Book of Abstracts

Scientific Sessions

12-13th APRIL 2019

Medical University of Gdańsk

Poland

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This book was completed and issued on 8th April 2019.

This book contains the abstracts accepted for the 25th International Student Scientific Conference
(12-13 April 2019, Medical University of Gdańsk, Poland). Some of those presentations may not have been delivered during the conference.

Within each session, the abstracts are ordered alphabetically by authors' last names.

The order of the abstracts in the book does not correspond to the order of presentations during sessions.

For the order of presentation and list of session coordinators please go to:

25th ISSC - Order of Presentations

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Basic Science

(Saturday 13.04 - 10:15-13:15)

The content of tryptophan and its metabolites in blood plasma of rats with chronic circulation insufficiency

Presenting author: Ella Beglaryan - Grodno State Medical University
Authors: Ella Beglaryan, Yana Novogrodskaya, Mariya Petrushko
Supervisors: Yevgeni Doroshenko

Introduction

Experimental model of heart insufficiency reproduces isometric hyperfunction of heart, which leads to hypertrophy of heart muscle. Taking into account hemodynamic parameters this model is a good representative of circulation failure. Experimental heart failure corresponds to circulation failure in arterial hypertension and aortal stenosis. That is why we consider this model appropriate to evaluate metabolism in cardiovascular pathology. 80-90% of pool of tryptophan (TRP) metabolizes in kynurenine pathway. Metabolites of this pathway possess neuroactive properties. They found to play significant role in regulation of heart function and pathogenesis of various nervous system diseases.

Aim of the study

To establish the influence of experimental circulation failure on the levels of metabolites of tryptophan's kynurenine pathway.

Methods

Chronic circulatory failure in rats was created by artificial narrowing of the lumen of the abdominal aorta above the renal arteries. It was made by installation a metal spiral with an internal diameter of 0.7 mm. The animals of one of the groups underwent false operation (false-operated control). Starting from 13th week post operation, the animals of the experimental groups were administered intragastrically twice a day for 7 days with: 1. Tryptophan (TRP) 80 mg/kg per day. 2. Composition of amino acids (daily doses): taurine(TAU)150 mg/kg, TRP 80 mg/kg, arginine(ARG) 245 mg/kg, zinc diaspartate (ASP) 25 mg/kg, supplemented with intraperitoneally administered pyridoxal phosphate (PALP) 25 mg/kg. The content of TRP, KYN, and KYNA were determined by HPLC in the perchloric acid extracts of blood plasma.

Results

1. In the group of rats with circulation failure with no administration of the substances the level of KYNA decreased in comparison with false-operated rats. 2. No significant differences in levels of the metabolites of tryptophan's kynurenic pathway were found in group of rats with circulation failure after the injection of TRP in comparison with false-operated control. 3. In the group of rats with circulation failure administered with combination of amino acids with PALP the level of KYN increased versus false-operated group. It is well known that KYN can pass the blood-brain barrier, but it can't be excreted by the kidneys. Rise of KYN concentration can cause its excess in a brain. There it converts to neuroactive substances such as kynurenic acid, 3-hydroxykynurinine, and quinolinic acid.

Conclusions

1. The activity of transamination of KYN decreases in circulation failure.

2. Additional administration of TRP in the situation of circulation failure corrects levels of both KYN and KYNA. It means that additional TRP eliminates transamination depression.

3. Additional injection of TRP in combination with TAU, ARG, ASP and PALP makes transamination of KYN more active, than initial. It can be a way of compensation of circulation failure's adverse metabolic effects.

Platelet Rich Plasma and Pulsed Radiofrequency may be complementary as a treatment for Chronic Pain in vitro studies.

Presenting author: Ewelina Gojtowska - Gdański Uniwersytet Medyczny
Authors: Ewelina Gojtowska, Anna Michno, Zbigniew Kirkor, Bartosz Baścik, Irmina Śmietańska
Supervisors: Anna Michno

Introduction

For many decades several methods of pain treatment and regeneration of nerves have been used in regenerative medicine. However, relatively little is still offered to patients. Recently, Pulsed Radiofrequency Neuromodulation (PRF) is one of techniques used in the treatment of pain without permanent damage to tissues. Another option for tissue regeneration is the injection of autologous platelet rich plasma (PRP) which is considered as a rich source of growthfactors and used to accelerate the soft tissue healing.

Aim of the study

Here we investigated whether PRF may potentiate the activation of platelets in PRP samples when both these techniques are combined together in in vitro conditions.

Methods

Overall, we performed experiments on concentrated PRP samples obtained by differential centrifugation from ACD-treated blood taken from 7 healthy volunteers (aged 25-62 years). PRP preparation resulted in an approximately 4-fold increase of platelet count compared with whole blood. Then, PRP samples were divided into three groups: 1. Non-activated PRP; 2. Thrombin-Activated PRP as a positive control for platelets activation; 3.PRF-treated PRP exposed for 20 min to pulsed radiofrequency energy generated by Neurotherm Radio Frequency Lesion Generator Model NT2000 (Croydon, UK) at 500 kHz, with an adjusted voltage of 40V, to permit maximal temperature of 42°C.

Results

In our experiments we observed that PRF induced platelet activation measured by their ATP release from PRP samples and the effect was similar to ATP release from thrombin-activated PRPs. Additionally, PRF neither induced any platelet membrane integrity measured by LDH release from PRP nor modified any platelets viability measured by MTT.

Conclusions

We experimentally confirmed that a combination of PRF and PRP injection may be more effective treatment strategy for pain treatment without any damage to blood platelets and also provides a new opportunity for tissue regeneration.The work was founded by ST-57 project grant (Medical University of Gdańsk).

miR-410-3p is induced by vemurafenib and contributes to BRAF inhibitor resistance in melanoma

Presenting author: Tomasz M. Grzywa - Medical University of Warsaw
Authors: Tomasz M. Grzywa, Klaudia Klicka, Wiktor Paskal, Julia Dudkiewicz, Jarosław Wejman, Paweł K. Włodarski
Supervisors: Paweł K. Włodarski

Introduction
Vemurafenib is a first-in-class inhibitor of BRAF kinase approved for the treatment of metastatic melanoma harboring BRAF mutation. Despite a significant improvement of overall and progression-free survival in vemurafenib-treated patients, resistance and progression occur in the majority of patients. MicroRNAs are single stranded stable non-coding small molecules which play an important role in post-transcriptional gene regulation and have an impact on melanoma pathogenesis.

Aim of the study
To determine the role of microRNA, especially miR-410-3p, in early response to Vemurafenib in melanoma.

Methods
The experiments were performed on three model melanoma cell lines. The IC50 dose of Vemurafenib (PLX4032) was determined using MTT assay. Cells were cultured in medium with Vemurafanib (IC50 dose) for 1, 6, 12, 24, 48, 96, and 192 hours. Total RNA was isolated using RNeasy kit. The isolated RNA was subjected to reverse transcription of the mir-X system. The expression of microRNAs as well as the expression of putative targets of miR-410-3p were determined using qPCR method. Resistance to vemurafenib after transfection with miR-410-3p mimic or miR-410-3-anti was determined using MTT.

Results
We found an increased level of miR-410-3p in vemurafenib-treated cells. The level remained constant for the first 24 hours followed by a significant upregulation. We observed upregulation of miR-211-3p and a variable level of miR-410-5p. miR-410-3p increased resistance, while its inhibition decreased resistance to vemurafenib in melanoma cells.

Conclusions
We observed miR-410-3p–dependent regulation of response to

vemurafenib. miR-410-3p contributes to resistance to BRAF inhibitor. miR-410-3p may be a promising therapeutic target in melanoma cells in combination with Vemurafenib therapy.

5-arylideneimidazolones as potential antibiotic adjuvants able to block efflux pumps

Presenting author: Aneta Kaczor - Uniwersytet Jagielloński, Collegium Medicum
Authors: Aneta Kaczor
Supervisors: Jadwiga Handzlik

Introduction

One of main problems of treatment is multidrug resistance (MDR) e.g. in bacterial, viral diseases.Based on WHO report, nowadays in every country there are MDR bacterial strains. For this reason searching for possibilities to overcome this problem is necessary. There are two main paths: searching for (i) new antibiotics or (ii) chemosensitizers also called antibiotic adjuvants. Antibiotic adjuvants are compounds able to block at least one of the mechanisms of bacterial resistance without antibacterial activity itself. Among many mechanisms of bacterial resistance, antibiotic efflux pumps are one of mostly found in various bacterial strains.. Previously, compounds able to block this mechanism was described in the group of hydantoin and imidazolone derivatives.

Aim of the study

For this reason, the aim of this study is to obtain new potential antibiotic adjuvants in the group of 5-arylideneimidazolones with amine moiety at position 2 or 3.

Methods

Design of new compounds was performed basing on previously obtained results and in silico ADMETox screening, which was conducted in various computer programmes, e.g. SwissADME, pkCSM. Chosen compounds were synthesized in 4-step synthesis, which consists of: (1) Knoevenagel condensation, (2) S-methylation, (3) reaction with amines going with Dimroth rearrangement for primary amines. All compounds were (iv) converted into hydrochloride forms to increase solubility. Activity of final products were measured in microbiological assays in Escherichia coli strains (Gram negative bacteria). First test was to assessminimal inhibitory concentration (MIC) of synthesized compounds. Then, adjuvant activity was investigated for eight various antibiotics in the microdilution assay. Additionally, Real-Time Efflux (RTE) assays were conducted to assess the ability of final products to block AcrAB-TolC efflux pump.

Results

Seven 5-arylideneimidazolone derivatives with amine at position 2 or 3 were synthesized. All final compounds were sent to microbiological assays. Obtained results of microdilution assays show that one of tested compounds display significant (at least 4) reduction of levofloxacin, tetracycline, cefuroxin and linezolid MIC. The same compound in RTE assays excerted ability to block efflux pump in E.colistrain in more than 70% in 0.05mM concentration.

Conclusions

Obtained results prove that 5-arylideneimidazolones are potential chemosensitizers able to block efflux pumps in Gram negative bacteria. Further studies are needed to obtain results in various bacterial strains with different antibiotics.

Nitrite-Induced Changes OfEndotheliumFunctional State And Cognitive Brain Functions In Rats

Presenting author: Yevgeniya Lukyanova - Kharkiv National Medical University
Authors: Yevgeniya Lukyanova
Supervisors:Olena Pavlova

Introduction

It is common knowledge that the cerebrovascular insufficiency and hypoxia result in the encephalopathy. Several studies have explored that the intraperitoneal injections of aqueous solution of sodium nitrite to pregnant female rats from the 10th to the 19th day of pregnancy caused hemic hypoxia and disturbance of the cognitive function of the brain in the offspring of rats (Sosedova L., Vokina V., 2012). However, the possibility of the encephalopathy developing of male rats with a background of chronic administration of aqueous solution of sodium nitrite has been poorly investigated.

Aim of the study

The study was designed to determine the nitrite-induced changes of the endothelium functional state and cognitive functions of the brain in adult rats.

Methods

The experiment was performed on 24 male WAG rats aged 5-6 months weighing 180-230 g, which were divided into 4 groups (6 rats in each group). Groups 1 and 2 received 0.1% and 0.2% aqueous solution of sodium nitrite respectively instead of drinking water (in free access) for 6 weeks. Rats of group 3 were injected 50 mg / kg of body mass the aqueous solution of sodium nitrite intraperitoneally during 2 weeks. Group 4 was control. The endothelial growth factor (VEGF-A, pg / ml) was determined by the immuno-enzymatic method, the von Willebrand factor (vWF, %) was identified by photometric method, the 2, 3 diphosphoglycerate (2, 3-DFG, μmol / ml) was measured by spectrophotometric method. Cognitive functions were evaluated using passive avoidance test and extrapolational disposal test.

Results

The level of VEGF-A was found increased in rats of the group 1 by 1.8 times (52.5 ± 0.5), group 2 - by 4,4 times (131,3 ± 1,8), group 3 – by 21 times (622,1 ± 6,6) compared to control group (29,7 ± 0,7). Quantitative analysis of von Willebrand factor and 2, 3 diphosphoglycerate showed the highest levels in the third group, which indicated a significant endothelial damage and led to rising of oxygen transfer to tissues. Rats of the group 3 did not pass extrapolational disposal test and the conditional reflex was not formed in passive avoidance test. It proved that the cognitive functions of brains in the group 3 were noticeably reduced. In contrast, the control group rats completed both tests successfully. There were no significant changes in rats of first and second groups.

Conclusions

The data demonstrates that the long-term administration of aqueous solution of sodium nitrite leads to development of endothelial dysfunction and cognitive impairment of the brain in rats.

Effect of SDF-1 concentration on liver transplantation

Presenting author: Ewa Ostrycharz - Pomorski Uniwersytet Medyczny w Szczecinie
Authors: Ewa Ostrycharz
Supervisors: Marta Budkowska, Marta Budkowska

Introduction

Liver transplantation is the finalmethod of treatment in patients with end-stage (acute and chronic) failure of this organ. It is believed that the factors influencing the migration, adhesion, differentiation and survival of cells, such as the SDF-1 chemokine, have a huge impact on the transplantation process. The SDF-1 - CXCR4 axis or the SDF-1 - CXCR7 axis activates signaling pathways in the target cells, affecting their migration and interaction with the intercellular environment. SDF-1 through its receptor stimulates the phosphatidylinositol 3-kinase pathway activating protein kinase (Akt), affecting cell differentiation and proliferation. It also affects the increase of adhesion by modulation of surface functions of cell integrins. The increase of SDF-1 concentration in damaged tissues and organs plays an important role not only in inflammation, but also during their regeneration and repair and leads to the migration of stem cells released from the bone marrow, which is why SDF-1 seems to be important for organ survival.

Aim of the study

The aim of study was to determine the changes in chemokine SDF-1 concentrations in patients before and after liver transplantation, as well as assessing whether any changes in the concentration of the investigated factor influence the correct transplant liver function or its damage in the mechanism of ischemia-reperfusion (IR).

Methods

Blood was obtained from 100 patients (44 women and 56 men) between the ages of 20 and 68 years qualified for liver transplant surgery. The concentrations of SDF-1 were measured used a reagents kit ELISA (Quantikine ELISA R&D SYSTEM and a bio-techne brand), whose operation is based on the principle of double bonding.

Results

The studies showed significant differences in SDF-1 concentration in pre-transplant patients, 24 hours after transplantation and two weeks after transplantation. The highest concentration of SDF-1 occurred before transplantation, while the lowest in the first day after transplantation and gradually increased.

Conclusions

SDF-1 affects liver regeneration during disease processes and it may impact organ regeneration after IR, through its infulence on the migration of stem cells to the damaged organ and lowering the hepatocyte apoptosis, which has an effect on the survival of the graft

Development of a new therapeutic strategy for Alzheimer's disease, based on the degradation of its pathogenic factors by genistein-mediated autophagy

Presenting author: Karolina Pierzynowska - University of Gdańsk
Authors: Karolina Pierzynowska, Magdalena Podlacha, Lidia Gaffke, Irena Majkutewicz, Jagoda Mantej, Dorota Myślińska, Grzegorz Węgrzyn
Supervisors: Grzegorz Węgrzyn

Introduction
Alzheimer's disease (AD) is one of the most common neurodegenerative diseases. It is caused by accumulation of β-amyloid (βA) and hyperphosphorylated tau protein (P-tau) in neurons, which damages their proper functions, leading to progressive memory disorders. Unfortunately, none of anti-AD therapies tested to date is effective. One of therapeutic strategies is based on accelerated removal of accumulated proteins, and stimulation of autophagy (a phylogenetically conserved process of degradation of misfolded proteins or malfunctioning small organelles by lysosomes) could be used for this. However, the problem was to find a molecule crossing the blood-brain barrier which can both activate autophagy and be safe for a long-term use. The compound that meets all of the above requirements is one of flavonoids, genistein.

Aim of the study
The purpose of the present study was to determine effects of genistein on the behavior of AD animal model as well as on the levels of βA and P-tau in the brains of these animals.

Methods
The research was carried out on the rat streptozotocin (STZ) model of AD. The animals were divided into 4 experimental groups: 2 groups with intraventricular injection of streptozotocin (AD groups) and 2 groups with injection of the solvent (control groups). The animals were given water or genistein (150 mg/kg/day). Behavioral studies were performed after one month of genistein administration, and included memory measurements (Morris Water Maze), anxiety disorders (elevated plus maze test) and locomotor activity (actometers, open field test). Post mortal detection of levels of βA, P-tau, and autophagy markers in hippocampus, cortex and the rest of the brain was performed with the immunohistochemistry and Western blotting or dot-blotting techniques.

Results
Results of experiments indicated a complete normalization of the behavior of animals constituting the AD model. Administration of genistein to rats over the period of one month removed hyperactivity, memory disorders and changes in fear-related locomotor activity, making them completely indistinguishable from control animals.

Immunodetection of βA and P-tau showed a decrease in the levels of these proteins to those observed in control animals in the hippocampus, cortex and the rest of the brain. In addition, the levels of short forms of amyloid, βA40 and βA42, which are currently considered the most toxic to neurons, have also been reduced completely.

Markers of autophagy, particularly the LC3-II protein and the lysosomal biogenesis factor (TFEB), as well as number of lysosomes, were significantly elevated in rat brains after genistein treatment which confirms the role of autophagy in the observed phenomenon.

Conclusions
Genistein is a compound that stimulates removal of the accumulated proteins, including βA and P-tau. Since its high safety and the blood-brain-barrier crossing have also been demonstrated, it is promising molecule that can be considered as a potential drug for Alzheimer's disease.

Search for potent and selective 5-HT6R agents among derivatives of the thymol derivative MST4

Presenting author: Michał Pikuła - Jagiellonian University Collegium Medicum
Authors: Michał Pikuła
Supervisors: Małgorzata Więcek, Jadwiga Handzlik

Introduction

Serotonin (5-HT) is one of the primary neurotransmitters involved in physiological processes, notably memory, cognition, mood regulation and food intake control. 5-HT interacts with 14 different subtypes of serotonin receptor, of which the most recently discovered, but also the least known, is subtype 6 (5-HT6R) which is almost exclusively expressed within central nervous system. Recent studies on animal models suggest 5-HT6R contribution in development of Alzheimer's and Parkinson's disease, obesity as well as depression, which makes it a very promising pharmacological target for therapies of the future.

Aim of the study

In our previous studies a compound with substantial affinity to 5-HT6R was obtained. The compound (MST4) was chosen as a lead structure for further modifications. The aim of this study was to obtain a series of new compounds with various alkyl substituents within aryl moiety and linker, then, to assess them on the affinity for human 5-HT6R and competitive G-protein coupled receptors.

Methods

Final triazines were obtained in two-step synthesis pathways starting with alkyl derivatives of phenol. For most promising compounds their stereoisomers were synthesized utilizing Mitsunobu reaction. The newly obtained compoundswere examined in the radioligand binding assay (RBA). For this purpose human 5-HT6, 5-HT2A and 5-HT7 receptors expressed in HEK293 were used to assess both the target affinity and selectivity.

Results

As a result of performed syntheses, a series of triazine derivatives was obtained, which displayed moderate to high affinity to 5-HT6R in RBA. Themost potent ones had Ki values lower than 5nM.

Conclusions

Amongthe series of 1,3,5-triazine derivatives obtained, two compounds were characterized by an excellent affinity and selectivity towards 5-HT6R, displaying more potent action than that of leadMST4.

Engineering and biosynthesis of Myb1 and Myb2 binding domain from human TRF1 and TRF2 shelterin complex protein.

Presenting author: Maciej Prusinowski - Uniwersytet Gdański
Authors: Maciej Prusinowski, Joanna Żebrowska, Paulina Maciszka
Supervisors: Piotr Skowron, Agnieszka Żylicz-Stachula

Introduction

Telomeres are complex molecular structures present at the ends of eukaryotic chromosomes. Telomeric DNA is protected by a group of specific proteins that constitute the shelterin complex. The hTRF1 interacts specifically with the duplex DNA and is implicated in telomere replication, telomere protection and telomere length maintenance. The hTRF2 is often described as the TRF1 paralog. hTRF1 and hTFR2 display significant structure similarity. Both proteins have three functional domains: the acidic TRF1 domain/the alkaline TRF2 domain, the central homodimerization domain (TRFH) and DNA binding domain (Myb).

Aim of the study

The aimed of our study is to demonstrate the importance of the use of recombinant Myb1 and Myb2 domain proteins to study in vitro protein-DNA interaction model.

Methods

We have designed, synthetized and cloned genes encoding domains of human hTRF1 and hTRF2 proteins included in shelterin complex: as the Myb1 and Myb2. The genes were optimized for expression in Escherichia coli. The gene variants coding for Myb1/2 contain the His tag and the ubiquitin domain on N-termus. Secondly. We successfully performed mutagenesis, removing the ubiquitin domain from gene coding Myb1. We are also try to overexpressed this kind of protein variant (in the absence of the ubiquitin domain).

Results

We are overexpressed both the recombinant Myb1/2 in E.coli system. The mutagenesis was a successes and moreover we obtained a larger amount of protein without degradation fragments.. The experience was a successes and moreover we obtained a larger amount of protein without degradation fragments. Additionally we comparison the ability of binding Myb1 fusion with the ubiquitin domain and without it to telomeric DNA.

Conclusions

It will allow testing of chemical compounds which may be a potential solution in the fight against cancer cells.

The expression of peroxisome proliferator-activated receptor gamma in murine tissue.

Presenting author: Piotr Przybycień - Uniwersytet Jagielloński Collegium Medicum
Authors: Piotr Przybycień, Piotr Przybycień
Supervisors: Wojciech Placha

Introduction

The peroxisome proliferator-activated receptors (PPARs) are a well-known group of nuclear receptor proteins. PPARs regulate the expression of genes as transcription factors. There are three types of this receptors: PPAR alfa, PPAR beta/delta and PPAR gamma. PPAR gamma is expressed in various human tissues, especially in adipose tissue. This nuclear receptor, though alternative splicing, may be expressed in two distinct forms of protein: PPAR gamma 1 and PPAR gamma 2. The difference between those forms is the length of the aminoacid chain. Ligands of said receptor include arachidonic acid or phospholipids.

Aim of the study

The main goal of this research was to assess the PPAR-gamma levels in various parts of the female reproductive system and CNS.

Methods

The first stage of the study was organ extraction from lab mice. Subsequently, each sample was homogenized and centrifuged. We measured the total protein concentration and performed Western Blot assays on the extracts. Finally, the receptors were visualized using immunochemiluminescence. A detailed comparison of the results in tested tissues was performed.

Results

In this research we focused on two types of samples of female reproductive system tissue and two types of CNS tissue. A higher concentration of the receptor was noted in the female reproductive tract compared to the CNS tissue. Receptor concentration in each system was similar.

Conclusions

The concentrations of the PPRA gamma receptor in murine tissue are different in various organs. Based on available literature, the varied expression levels of the receptor in disparate tissue types may be due to the different isoforms of that receptor.

ESBL producing Enterobacteriaceae isolated from surface waters of Gulf of Gdansk and fromrainwater paths in Sopot.

Presenting author: Bartosz Rybak - Medical university of gdansk
Authors: Bartosz Rybak, Bartosz Rybak
Supervisors: Katarzyna Sikorska, Katarzyna Sikorska

Introduction
The production of extended spectrum beta-lactamases (ESBL) and carbapenemases is one of the most clinically and epidemiologically important mechanisms of resistance to antibiotics in bacteria from the Enterobacteriaceae family. They are mainly produced by hospital strains of the Enterobacteriaceae family, although recently they have also been found more frequently in strains causing non-hospital infections.

Aim of the study
The main goal of our research was analysis frequency of occurrence ESBL positive Escherichia coli strains from surface waters of Gulf of Gdansk and from rainwater paths in Sopot.

Methods
Sample were inoculated onto MacConkey agar supplemented with cefotaxime (2mg/l). All lactose positive strain were identified by API test. An antibiotic susceptibility test was performed using the disc diffusion method on the Mueller-Hinton II agar following the recommendations of the National Reference Center for Antimicrobial Susceptibility (KORLD). In addition, the ability to synthesize beta-lactamases with an extended spectrum of action were detected by the double-disc test and the production of carbapenemase were phenotypically determined in accordance with current KORLD recommendations.

We examinated 15 sample rainwater paths from Sopot and 4 surface waters of Gulf of Gdansk taken in the vicinity of Sopot.

Results
From 19 analysed sample 3 were positive. All lactose-positive strains were identified by API test to E. coli. All E.coli strains in the double-disc test were positive to ESBL-production.

Antimicrobial susceptibility analysis proved resistance to cefalosporins, and fluoroqinolones. All strains were sensitive to carbapenems.

Conclusions
Bacteria in the Enterobacteriaceae family that produce ESBL β-lactamases isolated from surface waters of Gulf of Gdansk can be significant reservoir of multi-drug resistant strains not considered in epidemiological considerations.

Are biological properties of silver nanoparticles shape-dependent? Clinical implication.

Presenting author: Karol Steckiewicz -

Authors: Karol Paweł Steckiewicz, Ewelina Barcińska, Szymon Kowalski, Maciej Jaśkiewicz, Wojciech Kamysz, Iwona Inkielewicz-Stępniak

Supervisors: Iwona Inkielewicz-Stępniak

Introduction

After joint replacement surgery, even 1 in 6 patients need another surgery due to an infectious complication.Silver nanoparticles (AgNPs) may be an interesting agents which potential can decrease complication ratio. Due to the small size, Nanoparticles have unique properties (high surface to volume ratio, good penetration through biological membranes), which may be beneficial. We tried to posses AgNPs, with antimicrobial properties and acceptable safety-profile, which later can be used as antimicrobial agent to coat implants.

Aim of the study

The aim of the study was to determine if antimicrobial properties and cytotoxicity of AgNPs are shape-depended.

Methods

Antimicrobial properties of AgNPs were assessed by determining MIC (minimum inhibitory concentration) and MBEC(minimum biofilm eradication concentration) on reference strain of bacteria and fungi. Cytotoxicity was assessed on mammalian cells in in vitro model. MTT, LDH and BrdU assay was used to determine the viability of the cells. Reactive oxygen species (ROS) production was assessed by flow cytometry. Impact of AgNPs on protein levels was examined by western-blot. To assess morphological changes in cells transmission electron microscopy was done.

Results

Antimicrobial properties of AgNPs were shape-dependent. AgNPs had higher antifungal than antimicrobial properties.MIC values were smaller than MBEC. Cytotoxicity was shape and concentration dependent. We suggest that increased ROS production is one of the most important cytotoxicity mechanisms of AgNPs.Our AgNPs impacted protein levels and caused ultrastructure changes in the cells.

Conclusions

The shape of AgNPs is an important factor modulating their properties. It should be taken in concern when designing nanoproducts for biomedical use.

Project “Wpływ fukncjonalizacji nanocząstek srebra na ich właściwości przeciwdrobnoustrojowe. Nowa opcja terapeutyczna” was funded by grant “Wspieramy rozwój” by Cedrob S.A

New methods of drug detection using nanometric structures

Presenting author: Elżbieta Szczepańska - Uniwersytet Gdański
Authors: Elżbieta Szczepańska
Supervisors: Anna Synak, Piotr Bojarski, Beata Grobelna

Introduction

The interest of metal nanoparticles, which are suitable for biomedical applications such as bioimaging, targeted therapy, photothermal therapy, is constantly increasing. Noble metal nanoparticles (for example gold or silver) are mainly used due to the surface plasmon resonance (SPR) phenomenon, which can be used to convert photon energy into heat. Due to the numerous disadvantages of nanoparticles such as agglomeration, they are coated with materials such as silica (these structures are designated as X@SiO2, where X is a noble metal element). As a result, core-shell structures are formed with shorter lifetimes and an extended fluorescence field, thus preventing photobleaching and providing imaging resolutions that exceed the diffraction limit. Valrubicin tested in this study, it is a drug administered with bladder cancer chemotherapy, but it is difficult to detect by spectroscopic methods (quantum yield around 6%). Therefore, the search for new structures that can enhance quantum effects becomes a challenge for science.

Aim of the study

The aim of the study was to determine the fluorescence properties of the anticancer drug- Valrubicin using a new tool such as plasmonic platform.

Methods

To obtain nanoparticles and core-shell structures, chemical reduction and sol-gel method were used sequentially. In order to confirm the size, shape and structure of the structures, scanning and transmission electron microscopy methods were used. Fluorescence spectra and fluorescence times of the test samples were obtained at room temperature conditions using a pulsed spectrofluorometer. The results of the florescence enhancement were confirmed by florescence microscopy.

Results

As a result of the research, spherical silver nanoparticles and core-shell nanostructures Ag@SiO2 with a size not exceeding 100 nm were obtained. Using the plasmonic platform, which was obtained with core-shell structures to detect the Valrubicin showed enhancement of fluorescence intensities about 50 times. For metal nanoparticles, the fluorescence enhancement was two times smaller. Photographs from a fluorescence microscope show a clear fluorescence intensity and homogeneity of the prepared platforms in the case of core-shell nanostructures compared to nanoparticles.

Conclusions

The core-shell structures (in contrast to the metal nanoparticles) included in the designed platforms significantly enhance the emission intensity of the drug- valrubicin, and thus may be promising in the detection of this drug in various samples.

This study was financed by the University of Gdansk within the project supporting young scientists and PhD students (grant No. BMN 538-8210-B318-18).

Cardiology and Cardiovascular surgery

(Saturday 13.04 - 14:45-17:00)

THE EFFICACY OF THE ENDOVASCULAR TRANSVENOUS BYPASS IN THE TREATMENT OF LONG LESIONS OF THE FEMORAL ARTERY

Presenting author: Naums Davids Hlebins - University of Latvia
Authors: Naums Davids Hlebins, Olga Leitāne, Aļina Graubergere
Supervisors: Dainis Krieviņš, Jānis Šavlovskis

Introduction

The PQ Bypass DETOUR System is a novel, investigational approach to fully-percutaneous femoral-popliteal bypass. Using fluoroscopic guidance, a series of stent grafts are deployed from the popliteal artery into the femoral vein, and from the femoral vein into the superficial femoral artery through two independent anastomoses.

Aim of the study

The aim of this study is to demonstrate that the endovascular transvenous bypass (ETB) provides equal patency rates compared to the surgical femoral-popliteal bypass (SFB).

Methods

Data from 85 patients with peripheral artery disease and long femoral occlusions were collected. Two treatment arms (above-the-knee): SFB (n = 35) and ETB (n = 50). A retrospective review was performed. All analyses were performed in IBM SPSS Statistics for Windows, Version 22.0 (IBM Corp., Armonk, N.Y., USA).

Results

The mean age was 64.7 ± 7.4 years (87 % - men). The operations' lengths were 1.68 h ± 0.53 h (SFB) and 1.71 h ± 0.82 h (ETB) (p = 0.866). The mean lesion length was 23.44 cm ± 7.61 cm with no difference between the groups (p = 0.397). The most frequent Rutherford grade among the groups was III (75.6 %). At 1 year the ankle-brachial index improved from 0.59 ± 0.15 to 0.88 ± 0.19 (SFB) and from 0.62 ± 0.13 to 0.89 ± 0.23 (ETB) (p = 0.824), at 2 years it improved from 0.58 ± 0.10 to 0.90 ± 0.17 and from 0.59 ± 0.14 to 0.92 ± 0.16, respectively (p = 0.864). At 1 year the primary patency rates were 91.4 % (n = 35) and 76.0 % (n = 50) (95 % CI, 10.39 – 11.63; p = 0.071; HR, 2.99), at 2 years they were 80.0 % (n = 20) and 57.6 % (n = 33), respectively (95 % CI, 17.89 – 22.11; p = 0.093; HR, 2.48). The freedom from clinically-driven target lesion revascularization at 1 year was 91.4 % and 82.0 % (95 % CI, 10.78 – 11.83; p = 0.241; HR, 2.13), at 2 years it was 80.0 % and 63.6 %, respectively (95 % CI, 18.69 – 22.61; p = 0.215; HR, 2.00). At 1 year the improvement of the Rutherford grade to I (8.8 %) and 0 (41.2 %) was 8.8 % and 41.2 % in SFB group, and 80.0 % and 10.0 % in ETB group, respectively (p < 0.0001). At 2 years the improvement to I and 0 was 20.0 % and 35.0% (SFB), and 9.4 % and 90.6 % (ETB), respectively (p < 0.0001).

Conclusions

PQ Bypass achieves an excellent primary patency and is a good alternative to SFB. Optimal stent deployment remains critical to the performance of this stent device.

The levels of cell adhesion molecules in plasma in patients with mitral valve prolapse

Presenting author: Palina Kavalenia - Grodno State Medical University
Authors: Yuliya Shaukovich, Palina Kavalenia
Supervisors: Yuliya Shaukovich

Introduction

Mitral valve prolapse (MVP) seems to be one of the most common hereditary connective tissue disorders. According to the literature data MVP can lead to cardiomyopathy and cardiovascular complications. sICAM and sE-selectin are the cell adhesion molecules which can contribute development of cardiovascular complications due to inducing endothelial dysfunction and inflammation. Thus, the evaluation of these molecules in patients with MVP has scientific and clinical significance.

Aim of the study

The aim of study was to estimate the levels of sICAM-1 and sE-selectin in plasma in patient with MVP.

Methods

24 patients have been examined at Grodno city hospital №2, Belarus. The average age was about 31 (27,5; 35) years old. For diagnosis of MVP echocardiography was performed and Ghent criteria (2010) was used. Patients were divided into 2 groups: group 1 – patients with MVP (n=14), group 2 – control group (n=10). The plasma levels of sICAM-1 and sE-selectin were evaluated with using of enzyme-linked immunosorbent assay (Wuhan Fine Biotech Co, China). For analyzing data nonparametric statistical methods were used (Statistica 10.0 for Windows (StatSoft, Inc., USA).

