INFLAMMATORY BLOOD MARKERS IN COLORECTAL CANCER PATIENTS.

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Introducion: Colorectal cancer (CRC) is the third most common neoplasm worldwide with the number of 1.4 million newly diagnosed cases in 2012. The primary and the most efficient method for the CRC screening is endoscopy. However, the public response is still unsatisfactory. Thus there is a need to search for the simple noninvasive blood-based markers that allow for early diagnosis of CRC. The study aimed to evaluate whether hematological parameters: platelet count (PC), mean platelet volume (MPV), MPV/PC ratio, red blood cell distribution width (RDW), neutrophil to lymphocyte ratio (NLR), and platelet to lymphocyte ratio (PLR) are useful markers to differentiate between colorectal cancer patients and healthy individuals.
Methods: We retrospectively analyzed patients who have been diagnosed with colorectal cancer (n = 189) and were admitted to the Department of General and Minimally Invasive Surgery of the 1st Military Clinical Hospital in Lublin, Poland between 2010-2015. Healthy individuals (n = 91), served as a control group. Demographics and laboratory values of blood tests were extracted from the hospital medical database records. Statistical evaluation concerned blood parameters: white blood cell (WBC) and platelet (PLT) count, red blood cell distribution (RDW), mean platelet volume (MPV), MPV/PLT ratio, neutrophil to lymphocyte ratio (NLR), platelet to lymphocyte ratio (PLR).
Results: The significantly higher mean value of WBC, PLT, RDW, NLR, and PLR was observed in CRC patients in comparison to healthy individuals. Additionally, the significantly lower mean value of MPV/PLT ratio was found in CRC patients than controls. Moreover when analyzing T stage of CRC patients significantly higher mean value of WBC, PLT, RDW, NLR, and PLR was observed in T4 compared to T1 tumor stage. However, MPV/PLT ratio was significantly lower in CRC patients with tumor T4 compared to tumor T1 stage.
Conclusions: Hematological parameters: PC, MPV, RDW, NLR, PLR are widely available, routinely measured and have the diagnostic power to help to identify patients with colorectal cancer from patients without cancer. Moreover, blood parameters can be used to figure out the CRC patients with high tumor invasiveness.

Keywords: colorectal cancer, blood markers

WAYS TO CHANGE MEDICAL CURRICULUM REGARDING SURGICAL TRAINING - MEDICAL UNIVERSITY OF LUBLIN EXPERIENCE

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Introducion: Most of Polish students dream of becoming a surgeon while entering Medical University. Surgery, both science and art, requires not only theoretical, but more importantly practical training, essential in proper operating technique and consequently, lesser post-operative complications. Polish medical curriculum allow students to observe surgeries, obtain knowledge on surgical procedures, but doesn't include the opportunities for them to practice surgical skills, which prevents them from experiencing surgical reality. Observing increase of interest in surgical workshops in our Local Committee, we decided to provide more concrete practical basis for medical students, resulting in a week of First National Surgical Summerschool.
Methods: During the Summerschool 50 hours of surgical training for 30 students from all of Medical Universities in Poland is performed from disciplines: general surgery, cardiosurgery, vascular surgery, thoracic surgery, laparoscopy techniques,pediatric surgery accompanied by workshops from other essential skills from non-surgical specialties relevant to surgery, such as USG-fast examination, tracheostomy. We measured their knowledge on practical surgical information with 40-questionnaire test - distribution of amount of questions per discipline was divided depending on the time of the course of the discipline in the training. Participants performed the test before the start of the course and in the end of the course.
Results: Participants were very well prepared to the course theoretically, taking into consideration that most of them started surgery classes this year. The increase of knowledge was 14,29%, as for the practical aspect, students decreased the time of performance from 40 up to 60%, as well as improved the accuracy and cosmetic effect of the sutures, but as subjective values were not included in the analysis.
Conclusions: Research held previously proved that surgery residents aren't well prepared for their residencies in practical aspect, as well as research on surgical workshops held by students organization proved the importance of this kind of training in medical faculties. We believe that medical students should advocate for inclusion of surgical labs into medical curriculum, which is the lacking aspect in Polish surgical training.