Results

Patients with MVP have statistically significant higher plasma levels of sE-selectin in comparison with control group: 4,848 (4,313; 5,391) and 4,501 (4,17; 4,965) ng/ml respectively (p=0,024), and tendency to the increasing of sICAM concentration 48,6 (45,1; 49,2) and 44,7 (41; 46,9) ng/ml respectively (p=0,11). Then for detailing results patients with MVP were divided into the patients with isolated MVP (n=9) and patients with MVP in combination with other congenital heart anomalies (n=5). Patients with MVP in combination with other congenital heart anomalies in comparison with patients with isolated MVP have higher levels of sE-selectin (5,067 (4,785; 5,51) and 4,735 (4,221; 5,2) ng/ml respectively, p=0,043) and sICAM-1 48,6 (45,1; 49,2) и 44,7 (41; 46,9) ng/ml respectively, p=0,05) in plasma.

Conclusions

Patients with MVP have abnormalities in plasma levels of cell adhesion molecules. Presented results show that patients with MVP due to high levels of cell adhesion molecules can have increased risk of development of endothelial dysfunction and cardiovascular complications. The disturbances in levels of sICAM-1 and sE-selectin are higher in patients with MVP in combination with other congenital heart anomalies then patients with isolated MVP.

Uric acid concentration in the most important metabolic disorders.

Presenting author: Maciej Ledziński - Collegium Medicum im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu
Authors: Maciej Ledziński, Kamila Skibińska, Paulina Adamska, Jakub Rzeszuto
Supervisors: Szymon Suwała, Roman Junik

Introduction

Hyperuricemia is an elevated concentration of uric acid ≥ 7.0 mg/dl. This condition correlates with the occurrence of gout and nephrolithiasis. In addition, it is an independent risk factor for hypertension, ischemic heart disease, ischemic stroke and peripheral artery disease. The concentration of uric acid is influenced by many factors, such as reduced urinary excretion, increased supply or drugs. Hypothyroidism is the most important endocrine disorder that has been proved to have a positive correlation with uric acid level.

Aim of the study

The aim of the study is to assess the occurrence of hyperuricaemia in the most common endocrine diseases and metabolic disorders.

Methods

Retrospective study, ongoing. In study we analyze medical data of patients hospitalized in our Clinic (age, weight, height, BMI, laboratory results including e.g. uric acid, creatinine, TSH, lipid parameters etc.; final diagnosis) - this informations will be analyzed by using the STATISTICA 13.0 and Microsoft Office Excel.

Results

Research in progress - so far 68 patients have been analyzed. The study group includes 41 women and 27 men with a median age of 64.5 years. The median uric acid concentration is 6.09 mg/dl. Among the examined patients, 38/68 suffer from diabetes (regardless of type), 32/68 from obesity (BMI>30kg/m2), 32/68 from hypertension, 13/68 from hyperlipidemia and 24/68 from metabolic syndrome. A difference in uric acid levels with limited statistical significance was found in obese vs. non-obese patients (7.03 vs. 5.96 mg/dl, respectively, $p = 0.17$). We found correlation between uric acid level and BMI, also with limited statistical significance ($p=0.13$) There is no statistically significant difference in patients with diabetes of any type vs. non-diabetic patients (6.89 vs. 7.90 with $p = 0.287$), while a significant correlation with HbA1c level ($p = 0.05$) was demonstrated. There was no statistically significant difference in uric acid concentration in hypothyroid patients vs. non-hypothyroid patients (6.21 vs 7.47 with $p = 0.418$), in patients with hyperlipidemia vs. patients without hyperlipidemia (6.44 vs 7.55 with $p = 0.356$) and in patients with metabolic syndrome relative to patients without metabolic syndrome (6.54 vs. 7.77 with $p = 0.21$). A statistically significant correlation was found between uric acid levels and creatinine concentration ($p <0.001$).

Conclusions

The above results indicate a possible correlation of BMI and obesity with elevated uric acid concentration. The lack of statistically significant difference in patients with diabetes compared to non-diabetic patients with significant association of uric acid levels with HbA1c levels suggests elevated uric acid concentration in patients with poorly controlled diabetes. A positive statistically significant correlation between uric acid and creatinine concentration confirms the role of normal renal function in regulating the concentration of the former. Research in progress - full conclusions will be presented during the Conference.

Surgical Ablation for Atrial Fibrillation in Minimally Invasive Mitral Valve Surgery. Insights from Single Centre Registry.

Presenting author: Michal Pasierski - Medical University of Warsaw
Authors: Michal Pasierski, Michal Pasierski
Supervisors: Piotr Suwalski

Introduction
Minimally invasive mitral valve (MIMVS) surgery has become widely accepted alternative to standard sternotomy approach for the treatment of complex MV disease. Surgical ablation for atrial fibrillation (AF) performed at the time of other valvular- or non-valvular cardiac procedure is a mainstay of therapy; yet there exist only sparse data regarding its impact on remote survival and in particular in the setting of MIMVS.
Aim of the study
Current investigation aimed to evaluate remote survival in patients undergoing MIMVS with concomitant surgical ablation for AF.
Methods
Between 2011 and 2018, 390 patients underwent minimally invasive mitral valve or mitral and tricuspid valve surgery. Right mini-thoracotomy was performed through a 4.0 to 6.0-cm skin incision in the fourth or fifth intercostal space depending on preoperative imaging; from 2015 forward, 3.5 to 4.0-cm periareolar access was adopted. Total of 215 patients presented with baseline AF (53,95% men, mean age 66.99.4). Median follow-up was 3 years (3.1 IQR 1.4-5.0). Cox proportional hazards models were used for computations.
Results
Of included patients, 135 (62.8%) underwent surgical ablation. Patients in this group were younger (65.5 vs 69.2) but were at higher baseline surgical risk (EuroSCORE 2.22 vs 1.72). Mitral regurgitation was present in 131 (97.0%), MV stenosis in 19 (14.1%); additional tricuspid regurgitation in 62 (46.0%). Mitral valve repair was preferred approach that ensued in 101 (75.1%) cases, followed by MV replacement in 34 (25.2%); the PTFE loops and annuloplasty rings were used in all MV repair cases. Median duration of intensive care unit stay was 4.0 [IQR: 1.9-5.9] days. Over 8-year study period, there was a significant survival benefit (Hazard Ratio 0.030; [95%Confidence Interval: 0.002-0.227]; $p<0.001$) with MMVS+ablation as compared to MIMVS alone.
Conclusions
Concomitant surgical ablation for atrial fibrillation in patients undergoing minimally invasive mitral valve procedures is safe, feasible and associated with significantly improved remote survival.

RETROSPECTIVE ANALYSIS OF EARLY INVASIVE MANAGEMENT STRATEGY IN PATIENTS WITH UNSTABLE ANGINA

Presenting author: Emilija Petrulionyte - Vilnius University
Authors: Emilija Petrulionyte, Aiste Pilkiene
Supervisors: Rokas Serpytis, Pranas Serpytis

Introduction

Coronary artery disease is the main cardiovascular disease in developed countries causing 1,8 million deaths each year. Unstable angina (UA) is a myocardial ischemia without cardiomyocytes necrosis. It is diagnosed in approximately 10% of patients complaining of chest pain. ECG changes, troponin, mioglobin, creatine kinase-MB levels and coronary angiography are the main diagnostic methods for differential diagnosis of myocardial infarction and UA. Obstructive coronary artery disease is diagnosed when there is ≥ 50% diameter stenosis in major epicardial vessels. Main treatment methods of UA include optimal medical therapy, percutaneous coronary intervention (PCI) and coronary artery bypass graft (CABG) surgery.

Aim of the study

Our aim was to evaluate findings of coronary angiography, decision making process and frequency of revascularisation procedures (PCI and CABG) among patients diagnosed with unstable angina hospitalized in Vilnius University Hospital Santaros Klinikos.

Methods

We analyzed 856 patients case histories in Vilnius University Hospital Santaros Klinikos over the period 2017-2018 with diagnosis of unstable angina. Due to missing data 16 patients were eliminated from final analysis. Gender, age, concomitant diseases, history of coronary artery disease, coronary angiography, PCI and CABG data were analyzed. Statistic analysis was made with Excel and SPSS23.

Results

Out of 840 patients 532 (63,3%) were men and 308 (36,7%) – women. The mean age was 65,99±11,53 years in men and 71.10±10,34 years in women. Two or more concomitant diseases was found in 702 (83,6%) patients. Previous myocardial infarction was documented in 291 (34.6%) patients, 301 (35.8%) patients had previous coronary artery stenting and 103 (12.3%) – CABG. Coronary angiography was performed in 782 (93.1%) patients and 645 (82.5%) had significant coronary artery stenosis (≥50%). Significant stenosis of left anterior descending coronary vessel (LAD) was detected in 525 (67.1%) cases, right coronary artery (RCA) – 395 (50.5%),left circumflex (LCx) – 379 (48.5%), left main (LM) – 87 (11.1%). Triple-vessel disease was confirmed in 218 (26%) patients. Smooth arteries or no significant stenosis were found in 137 (17.5%) cases. After evaluating the history of coronary heart disease and coronary angiography, obstructive coronary disease was detected in 662 (78.8%) cases. PCI was performed in 391 (46,5%) cases. LAD stenting was performed in 23,1% (194) patients, RCA –16,8% (141), LCx – 10,6% (89), LM – 2,7% (23), graft stent – 2,1% (18). CABG was performed in 5,4% (45) patients.

Conclusions

Unstable angina is 1,7 times more common in men. Men diagnosed with unstable angina are 5 years younger than women. More than half of patients had significant stenosis of LAD. Quarter of patients had triple-vessel disease. Coronary stenting was performed in more than half of cases. LAD was stented in almost quarter of patients and CABG was uncommon procedure in patients with unstable angina.

Dermatology (Friday 12.04 - 10:30-12:00)

Topical corticosteroid phobia among parents of children with atopic dermatitis - what the doctors say, what patients know?

Presenting author: Aleksandra Necel - Gdański Uniwersytet Medyczny
Authors: Monika Konczalska, Aleksandra Necel
Supervisors: Monika Konczalska

Introduction

Corticosteroid phobia is a consequence of its abuse in the past, when its side effects were not widely known. Topical corticosteroid phobia is a common problem among dermatological patients. It diminishes the effectiveness of the treatment by reducing the therapy compliance.

Aim of the study

The aim of the study was to analyze the knowledge of topical corticosteroid (TCS) side effects and resistance to its use despite doctors recommendations, among parents of children with atopic dermatitis (AD). Moreover particular considerations of vaccination opponents opinion abaut their children treatment using TCS.

Methods

The study was performed by using an anonymous questionnaire to parents of children with AD. The test group amounts to 253 respondents including 16 vaccination opponents. All the interviewees are members of AD groups on social media platform - Facebook.

Results

The study showed that 24,1% of respondents do not use TCS in their children's treatments. Moreover, only 3 out of 16 respondents who intentionally do not vaccinate their children make use of TCS. Only 21,7% of the interviewees believe that they were well informed and 49.0% were not informed about TCS side effects by their doctors . What is more 5,5% of respondents report asthma as a side effect of TCS and 10,3% as a side effect of oral CS. 7,1% of the respondents report slowing of growth and aggression as a side effect of TCS. Only 51,4% of respondents know that TCS may cause skin thickness. 23.3% of all respondents and 11 in group of 16 vaccination opponents considers TCS as a drug that often causes side effects despite following doctor's instructions.

Conclusions

To conclude, patients often falsely attribute TCS to cause manifold systemic side effects. Therefore, doctors should pay more attention to education to reduce patients fear of TCS side effects and that could be important to increase therapy compliance. What is more, vaccination opponents more often than others abandon the use of TCS. It can be concluded that they are less trusting towards doctor's opinion.

Review of the quality of life and assess treatment effectiveness of vitiligo patients in Lithuania.

Presenting author: Dovilė Pileckė - Vilnius University

Authors: Dovilė Pileckė
Supervisors: Matilda Bylaitė-Bučinskienė

Introduction

Vitiligo is a melanocyte destructing disease of an unknown etiology characterized by acquired, progressive, and well-defined depigmentation of the skin, hair and mucosal surfaces. Morbidity is approximately 0,5-1% in the worldwide. Treatment effectiveness remains limited.

Aim of the study

To determine areas affected by vitiligo the most, impact of vitiligo on the quality of life and assess treatment effectiveness in Lithuania.

Methods

A research conducted in 2018 was an anonymous online questionnaire. The questionnaire consisted of 18 original questions about affected skin areas, size, symptoms, treatment options and its effectiveness. Statisticaldata analysis was carried out using SPSS, v 23.0. P value <0.05 was considered statistically significant.

Results

77,7% (n=80) out of 103 patients were female. Mean adult age was found to be 35,6 ± 11,5 years. 1/3 of the respondents 33%, (n=34) had a family history of vitiligo.The condition is prone to photosensitivity and tends to occur in summer for 53,4% (n=55) of the respondents. 67% (n=69) respondents mark a stressful event before the onset of the disease, mostly short-term health problems 13,6% (n=14). In 73,8% (n=76) of the cases approximately 1 to 25% of the skin surface was affected, most commonly discoloration is located on the back 37,9% (n=39), chest 37,9% (n=39) and face 34% (n=35). In 54,4% (n=56) of cases course of vitiligo was limited to one area. Often vitiligo was associated with symptoms of a mild (32%, n=33) or moderate (30,1%, n=31) anxiety. People tend to hide affected areas: 34% (n=35) under the clothing, 20% (n=21) with cosmetics. Another autoimmune disorder was observed in 19,4% (n=20) of the cases with a predominance of autoimmune thyroiditis 6,8% (n=7). 72,8%(n=75) respondents received treatment: 27,2% (n=28) were treated using phototherapy and topical medication.Repigmentation occurred in 64,4% (n=47) of the cases.

Conclusions

More than a half of the respondents experienced onset of vitiligo in summer, most of them had a stressful event prior to the disease onset. 1/5 of the patients had a history of a systemic autoimmune disorder. Back, chest and facial regions were affected the most. The treatment of choice was phototherapy and topical medication. Skin repigmentation occurred in 64,4% (n=47) of the cases.

Silver nanoparticles in cosmetics:research on properties and safety for the skin

Presenting author: Elżbieta Szczepańska - Uniwersytet Gdański
Authors: Elżbieta Szczepańska
Supervisors: Karolina Niska, Beata Grobelna

Introduction

The interest of new skincare preparations containing nanoparticles (NPs) is constantly growing. One of the most frequently used NPs are silver nanoparticles (Ag-NPs). Ag-NPs characterizedstrong antimicrobial properties, hence they are used in deodorants, soaps and anti-acne creams..

The very important is aspect of skin safety after using cosmetic with Ag-NPs. First of all, they are structures with a small size from 1 to 100 nm, which may cause deep penetration of epidermal cells. Skin penetration is also affected by the shape (NPs can be found, for example: spheres, tubes, cubes).

Permeability tests often use the Franz diffusion cell. This cell built of two parts: donor and acceptor. In the donor chamber there is water, which plays the role of the circulatory system. In the acceptor part, a membrane is placed, in our case it was porcine skin. Another important study of the use of this type of structures in cosmetics is to check the cytotoxicity of skin cells.

Aim of the study

Characteristics of silver nanoparticles and the determination of their penetration from different types of skincare formulations.

Methods

To determine the morphology of NPs, UV-Vis spectrometry and Scanning Electron Microscopy (SEM) were used. The antimicrobial activity of Ag-NPs against two tested strains of S. aureus and E. coli was evaluated by MIC and Inhibition Zone Assays. Permeation tests were performed using the Franz chamber. The receptor fluid measurements were performed by Atomic Absorption Spectroscopy (AAS). Cytotoxicity was tested on three human cell lines: fibroblasts (HDF), keratinocytes (HaCaT) and melanocytes (HEMas).

Results

Spherical silver nanoparticles of various sizes (about 50 and 100 nm) and cosmetic products with NPs, (O/W emulsion, W/O emulsion and hydrogel mask) were obtained. Spectroscopic results indicate that the lowest concentration of Ag-NPs that it inhibits E.coli is 0.405 mg/ml, while S.aureus is 0.202 mg/ml. The highest concentration of silver nanoparticles in the acceptor solution was found in the case of the hydrogel mask.

Conclusions

The results showed that the permeability of nanoparticles from cosmetic product is influenced by various factors: the cosmetic formula, the size of the nanoparticles, the content of lipid and hydrophilic components in the skin. It should be noted that permeability results are very important and should be performed for each cosmetic separately.

This study was financed by the University of Gdansk within the project supporting young scientists and PhD students (grant No. BMN 538-8210-B318-18).

PROBLEM OF ZOONOTIC SKIN DISEASES- EVALUATION BASED ON VETERINARY PHYSICIANS CLINICAL EXPERIENCE

Presenting author: Marta Taube - Gdański Uniwersytet Medyczny
Authors: Marta Taube, Maciej Skałbania
Supervisors: Aneta Szczerkowska-Dobosz

Introduction

More than a half Polish citizens own a pet companion. 42% declares having a dog, 26% a cat and 5% other animal. Furthermore, from one year to another, number of pet owners is increasing. Nowadays, people tend to treat their animals as full-fledged family members, sharing living space or even sleeping with them. For these reasons we assume that zoonotic skin diseases could start to become more common problem. What's worse, knowledge about the risk of transmission among owners is usually low.

Aim of the study

The aim of the study was to collect Polish veterinary physicians clinical experience about zoonotic skin diseases, establishing how common this problem is in their practice, are they aware of the risk of transmission and do they inform their patients owners when this risk occurs. Moreover, we wanted to know if vets, due to their profession, suffer from zoonotic skin diseases more often, what diseases are most frequent and how diagnosis of such diseases is made.

Methods

An original, anonymous questionnaire, containing 22 questions, was created on widely available "Google Forms" and sent to more than 100 veterinary physicians working in Poland. 92 answers were obtained. Vets working mainly with cattle and animals other than dogs and cats were excluded from this study.

Results

More than one third veterinary physicians says that skin disease is the main reason of the visit in more than half of all visits. Animal owners also report changes on their own skin, but it's not frequent. According to our study, almost 95% vets inform their patients owners about the risk of transmission. Almost half of all questioned vets have suffered from zoonotic skin disease at least once during their career. 21 of 47 people reported to have suffered once, 12 people twice, 4 people 4 times, one person 10 and one person even 20 times. The most common cause was Microsporum infection. From ours respondents clinical experience children tend to be the most vulnerable group and people most often get infected from cats. In veterinary practice when dermatophytosis is suspected, the decision about starting treatment (most commonly used combined topical and systemic treatment) is made after initial skin scraping investigation and the final diagnosis is made after obtaining fungi cultures. Our respondents general knowledge in the field of zoonotic skin diseases seems to be sufficient, yet only 39% of them feels that it is.

Conclusions

Results of our study shows that animal skin diseases with a risk of transmission to owners are a widespread problem in Polish veterinary private practices. The most common type of such disease is dermatophytosis (ringworm). Veterinary physicians knowledge on the subject appears to be extensive. Vast majority of owners are informed when there is a risk of transmission. Veterinary physicians as occupational group are particularly exposed to zoonotic skin diseases.

Skin lesions and dermatological diseases in pregnancy - analysis of problem occurrence in patients of gynecological obstetric and gynecological patients in Bydgoszcz.

Presenting author: Katarzyna Urtnowska - Joppek - Collegium Medicum im. L. Rydygiera w Bydgoszczy
Authors: Katarzyna Urtnowska - Joppek, Karolina Suwała, Kosma Kołodziej
Supervisors: Grzegorz Ludwikowski

Introduction

During pregnancy, the woman's body passes through a series of physiological changes aimed at developing a healthy fetus. This changes, even though they are very natural and healthy, cause a number of other changes, often undesirable and unfavorable for future mothers. Among the most commonly observed (except for a significant weight gain and pregnancy ailments) are skin lesions and pregnancy dermatoses. They are primarily caused by significant and dynamic fluctuations in the hormonal system. While physiological skin lesions are unestetical and often persistent although harmless, dermatological illnesses, even while after the treatment has gone without a trace, often pose a health risk to the mother and a baby.

Aim of the study

The aim of the study is to demonstrate which of dermatological problems occure more frequently during pregnancy.

Methods

A number of 180 pregnant woman took part in the study. The research tool used in the study is a specially developed questionnaire. The study was taking place in the area of Bydgoszcz city obstetric - gynecological clinics. The received responses were subjected to statistical analysis.

Results

Only 17,4% of a study group described their skin as a healthy. The most common were: stretch marks (20.1%), cellulite (16.1%), single skin lesions (10.9%) and varicose veins (8.2%). Pregnant women in majority (77%) did not have any skin disease. Pregnant women who responded positively to the disease listed 10.4% of viral herpes, 6% of skin, nail or vaginal yeasts, 4.4% prurigo of pregnant women, 1.6% of skin or nail fungus, and 0.5% of bacterial infections.

Conclusions

While physiological skin lesions are extremely common and are experienced by almost every future mothers, women should not be overly concerned about pregnancy dermatoses because they are relatively rare.

However, the dermatological problems of pregnant women should not be underestimated, not only because of possible health consequences, but also because of the fact that the severity of the body's aesthetic disturbances may put pregnant women at risk for pregnancy or postnatal depression. In order to have a healthy pregnancy, which would not be seen by a woman as some kind of sacrifice of her body, it is necessary to accept her appearance. That is why it is extremely important to care properly for the body before, during and after pregnancy, which can prevent from developing of physiological changes and alleviate the pathological symptoms.

The effect of chronotype, sleep disturbance and depression on the severity of psoriasis

Presenting author: Karolina Wrzosek - Medical University of Gdańsk
Authors: Karolina Wrzosek
Supervisors: Aneta Szczerkowska-Dobosz, Monika Konczalska

Introduction

Numerous studies confirm that sleep disturbance is common in psoriasis. Given the role of sleep in health and disease processes, it seems reasonable to consider the role of sleep disturbance for the severity of psoriasis. In addition, it should be emphasised that factors that cause sleep disturbance in psoriasis are not well characterized. The existing data suggest that perceived sleep quantity and quality are strongly influenced by chronotype - individual differences in a circadian rhythms or, in other words, by the functioning of the human biological clock.

Aim of the study

Assessment of the relationship between the severity of psoriasis, chronotype (Morningness-Eveningness), depression and sleep disturbance.

Methods

42 Patients diagnosed with psoriasis vulgaris, (40.5% of females; mean age=44.48 years;

SD=17.57, age range=21-82) completed Polish versions of: the Pittsburgh Sleep Quality Index (PSQI), the Composite Scale of Morningness, the Centre for Epidemiological Studies - Depression scale (CES-D) and Dermatology Life Quality Index (DLQI). The Severity of Patient's psorises was evaluated by using The Psoriasis Area Severity Index (PASI) and Body surface area for psoriasis (BSA) score. Regression analyses were used to examine predictors of psoriasis severity.

Results

The mean PSQI score was 6.88 (SD=3.16), with 64.3% (N=27) scoring above the threshold for poor sleep (≥ 6 on the PSQI). Morningness (β =0.36, $p = 0.05$), poor sleep quality (β =0.58, $p< 0.001$) were the most robust predictors of psoriasis severity assessing by PASI, which, together with depression ($\beta = 0.31$, $p <0.1$), accounted for 34% of variance in PASI scores. Poor sleep quality (β =0.55, $p< 0.01$) and depression ($\beta = 0.50$, $p = 0.01$) were also the significant predictors of psoriasis severity assessing by BSA and together with morningness ($\beta = 0.29$, $p < 0.1$) accounted for 40% of variance in BSA scores. The analysis likewise confirmed that poor sleep quality (β =0.61, $p< 0.001$) and depression ($\beta = 0.54$, $p <0.001$) accounted for 45% of variance in DLQI scores. The results demonstrated also that the effect of poor sleep quality on severity of psoriasis was mediated by depression. Poor sleep quality was significantly associated with depression, which, in turn, predicted higher levels of psoriasis severity.

Conclusions

Morningness, poor sleep quality and depression are significantly associated with the severity of psoriasis symptoms. Characteristics such as morningness, poor sleep quality and higher level of depression were associated with higher severity of psoriasis. It seems that the relationship between morningness, poor sleep quality and depression should receive greater clinical attention in the management of psoriasis.

Internal Medicine (Saturday 13.04 - 10:15-13:15)

Quality of sleep in patients suffering from thyroid diseases

Presenting author: Tomasz Arentewicz - Collegium Medicum Uniwersytetu Mikołaja Kopernika
Authors: Tomasz Arentewicz, Piotr Nadarzyński, Jagoda Ziemiańska
Supervisors: Szymon Suwała, Roman Junik

Introduction

Sleep is essential component in life of every human. Poor quality of sleep leads to series of consequences, which is felt not only right after waking up, but mostly during the day. In case of considerable depravity it can lead to falling asleep while doing everyday activities. The number of people with sleeping disorders is growing - current observations indicate that patients suffering from endocrinological diseases (especially thyroid diseases) often complain for worsened sleep quality.

Aim of the study

The aim of the study is to assess the frequency of sleep disorders in patients with thyroid dysfunctions and to determine their specificity.

Methods

Research in progress. In the study we used a questionnaire method (according to the Google Spreadsheet mechanism) with the use of an original survey containing 23 questions (6 metrical and 17 about quality of sleep and somnolence based on standarized questionnaires: Epworth Sleepiness Scale and Pittsburgh Sleep Quality Index). The obtained data was subjected to statistical analysis using the STATISTICA 13.0 and Microsoft Office Excel 2013.

Results

Research in progress. So far 254 respondents took part in the study- 43% of them suffers from hypothyroidism, 24% from Hashimoto's thyroiditis, 16,9% from hyperthyroidism. The average time needed to fall asleep for respondents with hypothyroidism (including Hashimoto's thyroiditis) was 37 minutes and for respondents with hyperthyroidism (including Graves' disease) it was 61 min. The average sleep time was 6 hours 54 minutes for respondents with hypothyroidism and 6 hours 30 minutes for patients with hyperthyroidism. In all thyroid gland disorders the assessment of sleep quality according to results of Epworth Sleepiness Scale is very varied. Best results were observed in Graves' disease with score of 7 out of 24, and worst results were observed in Hashimoto's thyroiditis. Only 6% of respondents rate their sleep quality as very good. The full results will be presented during the Conference.

Conclusions

Current results suggest that patients with thyroid gland disorders often suffer from sleeping disorders and quality of their night rest is not adequate to their personal needs. Further observations are required. Research in progress - all conclusions will be presented during the Conference.

Endothelial injury is closely related to osteopontin and TNF receptor mediated inflammation in end-stage renal disease

Presenting author: Krzysztof Batko - Uniwersytet Jagielloński
Authors: Krzysztof Batko, Marcin Krzanowski, Mariusz Gajda, Paulina Dumnicka, Karolina Woziwodzka, Marek Kuźniewski, Władysław Sułowicz, Jan Litwin, Katarzyna Krzanowska,
Supervisors: Katarzyna Krzanowska

Introduction
End-stage renal disease (ESRD) is characterized by exceedingly high cardiovascular (CV) risk.There is an ongoing search into novel, kidney disease-specific biomarkers that may aid in the monitoring of this population. Endothelial dysfunction, inflammation, and vascular remodeling are key processes involved. Serum (soluble) thrombomodulin (sTM) is an established marker of endothelial injury.
Aim of the study
The aim of this study was to assess correlations of sTM with a variety of parameters of cardiovascular and renal pathology in patients with ESRD.
Methods
80 patients in ESRD (50 on hemodialysis (HD), 30 in pre-dialysis) were recruited consecutively. Baseline distribution of sex, age, main comorbidities and Framingham CV score was similar. In a cross-sectional design, we investigated a panel of novel biomarkers utilizing ELISA immunoassays. Fasting venous blood samples were collected prior to vascular access procedures. Assessments of sTM, intact PTH (iPTH), interleukin-6 (IL-6), pentraxin 3 (PTX3), fibroblast growth factor 23 (FGF-23), osteopontin (OPN), osteoprotegerin (OPG), osteocalcin (OC), osteonectin (ON), soluble tumor necrosis factor receptor type 2 (TNFR2), transforming growth factor-β (TGF-β), hepatocyte growth factor (HGF), vascular endothelial growth factor receptor type 2 (sVEGFR2) and stromal cell-derived factor 1α (SDF1α) were performed in all patients. Samples of radial arteries obtained while surgically establishing first-time haemodialysis access were stained for calcifications with Alizarin red and examined by a blinded histologist using a semi-quantitative scale.
Results
Diabetes, hypertension, hyperlipidemia and smoking status did not influence sTM levels. Moreover, no significant correlation with age, nor Framingham score was observed. After adjustment for HD status, serum thrombomodulin (sTM) showed a significant positive correlation with serum creatinine, TNFR2, OPN, HGF, SDF1α, sVEGFR2, Pi, iPTH, FGF-23, OPG, OC and ON. In forward stepwise multiple regression, serum creatinine, TNFR2, and OPN were identified as significant, independent predictors of sTM. Radial artery calcifications (RACs) were present in 60% of patients at various stages, and were observed only in vascular media. Grades 1-3 of RACs correlated with sTM (R=0.50, p=0.017), while grade 3 RACs were significantly associated with higher sTM (p=0.02) than less advanced lesions.
Conclusions
We provide preliminary results that sTM concentrations are independent of several major CV risk factors in ESRD. OPN and TNFR-mediated processes may share a close relationship with recurring endothelial damage, implicating the importance of inflammation in ESRD. RACs are prevalent, medially-localized and their progression is paralleled by a presumed compensatory rise of sTM concentrations. sTM has an intricate role in endothelial function, with potential clinical and prognostic applications. Medial calcifications are frequently asymptomatic, and sTM may be an additional tool to assess their progression.

Analysis of miR-155 as a novel biomarker and promising therapeutic target in systemic lupus erythematosus.

Presenting author: Joanna Jarosz-Popek - Medical University of Warsaw
Authors: Joanna Jarosz-Popek
Supervisors: Marek Postuła

Introduction

MicroRNAs are small endogenous, single-stranded, non-coding microparticles consisted of 18-25 nukleotides and transpire as promising elements in molecular medicine for diagnostic, prognostic and as next-generation therapeutic targets. Latest statistical studies showed that microRNAs are mostly used in oncology (54%), and cardiology (14%). In the past two decades numerous studies also confirmed their role in immune system modulation, multiple pathways regulation and their importance in understanding the pathogenesis of systemic lupus erythematosus (SLE) which is a chronic autoimmune disorder strongly connected with immune system dysfunction, especially with aberrant activation of B lymphocytes, T lymphocytes and type 1 INF pathway resulting in production of cytokines and variety of autoantibodies which excessive inflammatory responses leading to multiorgan dysfunction. Recent researches on miRNA levels submitted their role in pathogenesis of SLE.

Aim of the study

The aim of this study is to assess the role of miR-155 expression isolated from peripheral blood as a next-generation biomarker in early diagnosis of SLE patients, detecting initial complications namely lupus nephritis, to determine the replacement of invasive diagnostic methods such as biopsy with assessment of miRNA levels in PB samples. In this study, it will also be determined whether it is possible to estimate the risk of appearance of specific complications and to diversify patients between early and end stage organ disfunction. It will also be assessed whether, the methods of inhibition of miR-155 expression can prevent from development of severe disorders such as lupus nephritis or diffuse alveolar hemorrhage.

Methods

Study groups consisted of 40 patients with confirmed SLE and 32 healthy individuals along with pristine-induced mice (20) and healthy subjects (10). The evaluation of miR155 expression was assessed in humans peripheral blood samples, using quantitative polymerase chain reaction (qRT-PCR) and relative aberrancies of gene expression levels of miR-155 were calculated by the 2-Ct method. The levels of mir-155 assessed in post-mortem renal biopsy and and serum autoantibodies.

Results

Profiling of miRNA between SLE patients and pristine induced mice showed significant overexpression of miR-155, respectively 50% and 40% in comparison to control group. Its upregulated levels positively correlated with onset and progression of SLE in both study groups (human and mice) and miR-155 deficient mice manifested less severe organ complication. Among humans the Spearman's rank correlation coefficient showed correlation of miR-155 with the diagnosis amounting to 0,330 while with age of patients to 0,366.

Conclusions

It should be emphasized that the future of medicine should manifest itself in the search alternative methods of diagnosis and treatment of diseases known by doctors for ages. What was confirmed, is the fact that analysis of miRNAs expressions can lead to better understanding and more effective treatment of many diseases.

Peculiar properties of chronic kidney disease in patientswith concomitant obesity

Presenting author: Teena Kapil - BUKOVINIAN STATE MEDICAL UNIVERSITY
Authors:Teena Kapil
Supervisors: MAROSLAVA BEREZOVA

Introduction

Introduction. Chronic kidney disease has a large influence on patients, health care and population in general. In recent years, there has been a sharp increase in the occurrence of chronic kidney disease that has paralleled the ascent in the occurrence of obesity and overweight. Chronic kidney disease is related with increased risk of mortality and cardiovascular disease. Potential mechanisms for role of obesity in the development and progression of chronic kidney disease andrenal function is still poorly understood. The aim of research was to investigate the possible interrelation between obesity and development and progression of chronic kidney disease.

Aim of the study

Aim of study. To study the peculiar properties of the passing of chronic kidney disease in patients with and without attendant obesity.

Methods

Materials and methods. The study involved patients with stage 2 chronic kidney disease (CKD) - 54, who were treated in the Chernivtsi regional clinical hospital, Nephrology department. The age of the patients in average was 44.5 ± 1.5 years (from 35 to 61 years). Chronic pyelonephritis was diagnosed in 19 patients (35%), chronic glomerulonephritis was diagnosedin 16 patients (30%) and diabetic nephropathy was diagnosedin 19 patients (35%). Duration of chronic kidney diseasewere ranged from 4 to 12 years (on average 8,9 ± 1,5 years).All patients were divided into three groups. The control group were 21 healthy individuals.

Results

Results.Proteinuria and reduction of glomerular filtration rate has been changed in patients with the 2 degree of CKDand without concomitant obesity in compare with the healthy individuals ($p < 0.05$)

The levels of triglycerides and cholesterol of low-density lipoprotein were significantly changed in patients with CKD and without obesity in compare with relevant indicators in the healthy individuals ($p < 0.05$)

Conclusions

Conclusions. The imbalance in fat metabolism was determined in the levels of relevant indicators in patients with obesity and non- obesity (with chronic kidney disease). The most pronounced changes were identified in patients with chronic kidney disease of 2stage and II degree of obesity ($p < 0.05$). In this same group the patients showed a more pronounced impairment of renal function, indicating a more severe course of disease in obese patients. It means that this variant of the disease is more unfavorable. Obesity and overweightare important risk factor for CKD.

Internists and family medicine doctors in the face of endocrine issues during specialization exams - analysis of official statistics from Specialization State Examinations in years 2003-2013

Presenting author: Hubert Lange - UMK w Toruniu

Authors: Hubert Lange, Adrian Bronowski, Marta Sobieralska

Supervisors: Szymon Suwała, Roman Junik

Introduction

Endocrine disorders affect a large amount of patients which are under care of family medicine doctors and internists. Early diagnosis of endocrine diseases (what directly affects the effectiveness of treatment and the quality of life of the patient) depends on knowledge and experience of the above-mentioned physicians.

Aim of the study

Verification of the level of knowledge in the field of endocrinology among family medicine doctors and internists, based on the official results of Specialization State Examinations.

Methods

In the study we used the official results and statistics of the Specialization State Examinations published on the website of Medical Examinations Center in Łódź, Poland. The content of questions from all exams in the field of family medicine and internal medicine carried out in 2003-2013 was analyzed and all questions regarding endocrinological issues were selected. The collected data (including the percentage of correct answers, index of difficulty, discriminant power index and point-two-part correlation coefficient) were subjected to a collective statistical analysis using STATISTICA and Microsoft Office Excel.

Results

Endocrinology issues were elements of 3.33-18.33% of questions from internal medicine and 1.67-7.5% of questions in family medicine. The difficulty index of questions (assessed on the basis of the percentage of correct answers) was 0.675 (IQR 0.27) for internal medicine exam and 0.69 (IQR 0.27) for family medicine exam (statistically non-significant difference; $p = 0.572$), whereas the median of the discriminative power index was successively 0.285 (IQR 0.226) and 0.263 (IQR 0.235) with $p = 0.018$ (which is statistically significant difference). The median of general percentage of correct responses to endocrine questions in the years 2003-2013 did not differ significantly between those examined in internal medicine and family medicine (65.41% vs. 66.54%, $p = 0.702$). The full results will be presented during the Conference.

Conclusions

On final specialization exams, internists and family medicine doctors answered correctly to 2 out of 3 questions in the field of endocrinology. Full conclusions will be presented during the Conference.

Evaluation of the influence of the distance of Base Transceiver Station (BTS) on the frequency prevalence and features of thyroid focal lesions, revealed in the studies ultrasound.

Presenting author: Aleksandra Marko - Collegium Medicum im. Ludwika Rydygiera w Bygdoszczy
Authors: Aleksandra Marko, Ewelina Malesza
Supervisors: Szymon Suwała, Roman Junik

Introduction

Nowadays mobile phones are an inseparable part of everyday life, of the majority of the

Society. Because of that, these devices are becoming more and more often as an object of the scientists interest - for example, in 2009, Mortavazi et al. proved, on a small group of healthy volunteers that there is a statistically significant correlation between intensity of use of a mobile phone (and thus the intensity of the electromagnetic field of the GSM system) and the concentration of TSH, fT3 and fT4 (among others, the more often the telephone was used, the higher was the median TSH). However the mobile phones, are only the mobile terminal of the system while radiation influencing the human body come also from fixed part of the digital telecommunications network.

Aim of the study

The aim of the study was to evaluate the impact of the location of BTS in relation to the patients' addresses including the incidence and characteristics of the focal changes in the thyroid glands, and thus an indirect assessment of the impact of the electromagnetic field produced by the BTS.

Methods

The patients' data were obtained (thyroid ultrasound examination results, age, addresses) from the Department of Endocrinology and Diabetology. These patients were hospitalized for non-thyroid reasons. Group contained 126 patients. Using the BTS web map (http://btsearch.pl) patients addresses were verified for distance from BTS (GSM and LTE) and BTS number located within 1km from the patient's place of residence. Data were analyzed by using STATISTICA 13 program.

Results

In a group of 126 patients, the median distance from the nearest BTS GSM was

360m, and from BTS LTE - 390m. In 49 patients (38.88%) there were focal lesions in thyroid structure, of which 21 of them were suspicious. Median thyroid volume in the whole group was 10.46ml (IQR: 13.53), and the changes mainly included 5.01% of total thyroid volume (IQR: 22.68). Patients with focal lesions in general (compared to the other respondents) were characterized by a shorter distance from the place of residence to the nearest GSM BTS (320m vs 390m) and LTE (345m vs 395m), but only for BTS GSM this difference can be considered as a statistically significant ($p = 0.149$).

In comparison to the other patients with focal lesions, the group of patients with lesions known as suspicious were characterized by a smaller distance from residence to the nearest BTS GSM (230m vs 370m) and LTE (260m vs 495m) and in both cases were statistically significant differences ($p < 0.001$). Percentage of volume occupied by focal lesions, significantly correlated with the distance from BTS LTE ($R = -0.307$, $p = 0.077$), but not with distance from GSM BTS ($p = 0.366$). The remaining results will be presented during the conference.

Conclusions

Basing on the results of the pilot study, it can be assumed that there is a potential correlation between the distance of the patient's place of residence, and the BTS and onset of thyroid focal lesions and their characteristics.

Risk factors, comorbidity and complications of Clostridium difficile infection

Presenting author: Mateusz Michalak - Collegium Medicum Uniwersytetu Jagiellońskiego
Authors: Mateusz Michalak, Marcin Fedewicz
Supervisors: Jacek Czepiel

Introduction

Clostridium difficile (C.diff.) is a Gram-positive, anaerobic bacillus, widely spread in the human environment. In the last decade, the incidence and severity of Clostridium difficile infection (CDI) have been increasing, making this particular disease one of the most significant nosocomial infections. Notable risk factors include: antibiotic use, advanced age, previous hospitalization. The patients often present with multiple comorbidities, which makes management of the disease challenging.

Aim of the study

Our goal was to create a profile of a certain patient population rather than attempt to discourage or question any of the treatment regimes throughout the various wards or institutions the patients had been treated in. It is immediately obvious that their medical histories were complicated and often required a decisive approach; however, successful treatment of CDI requires a swift stratification of patients into risk categories and an assessment of prognosed severity.As evident from our data, the patients have a multidisciplinary medical background and therefore require a multidisciplinary approach.

Methods

The study analysed 154 patients (mean age 77) who died diagnosed with CDI in the University Hospital in Krakow, Poland. The focus was on the complication rate, factoring in comorbidities, risk factors and antecedent antibiotic treatment type. Data was collected using standardised forms and statistical analysis was used where applicable.

Results

All patients had pre-existing risk factors for CDI in some form. 82,5% (127 out of 154) patients had been treated with antibiotics before developing CDI. Almost half (47%) had been treated with an immunosuppressant, most commonly steroidal. Among the most common pre-existing conditions was diabetes (32%, 49 out of 154 patients). Complications recorded in medical documentation included a high rate of pneumonia (19,5%, 30 patients), AKI (5,8%, 9 patients) and numerous others.

Conclusions

The epidemiological data of patients who died in the course of CDI paints a picture of a fragile, aged population with a staggering rate of risk factors for CDI, numerous comorbidities and complications. The high rate of pneumonia could be particularly worrying for patients such as those and more emphasis should be put on its prevention and fast diagnosis.

Trust in influenza vaccination in Poland

Presenting author: Piotr Nadarzyński - Collegium Medicum w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Authors: Piotr Nadarzyński, Jagoda Ziemiańska, Tomasz Arentewicz

Supervisors: Szymon Suwała, Roman Junik

Introduction

According to previous studies, vaccinations against influenza successfully prevent complications of influenza, reduce number of hospitalizations and scale of indirect costs (such as the costs of work absence due to disease or lowering the work efficiency of people with diseases). Unfortunately, for several years interest of vaccinating against influenza has been falling in Poland - considering all countries of Europe, immunization in Poland it is placed on one of the last places.

Aim of the study

The aim of the study is to assess the degree of trust in influenza vaccination in the Polish population.

Methods

Research in progress. In the study we used a questionnaire method (according to the Google Spreadsheet mechanism) with the use of an original survey containing 30 questions about trust in vaccinations and previous vaccinological experience. The obtained data was subjected to statistical analysis using the STATISTICA 13.0 and Microsoft Office Excel 2013.

Results

Research in progress. So far, 180 respondents took part in the study (median age: 26 years; Q1: 23 years, Q3: 29.5 years; IQR: 6.5 years) - 41.7% of the group declared that they were vaccinated against influenza at least once in their lifetime (each or almost every season - 4.4%), however, 66.7% of the respondents answered that he did not intend to vaccinate against influenza in the next infectious season. Persons vaccinating against influenza as the reason for their decision most often underlined the fact that flu is serious illness and may involve certain complications (68.3%). Respondents which don't want use vaccinations do so mainly due to lack of faith in the effectiveness of vaccination (39%). 65% of respondents consider that influenza vaccination is safe. Medium degree of confidence in influenza vaccination in the study population was assessed at 3.43 points (on a scale 1-5) with SD = 1.36. The full results will be presented during the Conference.

Conclusions

Research in progress. A significant part of the surveyed Poles are not vaccinated against influenza - only 4.4% regularly vaccinates each or every season. A high degree of trust in vaccination (close to 3.5 on a scale of 1 to 5) does not explain this disturbing phenomenon - it is necessary to continues research and observation. Full conclusions will be presented during the Conference.

ASSESSMENT OF FACTORS INFLUENCING DURATION OF HOSPITALIZATION OF PATIENTS WITH DIABETIC KETOACIDOSIS

Presenting author: Jakub Rzeszuto - Collegium Medicum w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Authors: Jakub Rzeszuto, Paulina Adamska, Kamila Skibińska, Maciej Ledziński
Supervisors: Szymon Suwała, Roman Junik

Introduction

Diabetic ketoacidosis (DKA) is an acute complication of diabetes mellitus. The mechanism of DKA includes carbohydrate, fat, protein metabolism disorders as well as water-electrolyte and acid-base metabolism disorders, as a result of sudden and significant insulin deficiency. Among diabetics, the prevalence of DKA is 46-80 people per 10,000 person-years, and the mortality rate ranges from 4 to 10%. DKA may occur in any type of diabetes, however, it is often the first manifestation of type 1 diabetes. The basic factors that can trigger DKA include: interruption of insulin therapy or its improper use, infections, acute cardiovascular diseases, delayed diagnosis of type 1 diabetes, pancreatitis, alcohol abuse, pregnancy and any other conditions that rapidly increase the need for insulin. In relation the ever-increasing number of people suffering from diabetes and high mortality in DKA, research in this field is highly needed, especially as there are no analyzes for circulating, seasonal and annual factors potentially influencing DKA occurrence.

Aim of the study

The aim of this study was to assess the factors affecting the onset of DKA, its severity and duration of hospitalization.

Methods

The study was carried out in a retrospective form. The study group consisted of patients from ourClinic, hospitalized for DKA. Medical documentation was analyzed in terms of such factors as the date of occurrence of DKA (day of the week, month, season etc.), results of laboratory tests, chronic diseases, nicotinism etc. The obtained information was subjected to statistical analysis using the STATISTICA 13.0 and Microsoft Office Excel. Research in progress - the documentation of 69 patients has been analyzed so far.

Results

According to current data, the median time of hospitalization of a patient with DKA was 6.05 days - there was a difference in the duration of hospitalization depending on type of diabetes (DM1 vs DM2: 5.33 vs 6.68 days) and patients'awareness but there were no such differences depending on age, sex and most of laboratory parameters on admission (pH, bicarbonate concentration, anion gap value) - $p>0.05$. There was a significant correlation between the time of hospitalization and glycemia at admission to the hospital ($R=0.30$; $p=0.013$). Full results will be presented on Conference.

Conclusions

The current results indicate that the duration of hospitalization of patients with DKA is most dependent on the state of consciousness, blood glucose level and type of diabetes of the patient at the time of admission to the ward, however further observation in this topic is necessary.

Transforming growth factor β1 in patients with gastroesophageal reflux disease and obstructive sleep apnea/hypopnea syndrome

Presenting author: Yuliya Shaukovich - Grodno State Medical University
Authors: Yuliya Shaukovich
Supervisors: Vitali Shyshko

Introduction

Gastroesophageal reflux disease (GERD) in patients with obstructive sleep apnea/hypopnea syndrome (OSAHS) is accompanied by low value of typical symptoms expressiveness. This situation can occur due to activation of profibrotic cytokines which contribute development of sclerosis in esophageal mucosa. Transforming growth factor β1 (TGF-β1) seems to be one of such cytokines.

Aim of the study

To evaluate plasma levels of TGF-β1 in patients with GERD and OSAHS.

Methods

120 patients have been examined at Grodno city hospital № 2, Belarus. The average age was about 48 (42; 54) years old. Patients with severe cardiac, gastrointestinal, otorhinolaryngological and other disorders have been excluded. For visualization of upper gastrointestinal canal esophagogastroduodenoscopy with biopsy of the lower third of the esophagus and morphological examination according to the Lion consensus were performed. For determination of OSAHS respiratory monitoring with using of SOMNOcheck micro (Weinmann) was provided. The plasma levels of TGF-β1 were estimated by means of enzyme-linked immunosorbent assay (Fine Biotech Co., China). Patients were divided into 4 groups: group 1 – patients with GERD (n=29), group 2 – patients with GERD and OSAHS (n=35), group 3 – patients with OSAHS (n=30), group 4 – comparison group (n=26). For analyzing data nonparametric statistical methods were used (Statistica 10.0 for Windows (StatSoft, Inc., USA)).

Results

According to the multiple comparisons groups of patients have statistically significant difference (H=15,747, p=0,0013): in groups 2 and 3 in comparison with group 4 higher levels of TGF-β1 have been revealed (160,9 (39,1; 2080,7), 111,3 (53,3; 549,3) and 12,1 (10,8; 52,2) ng/ml respectively, (p2-4=0,002, p3-4=0,01)). In the result of paired comparisons there was no statistically significant difference between group 1 and 4, but patients with erosive esophagitis demonstrated higher levels of TGF-β1 in comparison with group 4: 914,6 (245,3; 1928,5) and 12,1 (10,8; 52,2) ng/ml, p=0,000. In group 2 in comparison with group 1 statistically significant higher levels of TGF-β1 have been obtained: 160,9 (39,1; 2080,7) and 31,6 (12,1; 734,04) ng/ml respectively, p=0,05.

Conclusions

Patients with GERD and OSAHS have high plasma levels of TGF-β1 which can contribute development of sclerosis in esophageal mucosa and it may be accompanied by low value of typical symptoms expressiveness.

Plasma levels of proinflammatory cytokinesin patients with gastroesophageal reflux disease and obstructive sleep apnea/hypopnea syndrome

Presenting author: Yuliya Shaukovich - Grodno State Medical University
Authors: Yuliya Shaukovich, Yuliya Shaukovich
Supervisors: Vitali Shyshko

Introduction

Literature data suggest that obstructive sleep apnea/hypopnea syndrome (OSAHS) can contribute development of endothelial dysfunction and microangiopathy due to activation of proinflammatory cytokines. The endothelial cells of the esophageal microvasculature express cell adhesion molecules, such as ICAM-1 and E-selectin too. Thus, the evaluation of plasma levels of soluble ICAM-1 (sICAM-1) and E-selectin (sE-selectin) in patients with gastroesophageal reflux disease (GERD) and OSAHShas scientific and clinical significance.

Aim of the study

To evaluate the levels of sICAM-1 and sE-selectin in patients with GERD and OSAHS.

Methods

120 patients have been examined at Grodno city hospital №2, Belarus. The average age was about 48 (42; 54) years old. Patients with severe cardiac, gastrointestinal, otorhinolaryngological and other disorders have been excluded from the study. For visualization of upper gastrointestinal canal esophagogastroduodenoscopy with biopsy of the lower third of the esophagus were used. For diagnosis of OSAHS respiratory monitoring with using of SOMNOcheck micro (Weinmann) was provided. The plasma levels of sICAM-1 and sE-selectin were evaluated with using of enzyme-linked immunosorbent assay (Wuhan Fine Biotech Co, China). Patients were divided into 4 groups: group 1 – patients with GERD (n=29), group 2 – patients with GERD and OSAHS (n=35), group 3 – patients with OSAHS (n=30), group 4 – comparison group (n=26). For analyzing data nonparametric statistical methods were used (Statistica 10.0 for Windows (StatSoft, Inc., USA).

Results

According to the multiple comparisons the groups of patients have statistically significant difference in levels of sICAM-1 (H=15,528, p=0,001) and sE-selectin (H=8,521, p=0,036). In groups 2 and 3 statistically significant higher values of sICAM in comparison with group 4 have been obtained:54,4 (49,9; 69,3), 58,3 (53; 63) and 47,4 (43; 50,2) ng/ml respectively (p2-4=0,009, p3-4=0,019). Patients of group 2 demonstrate higher plasma values of sE-selectin in comparison with group 4: 4,76 (4,22; 5,3) and 4,3 (3,77; 4,6) ng/ml (p=0,041). In the result of paired comparisons in group 2 in comparison with group 1 statistically significant higher concentration of sICAM has been revealed: 54,4 (49,9; 69,3) and 47 (44,7; 52,2) ng/ml respectively (p=0,015). There was no statistically significant difference between group 1 and 4, but patients with erosive GERD have statistically significant higher levels of sE-selectin in comparison with group 4: 4,98 (4,7; 5,1) and 4,3 (3,77; 4,6) ng/ml respectively (p=0,011). Positive correlations between sICAM-1 level and apnea/hypopnea index (AHI) (r=0,4, p<0,05), desaturation index (DI) (r=0,4, p<0,05), sE-selectin and AHI (r=0,3, p<0,05), DI (r=0,34, p<0,05) have been obtained.

Conclusions

OSAHS contributes increasing of plasma sICAM-1 and sE-selectin levels in patients with GERD and it can lead to development of microangiopathy in esophageal mucosa.

Management of dyslipidemia – recommendations versus everyday practice

Presenting author: Julia Wrzesińska - Uniwersytet Medycznym im. Karola Marcinkowskiego w Poznaniu
Authors:Julia Wrzesińska, Agnieszka Muth, Filip Sawczak, Marta Kazarcow
Supervisors: Maciej Cymerys

Introduction

Hypercholesterolemia is a modifiable cardiovascular risk factor associated with coronary heart disease and stroke. The benefits of lowering the concentrations of atherogenic lipoproteins are well documented.

Aim of the study

The study aims to assess the efficacy of dyslipidemia treatment and whether it is possible to realize the recommendations (ESC 2012) in standard medical practise.

Methods

The study is based on the retrospective analysis of medical documentation from an outpatient clinic. It involves the data from 100 patients and covers a 5-year period (2012-2017).

Results

61% of patients were treated without medication changes or dose adjustments. In this category, the efficacy of treatment varied depending on cardiovascular risk. Those with the highest probability of death after 10 years (e.g. after myocardial infarction) presented with average LDL-C 2,79 mmol/l. Only 25% of them had LDL-C below the recommended 1,8 mmol/l. In the group of high cardiovascular risk (i.e. with diabetes mellitus) average LDL-C was 2,6 mmol/l with 44% under the target level of 2,5 mmol/l. In the remaining group of moderate risk the numbers were 3,02 mmol/l and 40% respectively.

39 patients had the medications changed, mainly because of an additional drug being prescribed. Average LDL-C in this group was 3,78 mmol/l. 12 patients required more than one modification. Importantly, there were 4 cases of drug adverse effects.

Conclusions

The control of lipid concentrations seem to be acceptable in the groups of moderate and high risk, where average LDL-C are very close to the target ones. The very high risk patients, on the contrary, appear to be relevantly undertreated, with average LDL-C nearly 1 mmol/l higher than recommended.

Adropin concentration in hypertensive patients with coexisting diabetes mellitus.

Presenting author: Magdalena Zakrzewska - Uniwersytet Medyczny w Białymstoku
Authors: Magdalena Zakrzewska, Mateusz Zakrzewski
Supervisors: Jolanta Małyszko

Introduction
Adropin, a newly discovered secreted peptide with calculated molecular mass of 4999.9 Da was discovered in 2008 by Kumar. The protein was encoded by the energy homeostasis gene (Ehno). Moreover, adropin has been detected in liver, brain, kidney, salivary glands and muscles and its production is controlled by the level of fat and sugar intake. Additionally, the protein has a role in metabolic processes, carbohydrates energy homeostasis, insulin resistance prevention and impaired glucose tolerance. The biological role of adropin secretion is still highly controversial.

Aim of the study
The aim of the study is to estimate the concentration of adropin in patients with primary hypertension, with/without coexisting diabetes mellitus and in healthy volunteers (control group).

Methods
The study group consisted of three subgroups. There were 121 patients with diagnosed primary hypertension enrolled to the first subgroup and 15 people with coexisting type 2 diabetes mellitus to the second one. The control groupcomprised 21 people.

Results
The level of adropin was higher in hypertensive group with Diabetes mellitus than in control group: 26.37ng/ml (15-119.9) vs 21.61 ng/ml (13.3-38.3), p=0.03 and there was no significant difference in pure hypertensive patients compared to healthy volunteers.

Conclusions
Our study supports assumption that adropin hasrole in energy homeostasis, metabolic disorders and hypertension.

Neurology and Neurosurgery (Friday 12.04 - 15:40-17:40)

Are flow diverting stents safe in ruptured intracranial aneurysms?

Presenting author: Szymon Baluszek - Medical Unversity of Warsaw
Authors: Szymon Piotr Baluszek, Szymon Piotr Baluszek
Supervisors: Michał Zawadzki

Introduction

Ruptured intracranial aneurysms are the leading cause of atraumatic subarachnoid hemorrhage (SAH). Current guidelines recommend their aggressive treatment within 72 hours, despite poor prognosis. Blood blister-like aneurysms (BBAs) pose a significant challenge due to fragile wall, rapidly changing morphology, 20-25% morbidity and 5-15% mortality with classical endovascular or surgical approaches. Flow diverting stents (FDSs) have been initially used to treat complex, unruptured aneurysms of internal carotid artery (ICA) but recently indications have broadened. Implantation of FDS aims at causing immediate or delayed thrombosis of the aneurysm lumen and epithelialization of the stent surface, usually with preservation of perforating vessels. Although FDS implantation is feasible in bleeding aneurysms, risk of stent thrombosis, perforator infarct and rise of aneurysm intraluminal pressure due to vasospasm should be kept in mind.

Aim of the study

SAH occurs in relatively young patients, peaking in the fifth decade of life. Providing safe and effective treatment for them is of paramount importance. This research focuses on small subpopulation of patients with SAH from blood blister-like aneurysm, who suffered unproportionate mortality and morbidity with traditional approaches.

Methods

Clinical records since 2013 to 2018 were screened for patients who underwent FDS implantation as treatment of bleeding aneurysm. Seventeen such patients with 19 aneurysms were identified. R programming environment was used for data analysis and visualization and Kaplan-Meier model of survival with Mantel-Haenszel test was used to asses clinical features influence on time to aneurysm occlusion.

Results

Seven patients were females, age range was 27-70 (mean 57). Majority of aneurysms was located on the internal carotid artery, predominantly in cavernous and ophthalmic segments and displayed features of BBAs. Median time from bleeding to intervention was 2.5 days and 5 lesions were coiled during the primary intervention and one during follow-up. Aneurysm neck size was best predictor of time to occlusion which was angiographically confirmed in 12 cases. Thirteen patients had modified Rankin Score lower than 2 at follow-up. One patient died due to pneumonia.

Conclusions

Implantation of flow diverting stents is modern, safe and minimally invasive treatment approach in some aneurysmal SAH cases, that can significantly extend life duration and quality in this patient population.

News in pineal region tumours – advancements in surgery and pathology

Presenting author: Szymon Baluszek - Medical Unversity of Warsaw
Authors: Szymon Piotr Baluszek
Supervisors: Kacper Kostyra, Kacper Kostyra

Introduction

Tumours of the pineal region present a unique neurosurgical challenge due to deep location and relationship with vital neural and vascular structures. They constitute a heterogenous group that includes glial, germ cell, pineal parenchymal and papillary tumours. Interestingly, papillary tumours of pineal region (PTPR) are novel pineal region neoplasms, which were first reported in 2003 and added to the World Health Organization Classification in 2007. Approximately 180 cases of PTPR were described and management standards are still being developed.Paramedian supracerebellar infratentorial approach (SCIT) is a novel approach which allows for preservation of veins draining cerebellar vermis and provides better gravity-assisted retraction in comparison to median SCIT.

Aim of the study

With recent advancements in field of pineal region tumours, we aim to discuss methods of treatment and new diagnostic entities in clinical context.

Methods

Case histories of 12 consecutive patients with pineal region masses undergoing surgery in the Clinic of Neurosurgery, Central Clinical Hospital of the Ministry of Interior and Administration in Warsaw between May 2013 and November 2018 were reviewed. Clinical and histopathological data including immunohistochemistry profiles were collected. Chi-squared test was used to compare frequency of PTPR in this series with published data.

Results

All patients presented with symptoms of hydrocephalus, usually with concomitant ocular motor complaints. All tumours were resected by paramedian SCIT or occipital transtentorial approach. Postoperatively, two patients developed new deficits and one patient with pineal region glioblastoma died during observation period. Histopathologically, two patients had PTPR which occurred more frequently than in previous reports ($p=0.04$). Patients with PTPR were followed and one has survived over fifty months with radical surgery and adjuvant radiotherapy.

Conclusions

This work presents good clinical outcomes after treatment with recently described paramedian SCIT and discusses treatment options in heterogenous group of patients with pineal region tumours. This includes insight into rare papillary tumours of pineal region.

Providing long-term care for a patient with Huntington disease as a determinant of the quality of life of caregivers.

Presenting author: Adrian Bartoszek - Uniwersytet Medyczny w Łodzi
Authors: Adrian Bartoszek
Supervisors: - -

Introduction
Huntington's disease (HD) is a rare neurodegenerative disease inherited in an autosomal dominant manner. Trajectory of illness in a family with HD can last for several dozen years. Complexity of problems resulting from the hereditary nature of HD have a huge impact on the quality of life of family caregivers, who are aware of the progression of the disease in subsequent generations. Carers have been described as "forgotten people" in HD families, forgotten also in genetic counseling.
Aim of the study
The aim of this study is to assess the quality of life of caregivers of people suffering from HD.
Methods
55 people were invited to the survey, of which 51 completed the questionnaire. The research tool was a questionnaire, evaluating three aspects of quality of life: practical aspects of care, satisfaction with life, emotions in the life of a carer related to HD (HDQoL-C) and EQ-5D scale.
Results
The majority(68.6%) of carers are women, married(60%), with higher education (47.1%). The average age is 51.8 years(SD = 15.7). 64.7% are the main caregiver of the patient, and the average duration of care is 8 years. Among 61% of carers, care over the patient has a significant impact on their quality of life. Over half (51%) are moderately satisfied with life. For 76% of carers, how they feel is having a moderate impact on their quality of life. Main carers have significantly decreased quality of life. All three aspects of the QoL correlate positively with Visual Analogue Scale(EQ-5D component).
Conclusions
Long-term care for patients with HD has a significant impact on the quality of life of family caregivers.

In the health care system, attention should also be paid to carers who, due to the deterioration of health resulting from care, will be potential patient of healthcare services.

Personalization of stroke risk factors

Presenting author: Ella Beglaryan - Grodno State Medical University
Authors: Ella Beglaryan
Supervisors: Sergey Kulesh

Introduction

Stroke is one of the most common reasons of mortality and disability in the world. Stroke is heterogenic and polyetiological process, which happens in people with vascular risk factors.That is why strategies of stroke prophylaxis should be different in different patients.

Aim of the study

To improve ways to identify risk factors and formation of areas for the prevention of stroke in patients with non-traumatic intracerebral hemorrhage (ICH) or ischemic stroke (IS).

Methods

Objects of the investigation were 24 patients of working age with ICH or CI. They were treated in Grodno Regional Clinical Hospital and Grodno Regional Clinical Rehabilitation Hospital from 01.10.2018 to 15.01.2019. Common list of risk factors was used in retrospective analysis . Treatment adherence was elevated with the help of 8-item Morisky Medication Adherence Scale (MMAS-8).The ASCOD phenotyping was used for patients with IS.

Results

Among surveyed patients it was 5 with ICH and 19 with IS.Average age was 45 years old, 71% was male.Subtypes of ischemic stroke were presented in this way:10 patients (53%)-atherothrombotic; cardioembolic– 2 (10%); small vessel disease – 7 (37%). During the ASCOD phenotyping14 (78%) from 18 patients with IS had at least 1 identified risk factor. It meansthat factor was the most significant in a specific ischemic event. According to MMAS-81 patient (4%) had high adherents, 3 (12,5%)-medium, 12 (50%)-low. It was impossible to evaluate the compliance in 9 patients (37,5%), because they were not examined during the long period of time and they didn't receive medical prescriptions.With the help of ASCOD phenotyping and clinical examination the most significant risk factors was identified. The most common were: lack of blood pressure control-20 patients (83%), dyslipidemia with or without stenosis of the brachiocephalic arteries (BCA) – 12 (50%). Methods of their modification as a basis of personal prophylactic strategies: correct antihypertensive therapy and compliance to it; identification of BCA stenosis and dyslipidemia, correct hypolipidemic therapy and compliance to it. At the same time 20 (83%)patients had4 and more risk factors of10 in common list of risk factors (4 factors- 5 (25%) patients, 5-1(5%), 6-7 (35%), 7-2(10%), 8-5(25%).

Conclusions

1. The ASCOD phenotyping system can be used during the treatment in hospital to identify the most significant risk factors. Results can be used for personal secondaryprophylactic strategies developing.

2. MMAS-8 can be used for developing of personal prophylactic strategies with tacking complacence into account.

3. Personal strategies of primary and secondary stroke prophylaxis should include correction of all identified risk factors.

4. Modification of the most significant risk factors should be a basis of the personal prophylactic strategy, if it is possible to identify these factors.

Risk assessment of falls in elderly patients with mild neurocognitive disorders

Presenting author: Eliza Oleksy - Nicolaus Copernicus University in Toruń, Collegium Medicum in Bydgoszcz

Authors: Eliza Oleksy, Remigiusz Sokołowski, Anna Ziółkowska, Paulina Kasperska, Wojciech Stemplowski, Karolina Klimkiewicz-Wszelaki

Supervisors: Kornelia Kędziora – Kornatowska

Introduction

Elderly falls are a very important and complex problem associated not only with physical injury, but also with psychological consequences. With age, the likelihood of falling grows rapidly. Over 30% of people over 65 and 50% after the age of 85 experience fall. In 10-25% of cases, the effects of a fall are wounds, fractures or other injuries that require long-term hospitalization. As a consequence, the quality of life of older people is significantly reduced there also may appear substantial psychosocial problems, disability and dependency on other people and even death.

Aim of the study

Assessing the risk of falls in elderly patients with mild neurocognitive disorders.

Methods

Thestudy was conducted at The Clinic and Department of Geriatrics, Ludwik Rydygier Collegium Medicum In Bydgoszcz, Nicolaus Copernicus University. The duration of the study: September 2015 – March 2017. The study involved 321 participants, including 98 people assigned to the group without NCD and 223 to the group with mild NCD. Recruitment for both groups took place on the basis of specific inclusion and exclusion criteria. All participants underwent a comprehensive Geriatric Assessment including neuropsychological (MMSE, MoCA, CDT), quality of life (ADL, IDAL) and functional (Tinetti scale) tests. The level of significance was $p<0.05$.

Results

The average Tinetti score in subscale: balance was 14.33 pts. In the control group without NCD, while in the study group in patients with mild NCD was 12.35 points. The difference was statistically significant ($p <0.001$).

The mean Tinetti score in subscale: gait was 10.81 pts. In the non-NCD group, while in mild NCD group was 9.71pts. The difference was statistically significant ($p <0.001$).

The total mean Tinetti score in the non-NCD group was 25.10 pts., while in the mild NCD group was 22.05 points. The difference was statistically significant ($p <0.001$).

The average Dynamic Gait Index (DGI) score in the non-NCD group was 19.53, while in the mild NCD group was 16.95 points. The difference was statistically significant ($p = 0.013$).

Conclusions

The risk of falls in older people is correlated with the occurrence of neurocognitive disorders. To reduce the risk of falls, it is advisable to increase prophylaxis, rehabilitation of people with neurocognitive disorders, equivalent exercises and the provision of orthopedic equipment. Future studies are indicated to clarify the underlying mechanism linking NCD and falls and to establish interventions targeting NCD to reduce the risk of falls.

Valproic acid potently inhibits interictal-like epileptiform activity in prefrontal cortex pyramidal neurons.

Presenting author: Michal Pasierski - Medical University of Warsaw
Authors: Michal Pasierski
Supervisors: Bartlomiej Szulczyk, Bartlomiej Szulczyk

Introduction

Sodium valproate has a long-standing reputation of effective treatment not only for epilepsy but also for psychiatric conditions. As for the latter the exact mechanism by which valproate exerts its effect remains unclear. Interictal epileptiform activity was reported to occur in children with attention deficit hyperactivity disorder and may contribute to symptoms of this disease (Socanski et al. 2015). Importantly, interictal epileptic discharges have been described in patients with autism spectrum disorder. The prevalence of such EEG abnormalities in these patients may reach 30%.