Keywords: surgery,practical training

BLOOD PRESSURE MEDICATION- VERAPAMIL MAY BE USED IN TREATMENT OF DIABETES

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Introducion: Diabetes mellitus is a common metabolic disorder, which involves a serious complication of human organism if it is not properly treated. Type 1 and type 2 of this disease are different in their pathophysiology, but in both there is loss of pancreatic B-cells in the way of apoptosis. There is a new study, which proves that verapamil and the group of Ca2+ blockers prevent apoptosis of B-cells in mouse models. There are also studies about verapamil's effect on humans with diabetes.
Methods: The aim of the project is to present studies on the effect of verapamil on the level of fasting sugar of diabetics on the basis of available publications concluded, inter alia, in the journal "Diabetes Research and Clinical Practice".
Results: This is a cross-sectional observational study which shows that there is an association between verapamil and lower glucose levels. The study included 4978 adults with diabetes, 1,484 were calcium channel blocker users, of whom 174 were verapamil users. The findings showed that calcium channel blocker users had 5 mg/dL lower fasting serum glucose compared to non-users. Verapamil users had 10 mg/dL lower fasting serum glucose compared to calcium channel blocker non-users. There was also greater difference in fasting serum glucose among insulin users who took part in the sample. Verapamil users who took insulin in combination with calcium channel blockers had a 24 mg/dL lower serum glucose, and verapamil users who took insulin alone to manage their diabetes showed a 37 mg/dL lower serum glucose. The study in mice showed that verapamil could reverse diabetes in their organisms and also this drug decreased fasting glucose level.
Conclusions: The biggest difference in fasting serum glucose was noticed in the group of diabetics who took insulin with verapamil. This may suggest that verapamil is better drug for diabetics and it is better for patients who has got destroyed B-cells (they need insulin in their therapy). These arguments encouraged to make randomized verapamil clinical trial. The university of Alabama at Birmingham announced it in November 2014 and began enrolling patients in early 2015. The test is still in progress.

Keywords: diabetes, verapamil, treatment of diabetes

THE IMPACT OF MOVIES ON PERCEPTION OF MENTAL ILLNESS IN POLISH SOCIETY.

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Introducion: Movies are one of the most influential media outlets and important information sources about mental illness. They have an incredible impact on education, perception and beliefs about mental illness. Generally movies follow stereotypes about insane patients presenting them as extremely dangerous, violent and unpredictable. Mental illness is often a way to make film more interesting and make people more curios to watch the film, produce fear in its watchers. Unfortunately watchers cannot recognize if movie shows truthful information or falsehood. There are only a few movies fairly present mental disorders. The purpose of this study was to define social perception of mental illness in Poland and determine the impact of movies on knowledge and beliefs about mental disorders.
Methods: The research method was the author's survey which was carried out among 108 adult in age 18-60 with secondary or higher education. Statistical analysis using chi-square test of independence was performed. We also analyzed images of mental disorders in selected examples of movies.
Results: Media and movies are the most important sources of information about mental illness and people do not have enough knowledge about them. People feel fear and negative emotions during watching movies with mentally ill character. Third (35,19%) of respondents would not agree to work with mentally ill people, 32,41% of respondents think they are dangerous and most people (66,67%) think they cannot rely on mentally ill people.
Conclusions: Among people unrelated to psychology and psychiatry the knowledge about mental illness is poor. People with mental disorders evoke negative feelings like fear, dislike and distrust. They are stigmatized and isolated because of harmful stereotypes. Awareness campaigns are needed to reduce the isolation of mentally ill people.

Keywords: mental illness, movies, stigmatization, stigma

ALCOHOL CONSUMPTION AMONG POLISH MEDICAL STUDENTS – SURVEY RESEARCH

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Introducion: Alcohol is the most widely used drug worldwide. Medical students should be aware of its possible harmfull properities although they are known to consume large amounts of alcohol. Therefore analysis of their drinking patterns is important for public health.
Methods: Students of different Polish medical universities were asked to fill a self-prepared survey on alcohol consumption and cigarette smoking. 852 fulfilled questionnaires were gathered. The statistical analysis was performed with Statistica 12 (Statsoft, USA).
Results: 99.18% of students (n=845) have declared trying alcohol. 50,7% of respondents declared the age of first alcohol consumption as between 15 and 18 years. 31,1 % (n=265) declared drinking once a week, 27.46% (n=234) twice a week. Beer was pointed as the most frequently consumed alcohol – 51,76%, 15,38% of respondents chose red wine. 125 students (14,67%) admitted participating in classes under the influence of alcohol.
Conclusions: Study reveals some risky alcohol drinking behavior, for example attending classes under the influence of alcohol. During classes they often have contact with patients therefor it can be really dangerous tendency.

Keywords: alcohol drinking trends, medical students

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