Aim of the study

The aim of this study was to induce epileptiform activity in prefrontal cortex pyramidal neurons and assess the influence of therapeutic concentrations of valproic acid on this activity.

Methods

In this study, epileptiform bursts have been recorded from prefrontal cortex pyramidal neurons (brain region thought to be involved in psychiatric disorders) using patch-clamp technique. Zero magnesium, elevated potassium extracellular solution, known to induce epileptiform activity in vitro was used. Because of their short duration, epileptiform bursts were regarded as interictal-like epileptiform activity which is believed to be involved in cognitive impairment. Interictal discharges occur in many neuropsychiatric disorders as well as in healthy population.

Results

Epileptic activity in prefrontal cortex pyramidal neurons was potently inhibited by two therapeutic concentrations of valproic acid (20 μM and 200 μM). Moreover, valproate suppressed spontaneous excitatory postsynaptic potentials. Epileptiform bursts were inhibited by NMDA receptor antagonist which suggests that NMDA receptors are involved in bursts formation. Additionally, application of NMDA to the whole bath induced bursting activity and potently depolarized the membrane potential.

Conclusions

This report indicates that therapeutic concentrations of valproate potently inhibit interictal-like epileptiform activity in the prefrontal cortex. We suggest that this brain region, which is involved in cognitive functions, is a good model to study the mechanisms and pharmacological modulation of epileptiform activity in vitro.

Association of High Signal Intensity in Nucleus Dentatus on Unenhanced T1WI with repeated Linear versus Macrocyclic GBCAs administrations: An Observational Study

Presenting author: Jana Peterlevica - University of Latvia

Authors: Jana Peterlevica
Supervisors: Maija Radzina

Introduction

In the past 5 years many publications described association between signal hyperintensity in the adult and children brain structures, such as globus pallidus and dentate nucleus, on unenhanced T1-weighted images and previous administrations of gadolinium-based contrast agents (GBCAs). These studies raised new concerns on the safety of GBCAs.

Aim of the study

The aim of the study was to determine the relationship between the amount and the type of GBCA administered and the visually detectable gadolinium deposits in the nucleus dentatus in patients, who received 6 or more linear or macrocyclic GBCAs in Latvia.

Methods

A group of 36 adult patients (out of 463 analyzed cases) with multiple sclerosis (n = 8) and brain tumors (n = 28), who underwent at least 6 consecutive enhanced MRI examinations in period between 2009. and 2019., were included in this retrospective study. All patients were divided in 3 groups – 12 patients in each. First group received gadobutrolum (macrocyclic GBCA) exclusively. Second group received gadobutrolum and 1-3 doses of gadodiamid or gadopentetate dimeglumine (linear GBCA). Third group received gadodiamide exclusively. The signal intensity increase in the nucleus dentatus was determined visually and amount of administered dose, at which an increase in signal intensity was seen, was calculated.

Results

First group did not show an increase in signal intensity after recieving gadobutrolum at 6-9 doses (45-90 ml), median 77.5 (IQR 54.5-82.5) ml, and the received volume was significantly larger than in other two groups, p=0.012. Second group did not show an increase in signal intensity after receiving gadobutrolum at 2-9 doses (22.5-67.5 ml), median 56.3 (IQR 31.9-60.0) ml and 1-3 doses (15 – 60 ml) of gadodiamide, median 35.0 (IQR 20-55) or gadopenetate dimeglumine, median 17.5 (IQR 15-30). The third group showed an increase in signal intensity after receiving of 4-6 doses (70 – 105ml) of gadodiamide, median 87.5 (IQR 76.3-105) ml. The received volume of gadodiamide was significantly larger in the third group, in comparison to the second, p=<0.001. Higher amount of administered gadodiamide was associated with signal increase in the nucleus dentatus, p=<0.001.

Conclusions

Observed increase in signal intensity in the nucleus dentatus on unenhanced T1-weighted images was found in patients, who received a significantly larger volume of gadodiamide contrast agent. Further studies with a higher number of patients are strongly recommended.

Postoperative cognitive dysfunction and postoperative delirium as neurological complications of anesthesia and surgery

Presenting author: Tomasz Skibicki - Collegium Medicum im. Ludwika Rydygiera w Bydgoszczy Uniwersytetu Mikołaja Kopernika w Toruniu

Authors: Tomasz Skibicki
Supervisors: Krzysztof Szwed

Introduction

General anesthesia and surgery are fraught with risk of neurological complications which has many of manifestations. They can be classified by the criteria of The American College of Cardiology and the American Heart Association into two types, the first one: stroke, transient ischemic attack (TIA), coma and postoperative cognitive dysfunction (POCD) and postoperative delirium (POD) as a second type. Although POCD and POD are not as dangerous as stroke or coma, they are much more common. This complications significant increase the risks of mortality, morbidity, risk of dementia, recovery time, duration of hospitalization and longer insufficiency after treatment.

Aim of the study

Research of current state of knowledge, methods of detection and prevention.

Methods

Selective review of the literature.

Results

Mental symptoms are very sensitive markers of brain injury caused by systemic stress inflammatory reaction in response to treatment and linked with focal neurological deficits in brain tissue (FND), which can be detected in MRI. There are many co-factors in etiology of POCD and POD like microembolisation, ischemia, inflammatory, impact of anesthetics drugs. We know also othersindirect risk factors for example age, education level, body temperature during surgery, type and technique of surgery, thyroid hormone level, diabetes, peripheral artery disease and alcoholism. So pathogenesis seemsto be multifactorial and complex. This type of neurological complications occurs with a frequency of up to 54% for POCD and up to 73% for POD in patients after surgery. Currently, no single definition for POCD exists, but decline mostly concerns memory, memorizing, executive functions and also psychomotor learning. POD is clearly defined according to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM-5) criteria.

Conclusions

POCD and POD are related to higher mortality and lower life quality after surgery. Unfortunately, POCD and POD are mostly unrecognized which increases costs of treatment and causes inconvenience for patients, families and hospital staff. In literature there are mentioned potential perioperative strategies for the prevention to minimize their frequency. Postoperative neurological complications have many challenges and problems, for example methodological, that make their detection and prevention difficult, but any effort to solve them is a straight way to increase the effectiveness of treatment and the quality of patients life.

Oncology and Radiotherapy

(Friday 12.04 - 15:40-17:40)

Human cytomegalovirus infection effect on lung cancer prognosis after surgical resection

Presenting author: Javier Cortón Ruiz - UMB

Authors: Javier Cortón Ruiz
Supervisors: Lennart Luecke

Introduction
Human cytomegalovirus (HCMV) can cause life-threatening infections in immunocompromised patients. HCMV is an ubiquitous virus in humans with very high prevalence rates. Despite its proven effect on immune senescence, oncogenicity has not been proven so far.

Aim of the study
The aim of this study was to assess the impact of active human cytomegalovirus infection on lung cancer prognosis.

Methods
84 lung cancer tissue were collected during surgical removal of the tumor. DNA was extracted and analysed using Real Time-PCR for specific HCMV DNA fragments. 12 samples proved HCMV positive while 72 were HCMV negative. Statistical analysis was performed to correlate HCMV infection and several clinical outcome parameters.

Results
No correlation was found between active HCMV infection and: age group, smoking, TNM classification, relapse time, survival time or death rate ($p>0.05$).

Correlation was found between lung cancer relapse times and high HCMV concentration in the samples: (Mantel-Cox=3.705, df=1, $p=0.052$). The results state that active HCMV infection is associated with an early relapse in post-surgery lung cancer patients.

Conclusions
Results may have clinical relevance. Early treatment of active HCMV infection in lung cancer patients could improve relapse times. Further studies are recommended.

PERCEPTION OF THE DISEASE AND QUALITY OF LIFE IN LUNG CANCER PATIENTS.

Presenting author: NITISH GUPTA - BUKOVINIAN STATE MEDICAL UNIVERSITY
Authors: NITISH GUPTA, NITISH GUPTA
Supervisors: JULIA CHUPROVSKAYA, JULIA CHUPROVSKAYA

Introduction

.According to the World Health Organization (WHO) data, lung cancer is the fifth main reason,causing death.Lung cancer patients experience a variety of negative emotionsthat affects their physicalpsychological wellbeing (quality of life).

Aim of the study

. The aim of our study was to examine patients' understanding about the disease to evaluate the impact of lung cancer on emotional,physical status,future expectations and religious beliefs.

Methods

Materials and methods. During the period from March 2014 to May 2017, a prospective fifth main reason causing death. Lung cancer patients experience a variety of negative emotions that affects their physical and psychological wellbeing (quality of life) to assess the impact of the lung cancer on emotional, physical status, future expectations and religious beliefs. The study of lung cancer patients was performed at the Indira Gandhi Medical College shimla . HimachalPradesh.A questionnaire was created about the effects of lung cancer impact on patients' quality of life and the perception of the disease. The study population consisted of 116 consecutive questioned patients (78% of men, 63 years of age 12 months), 86 years; average.duration of the disease -12 months.

Results

Results. 37% of the patients could not answer the question how to do chemotherapeutic drugs work, 35% worry about adverse effects of chemotherapeutic therapy, 56% did not suffer from long-term emotional effects of lung cancer. 84% of the patients were physically reduced from the onset of the disease, 36% stopped smoking after learning their diagnosis. 34% had taken additional, in their opinion, health enhancing drugs. 81% of the questioned patients' religious beliefs, after the lung cancer was diagnosed, did not change and 16% claimed it became stronger. 41% were reluctant to predict the course of the disease.

Conclusions

Conclusion A large number of patients deny experiencing long-term emotional changes and avoid anticipating the disease outcome. However, the majority of patients admit that the lung cancer diagnosis had a significant effect on their physical condition. A significant amount of patients with lung cancer do not understand the treatment effectiveness, so many take additional remedies and do not change their smoking habits. The information that patients receive about the disease and the treatment is not sufficiently understood or quickly forgotten, so in order to increase the benefits of treatment, the doctor should provide information in a comprehensible and comprehensible way.

Etoposide: challenges and disadvantages in the mobilization of PBSC

Presenting author: Rūta Jakimavičiūtė - Vilnius University
Authors: Rūta Jakimavičiūtė, Rūta Jakimavičiūtė
Supervisors: Andrius Žučenka, Andrius Žučenka

Introduction

PBSC is used to ensure the hemodynamic regeneration after high dose chemotherapy. Sufficient dose of PBSC (>2,5x106 PBSC/kg) is needed to perform auto - PBSCT. The main mode of the mobilization of PBSC is Cyclophosphamide + G-CSF (Filgrastim). The PBSC can also be mobilized by using Etoposide. This product is not only effective in mobilization but also has a significant toxic effect.

Aim of the study

The goal is to demonstrate that Etoposide helps successfully mobilize stem cells used as a first line drug but is not the first choice because of the toxicity so it should be used as the second-line stem cell mobilizator.

Methods

A retrospective analysis was conducted. 552 patients underwent a stem cells mobilization during the year of 2003-2016. 52 patients underwent a mobilization using Etoposide. Platelet calculations were performed for 32 patients due to a lack of the data. The demographic data, underlying disease information, treatment, comparison with other chemotherapy regimens were studied in these patients. Permission to make a study from biomedical ethics committee Nr.: 158200-18/4-1032-528). Protocol Nr.: ETO-LTU-2018.

Results

The research sample consisted of 24 men (46.15%) and 28 women (53.85%). The average age of the subjects was 57.7 ± 9.3 years. The majority of patients had myeloma and mantle cell lymphoma.

The results of the mobilization with Etoposide were compared to the results with other regimens. The Etoposide dose of 2g/m2 was given for 96.15% patients and 1.5 g/m2 for 3.85%.

The average number of stem cells count in the venous blood was 108.47 cells/µl (Etoposide mobilization) and 12.87 cells/µl (mobilization in other regimens), $p < 0.001$. The mobilization with other regimens amounted to 88.46%, and the mobilization with other regimens + Plerixafor was 11.54% of patients. Febrile neutropenia (38 patients - 73.1%), mucositis (27 patients - 51.92), sepsis / bacteremia (21.2% in 11 patients) were the main complications of chemo-mobilization with Etoposide. The maximum CRB rodent average is 139.44 ± 97.3. The neutrophil count, less than 0.5x109 / l, was 9.77 ± 3.1 days from the start of the administration of Etoposide. Five patients with a platelet baseline> 100 x 109 / l had no thrombopoiesis > 100 x 109 / l (15.63%). Four patients with platelet baseline > 100 x 109 / l had no thrombopoesis > 50x109 / l (12.5%). Patients received an average of 7.93 ± 6.02 platelet transfusions. Deaths were not recorded

Conclusions

Based on the results, it can be stated that the use of Etoposide in PBSC mobilization is possible and successful but also toxic, therefore, it is not recommended for the first-line stem cell mobilization, but using as a second-line mobilizator its benefits outweigh damage. After our demonstration of Etoposide toxicity, the dose, used to mobilize PBSC was decreased to 1,5g/m2 in Vilnius University hospital “SANTARA”.

NON-SMALL CELL LUNG CANCER CHEMOTHERAPY TREATMENT EVALUATION IN COMPUTED TOMOGRAPHY USING RECIST CRITERIA

Presenting author: Lina Lazdina - University of Latvia

Authors: Katrina Bandere
Supervisors:Sigita Hasnere

Introduction

In RECIST (Response evaluation criteria in solid tumors), imaging is recognized as indispensable for objective response evaluation of chemotherapy. The most important advantage of RECIST is standardization of treatment results by using a "common language" for comparison of results from different trials. Evaluation of target lesions is divided in 4 stages: Complete response (CR): Disappearance of all target lesions, Partial response (PR): At least a 30% decrease in the sum of the longest diameter (LD) of target lesions, taking as reference the baseline sum LD, Stable disease (SD): Neither sufficient shrinkage to qualify for PR nor sufficient increase to qualify for PD, taking as reference the smallest sum LD since the treatment started, Progressive disease (PD): At least a 20% increase in the sum of the LD of target lesions, taking as reference the smallest sum LD recorded since the treatment started or the appearance of one or more new lesions. If the treatment response after RECIST evaluation is stable disease, then currently used chemotherapy regimen can be proceeded if there are no other indications to change it.

Aim of the study

The aim of the current study was to evaluate the effectiveness of palliative chemotherapy by making measurements of target lesions in CT imaging according to RECIST criteria and to make comparison how many patients with stable disease (evaluated using RECIST criteria) had chemotherapy regimen changed.

Methods

Altogether 79 patients were enrolled in the retrospective and descriptive study. Patients' data were taken from oncological council reports of patients with stage IV non-small cell lung cancer who received only palliative chemotherapy. Computer tomography (CT) imaging data were collected from Pauls Stradiņš Clinical University hospital computer programs TELEMIS and AIRIS. Data were conducted from January 2016 to March 2018. Descriptive data were collected and analyzed using IBM SPSS Statistics program.

Results

The average age of the patients were 67.2 years ± 7.74 (max=82, min=38) years. 18 (22.8%) were women, 61 (77.2%) were men. The most common histological variant of non-small cell lung cancer was adenocarcinoma (41 patients (51.9%)).

After analyzing CT imaging data with RECIST criteria, 38 (48.1%) patients had progression, 24 (30.4%) had stable disease, 16 (20.3%) had partial remission, 1 (1.3%) had complete remission. 7 (29.1%) from 24 patients with stable disease had chemotherapy regimen changed.

Conclusions

The most common response to first-line palliative chemotherapy was progressive disease (48.1%) which was followed by chemotherapy regimen change . Almost one third (29.1%) of the patients with stable disease had chemotherapy changed to second line treatment. Benefit of using RECIST criteria in everyday basis would make the decision of following treatment for medical oncologist easier.

CORRELATION BETWEEN SMOKING PACK-YEARS AND RESPONSE TO CHEMOTHERAPY USING RECIST CRITERIA IN NON-SMALL CELL LUNG CANCER PACIENTS

Presenting author: Lina Lazdina - University of Latvia

Authors:Katrina Bandere

Supervisors: Sigita Hasnere

Introduction

Lung cancer is the leading cause of cancer-related mortality not only in Europe but also around the world.Non-small cell lung cancer accounts for 85% of all lung cancer cases. Cigarette smoking is the leading risk and etiological factor for lung cancer.

Aim of the study

The aim of the current study was to prove the correlation between smoking pack-years and evaluation of response to first-line chemotherapy regiment in computed tomography imaging using Response Evaluation Criteria in Solid Tumours (RECIST) criteria in non-small cell lung cancer patients.

Methods

Altogether 79 patients were enrolled in the retrospective and descriptive study. Patients' data were taken from oncological council reports of patients with stage IV non-small cell lung cancer (NSCLC) who received only palliative chemotherapy. Patient smoking pack-years were calculated and response to first-line chemotherapy was evaluated comparing findings in CT before the treatment and after finishing chemotherapy.Data were conducted from January 2016 to March 2018.

Results

From 79 patients 26 (32.9%) were smokers and mean smoking pack-years were 40.6 years (min=15, max=53). The average age of the patients were 68.3 years ± 8.5 (max=80, min=52) years. 3 (11.5%) were women, 23 (88.5%) were men. Most common histological variant was adenocarcinoma (11 patients (42.3%) and squamous cell carcinoma (11 patients (42.3%). After analyzing CT imaging data with RECIST criteria to evaluate the effectiveness of first-line chemotherapy, 12 (46.2%) patients had progression, 4 (15.4%) had stable disease, 9 (34.6%) had partial remission, 1 (3.8%) had complete remission. A Spearman's rank-order correlation was run to determine the relationship between smoking pack-years and response to first-line chemotherapy. There was a weak, positive correlation which was not statistically significant (r_s= 0.20, p=0.328).

Conclusions

Almost half (46.2%) of the patients with past or current smoking history had progressive disease. No strong correlation was proven comparing smoking pack-years and effectiveness of first-line chemotherapy treatment using RECIST criteria.

Exploration of the expression of miRNA-134 and miRNA-185 in pleural effusion accompanying non-small cell lung cancer. Promising biomarkers of contemporary oncology?

Presenting author: Nattakarn Limphaibool - Poznan University of Medical Sciences
Authors: Nattakarn Limphaibool, Dominik Kobylarek, Wiktor Wojczakowski, Jacek Lindner, Mariusz Kaczmarek
Supervisors: Mariusz Kaczmarek

Introduction
Non-small cell lung cancer (NSCLC) requires an accurate and timely diagnosis and treatment for an improved prognosis. Common pleural fluid tumor markers (including Cyfra 21 and CEA) for the diagnosis of lung adenocarcinoma shows limited sensitivity and novel diagnostic biomarkers are needed. Accumulating evidence has indicated that microRNAs (miRNAs), an important post-transcriptional regulators of gene expression, which can be isolated from pleural fluid may serve as diagnostic markers for NSCLC.
Aim of the study
The present study evaluated the expression of miRNA-135 and miRNA-185 in malignant pleural effusions obtained from patients with lung adenocarcinoma (NSCLC). The role of miRNAs as diagnostic markers for NSCLC were examined.
Methods
Pleural effusions obtained from patients on routine diagnosis by fine-needle biopsy. Real-time reverse transcription quantitative polymerase chain reaction (RT-PCR) was used to measure the expression of the miRNA-134 and miRNA-185 in pleural effusions (n=40). Some samples contained cells from lung associated malignant pleural effusions (LA-MPEs) (n=5). The miRNAs were also examined in established human cell lines of the lung cancer, A549 and Calu-3. Both of cell lines were derived from non-small cell lung cancer (NSCLC), and both of them were used in our study as positive controls.
Results
The material from the tested cell lines derived from pleural effusion showed the increased expression of miRNA-134 and miRNA-185.
Conclusions
The present study suggests that miRNAs can be useful diagnostic markers for the detection of NSCLC. Modifying the technique used for the isolation of malignant pleural effusions should also be considered.

Spectral charecteristics of novel fluorescentprobesin fibroblast and melanoma cells

Presenting author: Marta Paeglie - Univesity of Latvia
Authors: Ilze Leve, Dace Pjanova, I. Kalnina, J. Kirilova, Marta Paeglite, Lina Lazdina
Supervisors: Dace Pjanova

Introduction

Benzathrone probes are fluorescent chemical substances, that are synthesized at Daugavpils University, Latvia. These probes have been shown to possess affinity for lymphocyte membranes, however, their distribution thought the cell is not known.

Aim of the study

The aim of this study was to compare the localization and spectral characteristics of four benzanthrone probes (ABM, AM423, AM2223, P9) in different cell types

Methods

Normal skin fibroblasts (Hs-68) and melanoma cells (Sk-Mel28) were grown in culture. Cells were stained with benzahtrone probes by adding each of probe directly to the culture medium. Scanning confocal microscopy under 63x magnification was used both for obtaining cell pictures and dye spectral measurements. Spectral characteristics were analysed at the whole cell and different cellular compartment levels using LAS Z platform for Leica microscopes.

Results

All analysed probes have similar distribution within the cell. They were localized in cell membrane and in the cytoplast of the cell. In fibroblast, the maximum fluorescence intensity (FI) for P9 probe at 600nm, while other probes showed maximum FI at 620 nm. In melanoma cells, the maximum FI for P9, AM423 and AM2223 probes remained the same as in fibroblasts, whereas for ABM probe the maximum FI shifted to the 600nm. The analyses of spectral parameters of probes at the level of different cellular compartments showed that for the shift of maximum FI for ABM probe are spectral changes in the plasma membrane of melanoma cells.

Conclusions

All four analysed probes are non-toxic to cells. The localization of the probes in the cells is also similar as well as spectral characteristics, except for probe P9. However, only the ABM probe showed differencies in their spectral characteristics between fibroblasts and melanoma cells and might be used as a diagnostic tool in future researches differentiating normal and malignant cells.

Inflammation and lung cancer: the expression levels of IL-1β, IL-6, IL-17 and miR-122

Presenting author: Bartosz Szmyd - Medical Univeristy of Lodz
Authors:Bartosz Szmyd, Agata Dutkowska, Marcin Kaszkowiak
Supervisors: Daria Domańska-Senderowska, Dorota Pastuszak-Lewandoska, Ewa Brzeziańska-Lasota, Adam Antczak

Introduction
Lung cancer (LC) was responsible for 13.5% and 25.3% of those values respectively, making it the second-most prevalent and the most death-causing carcinoma. Non-small cell lung cancer (NSCLC) is the most popular LC subtype (85% of cases) and can be furtherly divided to adenocarcinoma (AC), squamous-cell carcinoma (SCC), and large cell carcinoma (LCC). Inflammation is related to two hallmarks of cancer: avoiding immune destruction and tumour-promoting inflammation. It is especially interesting in the context of recently developed treatment strategy i.e. immunotherapy. Better understanding of the link between lung cancer and inflammation may lead in early detection and more personalized treatment of this most prevalent and the most death-causing carcinoma.

Aim of the study
The goal of research was to evaluate expression levels of proinflammatory interleukins (IL-1β, IL-6, IL-17)and related miR-122 as potential biomarkers of NSCLC.

Methods
The study group comprised 39 patients (19 women) with primary NSCLCs, who underwent pulmonecomy or lobectomy. During surgery tumour tissues and non-cancerous tissue were obtained. Moreover, blood samples were collected before and after surgery. RNA was isolated from tissue samples (selected genes) and peripheral blood exosomes (miR-122). The expression level of cDNA, obtained in reverse transcription procedure, was evaluated using qPCR. Statistical analysis was performed using the Statistica13.1 PL.

Results
Relative expression values of selected interleukins were higher in non-cancerous than in tumour tissue (IL-1β: 21.591 (IQR: 8.966-119.837) vs. 7.794 (IQR: 3.46-15.917), IL-6:13.03 (IQR: 3.544-77.858) vs 1.273 (IQR: 0.437-3.488), and IL-17: 0.417 (IQR: 0.112-1.524) vs. 0.097 (IQR: 0.020-0.179)). These differences were statistically significant, the p-values of Wilcoxon tests were <0.001, <0.001, and 0.008 respectively. Moreover, there was noted statistically significant higher expression of Il-6 measured in patients tumour tissue with history of ≤40 PY's (2.197 (IQR: 0.821-4.415)) in comparison to these with >40 PY's (0.461 (IQR: 0.372-0.741)) (UMW test, p=0.037).

Conclusions
Significantly dependences in relative expression level of selected genes between non-cancerous and tumour tissue suggest that inflammation affect NSCLC etiopathogenesis. Upregulated expression of Il-6 in tumour samples among patients with ≤40 PY's vs. >40 PY's showed the impact of smoking on tumorigenesis.

Epithelial-mesenchymal plasticity of circulating tumour cells in early breast cancer patients and their implications fortumour aggressiveness

Presenting author: Justyna Topa - Międzyuczelniany Wydział Biotechnologii Uniwersytetu Gdańskiego i Gdańskiego Uniwersytetu Medycznego

Authors: Justyna Topa, Aleksandra Markiewicz, Anna Nagel, Jaroslaw Skokowski, Barbara Seroczynska, Tomasz Stokowy, Marzena Welnicka - Jaskiewicz, Anna J. Zaczek, Anna J. Zaczek,
Supervisors: Aleksandra Markiewicz

Introduction
Circulating tumour cells (CTCs) are cells disseminating from cancerous lesions by entering blood vessels. Their detection correlates with worse prognosis of the patients. One of the mechanisms by which CTCs gain malignancy is epithelial-mesenchymal transition (EMT) during which CTCs may show both epithelial and mesenchymal features, gain stemness and enhance their ability to form metastasis. Therefore, EMT is considered a process during which generation of CTCs with the most malignant features occurs. One of the biggest challenges is the detection of CTCs that have lost epithelial markers. The current knowledge about CTCs, especially their most aggressive mesenchymal population, is still limited.

Aim of the study
The aim of this study was to isolate and perform extended characterization of CTCs with different EMT status in order to establish their clinical significance in early breast cancer patients.

Methods
Eighty three CTCs-enriched blood fractions were obtained from early breast cancer patients and analyzed for expression of epithelial, mesenchymal and general breast cancer CTCs markers (MGB1/HER2/CK19/CDH1/CDH2/VIM/PLS3), invasion-related genes (CXCR4, uPAR), cancer stem cell markers (CD44, NANOG, ALDH1, OCT-4, CD133) and cluster formation gene (plakoglobin).

Results
In the CTCs-positive patients, epithelial, epithelial-mesenchymal and mesenchymal CTCs markers were detected at a similar rate (in 28%, 24% and 24%, respectively). Mesenchymal CTCs were characterized by the most aggressive phenotype what has been confirmed by significantly higher expression of metastasis-related genes and stemness markers (CXCR4, uPAR, CD44, NANOG, $p < 0.05$ for all), presence of lymph node metastases ($p = 0.043$) and larger tumour size ($p = 0.023$). Moreover, presence of mesenchymal markers in CTCs-enriched blood fractions correlated with shorter overall survival ($p = 0.005$) in comparison to patients without detected CTCs and was independent predictor of poor outcome in the multivariate analysis (HR=7.33, 95% CI 1.06–50.41, $p = 0.04$).

Conclusions
Molecular profiling of CTCs' EMT phenotype allows for stratification of patients to different prognosis group and reveals their biological differences.

THE INCIDENCE OF GASTROINTESTINAL STROMAL TUMORS IN HRODNA REGION

Presenting author: Vladislava Vasilevich - Grodno State Medical University
Authors: Vladislava Vasilevich Vasilevich Daria Kovalieva
Supervisors: Yuri Lagun

Introduction

Gastrointestinal tumors are the most wide-spread primary mesenchymal ones of the gastrointestinal tract. That's why the data of the research are aimed at studying the structure of GIST morbidity in Hrodno Region.

Aim of the study

It is to study GIST morbidity and the results of its treatment of various localizations in Hrodno region including the period from 2006 to 2018.

Methods

There were used retrospective analysis of case histories the results of immunohistochemical investigations as well as the information from the computer database 4d client of the Health Establishment "Hrodna Regional Clinical Hospital" . There were identified only 63 cases.

Results

GIST has been identified in 34 cases (54 %) among women. The patients' age structure is following: 40 people (64 %) are over 60 years; 21 people (33 %) are from 40 to 59 years; and only 2 patients (3 %) are from 18 to 39 years. There were prevailed the city residents – 44 people (70 %). The localizations of tumors are small intestine (30 people (48 %)); stomach (24 people (38 %)); large intestine(5 people (8%)); retroperitoneal space (4 people (6 %)). There were dominated small intestine GIST (47,2 %) and stomach GIST (38,4 %) among both men and women. Further there was dominated GIST localized in retroperitoneal space (69 %) among men, but women have got GIST predominance in the large intestine (17,8 %).Thus, one-year mortality rate is 7,4 %: at stage I is 0 %, at stage II is 9 %, at stage III – 0 %, at stage IV – 10 %. Five-year survival rate is 39,1 %: at stage I is 100 %, at stage II is 20 %, at stage III – 50 %, at stage IV – 66,7 % (for the patients, who became ill from 2006 to 2013) . 35 patients (55,6 %) were undergone surgery and chemotherapy with "imatinib". 30 patients (47,6 %) were undergone surgery and chemotherapy with "imatinib" at a dose of 400 mg.; 3 patients had got surgery and chemotherapy with "imatinib" at a dose of 800 mg.; 1 patient had got surgical treatment and chemotherapy with "imatinib" (400 mg.) as well as "sunitinib" (50 mg.);1 patient had got surgical treatment and chemotherapy with "imatinib" (400 mg.) and "Ftorafur" at a dose of 1600 mg. / day. Apparently 18 patients (28,6 %) were undergone only surgery, 4 patients (6,4 %) had got only chemotherapy with "imatinib".

Conclusions

Gastrointestinal stromal tumors are widely spread among women (54 %). As for the patients at the age of 60 they are more frequently ill with tumors than the people of the other age. The main proportion of the sick was represented by the city residents (70 %). The major localizations of GIST are the small intestine (48 %) and stomach (38 %). One-year mortality was 7,4 %. Five-year survival was 39,1 %. The main treatments were surgery in a combination with "imatinib" chemotherapy.

Ophthalmology and Otolaryngology (Friday 12.04 - 12:00-14:15)

Efficiency of treatment with glucocorticoids in sudden sensorineural hearing loss

Presenting author: Magda Barańska - Uniwersytet Medyczny w Łodzi
Authors: Magda Barańska Barańska, Jakub Wielgat
Supervisors: Oskar Rosiak, Wioletta Pietruszewska

Introduction

Idiopathic sudden sensorineural hearing loss (ISSNHL) is an otologic emergency that appears in 5-20 patients per 100 000 individuals annually. It is defined as a 30-decibel hearing loss over three consecutive frequencies for at least 72 hours. The condition is often accompanied by tinnitus, vertigo and a feeling of fullness in the ear. Etiology remains unknown, however, some authors indicate vascular disorders, viral infections, head injuries, autoimmune diseases, hypertension or hypercholesterolaemia as a trigger factor. There is no hard evidence in favor of any form of treatment, but most recommendations include oral or intravenous glucocorticiod therapy.

Aim of the study

The aim of the study was to assess the hearing outcomes in ISSNHL.

Methods

A retrospective analysis of 135 patients(53,33% females, median age: 49 years) diagnosed with ISSNHL at the Department of Otolaryngology and Oncological Laryngology of the Medical University of Lodz between 2015 and 2017. The effectiveness of treatment assessed with ΔPTA(ΔPTA=PTApre-PTApost; 500Hz, 1kHz, 2kHz, 4kHz) was compared with age, sex, the period of time between occurrence of symptoms and the initiation of treatment, presence of co-existing disease (hypertension, hypercholesterolaemia, diabetes mellitus, recently infection, head injures) and co-existing symptoms (tinnitus, vertigo and feeling of fullness in the ear). The criterion for hearing improvement was assumed as ΔPTA>0. The association between parameters and the efficiency of treatment was tested using univariable statistics.

Results

An improvement was observed in 103 patients (76,3%) after the glucocorticoid treatment. The median of pure-tone audiometry (PTA) of the four frequencies was 56,09 dB (SD=30,02 dB) before the treatment and 43,80 dB (SD=30,36) after the treatment. 59% of the patients reached ΔPTA of ≥10dB.

Conclusions

There is no association between analyzed parameters and the efficiency of treatment.

Intravenous glucocorticoid therapy in analyzed group provided satisfactory hearing outcomes.

Analysis of the functionality of different types of moisture drops bottles in the evaluation of patients with rheumatic diseases

Presenting author: Jacek Dziedziak - Warszawski Uniwersytet Medyczny
Authors: Jacek Dziedziak
Supervisors: Piotr Maciejewicz

Introduction

Systemic connective tissue diseases and progressive changes in the bone-joint system, often lead to a reduction in the patient's dexterity. In Sjögren syndrome, the secreting function of lacrimal glands is damaged. Its secondary form may occur with other autoimmune diseases, mainly rheumatoid. Approximately 30% of patients with rheumatoid arthritis also suffer from Sjögren syndrome. The nagging symptom of Sjögren syndrome is dry eyes sensation. Lack of a stable tear film may lead to permanent eye's surface damage. Patient requires a systematic moisturization, but co-existing rheumatic changes in finger or wrist joints can hinder the correct application of moisture drops.

Aim of the study

The purpose of this work was to run tests which will enable the evaluation of functionality and self-application comfort of pharmacy-available' moisture drops in 6 different types of packaging by patients with different exacerbation of rheumatic changes of fingers and hand.

Methods

The study included 24 patients (21 women and 3 men) ophthalmologically-consulted in the rheumatological ward. Patients completed the OSDI questionnaire to obtain a subjective assessment of the dry eye syndrome. Schirmer and SICCA tests were performed. Next, patients applied 6 different moisture drops in practice, evaluating them with 5-grade scale: ease of opening the package, comfort and grip's confidence, how easy is to squeeze and to instill the drops. Patients also assessed the importance of bottle transparency. The examiner also evaluated the effectiveness of the application.

Results

In terms of ease of the package opening, drops number 5 in a large bottle with a vertical pump and side handle have been assessed to be the best. Drops No. 6 in a small, traditional bottle were considered to be the most comfortable in grip and were the easiest to instill to the eye. The transparency of the package was proved to be important for patients, this criterion had been fulfilled by drops number 3 in a small soft transparent bottle. Drops number 1 in the minims package have been considered the easiest to squeeze.

Conclusions

Effective moisture drops application among patients with the dry eye syndrome is an important part of treatment which reduces the risk of complications and improves the quality of life. Rheumatic changes in the joints and deterioration of the coordination may hinder the proper instilling technique. The differences in structure, size, and hardness of the bottle vary in patients evaluation. There was no correlation of the advancement of rheumatic changes with the preference of any applicator.

Short term results of intravitreal anti-vascular endothelial growth factor therapy in the case of exudative age related macular degeneration.

Presenting author: Laura Grava - University of Latvia
Authors: Laura Grava, Liva Strucinska, Beate Baumane
Supervisors: Kristine Baumane

Introduction

Age related macular degeneration (AMD) is a progressive eye disease and is the leading cause of severe vision loss in adults over the age of 50. AMD causes loss of central vision, which can lead to blindness. Main treatment for this disease is anti-vascular endothelial growth factor (anti-VEGF) intravitreal injection, aiding in vascular normalization

Aim of the study

To evaluate outcomes of intravitreal anti-VEGF tharapy in eyes with exudative age related macular degeneration after short term therapy.

Methods

Retrospective study included 35 patients (50 eyes) with wet AMD who were treated with anti-VEGF therapy (bevacizumab Avastin). Patients who received one intravitreal anti-VEGF injection monthy were analysed. Data from medical records in clinic “Bikernieki” were collected and analysed during three months period. The following data for each patient were analyzed: patient age during the first injection, gender, visual aquity after each intravitreal injection during the period of 3 months. Data were statistically analysed using IBM SPSS Statistics 25.0 program, significance level was set at $p<0.05$.

Results

In this study 50 eyes were analysed. This study included 41 women and 9 men. Mean age during the first injection was 77,4 (from 56 to92 years). Among women mean baseline visual acuity before the treatment was 0.20 ± 0.21 by Snellen chart, after 1st month mean visual acuity was 0.24 ± 0.22, after 2nd month – 0.27 ± 0.25 and after 3rd month – 0.31 ± 0.28. Among men mean baseline visual acuity was 0.18 ± 0.13, after 1st month mean visual acuity was 0.18 ± 0.13, after 2nd month – 0.26 ± 0.18, after 3rd month – 0.27± 0.19. Mean visual acuity did not depend on gender or age ($p>0,05$).

Conclusions

Obtained results indicate that intravitreal anti-VEGF (Bevacizumab) therapy gradually improves visual acuity. There were no statistically significant difference between gender or age. Women showed better results after injections than men. This study should be continued and include more participants with longer treatment duration of monthly intravitreal injections, to properly evaluate the efficacy of intravitreal anti-VEGF treatment.

PREVALENCE OF GENERALIZED ANXIETY DISORDER AND DEPRESSION AMONG MIDDLE AGED PATIENTS WITH GLAUCOMA IN LITHUANIA.

Presenting author: Rūta Maželytė - Vilnius University
Authors: Rūta Maželytė, Rūta Maželytė
Supervisors: Saulius Galgauskas

Introduction
Although previous cross-sectional studies revealed a higher prevalence of generalized anxiety disorder and depression among glaucoma patients, these comorbid conditions have not received much attention. This study provides results emphasizing the necessity of regular screening and psychochronobiological treatment in glaucoma patients.
Aim of the study
To investigate the prevalence of depression and anxiety disorder among glaucoma patients in Lithuania and assess the difficulties which were impacted by these conditions in work, household and social environment.
Methods
A cross-sectional study was performed involving 111 patients (58 male and 53 female) aged 60 to 86 years (mean age, 72,14 years) in Lithuania. Depression was assessed with the Lithuania-version of Patient Health Questionnaire (PHQ-9), and generalized anxiety with the short form of Generalized Anxiety Disorder-7 Scale (GAD-7). Depression was classified into four (minimal symptoms; mild; moderately severe; severe depression) and anxiety into three types (mild, moderate, severe anxiety) according to the total number of scores. Glaucoma type, stage and intraocular pressure (IOS) were assessed through clinical examinations by professionals.
Results
The final study consisted of 86 primary open-angle glaucoma patients and 25 patients with pseudoexfoliative glaucoma. Prevalence of mild, moderately severe and severe depression among all participants with glaucoma was 20,72%, 20,72%, and 45,05%, respectively. Slightly more than 9% revealed minimal symptoms of depression and only in 5 patients (4,5%) glaucoma triggered no signs of clinical depression. In the whole sample 88 patients (79,28%) reached a GAD-7 score indicating severe anxiety; 8 (7,21%), moderate anxiety and only 15 (13,51%) patients reported no signs of anxiety. The majority of subjects (72,97%) who suffered from psychological consequences of glaucoma defined that it caused extremely big and big difficulties (respectively 31,53% and 41,44%) and only 30 of them noticed few (14,42%) or no difficulties at all (12,61%) in work, household and social environment. More prelevant severe depression frequency was observed among people who were diagnosed with pseudoexpholiative glaucoma (88%) than those who suffered from primary open-angle glaucoma (32,56%). There was no correliation between intraocular pressure.
Conclusions
There is clearly high prevalence of depression and anxiety disorders among glaucoma patients in Lithuania. Vast majority of observed subjects are suffering from severe and moderately severe depression and anxiety which cause significant problems in their personal environment. Similar studies are important in order to emphasize the necessity of regular screening and psychochronobiological treatment in glaucoma patients.

Quality of Life Assessment in Middle Aged Glaucoma Patients in Lithuania.

Presenting author: Rūta Maželytė - Vilnius University
Authors: Saulius Galgauskas, Saulius Galgauskas
Supervisors: Saulius Galgauskas

Introduction

Glaucoma is the second leading cause of blindness in the world, so the fundamental goal of it's management isthe preservation of patients' visual function and quality of life. The diagnosis, which requires lifelong follow-up and frequent ocular medication or surgical treatment can have a serious impact on a patient's well-being.

Aim of the study

To determine and compare the quality of life in middle aged patients with and without glaucoma using the Lithuanian-version of Glaucoma Quality of Life-15 Questionnaire and evaluate the association between glaucoma-related quality of life and clinical indices of glaucoma.

Methods

Altogether 155 patients (89 female, 66 male) aged 50 to 80 (mean age, 68.86 years)were separated in two groups – patients with glaucoma (N=109) and control group (N=46); and enrolled to the cross – sectional study. Glaucoma type, stage and intraocular pressure (IOS) were assessed through clinical examinations by professionals. All subjects were given a Lithuanian-version of the 15-item Glaucoma Quality of Life-15 (GQL-15) questionnaire comprising 4 main factors of visual disability: central and near vision; peripheral vision; dark adaptation and glare; and outdoor mobility. Responses for each factor were coded on a scale from 0 to 5, where 5 stands for severe difficulty, 1 – no difficulty and 0 indicating abstinence from activity.

Results

Patients with glaucoma had significantly poorer glaucoma-related quality of life than controls. The mean value of GQL 15 scores in the glaucoma group was 44,39±25,5 and 24,31±16,5 in the control group. In both glaucoma and control groups, the average quality of life score was similar among males and females (42,48 and 45,69 respectively in glaucoma group; 25,18 and 23,71 in control group).Activities involving glare and dark adaptation were most problematic for all but patients with glaucoma experienced more serious difficulties with it. Likewise, glaucoma group subjects felt significantly more compromised in central and near vision, peripheral vision, and outdoor mobility. Glaucoma related quality of life scores were significantly lower among early stage glaucoma group (mean QoL score=29,1), but differed slightly among moderate and severe stages (mean QoL scores 45,71 and 48,24 respectively). The analysis of the overall QoL score with age, glaucoma type and IOP showed no significant correlation.

Conclusions

Significant deterioration in vision-related quality of life was observed between patients with glaucoma compared with control group. In addition, the 4 main factors of visual disability (near vision, peripheral vision, mobility and dark adaptation) triggered much more unfavorable impact on the life quality of glaucoma patients than in general population. The analysis of the QoL score showed no significant correlation between age, gender and IOP.

Effectiveness of allergen immunotherapy in allergic conjunctivitis

Presenting author: Miłosz Lewandowski - Gdański Uniwersytet Medyczny
Authors: Miłosz Lewandowski
Supervisors: Marek Niedoszytko, Marta Chełmińska

Introduction

Allergic conjunctivitisis a prevalent allergic disease with increasing prevalence. It decreases significantly the quality of life, causes an actual everyday discomfort. The only causative treatment of allergic conjunctivitis is an allergen immunotherapy.

Aim of the study

The aim of the study was to determine efficacy of allergen immunotherapy in population suffering from allergic conjunctivitis.

Methods

The research was conducted on adult patients treated in outpatient unit of the Department of Allergology Medical University of Gdańsk. The analysis was based on the questionnaire, containing symptom-medication score based on Allergy-Control Score (ACS). The patients marked ocular symptoms: lacrimation, itching and redness before the beginning of treatment and then during or after the treatment. Additionally patients named other medicaments, which they also took before the beginning and then during or after the treatment.

Results

The study group consisted of 13 men and 5 women with an average age 37. The suffered from pollen allergy-13, house dust mites-3. Patients were treated with SCIT. The results of medication scorewere not significantly different after the treatment ($p=0.09$). The symptom-mediation score showed significant improvement $p=0.00029$. The mean difference before and after allergen immunotherapy in symptom-medication score was 12 ($SD=8$), in symptom score was 10 ($SD=6$).

Conclusions

Allergen immunotherapy is effective in reducing symptoms of allergic conjunctivitis.

Isotretinoin and its effects on symptoms of dry eye syndrome.

Presenting author: Anna Nowak - Medical University of Warsaw
Authors: Anna Nowak, Magdalena Kułak, Jacek Dziedziak
Supervisors: Piotr Maciejewicz

Introduction
The primary indication for isotretinoin is the treatment of severe acne. The main effect of this drug is the inhibition of sebaceous glands, as well as Meibomian glands. Consequently, the secretion of the glands may be lost and it can result in ophthalmological complications. Among them, the dry eye syndrome is the most common one.
Aim of the study
The aim of this study is to evaluate the effect of isotretinoin therapy on the development of symptoms of dry eye syndrome and its severity which occurred prior to the therapy. Furthermore, it was also assessed whether the patients were informed about the possible side effects.
Methods
The data used in this study was collected by means of an online survey. The parameters evaluated presence of pre-therapy and post-treatment symptoms, and also their severity. Usage period, dose of the drug, presence of other ophthalmological and systemic diseases also have been taken into consideration.
Results
The majority of respondents complained of the occurrence of new ophthalmological symptoms that did not exist prior to the therapy. Predominant symptoms were burning eyes and eye redness. Additionally, 25 percent of the respondents had not been informed about possible ophthalmic side effects of the therapy.
Conclusions
The development ofsymptoms of dry eye syndrome during isotretinoin therapy is a serious problem which can lead to the development of severe ocular complications among young patients. In addition, an alarmingly large number of respondents were not informed about the possibility of the above mentioned symptoms.

CONGENITAL NASOLACRIMAL DUCT OBSTRUCTION ASSOCIATION WITH BIRTH DELIVERY METHOD

Presenting author: SIGITA PADVARIŠKYTĖ - Vilnius University
Authors: Sigita Padvariskyte, Greta Paulaityte, Salomeja Ignotiene, Viktorija Bendikaite
Supervisors: Salomeja Ignotiene

Introduction

Congenital nasolacrimal duct obstruction (CNLDO) is the most common disorder of the lacrimal system. For this reason parents frequently bring their newborns to ophthalmological examination. Most the cases requires minimal intervention by the first year of life, but unresolved cases need to be referred to the pediatric ophthalmologist for probing and may require surgical intervention. Previous research shows that there may be association between CNLDO and birth delivery method.

Aim of the study

To find association between congenital nasolacrimal obstruction and birth delivery method.

Methods

A retrospectivestudy was performed at Children's Hospital, Affiliate of Vilnius University Hospital Santaros Klinikos, Ophthalmology Department between November 2018 and February 2019. The study included 45 patients who were diagnosed with congenital nasolacrimal duct obstruction and treated in tertiary care childrens hospital with lacrimal probing. After obtaining informed consent, the parents underwent a medical interview.

Results

The mean age of the mother was 29,87 year old. A higher percentage of patients with congenital nasolacrimal duct obstruction (75,6%) were born during vaginal delivery (VD) and 24,4% were cesarean sections (CS). Results were compared between these two birth methods. The mean age of the infants in VD group was 28,91 weeks and in CS group 29,91 weeks.Mean birth time was 38,97 weeks in VD group and 39,36 weeks in CS group. Based on the type of CNLDO 38 (84,4%) were simple and 7 (15,6%) were complex CNLDO. Of the 34 vaginal delivery patients 5 (14,7%) had complex CNLDO and 29 (85,3%) had simple CNLDO. Of the 11 cesarean section patients 2 (18,2%) patients had complex CNLDO and 9 (81,8%) had simple CNDO. In current study congenital nasolacrimal duct obstruction showed an association with vaginal delivery but did not find any significant association between age, birth time and type of CNLDO between the VD and CS groups ($p>0,05$).

Conclusions

In general, the current study did not find any statistically significant association between the incidence of CNLDO and mode of delivery. Congenital nasolacrimal duct obstruction showed an association with vaginal delivery due to the small size of our study group. In order to identify and to clarify any significant associations our study will be continued.

Prevalence of sleep-disordered breathing in Medical University of Warsaw students

Presenting author: Krystyna Sobczyk - Medical University of Warsaw
Authors: Krystyna Sobczyk, Anna Bohdziewicz
Supervisors:Ewa Migacz, Wojciech Kukwa

Introduction

Obstructive sleep apnea (OSA) is the most common disorder of sleep related breathing disorders. Involving repetitive narrowing of the upper airway during sleep, with concomitant breathing cessations, OSA leads to intermittent hypoxia and sleep fragmentation due to frequent arousals. In consequence, quality of life during the day declines. Few studies were dedicated to investigate this problem in young adults.

Aim of the study

The aim of the study was to screen students of Medical University of Warsaw for sleep-disordered breathing.

Methods

Paper questionnaires were distributed among students of Medical University of Warsaw. The survey consisted of a modified version of the Berlin Questionnaire with additional questions on nasal and oral breathing, morning headache and history of adenotonsillectomy.

Results

500 questionnaires were distributed to the students and 410 (82%) were completed and successfully returned. 61% of the participants were women. The mean age was 22.55 ± 4.81 years. The mean BMI score was 21.54 ± 2.79.

92 participants (22,43%) reported snoring, while in 14 of them (3,41 %) apnea/breathing pauses during the night were observed. In 8 (1,95%) subjects both symptoms were noticed.

Symptoms of obstructed nose after waking up were found in 153 (37.32 %) students, similarly symptoms of obstructed nose during the day were reported in 147 (35.85%) subjects. 339 (82.68 %) people suffered from the concentration disorders.

Conclusions

The results of this study indicate the sleep disordered breathing is frequent problem among students. While it seems to be ignored by the young population, it may have huge impact on present and future quality of life.

Monitoring of visual acuity and metamorphopsia using mobile applications in the eyes with neovascular form of age related macular degeneration

Presenting author: Karolina Suwała - CM UMK
Authors: Karolina Suwała, Katarzyna Urtnowska, Kosma Kołodziej
Supervisors: Jakub Kałużny

Introduction
The neovascular form of age-related macular degeneration (nAMD) bindswith the accumulation of fluid under the retina or within the sensory retina. The consequence of this is the displacement of retinal layers and damage to photoreceptors, which causes disturbances in the functioning of this tissue. A characteristic symptom of the disease, apart from the reduction in visual acuity, are visual metamorphopsis. Thanks to repeated intravitreal injections of antiVEGF preparations, most patients improve functional and structural eyes with choroidal neovascularization (CNV) against the background of nAMD. Maintaining a beneficial therapeutic effect, however, is associated with monitoring the state of the retina, which requires systematic, monthly ophthalmologic examinations. In this situation, it seems a good solution to introduce tests that allow the patient to self-control the retina function. Such tests could include applications enabling the examination of visual acuity and the presence of metamorphopsia.
Aim of the study
The aim of the study was to assess the usefulness of visual acuity applications and metamorphopsia applications in the diagnosis and monitoring of neovascular AMD (nAMD).
Methods
30 eyes with the active form of nAMD qualified for intravitreal injections of aflibercept were included in the study. Before the first, fourth and seventh injections, the patients underwent an ophthalmologic examination including distance visual acuity, near visual acuity, metamorphopsy scores using the M-charts, Amsler test and SdOCT. At the same time, an examination of near visual acuity and metamorphopsis was performed using original applications installed on the tablet. The results of the study were subjected to statistical analysis.
Results
During therapy, improvement in distance visual acuity was noted. Regardless the method of examination the fluctuations in distance and near visual acuity and the extent of metamorphopsis were not statistically significant. Significant correlations were found between proprietary mobile applications and commonly used tests. No correlation was found between the degree of metamorphopsia and near vision acuity and the thickness of the retina.
Conclusions
The correlation between the retinal anatomical state in patients with nAMD and function tested with simple tests is poor. The most useful method of monitoring the effects of treatment is visual acuity. Mobile applications used during the study correlate with commonly used tests, which in the future gives the possibility of easier and faster examination of patients

Comparative analysis of the clinical, radiological and histopathological picture of odontogenic keratocyst - a retrospective study

Presenting author: Dominik Woźniak - Warszawski Uniwersytet Medyczny
Authors: Dominik Woźniak, Paulina Urbańska
Supervisors: Zygmunt Stopa, Piotr Regulski, Paweł Pihowicz

Introduction

Odontogenic keratocyst develops from residual odontogenic epithelium. It places mainly in the area of the mandible angle. It is characterized by local malignancy in the form of the ability to destroying hard tissues and infiltration of soft tissues. Due to the aggresive clinical process, recurrence tendency, histology and genetics from 2005 to 2017 classified as a tumour - keratocystic odontogenic tumour.

Aim of the study

Assessment and comparison of diagnoses based on clinical, radiological and histopathological picture of odontogenic keratocyst. Selection of characteristic features of clinical and radiological picture based on the result of histopathological examination affecting more effective diagnosis.

Methods

Analysis of the Department of Cranio-Maxillofacial Surgery, Oral Surgery and Implantology, Medical University of Warsaw patient's medical history with diagnosed odontogenic keratocyst, radiological examinations (OPG, CBCT) performed in the Department of Dental and Maxillofacial Radiology, Medical University of Warsaw and histopathological examinations prepared in the Department of Pathology, Medical University of Warsaw and assessment and comparison of diagnoses made on their basis. Comparison with the control group of patients with diagnosis of radicular cyst. Statistical analysis of the features of the clinical and radiological picture and assessment of the correlation between these features and the histopathological diagnosis.

Results

Data analysis of 18 patients divided in two equal groups. In the study group women constitued 66.6%, in the control group men 55.6%. Average age in the study group was 42.6 years, in the control group 47.3 years. Patients under 32 years were diagnosed with odontogenic keratocyst more frequently than with radicular cyst. Odontogenic keratocyst was located in the mandibular body (76.9%) and maxillary tuberosity (23.1%). Radicular cyst was located in the mandibular body (50.0%), alveolar process (41.7%) and maxillary tuberosity (8.3%). Pain and sensory disorders did not occur in the study group, in the control group constitued respectively 41.7% and 25.0%. Osteolytic lesions in different location in case of odontogenic keratocyst occured in 46.2%, in case of radicular cyst in 9.1%. Odontogenic keratocyst resorbed roots of adjacent teeth in 15.4%, radicular cyst in 66.7%. Root displacement occured more frequently in the study group by 23.0%. Inflammatory infiltration was more frequent in the control group.

Conclusions

Odontogenic keratocyst is more common in younger patients. There is a relationship between pain and radicular cyst. The absence of sensory disorders suggests odondogenic keratocyst. The presence of odontogenic keratocyst at the present or in the past in case of new lesion suggests odontogenic keratocyst. Odontogenic keratocyst displaces the roots of the teeth, the radicular cyst resorbs them.

Pediatrics (Friday 12.04 - 15:40-17:40)

TNF-α level investigation in children with Juvenile Idiopathic Arthritis (JIA)

Presenting author: Andrew Brian Amoah-Danful - Kharkiv National Medical University
Authors: Brian Andrew Amoah-Danful, Brian Andrew Amoah-Danful
Supervisors: Alexander Onikienko, Alexander Onikienko

Introduction

Juvenile idiopathic arthritis (JIA) is the most common chronic rheumatic disease of childhood. While aetiology and pathogenesis appear unclear, multiple genes are thought to play a role in the development of disease. These include variants in MHC class I and class II regions. Other genes also thought to contribute but which are not part of the HLA loci include polymorphisms of protein tyrosine phosphatase nonreceptor 22 gene (PTPN22), tumour necrosis factor (TNF)-α, macrophage inhibitory factor, interleukin (IL) -6, and IL-1α.

Aim of the study

To determine the possible role of TNF-α in the pathogenesis of Juvenile Idiopathic Arthritis (JIA).

Methods

Clinical and laboratory investigation of 26 children with confirmed diagnosis of JIA was performed. In addition to standard diagnostic tests, TNF-α level was assessed prior to treatment initiation and 3 months (2.5-4 months) after administration of therapy. All children were naive to biological therapy. In addition, 21 healthy children were included in a control group to compare baseline levels of TNF-α. Statistical analyses were performed with StatSoft Statistica Version 8 (Tulsa, OK).

Results

The baseline TNF-α level (Mean(Lower Quartile;Upper Quartile)) in patients with JIA was 21,57 (19,57;26,29) pg/ml. This was significantly higher (p=0,0001) when compared to the control group 5,37 (4,73;5,91) pg/ml. The level of TNF-α after onset of treatment decreased to 14,71 (14,61;15,14) pg/ml. However, it was still higher than the serum biomarker level in control group (p=0,0026).

Conclusions

Patients with JIA have elevated TNF-α which may be due to long term chronic inflammatory process that affects cytokine levels. After treatment initiation the concentration of TNF-α decreases in JIA patients, but is still quite elevated when compared to that in the control group (healthy children).

A further hypothesis is that the assessment of the level of TNF-α may be valuable in the evaluation of treatment efficacy, although this may affect the cost effectiveness of JIA management.

Type 1 and 2 diabetes mellitus glycemic control correlation with PAID score in adolescent (11 – 18 years) patients.

Presenting author: Romans Beskrovnijs - Riga Stradins university
Authors: Romans Beskrovnijs, Dace Seile, Davis Pretkalnins
Supervisors: Arturs Miksons

Introduction

According to Latvian Disease Prophylaxis and Control center there were registered 91 571 patients with diabetes mellitus in 2017. 682 out of these patients were less than 19 years old. The PAID is a 20 item self-report questionnaire that assesses a range of emotional problems related to having type 1 or type 2 diabetes. Previous research has shown that the PAID is a clinically relevant and psychometrically sound instrument (Welch et al (2003)). Diabetes specific stressors were found to be associated with less adequate self-care and impaired glycemic control (Peyrot et al (2005)).

Aim of the study

Evaluate the association of PAID score with HbA1c(%), Hypoglycemia (times/week) and Blood sugar level when hypoglicemia symptoms start(mmol/l) for adolescents (11 – 18 years old) with type 1 or 2 diabetes mellitus.

Methods

This is a cross-sectional study including 44 adolescent patients (11-18 years old), diagnosed with type 1 or type 2 diabetes mellitus(DM), in a single university hospital (2018-2019). Patients were given anonymous PAID questionnaire that was translatet in Latvian and Russian language. To evaluate glycemic control of participants anonymous questionnaire of 10 additional questions was designed. Descriptive statistical analysis and Pearson correlation was used to evaluate the results.

Results

There were 43 patients diagnosed type 1DM and 1 with type 2DM. The mean age 14.05 ± 2.19 (mean ± SD). Diabetes duration 4.9±4.3 years, 47.7% female and 52.3% male. Glycemic control HbA1c% 11.3 % ± 4.9, Hypoglycemia (times/last week) 2.39 ± 1.73. Blood sugar level (mmol/l) when hypoglicemia symptoms start was 3.87 ± 0.83. PAID score was 22.8 ± 14.16. Association between PAID score and HbA1c(%) was not found (rxy= -0.161; p=0.296). Association between PAID score and Blood sugar level when hypoglicemia symptoms start was found (rxy= – 0.332; p= 0.037). Relation between PAID score and Hypoglycemia (times/last week) was found (rxy= 0.445; p= 0.012).

Conclusions

Relation between PAID score and HbA1c(%) levels was not found. There were 6 patients who scored over 40 points in PAID scale – which indicates that these patients may be at the level of “emotional burnout” and warrant special attention. 6 patients scored bellow 10 points while having high HbA1c(%) levels - this may be indicative for denial. Association between PAID score and blood sugar level when hypoglycemia symptoms start was found showing that patients who score higher in PAID scale have lower blood sugar level when hypoglycemia symptoms start. Association between hypoglycaemia times per last week and PAID score was found indicating that patients who had more hypoglycaemia episodes duringlast week scored higher points in PAID scale.

Seasonal glycemic variability observed in long-duration Continuous Glucose Monitoring Systems in paediatric patients with type 1 diabetes mellitus.

Presenting author: Jędrzej Chrzanowski - Medical University of Lodz,
Authors: Jędrzej Chrzanowski, Arkadiusz Michalak
Supervisors: Konrad Pagacz, Wojciech Fendler, Agnieszka Szadkowska

Introduction
Self-monitoring of blood glucose (SMBG) is the mainstay of successful therapy of type 1 diabetes mellitus (T1DM). Application of Continuous Glucose Monitoring Systems (CGMS) allows for increased frequency of SMBG (in 5-minute intervals). This method enables the patient to dynamically measure glycemic changes, described by glycemic variability (GV) indices.

Due to increased use and better sensors used in CGMS devices, it is now possible to evaluate harmonic and seasonal nature of GV using long term CGMS records.

Aim of the study
Determination of glycemic variability (GV) indices' seasonal and harmonic nature, and its dependence on meteorological conditions specific for time of registration.

Methods
Continuous Glucose Monitoring System was used to register glycemic levels in group of 29 patients, from November 2015 to February 2019. Patients included in the study were <18 years, had clinically confirmed T1DM lasting for least 6 months and were treated using insulin pump. Mean duration of a CGMS recording was 438 days (+/-275 days).

CGMS data was synchronised with meteorological data specific for time and place of registration. GlyCulator 2.0 was used to calculate glycemic indices for each patient.

Influence of meteorological factors on GV indices was assessed using Pearson correlation. Unsupervised classification of patients was performed using k-means clustering. Differences in GV indices between selected groups were confirmed using ANOVA with Tukey-Kramer's post-hoc.

Results
Power spectrum analysis showed a clear periodicity of 3, 6 and 12 months for both glycemic variability (GV) indices and meteorological data.

Clustering identified three distinct groups of patients, with the main differentiating factor being the correlation of GV changes and mean daily temperature. Differences in GV indices between the three groups were significant, with mean glycemic levels [1: 132mg/dl (95%CI 131-133mg/dl), 2: 136mg/dl (95%CI 135-136mg/dl), 3: 127mg/dl (95%CI 125-128mg/dl), p<0,0001] and coefficients of variation measured using full CGMS-records [1: 28.50% (95%CI 28.20-28.80%), 2: 30.31% (95%CI 30.04-30.58), 3: 32.59% (31.99-33.20%), p<0,0001].

Conclusions
Changes in GV indices indicate important inter-personal differences between patients evidencing patient-specific seasonal trends of GV. Evaluating patient-specific profile of seasonal changes may have implications on both clinical assessment and research concerning patterns of GV changes in childhood T1DM.

The Attitude of Polish and American Mothers Toward Breastfeeding – A Questionnaire Study

Presenting author: Dominique Gnatowski - Medical University of Warsaw
Authors: Dominique Gnatowski, Steven Hamati, Anna Turska-Szybka
Supervisors: Anna Turska-Szybka

Introduction
Exclusive breastfeeding is recommended up to 6 months of age and no longer than 12 months.
Aim of the study
To compare the attitude of Polish and American mothers toward breastfeeding.
Methods
Surveys consisting of 49 questions concerning breastfeeding were given to mothers from Philadelphia (USA) and Warsaw (Poland). Statistical analyses including Spearman correlations were made using Statistica 12.
Results
There were 500 Polish and 504 American questionnaires collected. The average age of Polish and American mothers was 39.0±6.5 and 37.7±8.6 ($p=0.008$). 47.2% of Polish and 42.3% of American mothers had a graduate level of education ($p>0.05$). Polish (91.8%) and American (88.3%) mothers were mainly in the middle social class ($p>0.05$). In Poland 5.8% of mothers bottle-fed, 63.8% both breastfed and bottle-fed, and 30.4% only breastfed, and in the U.S. 16.5%, 70.1%, and 13.4%, respectively ($p<0.05$). Among Polish and American mothers, 50.9% and 79.0% ($p<0.05$) breastfed all of their children, 27.1% and 39.2% breastfed up to 6 months ($p<0.05$), and 11.8% and 0.2% breastfed up to 2 years, respectively ($p<0.05$). During the day, Polish mothers breastfed every 3 hours (27.9%) and every 4 hours (42.8%), and American mothers every 3 hours (36.6%) and every 4 hours (37.9%) ($p<0.05$). In Poland, 74.6% of mothers breastfed their children at night with 41.1% feeding 3 times per night, and in the U.S. 87.8% at night with 35.4% 3 times per night ($p<0.05$). During the eruption of primary teeth, 36.0% and 57.7% of Polish and American mothers both breastfed and bottle-fed their children ($p<0.05$). The more educated a Polish mother, the shorter she breastfed ($p=-0.279$) and for an American mother, the longer she breastfed ($p=0.134$). The higher the social status of a Polish mother, the shorter she breastfed ($p=-0.144$), and for an American mother, the longer she breastfed ($p=0.122$).
Conclusions
Most mothers in Poland and the U.S. both breastfed and bottle-fed, with most feeding 3 times per day and 3 times at night. There was an inverse correlation between education and social status and the duration of breastfeeding for Polish mothers while the opposite was true for American mothers.

The Oral Health Habits and Modifying Factors of Mothers of Young Children in Urban Areas in the United States and Poland – A Questionnaire Study

Presenting author: Dominique Gnatowski - Medical University of Warsaw
Authors:Steven Hamati, Anna Turska-Szybka, Dominique Gnatowski
Supervisors: Anna Turska-Szybka

Introduction
In the U.S. and Poland, early childhood caries (ECC) in children is still a health concern.
Aim of the study
To compare the oral health habits and modifying factors of both American and Polish mothers and their children.
Methods
Surveys consisting of 49 questions were given to mothers from Philadelphia (USA) and Warsaw (Poland). Statistical analyses including Spearman correlations were made using Statistica 12.
Results
There were 500 Polish and 504 American surveys collected. The average age of Polish and American mothers was 39.0±6.5 and 37.7±8.6 ($p=0.008$). 47.2% of Polish and 42.3% of American mothers had a graduate level of education and 91.8% and 88.3% were in the middle social class ($p>0.05$). Of Polish and American mothers 52.8% and 59.1% did not have dental caries during pregnancy or breastfeeding ($p<0.05$). Polish (80.0%) and American (92.7%) mothers received instructions about caring for children's oral health: 55.3% and 46.3% from the dentist and 56.5% and 46.3% from the pediatrician ($p<0.05$). 76.1% of American children above 3-4 years, never had dental caries but 43.1% of Polish children had caries ($p<0.05$). In Poland 26.4% and in the U.S. 17.3% of mothers cleaned their children's toothless mouths after feeding and before bed. When the first teeth appeared, 80.7% and 47.8% of mothers started cleaning their children's teeth ($p<0.05$). In both countries if mothers had systemic diseases they were more likely to breastfeed for a shorter time ($p=-0.173$, $p=-0.011$). As a Polish mother's education level and social status increased smoking during pregnancy ($p=-0.260$, $p=-0.207$) and breastfeeding decreased ($p=-0.270$, $p=-0.206$). In Poland, the higher the education and status of a mother, the earlier she started cleaning her children's teeth ($p=-0.270$). Similarly, with U.S. mothers ($p=-0.196$), but without the social status correlation.
Conclusions
Mothers received instructions from both the dentist and pediatrician about caring for their children's oral health. In Poland, a higher percentage of mothers cleaned the child's toothless mouth after feeding and before bed as compared to the U.S. However, they did not start brushing the children's teeth immediately after the appearance of the first tooth. There was a higher incidence of caries reported in Polish children than American children.

The Hobbies, Interests and Future Career Occupational Planning of Children with Special Needs in Vilnius, Lithuania

Presenting author: nida kotryna mulokas - vilnius university
Authors: Nida Kotryna Mulokas, Greta Paulaitytė
Supervisors: Sigita Lesinskienė

Introduction

Special needs children are often overlooked and never asked about their personal interests or ideas for their future, unlike typical children who readily provide answers to questions regarding their likes or dislikes and ideal career choices, be they realistic or underdeveloped. While children with neurological and psychiatric disorders are of variable competence in abstract thought and self evaluation, the application of such personal questions is a part of their normal socialization process and development, and thus should not be ignored.

Aim of the study

Our goal was to interview as many willing special needs students of Silas special needs school and to obtain their answers to questions regarding their personal interests and ideas for their future.

Methods

Each student has been interviewed in semi-structured form individually and independently, with the specially designed list of questions to cover, including their age, gender, family situation, hobbies, afterschool activities, topics at school that they like or dislike, their ideas for themselves when they graduate from school, if they want to take part in community service, and if they have a career choice made for themselves, as well as what influenced their making that choice for themselves. We also obtained as much medical and diagnostic backgroundfrom school documents, including IQ results.

Results

26 special needs students were inerviewed. 10 female (37%) and 17 male (73%), between the ages of 10 and 21, at the average age of 16.7 years old. 15 students state that they have already thought about and decided on their future employment, and 11 are either undecided or have little to no comprehension of what their future entails. Further results will be discussed in more detail within the presentation.

Conclusions

While level of IQ and intellectual ineptitude have significant influence on each student's ability to comprehend and answer the questions, we maintain that social exposure to the topics of career choices, finances, personal interests and basic societal functions presented at school and at home have as great of an influence on each student's self realisation.

Pediatric Computed Tomography of the Head and the Assessment of Radiation doses

Presenting author: Kitija Nulle - Rigas Stradins University
Authors: Kitija Nulle Nulle
Supervisors: Ilze Apine

Introduction

Nowadays computed tomography (CT) is one of the most frequently utilized imaging modality, but it is also becoming a major source of patient exposure to radiation, particularly in pediatric patients, who are more sensitive to radiation.

That is why diagnostic reference levels (DRL) as a tool for patient protection in diagnostic imaging were introduced. Dose length product (DLP, mGy) and volume computed tomography dose index (CTDIvol, mGy cm) are recommended values for setting the DRL.

Aim of the study

Aim of the study was to evaluate DLP and CTDIvol that accounts for both radiation intensity and total radiation dose in pediatric head CT examinations and to compare them with European pediatric dose reference levels (PiDRLs), thus gaining impression on the overall situation in the country and to evaluate whether dose management is necessary.

Methods

This is a retrospective descriptive study of radiation doses recorded for CT examinations of head for a total of 157 pediatric patients at one regional hospital in Latvia from July 2016 till June 2018.

Radiation estimates were determined using DLP and CTDIvol as provided on the operating console.

Results

Patients' age ranged between 1 and 17 years. Data were split into two groups based on their age: 1st group (n=47) included patients younger than 10 years, the 2nd group (n=109) included patients older than 10 years.
Mean values of CTDIvol in the 1st group were 62.23 mGy (2016), 63.04 mGy (2017), 62.76 mGy (2018).
Mean values of DLP were 1309.42 mGy x cm (2016), 1131.75 mGy x cm (2017), 1148.20 mGy x cm (2018).
Mean values of CTDIvol in the 2nd group was 60.23 (2016), 62.86 (2017), 61.67 (2018).
Mean values of DLP were 1214.29 (2016), 1172.23 (2017), 1236.94.
Recommended European DRLs for CT of the head depend on the age group with lowest value for patients younger than 1 year. Both DLP and CTDIvol DRLs increase in patients older than 1 year and they increase again in patients older than 6 years.CTDIvol values vary from 24 to 50mGy, and DLP values vary from 300 to 650mGy cm based on the age of child.

Conclusions

Registered radiation values from CT scans were generally higher than quoted in European guidelines for diagnostic reference levels for pediatric imaging.

There was 55,58% increase in CTDIvol (in 2016), 57,60% (2017) and 56,85% (2018) in 1st group compared to European Guidelines. In 2nd group there was 50,58% (in 2016), 57,15% (2017) and 54,18% (2018) increase in CTDIvol.DLP values increased more than twice namely 159,29% (in 2016), 124,11% (2017) and 127,37 (2018) in 1st group. There were similar results in 2nd group, namely 140,45% (in 2016), 132,12% (2017) and 144,94% (2018) increase in DLP values. Furthermore, values gathered during this study did not fallow the pattern mentioned in Guidelines. CTDIvol values do not differ in both patient groups as well as DLP values.

Analysis of the levels of serum Toxoplasma IgG antibodies and severity of ocular lesions among pediatric patients with recurring ocular toxoplasmosis.

Presenting author: Agata Joanna Ordon - Medical University of Lodz
Authors: Agata Joanna Ordon, Katarzyna Paździora
Supervisors: Ewa Majda-Stanisławska, Anna Kuc

Introduction
The infection with an obligate intracellular parasite Toxoplasma gondii through congenital or acquired routes is one of the most common cause of infectious chorioretinitis worldwide.
Aim of the study
The aim of the study was to analyze the levels of serum Toxoplasma IgG antibodies among pediatric patients with ocular toxoplasmosis and to observe the severity of ophthalmological symptoms.
Methods
The study was designed as a retrospective analysis of medical records of pediatric patients with ocular toxoplasmosis. The inclusion criteria were documented ocular toxoplasmosis (characteristic lesions in ophthalmoscopy, positive serum Toxoplasma IgG antibodies >8.8 IU/ml) and at least one recurrence. All of the patients were treated with pyrimethamine and sulfadiazine. Data from the records concerning age, sex, age at diagnosis, levels of serum Toxoplasma IgG antibodies at diagnosis and recurrences, ocular lesions, number and time of recurrences were evaluated. The results were subject to statistical analysis (STATISTICA 13.1).
Results
13 cases were identified (9 females, 4 males). Present age of patients ranged from 10 to 21 years old (mean 15.7 ±1.03 years). The age at diagnosis ranged from 0 to 13 years old (mean 6.85 ±4.82 years). The observation time ranged from 1 to 17 years (mean 5.77 ±3.98). During the observation time at least one recurrence was reported in all of the cases (100%), 2 recurrences were reported in 7 cases (53.8%) and 3 recurrences were reported in 1 case (7.7%). Mean time elapsed from the diagnosis to the first recurrence was 4 ±3.67 years (one month to 15 years), to the second recurrence 6.86 ±4.94 (2 to 17 years) and 4 years to the third recurrence (only one case). The level of serum Toxoplasma IgG antibodies at diagnosis was significantly higher than at first recurrence ($p=0.007$). No correlation was found between the age at diagnosis and time from diagnosis to the first recurrence ($r= -0.45$, $p>0.05$). At diagnosis active ocular toxoplasmosis infection in one eye was reported in 75% patients (right eye in all of the cases) and both eyes were affected in 25% patients. Retinal scarring was present in 3 cases (25%).
Conclusions
Despite administered treatment recurrences of chorioretinitis may be expected. The results of our study suggest that the level of serum Toxoplasma IgG antibodies is significantly higher at diagnosis than during first recurrence and that the age at diagnosis do not correlate with the time elapsed to the first recurrence. Further investigations with longer follow-up and larger group of patients are needed to determine long-term outcomes of treatment. Ocular toxoplasmosis is a progressive and recurring disease with vision-threatening complications and therefore may lead to serious visual impairment. Public awareness regarding this infection is crucial for the prevention of this infection.

A COMPARISON OF ADVERSE CHILDHOOD EXPERIENCES (ACE) INTYPE 1 AND TYPE 2 DIABETES MELLITUS ADOLESCENT PATIENTS AND ADOLESCENTS WITHOUT DIABETES MELLITUS

Presenting author: Dace Seile - Riga Stradiņš University
Authors: Dace Seile, Romāns Beskrovnijs, Dāvis Pretkalniņš
Supervisors: Artūrs Miksons

Introduction

According to Latvian Disease Prophylaxis and Control center there were registered 91571 patients with diabetes mellitus in 2017. 682 out of these patients were less than 19 years old.. Studies using adverse childhood experiences (ACE) questionnaire have foundthat people who have experienced any ACE are at a greater risk for developing diabetes and having poorer control of it (Huffhines, Noser, Patton (2016)). Some findings from studies show that 44-52% of adults report experiencing atlest 1 ACE prior to age of 18 and between 6-15% 4 or more ACE (Huffhines, Noser, Patton (2016)). And data from 2012 year shows that 678 810 children in U.S. were victims from substantiated maltreatment (US Department of Health and Family Services. Child maltreatment (2012)).

Aim of the study

The aim of this study was to determine ACE score for patients with diabetes mellitus type 1 and type 2 and for the adolescents without diabetes and compare the difference.

Methods

This is a cross-sectional study including adolescents patients 11-18 years old, diagnosed with type 1 or type 2 DM, in a single university hospital (2018-2019), and adolescents 11-18 years old without diabetes mellitus. Adapted ACE-IQ scale was used, it was translated into latvian and russian languages.Descriptive statistical analysis andindependent samples T-test was applied to evaluate the results. Cronbach's Alpha was used to test reliability of ACE-IQ.

Results

There were 43 patients diagnosed with type 1DM and 1 with type 2DM, mean age 14.05 ± 2.18 (mean ± SD), diabetes duration 4.9 ± 4.2 years, 52.3% male, Cronbach's Alpha for ACE-IQ were 0.696. ACE score: 95.5% of adolescents with DM had experienced an adverse childhood event. Adolescents without diabetes (n=18), meanage 15.5 ±2.43, 72,2% female. All of the adolescents without DM had experienced at least 1 ACE, 77.9% had an ACE 3 or higher. Most common form of abuse being emotional abuse in 77.8% and bullying in 66.7% (most commonly was made fun ofwith sexual jokes, comments, or gestures in 33.3%). For adolescents with diabetes the most common experience being community violence in 65.9% and bullying in 56.8% of cases (most commonly due to diabetes). Comparing adolescents with DM and adolescents without DM no statistically significant difference was found (p=0.08).

Conclusions

There was no statistically significant difference found comparing adolescents with DM and without. Adolescents without diabtes mellitus had experienced at least 1 ACE, comparing to adolescents with DM were the most of adolescents had experienced ACE. The forms of most common abuse were different, the most common for adolescents without diabetes being emotional abuse and for DM patients being community violence. The bullying reasons also were different for diabetes patients being due to diabetes, but for patients without being making fun of with sexual jokes, comments or gestures. From these findings a hypothesis could be made that different types of abuse could lead to different health outcomes.

The usefulness of the Oral Glucose Tolerance Test in the diagnosis of glucose metabolism disorders in adolescents with simple obesity

Presenting author: Zuzanna Witczak - Jagiellonian University Medical College
Authors: Zuzanna Witczak
Supervisors: Malgorzata Wojcik

Introduction

The incidence of overweight and obesity among children has increased dramatically in recent decades. Studies report an increased prevalence of type 2 diabetes mellitus (DM2) in obese children and adolescents, which may have significant impact on future health.

Aim of the study

The aim of this study was to determine the prevalence of DM2 and impaired glucose regulation in a group of children with obesity at the Children's University Hospital in Krakow.

Methods

The study population consisted of 98 patients, 46 boys and 52 girls, diagnosed with obesity (BMI SDS >2) at the Department of Pediatric and Adolescent Endocrinology. The mean age was 11.9 +/- 3.3, ranging from 3.5 to 17.7 years. The children underwent a standard 2-h oral glucose tolerance test (OGTT). Additionally, we measured values of fasting insulin concentration and insulin concentration 120 min. after the OGTT. Patients were evaluated in terms of impaired fasting glucose (IFG), impaired glucose tolerance (IGT) and diabetic status. Insulin resistance was evaluated with HOMA-IR.

Results

The mean BMI SDS in our group was 4.06 +/- 1.76. There were no cases of type 2 diabetes nor impaired fasting glucose. Impaired glucose tolerance was detected in 4.08% (n=4) of patients. The mean value of fasting insulin concentration was lower in male patients (p=0.02), and mean insulin concentration after the OGTT was also lower in males (p=0.002). There were are no significant differences between male and female participants in regards to BMI SDS, height, or weight. BMI correlated positively with fasting insulin concentration (r=0.4, p= 0.0001), and there was is also a correlation between HOMA-IR and BMI SD (R= 0.4, p= 0.0002).

Conclusions

Both DM2 and IGT are rare in obese children. Female patients seem to be more predisposed to these glucose metabolism disorders, with overall significantly higher fasting insulin concentration values, as well as higher insulin values after the OGTT.This gender difference may be useful to explore further

Dispositional self-control is negatively related to perceived stress above and beyond Big-Five personality traits in adolescents

Presenting author: Stanisław Czerwiński - Uniwersytet Gdański
Authors: Stanisław Konrad Czerwiński, Paweł Andrzej Atroszko
Supervisors: Paweł Andrzej Atroszko

Introduction
Dispositional self-control is defined as the capacity for altering one's own responses, especially to bring them into line with standards such as ideals, values, morals, and social expectations, and to support the pursuit of long-term goals (Baumeister, Vohs, & Tice, 2007). In recent years, it is obtaining increasing interest in clinical and personality psychology research. The construct has been found to play a crucial role in predicting life achievement, life satisfaction and stress. Stress is known to affect health and quality of life greatly. Karim & Chaudhri (2012) postulated that some people are getting more susceptible to losing control as a result of rapid advances in technology, overstimulation and the subsequent diminishing effort towards emotional growth and awareness. With increasing numbers of stimuli in the modern word individuals' self-control may be imperative. Adolescents have been found to have lower levels of self-control in an emotional context than other age groups, making the trait all the more important at this stage of life.

Aim of the study
The aim of the study was to examine whether dispositional self-control is significantly related to perceived stress in an adolescent sample, when controlling for other personality variables.

Methods
The study was conducted on 483 adolescents (307 (63.6%) female and 173 male (35.8%), 3 persons (.6%) did not report gender) from three different high schools in Gdańsk. Mean age was M = 16.91 (SD = .74). The participants completed Brief Self-Control Scale alongside Perceived Stress Scale and Mini-IPIP scale for measuring Big Five personality traits. The instruments used were valid and reliable. Demographic data was also collected.

Results
The results of the study showed that dispositional self-control is negatively correlated with perceived stress. Hierarchical regression analysis revealed that when controlling for Big Five personality traits the relationship between self-control and stress was still significant ($\beta = -.10$). Other variables significantly related to stress were neuroticism ($\beta = .48$) and gender (females scoring higher) ($\beta = -.61$).

Conclusions
These results underline the importance of self-control in individuals' health and well-being, as reduced stress can have great influence on all aspects of ones' quality of life. More research on the relationships between trait self-control and different aspects of quality of life could significantly expand the understanding of the construct.

Family violence among older adult patients- screening in Poland families

Presenting author: Karolina Filipska - Collegium Medicum im. Ludwika Rydygiera w Bydgoszczy, UMK w Toruniu

Authors: Karolina Filipska
Supervisors: Robert Ślusarz

Introduction
Elderly abuse is one of the most important problems of social and health policy among countries around the world. Making a real and reliable assessment of the occurrence of violence is difficult to implement.

Aim of the study
The aim of this work is to show the frequency of physical, psychological, sexual and economic violence among the elderly people.

Methods
Older adults, who were aged≥60 years (N = 200) were qualified for the study. The studied population consisted of 112 women (56.0%) and 88 men (44.0%). The whole project procedure only included filling in the survey questionnaire. The verification of hypotheses was based on tests: chi-square test, chi-square test with continuity correction and logistic regression models.

Results
Within the obtained own results, out of 200 respondents, 77 people (38.5%) experienced violence during the last 12 months. Most of the respondents (68.8%) experienced various forms of violence simultaneously. Among those who experienced violence, 75.3% experienced psychological violence, 68.8% economic violence, 48.1% physical violence, and 22.1% experienced sexual violence. The rate of physical (OR=2.48; 95%CI=1.13,5.44; p=0.02), verbal (OR= 1.94; 95%CI=1.02, 3.67; p=0.04), sexual (OR=4.05; 95%CI=1.13, 14.5; p=0.03) and economic (OR=1.98; 95%CI=1.02, 3.83; p=0.04) violence is statistically significantly higher respectively in women than in men. The level of education is a risk fact for physical violence (p=0.02). It has also been shown that singles, people with the income <233 EUR and people living in urban areas are most often victims of violence.

Conclusions
The results suggest that elderly abuse is a fairly common phenomenon. Our data also provide confirmation of other research conducted in this area.

Psychiatry, Health Psychology and Clinical Psychology (Friday 12.04 - 12:00-14:15)

Study of the quality of life with the FACIT scale with disturbed quality of sleep in a person over 60 years of age

Presenting author: Paulina Kasperska - Collegium Medicum UMK Bydgoszcz
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Introduction
People are more interested about research on quality of life since early forties XX century. The concept of quality of life have multilevel and multidimensional character. The concept of well-being describes the psychological, emotional, social, cognitive and physical aspects. Quality of life should be understood as a subjective well-being, and ability to function in different areas of life, including the assessment of resources and capabilities.

Aim of the study
The main aim of the study was to determine the level of quality of life by FACIT scale in people with good and bad quality of sleep examined by Epworth scale in aspects such as: physical condition, family and social life, emotional state, functioning in everyday life, fatigue, discomfort associated with illness, spirituality.

Methods
The study included 102 people hospitalized in Geriatric ward. The research group was about 60-92 years old. The average age in research group was 77,28 years old. Women accounted n=72 people, men n=30 people. The Avarage age of women was n=77,8 years old, average age of men was n=77,29. There was no significant difference in the average age between men and women.

To evaluate quality of life (in general) people with good and bad quality of sleep was FACIT scale, and Epworth scale. Statistical analysis was carried out on the basis of the Shapiro-Wilk test, U Mann-Whitney test, ANOVA test. For the level of statistical significance was setp ≤ 0.05.

Results
Good quality of sleep has significant impact on the functioning in the areas such as: the number of sleep hours (total), physical activity, functioning in day life, spiritual well-being, emotional well-being, quality of life (in general)

Conclusions
Good sleep quality has a significant impact on the functioning of the areas, i.e. the number of sleepless hours (total), physical performance, functioning in everyday life, spiritual well-being, emotional well-being, quality of life.

There is a need to conduct in-depth studies on the quality of life of elderly people with sleep disorders in the Polish population, because after conducting a systematic review of scientific work, research on similar subjects has not been resolved.

Frequency of depression symptoms for Latvian high school kids using Children's Depression Inventory

Presenting author: Marta Paeglie - Univesity of Latvia
Authors: Marta Paeglite, Ilze Blake, Ija Cimdina
Supervisors: Ija Cimdina

Introduction

Childhood depression is a serious mental problem which can leave negative effect on child's development and future adulthood. Children's Depression Inventory (CDI) is most widely used and best studied scale for depression.There has no previous studies using CDI in Latvia to asses the frequency of depressive symptoms in high school children age group.

Aim of the study

To study frequency of depression symptoms for Latvian high school kids.

Methods

The study was conducted during the year 2019 in high schools of Latvia. There was 337 participants, 267 girls and 70 boys in age group 15-20 year old. The Children's Depression Inventory (CDI) was administered to each participant. From data analysis total of 19 participant responses were excluded (age 15, 19, 20) due to small sample group. The final sample consisted of 318 children, 250 girls and 68 boys. The data analysis was carried out with GraphPad Prism v6 software, age, gender and depression symptom factor categories were compared with Two-way ANOVA analysis of mean values of CDI scores, significance level was set to $p<0.001$.

Results

Distribution of CDI scores among high school children reviles there is no significant variation between groups-boys and girls; age groups-16, 17, 18 year old. The average score for boys was 14.15 (SD: 7.509) and for girls 20.44 (SD: 8.976). The standard deviation for boys was When analyzing factors anhedonia, ineffectiveness, negative self-esteem, negative mood, interpersonal problems significant increase of anhedonia, negative self-esteem and negative mood was observed in girls compared to boys.

Conclusions

This type of study using CDI was the first study in Latvia.Our findings surges that there is a need to extend this studyto nation wide research. That could help to develop better understanding and possible prevention tools fordepression development for high school children.

Physical appearance comparison, fear of negative appearance evaluation relationship with self-esteem and life satisfaction

Presenting author: Agnė Šarskutė - Vilnius University
Authors: Agnė Šarskutė, Jokūbas Gužas
Supervisors: Vilma Andrejauskienė

Introduction

Nowadays the concern about body shape and appearance is rising dramatically as well as the fear to experience negative judgment of one's physical appearance. Nonetheless, existing researches lack data on these latter aspects relationship with life satisfaction and self-esteem.

Aim of the study

To determine correlation between frequency of body comparison, fear of negative appearance evaluation, self-esteem and satisfaction with life.

Methods

101 young adults (age M = 17,89, SD = 0,53), 43 female and 58 male participants took part in the study. Participants filled Fear of Negative Appearance Evaluation Scale (Cronbach α = 0,912), Physical Appearance Comparison Scale-Revised (Cronbach α = 0,946), Satisfaction with Life Scale (Cronbach α = 0,831), Rosenberg Self-Esteem Scale (Cronbach α = 0,747).

Results

For males more frequent comparison of ones physical appearance with the appearance of the same gender individuals were significantly related with decreased life satisfaction ($r = -0,265$, $p < 0,05$) and low self-esteem ($r = -0,380$, $p < 0,01$). Whereas for females body comparison was significantly related only with lower self-esteem ($r = -0,362$, $p < 0,05$). In males greater anxiety, caused by the fear to experiance negative judgement of one‘s physical appearance was significantly related with lower self-estem ($r = -0,409$, $p < 0,01$) and dissatisfaction with life ($r = -0,386$, $p < 0,01$). In females it was significantly related again only with lower self-esteem ($r = -0,450$, $p < 0,01$). In general, more frequent body comparison had stronger negative relation with self-esteem ($r =-0,388$, $p < 0,001$) than with life satisfaction ($r = -0,260$, $p < 0,01$). Moreover anxiety level of negative physical appreciation had stronger negative correlation with self-esteem ($r = -0,454$, $p < 0,001$) than with life satisfaction ($r = -0,264$, $p < 0,01$).

Conclusions

Frequent physical appearance comparison and anxiety to be negatively judged were strongly associated with lower self-esteem as well as with lower life satisfaction. However, more research is needed.

LINK BETWEEN ADVERSE CHILDHOOD EXPERIENCES (ACE), EMOTIONAL STATE AND GLYCEMIC CONTROL, IN TYPE 1 AND TYPE 2 DIABETES MELLITUS ADOLESCENT PATIENTS

Presenting author: Dace Seile - Riga Stradiņš University
Authors: Dace Seile, Romāns Beskrovnijs, Dāvis Niks Pretkalniņš
Supervisors: Artūrs Miksons

Introduction

According to Latvian Disease Prophylaxis and Control center there were registered 91571 patients with diabetes mellitus(DM) in 2017. 682 out of these patients were less than 19 years old.. Studies using ACE questionnaire have found that people who have experienced any ACE are at a greater risk for developing DM and having poorer control of it (Huffhines, et al., 2016). In a study of 9508 adults using ACE-IQ they found that there is strong relationship between the number of categories of childhood experiences and multiple risk factors ($p<0.001$) for the several of the leading causes of death in adults (Felitti,et al., 1998). The aspect of emotions in DM patients has been poorly assessed with only few studies available. In a research including 11615 patients anger was linked to development of type 2 diabetes (Golden,et. al., 2005).

Aim of the study

The aim of this study was to determine ACE scores (ACEs) and its relation with glycemic control and emotional state, social and school life in adolescents with DM type 1 and 2.

Methods

This is a cross-sectional study including adolescents patients 11-18 years old, diagnosed with type 1 or type 2DM, in a single university hospital (2018-2019). Adapted ACE-IQ scale and additional questions about emotional state, school and social life were obtained. The questionaire was translated into latvian, russian languages. Metabolic control was measured using HbA1c%. Descriptive statistical analysis and Spearman's rank correlation was applied to evaluate the results. Cronbach's Alpha was used to test the reliability of ACE-IQ.

Results

There were 43 patients diagnosed with type 1DM and 1 with type 2DM, mean age 14.05±2.18 (mean±SD), diabetes duration 4.9±4.2 years, 52.3% male, HbA1c% 11.3 % ± 4.9. Cronbach's Alpha for ACE-IQ 0.696. ACEs: 95.5% of children had experienced an adverse childhood event. The most common ACE being community violence in 65.9% and bullying in 56.8% of cases (most commonly due to diabetes). An association between ACEs and HbA1c% was not found ($rs= - 0.04$; $p=0.78$), but an association was found between ACEs and times of changing schools ($n=18$; $rs= 0.629$; $p=0.005$) and separation with significant other ($rs= -0.473$; $p=0.001$). Also the times of changing schools was associated with HbA1c% ($rs= 0.538$; $p=0.021$) and with times of hospitalization due to diabetes ($rs= 0.601$; $p=0.008$). The most common emotions reported was worry(63.6%), fear(52.3%) and anger(45.5%).

Conclusions

There was no association found between HbA1c% levels and ACEs. The significant associations were found between ACEs and times of changing schools and with the separation with the significant other. The times of changing schools was associated with HbA1c% level and with times of hospitalization due to DM, that leads to a hypothesis that ACEs may, in fact, interfere with the glycemic control and management of DM. The most common emotions found was worry, fear and anger, these findings need to be analyzed further to distinguish whether they are associated with diabetes or not.

Lifestyle Relationship with Burnout and Personal Wellbeing in General Practitioners

Presenting author: Greta Styraitė - Vilnius University
Authors: Greta Styraitė, Agnė Šarskutė
Supervisors: Jūratė Pečeliūnienė, Irena Žukauskaitė

Introduction

Burnout is a significant problem among general practitioners (GPs) which has a negative effect on the physical and mental health. GPs lifestyle has an important role for their general health. Moreover, GPs wellbeing is one of the key factors to their productivity and willingness to ensure high-quality primary health care.

Aim of the study

To assess relationship between GPs‘ lifestyle, burnout and wellbeing.

Methods

73 GPs took part in the cross-sectional study. Response rate was 75%. They were grouped into 3 groups: the 1st - living healthy lifestyle (HLS) – not smoking, not overeating and having sports at least 3 times per week (n=17), the 2nd - breaking at least one of the rule (n=26, relatively healthy lifestyle (RHLS)) and the 3rd - breaking at least 2 rules (n=37, non-healthy lifestyle (NLS)). Participants filled 10 point Likert type scales about life quality, work satisfaction, satisfaction with work atmosphere, and Shirom-Melamed burnout measure (physical fatigue, emotional exhaustion and cognitive weariness scales). Also, sociodemographic data were collected. For comparison of groups ANOVA was applied.

Results

The older the GPs, the more they were taking care of their health (M(HLS)=48.47 vs. M(RHLS)= were 45.88 vs. M(NLS)=37.48, p=.033). The healthier life style was lived by the GPs, the less cognitive weariness (M(HLS)=2.24 vs. M(RHLS)=2.34 vs. M(NLS)=3.06, p=.016) and less emotional exhaustion they have felt (M(HLS)=1.94 vs. M(RHLS)=2.05 vs. M(NLS)=2.66, p=.032). Also, when groups were compared by general burnout (M(HLS)=2.57 vs. M(RHLS)=2.70 vs. M(NLS)= 3.43, p=.013). Yet there were no differences found between groups comparing work satisfaction, satisfaction with work atmosphere and physical fatigue. These results also did not differ by gender or work conditions (work alone, with primary care nurse or with doctor resident; having or not night shifts).

Conclusions

The healthier lifestyle may be protective factor against some of burnout components such as cognitive weariness and emotional depletion. Also, older age plays significant role on lifestyle, personal wellbeing and general burnout. Therefore, additional attention for the risk of burnout should be given to younger GPs.

The effect of a relaxation massage during pregnancy on the level of satisfaction of women's sexual life

Presenting author: Katarzyna Urtnowska - Joppek - Collegium Medicum im. L. Rydygiera w Bydgoszczy
Authors: Katarzyna Urtnowska - Joppek, Karolina Suwała, Kosma Kołodziej
Supervisors: Grzegorz Ludwikowski

Introduction

Available studies show a decrease in sexual contact and satisfaction with this part of life in 50-70% of women during pregnancy. Probable causes of this phenomenon are, among others, malaise and physical ailments of pregnancy. Massage, as a form of therapy of musculoskeletal disorders and relaxation, performed regularly during pregnancy, can bring many benefits, also affecting the level of sexual satisfaction.

Aim of the study

The aim of the study was to confirm the main thesis, which assumes that a regular massage can positively affect the level of sexual satisfaction of a pregnant woman.

Methods

The study group consisted of 30 women during a normal pregnancy, aged 21 - 40 years. Pregnant women taking part in the study, with the consent of the attending physician, were once a week subjected to a whole body relaxation massage, from 24 to 35 weeks of pregnancy (2-3 trimester). Patients before and after the study anonymously, via internet filled the questionnaire assessing the level of sexual satisfaction – the FSFI questionnaire (Female Sexual Function Index, Domain I, II and V).

Results

There were no statistically significant differences between responses given in 24 and 35 weeks of pregnancy. In the majority of women surveyed, there was no change in the frequency of sexual desire, frequency and intensity of sexual arousal during sexual activity, and decreased satisfaction with this aspect. On the other hand, there was a slight increase in the intensity of desire and interest in sex life. In the vast majority of cases, the level of satisfaction with sexual life, including the level of emotional closeness and sexual relationship with the partner remained unchanged despite the progress of pregnancy.

Conclusions

The effects of massage such as relaxation, pain reduction and improvement of the movement apparatus as well as a reduction in the occurrence of swelling, cellulite or stretch marks have a significant impact on general well-being and the way the pregnant woman perceives her body. These are the aspects necessary to lead a healthy, satisfying sex life, which suggests that the lack of sexual satisfaction observed in the majority of respondents may be the result of the beneficial effects of regular massage treatments.

Shopping Addiction as a behavioural addiction: Validity of Measurement and Relationship with Personality, Social Functioning and Well-Being among Polish Undergraduate Students

Presenting author: Aleksandra Uzarska - Uniwersytet Gdański
Authors: Aleksandra Uzarska, Stanisław Konrad Czerwiński, Paweł Andrzej Atroszko
Supervisors: Paweł Andrzej Atroszko

Introduction
Compulsive buying refers to the chronic, repetitive purchasing in a response to negative events or feelings (O'Guinn & Faber, 1989) and has been commonly conceptualized within the framework of behavioral addictions. However, due to the lack of sufficient data and systematic measures, the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition recognizes it as „Disorder of Impulse Control Not Otherwise Specified"(American Psychiatric Association, 2013). Several tools have been developed to assess problematic spending, most of them, however, is based on the impulse-control paradigm (Andreassen et. al, 2015). The Bergen Shopping Addiction Scale is a recent measure based on the core addiction components and has shown good validity and reliability in previous research.

Aim of the study
The aim of the study was to investigate validity and reliability of the Polish adaptation of Bergen Shopping Addiction Scale and to establish relationships between shopping addiction, personality, social functioning and well-being.

Methods
The sample consisted of 1156 students: 601 females (52.0%), 545 males (47.2%) and 10 persons (0.9%) who did not report gender, with mean age of M = 20.33 years (SD = 1.68). The participants were asked to fulfill the Bergen Shopping Addiction Scale and other questionnaires measuring personality traits, social functioning and well-being.

Results
The original 7-item one factor solution demonstrated mediocre fit to the data in factor analysis, with modification indices showing substantial covariance between error terms of Item 1 and Item 2. After allowing for correlations between these items the model had acceptable fit: CFI = .98, RMSEA = .073 (90% CI = .060 – .087). The correlation between residuals of the first and second item was .51. Cronbach's alpha coeffictient was .87 Shopping addiction was related to being female, older, narcissistic, extroversive, low in agreeableness, low in conscientiousness and having a low sense of self-efficacy. The expected associations with loneliness, social anxiety and the impairment on well-being (quality of life, general health, sleep quality and perceived stress) were also confirmed.

Conclusions
The Polish adaptation of the Bergen Shopping Addiction Scale demonstrates good validity and reliability and therefore can be used to assess shopping addiction. The results provide some support to the notion that compulsive buying is a behavioral addiction, and that it is a result of ineffective coping and dissatisfying social life. More thorough exploration of psychometric properties of the Bergen Shopping Addiction Scale is necessary to provide explanation for the correlated error terms for items. Further research should focus on investigating the addictive status of shopping andestablishing widely accepted diagnostic criteria.

Study addiction and satisfaction with intimate relationships among undergraduate students

Presenting author: Magda Wielewska - Uniwersytet Gdański
Authors:Julia Godzwon, Magda Wielewska, Paweł Atroszko
Supervisors: Paweł Atroszko

Introduction

Study addiction has been conceptualized as a potential early form of work addiction which is a subject of research for several decades now. This addiction is understood as a result of ineffective coping strategy in vulnerable individuals, consistent with previous research on addiction. Longitudinal research showed that study addiction is related to work addiction and shows similar temporal stability. Both show alike symptoms and have comparable prevalence rates. Good quality intimate relationships are recognized as a protective factor against stress and addiction. Previous studies showed that work addicts lead a problematic family and social life.

Aim of the study

The aim of the study was examining the relationship between study addiction and satisfaction with intimate relationships.

Methods

The total sample comprised 3206 students of polish universities. To replicate the basic effect, the study was conducted on two subsamples. To control the relationship of personality traits and intimate relations Mini-IPIP was used in Sample 1 and Ten Item Personality Inventory in Sample 2. In both samples The Bergen Study Addiction Scale and a one-item measure of satisfaction with intimate relationships were used. All scales showed good validity and reliability in previous studies. Hierarchical regression analyses were conducted.

Results

The research showed no relationship between study addiction and satisfaction with intimate relationships. Regression analyses revealed that satisfaction with intimate relationships was related to gender, neuroticism and openness in Sample 1, and gender, age, extraversion, conscientiousness and emotional stability in Sample 2.

Conclusions

In conclusion, students suffering from study addiction are equally satisfied with intimate relationships as non-addicted students. Study addicts could be more satisfied with their intimate life than their partners and family. These results suggest also that more developmental, longitudinal approach to the study of quality of intimate life in study and work addicts is required. Addiction is progressive in nature and in many cases it takes time to observe its unequivocal negative effects. Further studies on the structure and function of social support in study addiction are necessary.

Surgery, Urology and Traumatology

(Saturday 13.04 - 10:15-13:15)

Urban vs. rural patients. Disparities in stage and overall survival among patients treated for kidney cancer.

Presenting author: Michał Brzeziński - GUMed
Authors: Michał Brzeziński, Michał Duda, Urszula Rusek
Supervisors: Mikołaj Frankiewicz

Introduction

It is believed that citizens of rural regions have worse access to modern diagnosis and treatment. Their lifestyle and working conditions may predispose to an increased incidence of various diseases including kidney cancer. Many studies have suggested that workplace exposure to certain substances increases the risk for Renal Cell Carcinoma (RCC). Some of these substances are cadmium, herbicides, and organic solvents, particularly trichloroethylene. What is more, rural inhabitancy is associated with higher obesity risk, which may cause changes in certain hormones that can lead to RCC. Moreover, awareness of the prevalence of risk factors and knowledge about modern diagnosis and treatment methods is noticeably more common in urban regions. However there is a trend in last decades that rural regions are influenced by migratory movements both in search for work and in search for better living conditions.

Aim of the study

The aim of the study was to evaluate differences between patients from urban and rural regions hospitalizeddue to the kidney cancer in the Department of Urology of the Medical University of Gdansk, Poland.

Methods

The retrospectiveanalysis was based on 202 kidney cancer patients who underwent surgical procedures in years 2013-2015. A total of 148 cases from urban and 54 from rural areas were considered in the analysis. Place of residence, age, gender, family history, size of the kidney tumour at the time of admission to the hospital, blood test results and possible influence of risk factors, were collected using the database provided by CliniNET (CGM CLININET). Type of surgery, staging, grading, and histological type of kidney cancer were provided or verified on the basis of the patients' medical records. Residence (urban – rural) was determined on the basis of the address of patients and verified according to the National Official Register of Territorial Division of the Country (TERYT)

Results

The results showed that there are no statistically significant differences taking into cosideration age, gender, family history, size of the kidney tumour at the time of admission to the hospital or blood test results between patients from urban and rural regions hospitalizeddue to the kidney cancer.

Conclusions

The assumption that Polish rural patients are presenting with later kidney cancer stages at the time of diagnosis, and have worse chances for survival have not been statisticaly proven in the analysed group.

First episode of catamenial pnemothorax - should thoracotomy be the treatment of choice?

Presenting author: Aleksandra Czapla - Medical University of Gdansk
Authors: Aleksandra Czapla, Tomasz Marjanski
Supervisors: Tomasz Marjanski

Introduction

Catamenial pneumothorax is defined as a presence of air in the pleural cavity which occurs within 72 hours before or after the beginning of menstruation. The pathogenesis of this condition is not fully known. It might be associated with pathological perforations in the diaphragm or foci of endometrium in the lungs, while hormonal changes lead to ruptures of pulmonary alveoli. Treatment of patients with catamenial pneumothorax is characterized by frequent recurrences.

Aim of the study

The aim of the study was to evaluate the results of treatment of patients with catamenial pneumothorax.

Methods

Between January 2011 and April 2019 in Thoracic Surgery Department Medical University's of Gdansk 11 patients were treated due to pneumothorax associated with menstruation. We present results of treatment of catamenial pneumothorax. Results of surgical treatment by the means of VATS (video-assisted thoracoscopic surgery) were compared to an open approach.

Results

Eleven patients in the mean age of 31 years were analyzed. Five of them were previously treated due to endometriosis. Nine patients were initially treated with drainage with 100% recurrence. VATS bullectomy and pleurectomy were performed in all patients (2 as first-line treatment and 9 secondarily to drainage). In this group, 73% recurrence rate was noticed. Five women, as last stage therapy, underwent thoracotomy with re-pleurectomy, chemical pleurodesis, and diaphragm reconstruction. Only one woman experienced pneumothorax again(20%). Four out of 11 patients, despite surgical management, still experience relapses of this condition.

Conclusions

Treatment of catamenial pneumothorax is associated with a high number of relapses. Drainage and VATS bullectomy and pleurectomy are ineffective in this type of pneumothorax. Complex operations performed during open thoracotomy are characterized by the lowest percentage of recurrences.

Evaluation of radiation dose in micturating cystourethrography in adults.

Presenting author: Martyna Gołębiewska - Medical University of Gdańsk
Authors: Martyna Gołębiewska, Olga Wawrzaszek, Jakub Krukowski, Marcin Matuszewski
Supervisors:Jakub Krukowski

Introduction
Cystourethrography (CUG) is a well known, commonly used radiological contrast enhanced study for evaluation of the lower urinary tract, especially in patients with urethral strictures. Main disadvantage of that examination is radiation exposure to organs located within the genital area. That causes a great exposure to testicles,which are very sensitive to radiation.

Aim of the study
Aim of this study was to evaluate mean dose of radiation in adult patients during cystourethrography.

Methods
The study involved 36 patients with urethral stricture qualified for urethroplasty. All patients underwent fluoroscopy-controlled-CUG. Entrance skin dose was compared to scientifically evaluated gonadal damage inducing dose. Data containing radiation dose was recorded in Exam Protocol after each examination.

Results
Mean entrance skin dose was 23,8 mGy (range: 0,86 - 156,92).

Mean time of fluoroscopy was 1 minute and 29 seconds (range: 0:16 - 3:37).

Mean X-ray's images recorded during examinations were 6 (range: 2 - 10).

Mean dose-area product was 0,41 Gycm^2 (range: 0,027 - 2,6).

There was no statistically significant difference between patients with and without cystostomy.

Conclusions
Entrance skin radiation dose during fluoroscopy-assisted-CUG is about 10 times lower than gonadal damaging dose (270 mGy). There is no difference in exposure between patients with and without cystostomy. Variable doses of radiation are linked to the experience of the operator.

Alternative examination for CUG can be sonourethrography or MRI, which better evaluateurethral pathologies.

Different basic life support education courses and driving experience effect to drivers first aid knowledge

Presenting author: Justina Krauklytė - Vilnius University
Authors: Ieva Kvietinskaitė, Justina Krauklytė Krauklytė
Supervisors:Darius Cincikas

Introduction

Annually, more than 127,000 people are killed and at least 2.4 million people injured or disabled in road accidents in Europe. Prompt prehospital care is essential for improving outcomes of road crash victims. In case of road accidents, illness or injuries, first aid and basic life support provided by bystanders save lives, limit the extent of the injury, and reduce delays in emergency medical services. However, first aid and basic life support are not always initiated or provided sufficiently. The scale and complexity of this problem shows clearly that there is a necessity for drivers to have an ability to give first aid.

Approximately half of all countries in the European Union have implemented mandatory first aid and basic life support training for learner drivers. Lithuania is one of those countries in the European Union where all future drivers must attend a 12-hour first aid course. After finisheing their training, all drivers get a certification, which is valid for unlimited period of time. Therefore it can be concluded that the first aid knowledge is not periodically updated.

Aim of the study

The aim ofthis study was to investigate and evaluate car driver's knowledge of first aid according to driving experience and attendency of basic life support courses.

Methods

2081 participants answered identical, anonymous either online or paper form questionnaire, which consisted of 20 question based on The European Resuscitation Council Guidelines for Resuscitation 2015. Demographic information of participants was also collected. According to driving experience drivers were divided into four groups: 0 years, <2 years, 2-5 years, >5 years; based on driving experience participants were divided into four groups: did not attend any courses, attended driving school courses, attended other courses, attended both courses (organized by driving school and other courses).

Results

The age of studied car drivers ranged from 18 to 69 with median of 26 years. Drivers with no driving experience correctly responded to 8,2 of 20 (41%) questions asked; <2 years of experience – 11,6 of 20 (58%); 2-5 years – 12,3 of 20 (61,6%); >5 years – 12,4 of 20 (62,1%). It should be noted that respondents who attended only other courses scored higher number of right answers (correctly answered to 12,7 of 20 (63,5%)) compared to those who gained their knowledge during driving school lessons (11,0 of 20 (54,8%)).

Conclusions

This descriptive study demonstrates that drivers with longer driving experience have better first aid knowledge. Also, the study showed that compulsory courses organized by driving schools does not provide excellent first aid theoretical skills.

Beals-Hecht syndrome, difference in dysmorphological features between patients diagnosed based on clinical presentation and genetic testing, meta-analysis.

Presenting author: Piotr Mędza - Gdański Uniwersytet Medyczny
Authors: Piotr Mędza, Agnieszka Łabuć
Supervisors: Tomasz Mazurek, Filip Dąbrowski

Introduction

Beals-Hecht syndrome (congenital contractural arachnodactyly - CCA) is a very rare autosomal dominant genetic disease of connective tissue caused by mutation of a gene coding of fibrillin 2 (FBN2 5q 25-31). It's main features include contractures of large and small joints, arachnodactyly, kyphoscoliosis, "crumpled" ears, occasionally cardiac, and aortic bulb defects, and ocular defects. Some craniofacial features such as micrognathia, high arched palate, and cleft palate may also be present. The recent studies provide ample proof for FBN 2 mutations causing the CCA, yet due to polymorphy of mutations clinical manifestation is enough to diagnose a patient despite negative genetic testing results.

Aim of the study

Determining if there is statistically significant difference between patients who tested positively for Fibrillin 2 mutation and those who did not and were diagnosed with CCA based solely on clinical presentation.

Methods

An extensive literature search of electronic databases was executed in search of case studies describing Beals-Hecht syndrome patients. Out of 147 unique results 63 cases met the inclusion criteria. They were reviewed for clinical features of described cases, as well as genetic testing results. Based on the genetic test results patients were divided into 2 groups FBN2 mutation positive and negative respectively.

Results

No new statistically significant differences were established between patients of either groups despite genetic testing being much more prevalent. The distribution of different dysmorphological features was consistent with previous reports.

Conclusions

Further research into the matter has yet to be conducted to definitively determine prevalence of Beals-Hecht syndrome in general population. Genetic testing and counselling as well as specialist care should be provided to affected patients and their families as while the general prognosis is good, some of the CCA features (especially kyphoscoliosis) may be debilitating and are prevalent enough to warrant extra care. The similarity between FBN 2 mutation positive and negative groups proves that while genetic testing may provide definitive proofs for diagnosis, it remains not reliable enough to be used as an exclusion criterion.

WHipple-ABACUS scale as a predictor of 35-days mortality after pancreatectomy.

Presenting author: Adrian Perdyan - Medical University in Gdansk
Authors:Adrian Perdyan, Rafał Pęksa, Michał Bieńkowski
Supervisors: Michał Bieńkowski

Introduction

Pancreaticoduodenectomy (PD), also known as Whipple's procedure, is the operation used for treatment of pancreatic cancer. In the past, it was associated with mortality rates reaching 20-30%. Over time, the mortality decreased to below 5%, yet the morbidity still ranges between 38 and 44%, which is the highest among any gastroenterological cancer surgeries. Risk factors of perioperative cancer surgery were investigated over years, which lead to the development of WHipple-ABACUS scale, which is an acronym of it components (hypertension With medication, History of cardiac surgery, Age, Bleeding disorder, low Albumin, disseminated Cancer, Use of steroids, Systemic inflammatory response syndrome) each adding 1 or 2 points up to the total of 12 points.

Aim of the study

Confrontation of WHipple-ABACUS score with the postoperative course of pancreatic cancer patients.

Methods

The study group consisted of 104 patients who underwent pancreatectomy for histopathologically confirmed pancreatic adenocarcinoma between December 2007 and February 2018 at Department of General, Endocrine and Transplant Surgery, Medical University Gdansk, Poland. Preoperative history and early post-operative period were analyzed for all patients. WHipple-ABACUS score was calculated for 35 patients who had the complete data required as described. The other 69 patients lacked the information on preoperative albumins levels (worth 1 point). Therefore, a truncatedform of the score (with the total of 11 points; without albumins) was additionally assessed in all 104 patients. Statistical analysis was performed using R statistical software.

Results

Early post-operative mortality in the full group of 104 patients was associated with the higher scores of the WHipple-ABACUS scale calculated without the data on albumins (Mann-Whitney U test $p<0.05$). The group of 35 patients with the complete WHipple-ABACUS data was too small to reach any statistically meaning conclusions.

Conclusions

WHipple-ABACUS scale is a useful tool to assess the risk of early mortality after Whipple's surgery. What is crucial, even when some of its components are unavailable, it still provides clinically meaningful insights.

Epidemiology of the proximal femoral fractures in the material of the Department of Orthopaedics and Kinetic Organ Traumatology MUG

Presenting author: Radosław Rogacki - GUMed
Authors: Filip Dąbrowski, Radosław Rogacki
Supervisors: Tomasz Mazurek

Introduction

Fractures of the proximal femur are one of the most frequent causes of hospitalization in Orthopedic Wards and it is an indirect threat to health and life. In most cases, they require surgical treatment.

Aim of the study

The aim of the study is to present epidemiological data of hip fractures of the patients hospitalized in the Department of Orthopaedics and Kinetic Organ Traumatology MUG.

Methods

The study group consists of 1222 adult patients hospitalized in the Clinic in 2011-2017. The study included the type of fracture, sex, age, side and duration of the hospitalization.

Results

During the study period, 1222 patients were hospitalized in the Department and Clinic (age from 18 to 102 years, average 75.95 years), including 833 women and 389 men. There were 573 injuries of the right and 623 of the left and 26 bilateral injuries. The most common type of fracture was intertrochanteric fracture which had 614 people (49%), next one was femoral neck fracture with 544 people (43,5%) and the last one was subtrochanteric fracture with 90 people (7,5%). The hospitalization lasted on average 6.9 days, the longest was 35 days and the shortest was one day. Most complications requiring rehospitalization were in the group of people after fracture of the femoral neck (25), while the remaining types of fractures required 16 rehospitalizations.

Conclusions

Fractures of the proximal femur most frequently concern older women, most often occur intertrochanteric fractures. Femoral neck fractures require more frequent rehospitalizations. The fractures occur the most often in January and December, while the fewest in April, July and November.

Low number of vascular vessels correlates with progression in naïve prostate carcinomas

Presenting author: Julia Smentoch - Uniwersytet Gdański
Authors: Julia Smentoch, Jolanta Szade, Elke Eltze, Axel Semjonow, Anna Żaczek, Natalia Bednarz-Knoll
Supervisors: Natalia Bednarz-Knoll, Anna Żaczek

Introduction

Prostate cancer (PCa) is one of the most common cancer among men in

the industrialized countries. Despite intensive research, knowledge about PCa progression and markers (different than prostate-specific antigen, PSA) is still incomplete which hampers determining the risk of recurrence. Vascularisation is considered as one of the factors influencing patients' outcome in different solid tumors. Rich vascularity might guarantee appropriate nutrition of a tumor and facilitate its dissemination (e.g. by epithelial-to-mesenchymal transition, EMT). On the other hand, low number of e.g. vascular vessels may induce poor oxygenation of tumor microenvironment termed hypoxia. It is known that hypoxia is associated with poor prognosis of PCa patients accounting for selection of the most resistant clone(s) of cancer cells.

Aim of the study

The aim of the study was to evaluate prognostic significance of the number of CD34- and podoplanin-positive vessels in PCa patient's samples.

Methods

Seven-hundred-eighty-six tumor samples from 398 prostate cancer patients were collected during prostatectomy at the Department of Urology in Prostate Centre University Clinic Münster (Germany) and prepared as tissue microarrays (TMAs). Immunohistochemical staining was performed using anti-CD34 and anti-podoplanin antibodies and evaluated using light microscope. The number of vascular and lymphatic vessels, respectively, was documented and correlated to the panel of proteins analysed in tumor cells in the same tumor fragments as well as clinical data and patients' survival. Statistical analysis was performed using SPSS software.

Results

Low and high number of vascular (n=101/26% and n=283/74%, respectively) and lymphatic vessels (n=223/57% and n=167/43%, respectively) was found in the examined fragments of prostate carcinomas. Low number of blood vessels correlated to the shorter time to biochemical recurrence in patients treated only by prostatectomy (p=0.003), and was also proved to be an independent prognostic factor in multivariate analysis (p=0.006). The elevated levels of Loxl-2 protein (tumor cell invasion marker, p=0.028) and reduced epithelial cell marker, EpCAM protein (p=0.002) were more frequently detected in low-vascularized tumors. In case of lymphatic vessels, no correlation to clinical and molecular factors was found.

Conclusions

Low number of blood vessels indicates worse clinical outcome in prostate carcinoma and more aggressive molecular phenotype of the analysed tumors.

Epidemiology of upper limb injuries in adult patients hospitalized at the Emergency Department in the Copernicus Hospital in Gdańsk.

Presenting author: Hanna Tryniszewska - Gdański Uniwersytet Medyczny
Authors: Hanna Tryniszewska, Adam Daniel, Magdalena Trawicka, Martyna Kala, Wojciech Zadura, Filip Dąbrowski, Tomasz Mazurek, Tomasz Mazurek
Supervisors: Filip Dąbrowski, Filip Dąbrowski, Tomasz Mazurek

Introduction
According to the World Health Organization, injuries are the most common and most problematic at the present time, which contributes to a long hospitalization, convalescence and disability.
Aim of the study
The aim of the study is present the epidemiological data of upper limb trauma at the Emergency Department, in the Copernicus Hospital
Methods
The study group consists of 252 adult patients who reported to ED due to injuries of the upper limb from 01/01/2018 to 13/07/2018. The study included diagnosis, gender, age, side and anatomical area.
Results
In the period under review, 252 patients (age 18 to 96 years, average 39,93), including 81 women and 171 men, registered for ED. 114 injuries were found on the right and 138 left. The most common were: contusion 81 (32%),fracture 79 people (31%), wound 76 people (30%) sprain 5 people (2.5%), amputation 4 people (2%), dislocation 3 people (1%), abrasions <1%.

The most common injuries were in the II finger (76 patients 38%), thumb (56 patients 28%) and the III finger (40 patients, 20%).

The most damaged upper limb tissue is skin 168 cases (54%), bones (89 patients 29 %).Direct trauma was the highest percentage the mechanism of injury (85%), indirect injuries 15%.The cause of the injury were fall (56 patients,22%)injury caused by someone (27 patients, 11%).

The circumstances of the injury wereunknown (191 patients - 76%), outside the home (44 patients -17%) and the injury at home (17 patients-7%).
Conclusions
1. Men were most likely to enter the emergency department, the average age was 37 years, with a left hand injury.

2. The most common injury were wound and fracture due to direct injury.

3. Skin and bones were most often damaged by the tissue of the upper limb.

FREQUENCY OF POSTOPERATIVE NEUROPATHIES AFTER V. SAPHENA MAGNA OR V. SAPHENA PARVA EXTIRPATION OR ABLATION – FIRST RESULTS

Presenting author: Anna Udre - University of Latvia

Authors: Anna Ūdre, Anna Ūdre

Supervisors: Patrīcija Ivanova, Ints Ūdris

Introduction

Varicose veins are a frequently encountered medical condition. N. saphenous injury is the most common complication after surgical treatment of varicose veins. It has been associated as a risk factor of v. saphena magna stripping, but sometimes it can also occur during ablation. Injury happens because of the anatomical relationship between n. saphenous and v. saphena magna. Several treatment methods have been developed in the last years. The risk of nerve injury is cited as a reason to avoid stripping and use other – minimal invasive techniques, such as endovenous laser ablation (EVLA) or the newest nonthermal vein ablation technique - VenaSeal closure system.

Aim of the study

The aim of this study is to share our experience of frequency of postoperative neuropathies after different type of surgical treatment of varicose veins.

Methods

A retrospective study of patients with chronic venous disease (CVD) who had undergone primary v.saphena magna or v. saphena parva extirpation or ablation. Patients were divided into groups depending on the treatment method – phlebectomy, EVLA or VenaSeal. Neurography of n. saphenous, n. suralis, n. peroneus superficialis and n. tibialis were done before surgery and one month after surgery. Status of patients' symptoms was surveyed according to the Aberdeen Varicose Vein Symptom Severity Score. Study was performed from January 2019 till February 2019. The data was analysed using Microsoft Excel and IBM SPSS 22.0.

Results

17 patients were included in the study. The mean age was 50.12 (SD 15.54, range 30-80). 35.3% patients underwent phlebectomy, 47.1% - EVLA, 17.6% patients - VenaSeal. In one patient nerve transmission abnormalities were detected before surgery and he was excluded from the further study. In 43.8% patients a statistically significant ($p<0.05$) n. saphenous or n. suralis lesion was identified one month after surgery. Phlebectomy caused injury of n.saphenous in 83.3% patients, EVLA in 28.6%, however, those who underwent VenaSeal procedure 100% of them didn't show any nerve injury.

Conclusions

Signs, symptoms and neurophysiological findings of n. saphenous injury are common after phlebectomy. Best results of treatment were observed in group of patients who had VenaSeal procedure, where no statistically significant consequences of nerve injury were detected. The risk of nerve injury should be considered as a reason to choose, if possible, minimal invasive treatment for varicose veins.

Evaluation of the effectiveness of local cryogemostasis after liver resection in comparison with local application methods

Presenting author: Andrei vaukavytski - Grodno state medical university
Authors: Andrei Vaukavytski, Uladzislau Kotovich
Supervisors: Tatiana Gustcha

Introduction

Reliable and non-traumatic hemostasis during and after surgery is one of the most important problems of modern surgery and remains relevant now.

Aim of the study

Conduct in the experiment a comparative assessment of the effectiveness of the impact of local cryohemostasis, hemostatic sponge, TachoComb and electrocoagulation on the resected liver wound.

Methods

Studies were conducted on 30 white mongrel rats. All animals were divided into four groups. Intraoperative hemostasis of the wound surface of the liver in the 1st experimental group was achieved by applying to the wound the working part of a cryoapplicator, previously cooled in liquid nitrogen in 45-80 seconds. In animals of the 2nd group, hemostasis was performed by closing the wound with a TachoComb collagen sponge of appropriate size (Nicomed, Austria) for 60 seconds, and in the 3rd with a collagen sponge having a hemostatic thickness of 0.5 cm (Cutanplast standard, Italy). Bleeding stopped for 80-90 seconds. In the 4th experimental group electrocoagulation was applied (monoactive electrode in mode 2), hemostasis time - 10-45 seconds.

Results

In the experimental groups, postoperative mortality was not observed. In the first experimental group on the 7th in rats adhesions were absent. During the morphological study in the field of liver resection a large number of vessels containing hemolyzed erythrocytes and hemosiderin. Hepatocytes are not damaged. By the 21st day of autopsy, a slight inflammatory infiltration. At necropsy of animals of the 2nd experimental group, after 7 days the adhesion process is moderately expressed. There are adhesions between the omentum, stomach, and liver (not in the resection area). On histological specimens in the area of resection, there is granulation tissue. On the 21st day, the macroscopic picture is similar to the picture on the 7th day. Microscopically visible mature fibrous tissue with lympho-plasmacytic infiltration. Hepatocytes are not damaged. On the 7th day after the operation in the 3rd experimental group at autopsy, loose adhesions and a non-resorbable hemostatic sponge. On the 21st day, adhesions are similar to the earlier period. Microscopically, the sponge has not yet completely resolved, its fibers are thick and swollen. The area between the sponge and the resection area is almost cleared of demarcation inflammation. In the 4th experimental group, when the rats were opened after 7 days, the adhesions were represented by a conglomerate from the stomach, intestinal loops and omentum soldered to the resection zone. Morphological examination in the resection area marked layer of granulation tissue. An extensive area of necrosis is defined in the depth of the tissue. With relaparotomy on the 21st day, the macroscopic picture is similar to the picture in earlier periods.

Conclusions

Comparing the results obtained, it can be concluded that local cryohemostasis is an effective method, leading to the formation of scar tissue in earlier periods and to a lesser extent causing inflammatory changes in the area of resection and bleeding.

Ultrasonography or uroflowmetry – which examination assess better the degree of male anterior urethral stricture?

Presenting author: Olga Wawrzaszek - Gdański Uniwersytet Medyczny
Authors: Olga Wawrzaszek, Martyna Gołębiewska, Jakub Krukowski, Marcin Matuszewski
Supervisors: Jakub Krukowski

Introduction

Uroflowmetry is basic non-invasive examination, routinely used as a tool in diagnosis of urethral strictures. Characteristic shape of flow curve allows to make preliminary diagnosis and maximal flow rate (Qmax) to assess the degree of urethral stenosis. An alternative to this procedure may be ultrasonographical measurement of bladder wall thickness (BWT). Sofar, it has not been proved which examination: uroflowmetry or USG, is more accurate in assessing the degree of urethral stricture.

Aim of the study

Aim of our study was to compare which variable: Qmax or BWT, better correlate with the degree of urethral occlusion.

Methods

The study enrolled 40 male patients with anterior urethral strictures, diagnosed in cystourethrography.

In each case sonourethrography was performed to assess the degree of urethral stricture. It was calculated by comparing the diameter of damaged urethra, measured in the narrowest point, to the urethra in undamaged place. The result was given as percentage of preserved lumen. BWT was measured on anterior wall of bladder. Minimum bladder filling to this part of the study was 250 ml. Uroflowmetry was performed with minimum bladder volume of 250 mL.

Results

Mean age of patients was 54,4 (range: 20 – 79).

Mean degree of preserved urethral diameter was 27 percent (range: 10 – 55).

Mean bladder wall thickness (BWT) was 3,84 mm (range: 2,4 – 6,07).

Mean maximal flow rate (Qmax) was 7,53 ml/sec (range: 0,5 – 18,6).

Correlation coefficient between preserved urethral diameter and BWT was -0,77 ($p<0,001$).

Correlation coefficient between preserved urethral diameter and Qmax was 0,45 ($p=0,005$).

After divided urethral strictures depending on localisation, did not reveal statistically significant differences between analysed groups for Qmax, BWT and degree of preserved urethral lumen.

For strictures localised in penile urethra, in comparison to bulbar urethra, there was higher correlation coefficient between degree of preserved urethral diameter and BWT and Qmax.

Conclusions

In comparison to uroflowmetry, ultrasonographical measurement of bladder wall thickness is more accurate non-invasive examination performed to assess the degree of urethral stricture. The combination of these two methods allows on faster and more accurate assessment of the degree of urethral damage before performance of cystourethrography.

Clinical Case Reports - Cardiovascular Medicine and Invasive Radiology (Friday 12.04 - 10:30-12:00)

Aortic regurgitation correction after transcatheter aortic valve implantation (TAVI)

Presenting author: Žygimantas Abramikas - Vilnius University
Authors: Žygimantas Abramikas
Supervisors: Greta Burneikaitė

Background

Patients with aortic stenosis (AS) and left ventricular dysfunction are at increased risk of morbidity and mortality following surgical aortic valve replacement. Limited data is available on the outcome of such patients.

Case Description

Herein described is a case report of an 83-year-old male patient with dyspnea on moderate exertion, typical angina and heart failure symptoms (NYHA class IV). Transthoracic echocardiography demonstrated a tricuspid aortic valve with significant calcification, meeting the echocardiographic criteria for severe AS. There was known history of hypertension, coronary artery disease (coronary artery bypass surgery was performed in 2003), chronic atrial fibrillation, pacemaker implantation, chronic renal failure and chronic obstructive pulmonary disease. The patient was evaluated by a multidisciplinary team and due to high surgical risk (the logistic EuroSCORE was 27, whereas the Society of Thoracic Surgeons score was 12) transcatheter aortic valve implantation (TAVI) was suggested. The patient underwent TAVI in December 2014. Self-expanding aortic valve bioprosthesis (31 mm) implantation was performed under general anesthesia using the retrograde approach with fluoroscopic and transesophageal echocardiogram (TEE) guidance. Pre-dilation of the native valve was performed with a 20 x 40 mm balloon. Due to the low positioning of the prosthesis, severe paravalvular aortic regurgitation (AR) occurred. It was evaluated immediately after the device deployment and after removal of the catheter and guidewire. Short- and long-axis TEE views were used to assess AR localization and grade and it was classified as severe. The transcatheter valve-in-valve (TV-in-TV) technique was used immediately after the first TAVI. The second valve was positioned 10 mm higher than the first one. After the second valve implantation the peak aortic gradient significantly decreased from 77 to 34 mmHg. No significant regurgitation was observed post second valve implantation. The post-procedural outcome was favourable. NYHA functional class improved to III. The patient was discharged in good general status and asymptomatic, with no complications from the procedure. He was referred to cardiologic clinical monitoring.

Discussion

Paravalvular leak after percutaneous transcatheter aortic valve replacement is associated with significantly higher morbidity and mortality. Transcatheter valve-in-valve (TV-in-TV) technique was feasible and effective treating acute severe AR after first TAVI.

Aorto-esophageal fistula as a complication after implantation of the stent graft into the aortic aneurysm

Presenting author: Olga Basiak - Medical University of Warsaw
Authors: Olga Basiak, Olga Basiak, Olga Basiak
Supervisors: Laretta Grabowska-Derlatka, Laretta Grabowska-Derlatka

Background
Stent grafts are implanted to patients with aortic aneurysms. These treatments may be associated with rare complications,such as leaks, stenosis and translocation of the stent graft. One of the complications may be vascular prosthesis infection even many years after implantation. The aorto-oesophageal fistula is a very rare complication. Fistula symptoms appear suddenly and cause rapid hemostatic disorders. The patient usually bleed from the gastrointestinal tract due to the pathological connection between circulatory and digestive system.
Case Description
An 87-year-old woman with thoracic aorta stent graft implanted 5 years ago was admitted to the Department of Internal Medicine, Pneumonology and Allergology due to weakening and dehydration lasting 3 weeks. Chest X-ray revealed fluid in the left pleura, atelectasis of the left lung and aortic aneurysm. Antibiotic therapy was implemented because of clinical and auscultatory symptoms of pneumonia. In the chest CT, a lot of gas bubblesin the aneurysm, aortic wall defect and the esophagus widened with the fluid level were found. The whole radiological image indicated the probability of the esophageal fistula to the thoracic aortic aneurysm. The maximum transverse dimension of the descending aorta was 71x89cm and was smaller in comparisson to dimensions (105mmx104mm) performed during a CT scan 4 months ago. The patient was examined with X-ray contrast examination, which confirmed the presence of the fistula. The patient was qualified to set up the esophageal prosthesis. Control radiological examination showed the tightness of the prosthesis. Due to sustained bleeding with end-stage Hb 6mg / dl, the patient received 10 units of red blood cell concentrate, 3 units of fresh frozen plasma and fluids during the whole hospitalization. Despite some stabilization there wasn’t significant improvement achieved. On the 15th day after admission the patient died.
Discussion
Complications such as aorto-oesophageal fistulas are imminent danger to life. Rapidly progressing bleeding from the gastrointestinal tract leads to the anemization of patients and can cause the shock. Thanks to imaging tests, we can confirm or exclude the presence of fistulas and other complications. However, thiscase may be evidence that even a quick supply of aorto-oesophageal fistula does not improve prognosis of the patients.

Endovascular treatment of giant intracranial aneurysm in pregnancy.

Presenting author: Rafał Bromirski - Gdański Uniwersytet medyczny
Authors: Rafał Bromirski, Oliwia Kozak, Michał Studniarek
Supervisors: Oliwia Kozak, Michał Studniarek

Background

Cavernous carotid artery (CCA) aneurysms account for 2-9 % of all intracranial aneurysms. Giant aneurysms defined as having a diameter ≥ 25 mm constitute approximately 60 % of all CCA. The most common presenting symptoms in unruptured aneurysm are diplopia, retroorbital pain, headache, diminished or blurred vision, and photophobia and also for ruptured into subarachnoid space acute severe headache, nausea, vomiting, neck stiffness, transient loss of consciousness.

Case Description

A 25-year-old woman during 10 week pregnancy, without previous medical history was admitted to the hospital with sudden loss of vision in the right eye, severe headache and nausea with vomiting for the past 9 days. Due to contradictions CT was not performed. There was a clinical suspicion of Multiple Sclerosis. Because of worsening of symptoms MRI revealed a giant aneurysm of left CCA with diamentions of approximately 23mm x 29mm x 35mm reaching the initial part of left middle cerebral artery, causing partial occlusion of right Internal carotid artery and optic chiasm compression with the symptoms of subarachnoid haemorrhage. As a consequence of aneurysm, patient developed hypopituitarism. Patient was treated with endovascular coiling embolisation and pipeline flow-diverter stent. Main complication of the procedure was ischemic stroke.

Discussion

Presented case indicates difficulties in differential diagnosis of giant intracranial aneurysms due to nonspecific manifestations such as hypopituitarism or optic disorders. Taking aneurysm in differential diagnosis is crucial in determing the treatment strategy.Treatment is intended to prevent further aneurysm rupture and reduce the mass effect on the pituitary gland to recover endocrine function.

Cerebral vasoconstriction is a very rare complication after carotid artery stenting. As the case presents quick recognition of ischemic stroke and confirmation of cerebral vasoconstriction are essential for prevention of irreversible neurological signs.

Although intracranial aneurysms are uncommon during pregnancy, normal hemodynamic changes in pregnant woman may increase risk of aneurysm formation, progression and rupture.

Myocardial infarction in a patient with exceptional electrocardiogram pattern.

Presenting author: Barbara Brzezinska - Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu
Authors: Barbara Brzezinska
Supervisors: Rafał Dankowski

Background
De Winter syndrome is an uncommon electrocardiographic manifestation of acute occlusion in the proximal segment of the left anterior descending artery (LAD). It is characterized by exceptional electrocardiogram (ECG) pattern that includes ST-segment depression at the J point, tall, symmetrically peaked T waves in the precordial leads and ST-segment elevation in the aVR lead.

Case Description
A 55-year-old man was admitted to the hospital with typical chest pain and angina. Symptoms were observed since a day before with escalating at night.

The patient had a past medical history of anterior wall acutetreated with streptokinase (08.2004), percutaneous coronary intervention (PCI) with implantation stent in the middle left circumflex artery (LCx) (10.2004), PCI on left anterior descending artery (LAD) (12.2009) and ST-Segment Elevation Myocardial Infarction (STEMI) treated with PCI on LAD with implantation stent (09.2013).

The patient suffered from hypertension, mixed dyslipidemia, and nicotinism.

Admission electrocardiogram (ECG) revealed ST-segment depression in leads I, II, III, aVF, and V2-6 with tall, symmetrical T-waves in leads V2-5. Further, lead aVR showed ST-segment elevation.

Troponin on admission was negative, but the next obtained samples were significantly elevated. Due to the general clinical condition, the patient was diagnosed with acute coronary syndrome: myocardial infarction with ST-segment elevation. It was decided to perform a coronary angiography that showed disseminated atherosclerosis with almost total occlusion of the left anterior descending artery (LAD). Successful coronary angioplasty was done using a drug-eluting stent.

Post-procedure ECG substantially improved. On the 7th postoperative day, the patient reported a recurrence of the chest pain. Repeated coronary angiography revealed recently formed thrombus in a previously stented segment. The emergency intervention was done and coronary flow was restored. Echocardiographic examination revealed left ventricular contractility impairment with the deterioration of left ventricular ejection fraction (LVEF). After 14 days long hospitalization the patient was discharged home in good condition.

Discussion
Clinicians should be alert to patients presenting chest pain and characteristic ECG changes that are not typical of STEMI. Failure to recognize de Winter syndrome may lead to undertreatment and delay in reperfusion therapy with catastrophic results.

Patient with pulmonary arterial hypertension treated with intravenous treprostinil delivered by the first in Gdansk implantable pump Lenus Pro: a case report.

Presenting author: Zofia Lasocka - Gdański Uniwersytet Medyczny
Authors: Zofia Lasocka, Zofia Lasocka
Supervisors: Ewa Lewicka, Ewa Lewicka

Background

Pulmonary arterial hypertension (PAH) is a severe disease characterized by an increase in pulmonary vascular resistance, leading to right ventricular failure and premature death.Several specific therapeutic agents have been developed for the medical management of PAH, including prostanoides, endothelin receptor antagonists and phosphodiesterase 5 inhibitors. We present the case of the first Lenus Pro pump implantation in the Clinical Center of Cardiology in Gdansk for the intravenous delivery of treprostinil to a patient with pulmonary arterial hypertension.

Case Description

A 27-year-old female with Down syndrome and pulmonary arterial hypertension was admitted for electiveLenus Pro pump implantation. The patient with congenital heart disease of common atrioventricular canal had developed Eisenmenger syndrome, which led to severe PAH. Since 2005 specific therapeutic PAH treatment has been administered, recently with oral bosentan and sildenafil, as well as treprostinil by subcutaneous infusion. Due to local inflammatory reactions and pain at the infusion site, there was a concern about the effectiveness of treatment. On admission the patient was stable in the WHO III functional class.Laboratory tests revealed elevatedNT-proBNP level (237 pg/mL) and thrombocytopenia (47000/μL). The pump implantation procedure was performed in the operating room conditions under general anesthesia. The Lenus Pro pump was placed suprafascially in the right subcostal area. The drug catheter was tunneled under the skin of the abdomen and thorax from the implanted pump to the right subclavian region, where it was connected with a catheter introduced into the right subclavian vein by means of a special connector. There were no complications during the procedure or in the postoperative period. During further several months of observation, a significant improvement in the patient's quality of life was observed, as well as amelioration of symptoms of the heart failure.

Discussion

Treatment options for patients with pulmonary arterial hypertension have evolved toimprove their survival and quality of life. In patients who do not tolerate subcutaneous infusion of treprostinil, the use of the implantable Lenus Pro pump is a promising solution.

AMIODARONE INDUCED QTc PROLONGATION AND POLYMORPHIC VENTRICULAR TACHYCARDIA

Presenting author: Rūta Masiulienė - Vilnius University

Authors: Rūta Masiulienė
Supervisors: Jūratė Barysienė

Background

The long QT syndrome (LQTS) is a form of channelopathy, a disorder of myocardial repolarization characterized by a prolonged corrected QT interval that can be either congenital or acquired. This syndrome is associated with an increased risk of polymorphic ventricular tachycardia (torsades de pointes (TdP)) and may occur with symptoms such as palpitations, presyncope, syncope, seizures and sudden cardiac death. TdP can be self-limited or can induce fatal arrhythmias such as ventricular fibrillation. Main risk factors to develop an acquired LQTS are specific drugs, hypokalemia, hypomagnesemia, age and female sex. Anti-arrhythmic drugs like amiodarone can markedly prolong the QT interval. However, in contrast to the other class III antiarrhythmic drugs, amiodarone is rarely associated with TdP. The estimated frequency of TdP is less than 1 %.

Case Description

A 44-year-old woman was transferred to emergency department due to recurrent syncope with brief loss of consciousness and quick recovery. She had a history of persistent atrial fibrillation (AF) which was diagnosed in 1997. The patient previously underwent 3 cardioversions (in 2011; 2013 and 2017-11). In November 2017 sinus rhythm wasn't restored. A month prior onset of syncope, she was administered oral amiodarone (600mg/day) and elective DC version was scheduled. After a cumulative dose of 16 g of prescribed amiodarone, she experienced 3 syncope episodes and was admitted to the hospital where she developed several episodes of TdP and QT prolongation (QTc- 700 ms). Physical examination showed blood pressure of 170/110 mmHg, AF and heart rate-110 beats per minute; serum K+ level was 3.5 mmol/l. She had no family history of syncope, sudden death or long QT interval. Review of the patient's medications did not reveal the presence of any other drug capable of prolonging QTc. Based on the prolonged QT interval and the history of TdP, congenital long QT syndrome (LQTS) was suspected. Next-generation sequencing (NGS) was performed and CACNA1C gene (NM_199460.2) c.5842G>A (p. (Glu1948Lys); rs200231105) variant was detected. Considering that Ic class antiarrhythmic drugs were not effective and III class drugs couldn't be administered due to QTc prolongation, our patient underwent pulmonary vein isolation and was prescribed a daily dose of bisoprolol 5 mg.

Discussion

Acquired QTc prolongation due to medications is the most common cause of QTc prolongation observed in clinical practice. Anti-arrhythmic drugs like amiodarone can markedly prolong QTc interval as it has also appeared in our case report. In our patient, hypokalemia and CACNA1C gene mutation was considered as significant contributing factors for manifestation of torsades de pointes. Health care providers must be careful about the possibility of TdP, a life-threatening condition that can become fatal very quickly if not treated and can lead to sudden cardiac death.

Infective Endocarditis of Bicuspid Aortic Valve presenting as Cardiac Conduction Disorders

Presenting author: Aistė Pilkienė - Vilnius University
Authors: Aistė Pilkienė, Aistė Pilkienė
Supervisors: Rasa Kūgienė

Background

Bicuspid aortic valve is one of the most common congenital heart diseases, affecting 0.9-2.0% of the general population. In most cases, heart function is maintained normally. Common complications of bicuspid aortic valve are aortic stenosis or regurgitation, aortic dissection and infective endocarditis. According to studies incidence of infective endocarditis (IE) in the bicuspid aortic valve population is approximately 2-25%. A total of 19% of patients with a primary diagnosis of Infective endocarditis required a valve surgery and 12.4% patients before surgery had conduction disorders.

Case Description

A 60-year-old woman who had a 12 days of persistent high grade fever and fatigue was admitted to the emergency department of the periphery hospital. 5 days prior to her visit she used amoxicillin and nonsteroidal anti-inflammatory drug. Patient's medical history included complicated tooth extraction two months before, hypertension, bicuspid aortic valve and postoperative hypothyroidism. On physical examination, she had a fever with a temperature of 38°C. A systolic murmur (grade III) was detected at the third intercostals space along right sternal border. Complete Blood Count showed neutrophilic leukocytosis. C-reactive protein levels at 217,44 mg/l. Lactate – 2,72 mmol/l, procalcitonin – 2,56 mkg/l, BNP – 872,6 ng/l, creatinine – 139,09 mcg/l, eGFR (CKD-EPI) – 46 (mL/min/1.73 m^2). Electrocardiogram (ECG) revealed complete AV block. Amoxiclav 1,2g 3 times a day intravenous antibiotic therapy was selected. Focal infection was not detected. Two days after the hospitalization patient was in asystole. Woman was successfully resuscitated and transferred to tertiary level hospital. ECG revealed complete LBBB with 1st degree atrioventricular block. Temporary transvenous pacemaker placement procedure was performed immediately. Transesophageal echocardiogram showed IE in bicuspid aortic valve, severe aortic stenosis, I* aortic regurgitation and aortic root infiltration. Three blood cultures were negative. The patient was treated intravenously with vancomycin (2g 2 times a day) and meropenem (1g 3 times a day). After 4 weeks of antimicrobial therapy was decided to perform Bentall de Bono surgery - aortic graft implantation and aortic valve replacement. On the 6th postoperative day, an ECG showed atrial fibrillation and RBBB. Two weeks after the operation 1st degree AV block and RBBB were detected during the ECG.

Discussion

Infective endocarditis commonly occurs in younger patients (mean age, 38-53 years). According ESC guidelines 2015 of IE antibiotic prophylaxis is not recommended for patients with any form of native valve disease including the most commonly identified condition - bicuspid aortic valve. Perivalvular extension predisposes to abscess formation, aneurysms, perforation, fistula development, and hemodynamic deterioration resulting in conduction disturbances. Infective blood culture-negative endocarditis is often caused by previous antibacterial treatment.

Unilateral intermittent claudication in a young male – a case report

Presenting author: Justas Šniaukšta - Vilnius University

Authors: Justas Šniaukšta
Supervisors: Tomas Baltrūnas

Background

Unilateral calf claudication is a rare symptom especially in physically active patients of a younger age. In the absence of significant atherosclerotic risk factors, nonatheromatous causes of lower extremity ischemic symptoms must be considered, such as adventitial cystic degeneration of the popliteal artery or popliteal artery entrapment syndrome. Adventitial cystic degeneration is a non-arteriosclerotic disease accompanied by ischemic symptoms of the lower limbs and intermittent claudication. It is caused by stenosis or occlusion of the blood vessel compressed by a cystic collection of mucinous material within the adventitial layer of the artery. The etiology is still unknown, although there are several hypotheses, such as dysplasia during fetal development, repeated injury, and synovial tissue intrusion into the arterial wall. No definite treatment has been established yet, while various approaches have been tried to cure adventitial cystic disease.

Case Description

A man in his mid-thirties was referred to Vascular Surgery Centre of Vilnius University Hospital Santaros Klinikos because of intermittent claudication of the left calf continuing for 6 months. Anamnesis revealed a sudden onset of the left limb ischemic symptoms. In that time a emergency thrombectomy of left popliteal artery was performed with no clinical regression of claudication afterwards. Patient had no significant atherosclerotic risk factors as he was physically active with normal arterial blood pressure. A physical examination revealed palpable left popliteal and foot pulses at rest that persisted during knee flexion. The right and left ankle-brachial pressure indices were 1.02 and 1.13, respectively. After the examination the patient underwent a MRI scan which revealed contrasting defect of the left popliteal artery with a mural thrombus in suspicion – a adventitial cyst compressing the vessel. A popliteal artery reconstruction was performed in which the lesional popliteal artery including the adventitial cyst was resected and then replaced by the short saphenous vein. A follow-up examination 2 months after the surgery showed no ischemia signs of the lower limbs and the patient had no complaints of claudication of the left calf.

Discussion

Bypass graft surgery employing a short saphenous vein is worth considering as a treatment of adventitial cystic degeneration at the popliteal artery. Long-term follow up is mandatory because of the potential for recurrence or graft occlusion.

Posttraumatic vertebrojugular fistula with delayed onset of symptoms and complex radiological presentation.

Presenting author: Radosław Środa - Uniwersytet Warmińsko-Mazurski w Olsztynie
Authors: Michał Radziwonka, Michał Radziwonka, Kajetan Charzewski
Supervisors: Mariusz Sowa

Background

Arteriovenous fistula (AVF) is an abnormal connection or passageway between an artery and a vein. It generally occurs as congenital vascular malformations, while it being acquired through trauma is a rare phenomenon. It may not be immediately apparent at the time of injury and can present itself several years later. It can be life threatening condition, especially when it is located in head or spine. That may lead to rupture of AVF causing subarachnoid hemorrhage. In addition, an abnormal communication causes shunting of blood from the arterial side to the venous side. This creates an abnormal low-resistance circuit that steals from the high-resistance normal capillary bed leading to symptoms such as weaknesses, short of breath or palpitations.

Case Description

Patient, 30 years old male, suffered from pulsating right-side tinnitus, occurring for many years, along with symptoms of circulation failure originating from the posterior cerebral vessels caused by parasite syndrome (fatigability, palpitations, sweating). In the neurological examination: clear narrowing of the right pupil (miosis), occasional exophthalmos, increased facial sweating (incomplete Horner syndrome). The direct cause was extensive trauma of the cranial base in childhood, which led to the creation of a high-flow arteriovenous fistula of right vertebral artery. In addition, arteriography examination revealed a small left-sided aneurysm with a broad base on the vertebral artery junction associated with retrograde blood flow to the fistula. Moreover, examination showed hypoplasia of the basilar artery, posterior cerebral arteries and right vertebral artery. From the right subclavian artery, tortuous massive artery feeding vertebral AVF was revealed, forming pseudoaneurysm at the base of the right side of skull and with blood parasite syndrome from basilar system. Extensive multivessel venous outflow to pathologically extended external jugular vein and internal jugular vein was also visible. As a treatment two-stage fistula arteriography with partial embolization with coil were used. In this type of surgery, there is a high risk of bleeding from a compromised system of the basilar and fistula vessels. Treatment went without complications. After second stage of operation significant slowing of blood flow in the fistula was detected. Ultimately patients symptoms completely stopped, including tinnitus.

Discussion

Due to location, vertebrojuguar fistulae cannot be operated like most AVFs. Standard management is endovascular stenting or embolization if possible. NCBA occlusion was deemed to risky because of size of fistula, luckily partial coil embolization was performed with success. Patient's history showcases that it's possible for posttraumatic fistulae to be asymptomatic for many years and that it's important to pay attention to radiological signs after injury management.

Clinical Case Reports - General Medicine

(Friday 12.04 - 10:30-14:00)

An unusual cause of bleeding in patient with chronic pancreatitis.

Presenting author: Aleksandra Cegła - Medical University of Gdansk
Authors: Aleksandra Cegła, Wojciech Kosior, Michał Dubowik, Anna Jabłońska
Supervisors: Anna Jabłońska

Background

Chronic pancreatitis is a progressive inflammatory disease of the pancreas that can lead to pancreatic atrophy, fibrosis, duct distortion and strictures, calcifications, exocrine and endocrine insufficiency. It is a multifactorial disordercaused by the following etiologic factors: toxic-metabolic (mainly alcohol), genetic, autoimmune, obstructive, recurrent and severe acute pancreatitis, idiopathic. Complications include: pancreatic pseudocysts, stenosis or obstruction of the duodenum or common bile duct, pancreatic ascites, splenic vein thrombosis, peripancreatic aneurysms, pancreatic cancer.

Case Description

We present a case of a 58-year-old man who was admitted to Gastroenterology and Hepatology Department on account of severeanemia (Hb 7.5g/dl) and exacerbation of chronic pancreatitis. The patient had a history of alcoholism, chronic pancreatitis (for 9 years) and liver cirrhosis. He was previously hospitalized a few times due to anemia, but the bleeding source could not be identified in endoscopic and radiological examinations. In our Department repeated gastroscopy and colonoscopy also failed to localize the cause of bleeding. On the fifth day of hospitalization the patient suddenly presented with acute abdominal pain, peritoneal signs, nausea and oedema of scrotum . Contrast enhanced computed tomography revealed haemorrhage from pseudoaneurysm of pancreaticoduodenal artery into the pancreatic pseudocyst. The patient underwentendovascular embolization of pancreaticoduodenal artery. After this procedure the patient's condition improved and no recurrent bleeding occurred.

Discussion

Pseudoaneurysms of the pancreaticoduodenal artery are a rare complication of chronic pancreatitis. They refer to 2% of all pseudoaneurysms in the course of this disease. Bleeding from pseudoaneurysm of the pancreaticoduodenal artery is also associated with the highest mortality rate among vascular complications. Pseudoaneurysms should be considered as a potential source of blood loss in patients with chronic pancreatitis.

Suspected frontotemporal dementia in patient with long-term history of depression

Presenting author: Klaudia Gądkowska - Collegium Medicum Uniwersytetu Jagiellońskiego w Krakowie
Authors: Klaudia Gądkowska
Supervisors: Michał Skalski, Justyna Rzeczycka, Adrian Chrobak, Dominika Dudek

Background

The associations between depressive mood disorders and dementias are still a matter of great interest for psychiatrists and neurologists, as these two medical conditions frequently co-occur. Depression has been reported to be a risk factor for developement of dementia in later life. Symptoms of depression may also appear in the prodromal phase of dementia.

Case Description

A 55-year-old man with a 30-year history of psychiatric treatment was admitted to Psychiatric Ward of University Hospital in Cracow for observation due to suspicion of degenerative process. The patient lives with his wife and daughter, he works as a water supply system fitter but recently he keeps neglecting his professional duties. The patient is a heavy smoker, has a low level of physical activity and does not eat enough. Besides psychiatric disorders his past medical history includes: diabetes, hypertension and obesity. The patient was initially diagnosed with mixed anxiety and depressive disorder, afterwards the diagnosis was modified to recurrent depressive disorder. The main symptoms were: depressed mood, anxiety, resignation thoughts and insomnia. He was hospitalized seven times in psychiatric ward due to depressive mood disorders and several changes of drugs were made during these hospitalizations. Within last few months the patient's family reported that he has developed cognitive impairment and memory impairment, has started acting inadequately and irresponsibly. On admission the patient was oriented in regard to person, place and time, in a logical verbal contact. However his responses were brief, lacking in spontaneous content. After neuropsychological consultation with several tests for cognitive functions the frontotemporal dementia was suspected. The patient was transferred to the Neurological Ward for further diagnosis. Neurological examination revealed increased muscle tension in left upper limb and lower limbs as well as stiffness of axial muscles and lack of synkineses in upper limbs during gait. MRI and EEG were carried out and showed no abnormalities. The infection of central nervous system was excluded. The patient was transferred back to the Psychiatric Ward for observation for possible intercurrent degenerative process and further treatment.

Discussion

Both depression and dementia are common medical conditions in neuropsychiatric practice with several similar symptoms. Sometimes it can be difficult to distinguish between them because they can co-occur and the signs and symptoms can overlap. However, dementia and depression are different conditions requiring different proceedings and treatment. Consequently, it is essential to pay attention to changes in the profile of symptoms and to educate the patient's family to report any new abnormalities in patient's behaviour.

Acne inversa in an atypical location – case report

Presenting author: Maria Golas - Medical Univeristy of Gdansk
Authors: Maria Golas, Dorota Mehrholz, Adrianna Opalska, Wioletta Barańska - Rybak, Roman Nowicki
Supervisors: Dorota Mehrholz, Dorota Mehrholz

Background
Acne inversa (Hidradenitis Suppurative) is a chronic inflammatory disease with a significant negative influence on quality of life. The characteristic features of HS are painful nodular lesions and fistulas with tendency for tissue fibrosis. The typical localization of the lesions is the areas of skin folds i.e. axillary region, inguinal region, genital regions and the buttocks. The condition is very rare to be found in other locations.

In this case report, a patient is described with chronic HS that is presented on the abdominal skin.

Case Description
A 61-year old female was admitted to the clinic of Dermatology, Venereology and Allergology UCK in Gdansk due to erythematous infiltrations on the abdominal skin with occasional pus formation and leakage from the lesions during a time period of two years.

The patient had previously been diagnosed with comorbidities regarding the field of internal medicine as well as HS in the axillary and inguinal regions since 20 – years of age and has underwent a number of plastic surgeries with a good clinical effect.

During the hospitalization, a biopsy was taken from the active lesions of the abdominal skin with suggestive diagnosis of HS, Paget disease, cutaneous tuberculosis and amyloidosis. The histopathological examination confirmed the diagnosis of HS. A microbiological culturing was performed from the local leakage, which confirmed the presence of Streptococcus pyogenes as a coinfection.

The patient was treated with Amoxicillin with clavulonic acid according to the antibiogram and topical Octinidine for two weeks. The treatment was continued with topical clindamycine gel and Adapalene cream with a successful local improvement.

Discussion
The localization of the chronic HS on the abdominal skin is unusual. It is worth taking it under consideration when differentiating erythematous infiltrative lesions in a patient with the particular pre-existing dermatosis in the previous history.

Deceiving manifestation of IgA nephropathy

Presenting author: Rimante Grigaraviciute - Vilnius university

Authors: Rimante Grigaraviciute
Supervisors: Arturas Vinikovas, Marius Miglinas

Background

This case represents an interesting and unclear presentation of IgA nephropathy (IgAN).

Case Description

38 y.o. man was urgently admitted to ophthalmology department because of a sudden worsening of visual acuity, especially in the right eye, following 2 days of headache. Patient had no significant previous medical history. Hypertension of 213/132 mmHg and characteristic hypertensive retinopathy of grade IV findings in the fundi of both eyes were observed during initial examination. Urinalysis showed proteinuria of 3 g/l and hematuria with erythrocyte casts. Creatinine was elevated to 234 mcmol/l, resulting in low eGFR (CKD-EPI) of 29 ml/min/1,73m2. Urea was 16 mmol/l, uremic acid was in normal values. ANA and ANCA were negative. Urine albumin-to-creatinine ratio was elevated to 78,19. Hypoproteinemia and dyslipidemia were observed. The ultrasound of renal arteries showed no signs of stenosis. In search of other secondary hypertension causes, neurological pathology, various infections (Lyme's disease, toxoplasmosis, toxocariasis, syphilis, CMV and HIV infections), thyrotoxicosis and pheochromocytoma were ruled out.Electrolytes (K, Na, Cl, Ca, P and PTH) were in normal values. Suppressed renin (1,03 ng/l) and slightly higher than the norm aldosterone (162,64 ng/l) levels were not taken into account because ofinterfering medications started prior to blood draw. Because the cause of the acute kidney injury was unknown, it was decided to perform a kidney biopsy

andthe IgAN diagnosis was confirmed.

Discussion

IgAN is the most common glomerulonephritis in the world. Although various presentations of this disease are possible, approximately half of the cases present with episode or recurrent episodes of visible hematuria. 30-40% of the cases are discovered by microscopic hematuria and possible mild proteinuria during a routine examination. In less than 10% disease is detected during an episode of nephrotic syndrome or an acute glomerulonephritis. Rarely, IgAN may present with malignant hypertension, as in our case. Patient‘s symptoms were also quite deceiving as they were ophthalmological. Judging by the changes in the fundi of the eyes, BP must have been dangerously elevated for at least a week and underlaying kidney disease was most probably long present but not detected because of lack of signs, symptoms and routine urinalysis. Unfortunately, malignant hypertension is a form of IgAN clinical presentation having a remarkably worse renal survival: 69% and 35% at 3 and 6 years, respectively, and no specific or highly efficient treatment is known to date.

RENDU-OSLER-WEBER SYNDROME: THE DANGEROUSNESS OF VASCULAR MALFORMATIONS

Presenting author: Naums Davids Hlebins - University of Latvia
Authors: Naums Davids Hlebins
Supervisors: Jānis Šavlovskis

Background

Rendu-Osler-Weber syndrome (ROWS) is a rare autosomal dominant genetic disorder that leads to abnormal blood vessel formation in the skin, mucosa and organs. Pulmonary arteriovenous malformations (PAVMs) may cause paradoxical embolism to the brain.

Case Description

A 51-year-old woman complained to the author about a blurry vision. It started a week ago and there was a case of visiting a forest. The patient's medical history was notable for primary AH, Hashimoto's thyroiditis and PAVMs on both sides. On examination, the temperature was 37.8 °C, HR 110 bpm, BP 135/70 mmHg, and the SpO2 was 88 % while breathing ambient air, GCS – 15 points. There was pain in the anterior aspect of the left proximal forearm with a visible enlargement, tenderness and hotness. Neurological examination revealed homonymous hemianopia. The patient visited her GP where laboratory tests for tick-borne encephalitis and Lyme disease were obtained (which later came negative) and she was referred to Pauls Stradiņš Clinical University Hospital. Ophthalmologic examination revealed no pathology. CBC and biochemistry values were unremarkable; fibrinogen and D-dimers were elevated. A native CT scan of the head was made following MR-angiography. A lesion was detected which was hyperintense on FLAIR and T2-weighted images, measuring 2.5 x 3 cm, with a hypointense zone around the structure on T1-weighted image in the right temporal lobe's crus posterior capsulae internae continuing to the thalamus – with the utmost probability signs of an abscess. Additionally, an aneurysm of the right ICA's syphon's supraclinoid part (3 x 3.5 mm) was found. Before a planned stereotactic drainage of the abscess lung CTA was performed and showed a big varicose PAVM, 15 mm in diameter, on the left side and several bilateral PAVMs. The antibiotics were started, the US of the left hand revealed phlegmon, and drainage was performed, patient was discharged with trimethoprim/sulfamethoxazole prescribed (430 mg twice daily), but the patient did not improve, neurological deficit became more apparent, and she was admitted to the hospital again for the abscess drainage. Cultures came negative. The patient's status improved dramatically. The vision defect persists.

Discussion

The patient presented with neurological symptoms that were caused by paradoxical septic emboli that travelled to the brain through the PAVM and formed the abscess. The source of infection is thought to be the phlegmon of the left arm. The patient is suspected to have ROWS, because 2 of 4 Curaçao's diagnostic criteria (CDC) are met – skin telangiectasias and organ vascular lesions are present. ROWS may also be the aneurysm's cause.

Early diagnosis of ROWS is necessary, enabling the investigation/treatment of AVMs, preventing and avoiding serious neurologic consequences.

The knowledge of ROWS could save a patient from suffering these consequences, because this patient had a history of PAVMs, so, knowing the possible complications, would enable physician to advise surgery.

Diagnostic challenges in Interstitial Lung Diseases - Usual Interstitial Pneumonia microscopic image in a patient with no Idiopathic Pulmonary Fibrosis

Presenting author: Grzegorz Kardas - Uniwersytet Medyczny w Łodzi
Authors: Grzegorz Kardas, Martyna Cieślińska
Supervisors: Michał Panek

Background

Interstitial Lung Diseases (ILDs) is a diverse group of pulmonary fibrotic disorders. Significant progress in ILDs management was achieved over past years. However, an increasing prevalence of ILDs is observed worldwide with some international differences. The newest American Thoracic Society/European Respiratory Society/Japanese Respiratory Society/Latin American Thoracic Association (ATS/ERS/JRS/ALAT) guidelines for Idiopathic Pulmonary Fibrosis (IPF) highlight the importance of high-resolution tomography (HRCT) together with multidisciplinary discussion (MDD) between a pulmonologist, radiologist and pathologist.

Case Description

A 49-year-old female patient was admitted to the Department of Pneumonology and Allergy at the Medical University of Lodz, Poland in February 2018 due to the detection of a focal lesion in the left lung in an X-ray examination. The spirometry showed no restriction nor obstruction (FEV1 106%Ref, 0.52SR, 70P; FVC EX 115%Ref, 1.20SR, 88P, FEV1/VC 27%Ref, -0.61 SR, 27P). Morphology showed: WBC 7.1G/L, EOS 0.04G/L, PLT 334G/L; CRP 0.8mg/L. Following that, a chest CT showed a solid infiltration of the same area. The histopathology from a transbronchial lung biopsy showed microscopic honeycomb, fibroblast fibrosis, macrophage clusters loaded with hemosiderin and widened bronchioles – an image suggesting probable Usual Interstitial Pneumonia (UIP). HRCT performed in August 2018 showed considerable differences of the lung image compared to the previous CT examination - no polycyclic lesion in the left lung was detected and the fibrous changes decreased. The patient also denied experiencing cough nor dyspnea. Finally, in October 2018 another CT showed a significant regression of the analyzed abnormalities. The spirometry again did not reveal any clinically significant ventilation changes (FEV1 66%Ref, -1.90 SR, 3P; FVC EX 75 %Ref, -1.41 SR, 8P, FEV1/VC 88%Ref, -1.30 SR, 10P; DCO SB K 83 %Ref, -0.99 SR, 16P). The patient is now observed in the Adult Pulmonology out-patient Clinic.

Discussion

In the diagnosis of IPF the clinical symptoms, such as cough and dyspnoea in their correlation with radiographic pattern are crucial. No less important is the observation of changes in spirometry (FEV1, FEV1/VC%, DCO SB K).

This case shows the importance of the newly published ATS/ERS/JRS/ALAT guidelines for IPF diagnosis. The role of HRCT is strongly highlighted in this document and our case study leads to similar conclusions. The MDD is crucial in the diagnosis of these rare, persistent and life-threatening diseases. The analysis of this casestrongly suggests that the histopathological examination only is not sufficientin the diagnosis of IPF.

Fever as a common symptom of a rare disease

Presenting author: Joanna Karolewska - Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu
Authors: Joanna Karolewska
Supervisors: Iwona Krela-Kaźmierczak

Background

Caroli's disease is a rare (1:1 000 000) congenital malformation with saccular dilatation of intrahepatic biliary tract. It is strongly related to PKHD1 gene. The mutation is responsible for autosomal recessive polycystic kidney disease .Intrahepatic ductal ectasia predisposes to stagnation of the bile, which may lead to the formation of stones and predispose to infections such as cholangitis, sepsis and liver abscesses. The most common symptoms are abdominal pain, fevers, chills, anorexia, fatigue and jaundice.

Case Description

A 62-year-old male for the past eight years had complained of fever every six months, lasting about one week. After he had undergone sepsis, a CT scan was performed and it visualized numerous cysts in the liver. A year after the diagnosis, he was admitted to the Department of Gastroenterology due to fever of 40,3 degrees Celsius, abdominal pain and nausea. Laboratory tests revealed CRP above 300 mg/l, hypoalbuminemia, hypoproteinemia, anemia, leukocytosis, thrombocytosis, elevated alkaline phosphatase and GGTP. The patient was referred for endoscopic retrograde cholangiopancreatography and genetic testing.

Discussion

Due to the very low prevalence and lack of pathognomic symptoms, Caroli's disease is difficult to diagnose, however it should be taken into account in recurrent cholangitis and non-specific gastrointestinal symptoms.The presented case of the patient was particularly problematic in the diagnosis due to the late appearance of the disease that was manifesting only by a recurrent fever. Moreover, in the long-term observation of the patient we should pay attention and remember about the increased risk of biliary tract cancer ranging from 2.5% to 17.5%.

Coexistence of calcium and phosphate management disorders, autoimmune and genetic disorders based on a clinical case.

Presenting author: Klaudia Kulnianin - Śląski Uniwersytet w Katowicach
Authors: Klaudia Kulnianin, Gabriela Orzeł Paulina Pałka
Supervisors: Dariusz Kajdaniuk

Background

Neurological disorders in medicine can have different causes. Often, overlapping symptoms of various disease entities make diagnosis difficult, despite the numerous available test panels, including imaging examinations.

Co-occurring microcalcification in such studies and spontaneous tremors or mood disorders lead us in the course of in-depth diagnostics to rare disease entities.

Clinical cases may include a leading disease unit, which is also accompanied by autoimmune disorders which occure more and more frequently in modern medicine.

Case Description

The clinical case concerns a 66-year-old patient with a body weight of 88 kg, an increase of 166 cm and BMI 32kg/m2, admitted to the Department of Diabetology and Endocrinology in Rybnik for the purpose of endocrine diagnostics of the causes of the Fahr Syndrome. In general good condition, the patient reported symptoms of tremor of spontaneous, involuntary ball movements and torsional movements of the left limbs, in the absence of symptoms of overt tetany despite deep hypocalcaemia, hyperphosphatemia, hypocalciuria due to low PTH and vitamin D3 concentrations obtained in laboratory tests. Among these studies, the following results were obtained: calcium concentration of 0.97 mmol /l [N: 1-1,3mmol/l], ACTH 77.67 pg/ml [N: 5-60pg/ml], phosphorus 2.24 mmol/l [N: 0,85-1,45mmol/l], PTH of 12.1 pg/ml [N: 15-65pg/ml]. In the imaging studies, massive symmetrical calcifications in the subcortical nuclei and changes in the pituitary gland were revealed. The patient has been subjected to diagnostics for disorders of calcium metabolism and parathyroid function disorders. After careful diagnosis, the patient was diagnosed with Fahr's syndrome, primary hypoparathyroidism, autoimmune thyroiditis, nodular goitre, type 2 diabetes, mixed hyperlipidemia and mild cognitive impairment.

Discussion

With the help of imaging examinations such as MR/CT scans, we are able to precisely determine the presence and the area of altered structures, which is very important during the diagnostic process. In medicine, clinical cases often do not have a standard course. Symptoms such as unsteadiness of gait, dizziness, spontaneous tremor or mood disorders do not necessarily immediately suggest a diagnosis of rare disease background. Disorders of calcium -forforate metabolism are manifested individually in patients, and the results of additional tests may have fluctuating values. These disorders, co-occurring with damage to the blood-brain barrier, may cause the deposition of calcium phosphates and, as a result, the appearance of changes visible in imaging studies. Auto-aggressive diseases and civilization diseases include increasingly large groups of patients and may coexist with obstructing diagnostics and treatment. Endocrine patients should also undergo control tests to assess the effectiveness of treatment and compare changes in laboratory tests that allow decision-making of further treatment regimens depending on the results obtained.

Rosacea fulminans - a case report of coincidence of the disease with inflammatory bowel disease

Presenting author: Marcela Nowak - Gdański Uniwersytet Medyczny
Authors: Marcela Nowak, Dorota Mehrholz, Wioletta Barańska Rybak, Roman Janusz Nowicki
Supervisors: Wioletta Barańska-Rybak

Background

Rosacea fulminans (RF) is an extremely rare disease. Only about 200 cases have been described. it is a type of acne rosacea which very often co-occurs with inflammatory bowel diseases.

RF is a severe form of rosacea characterized by the sudden appearance of painful, inflammatory pustules covered with hemorrhagic scabs. The eruptions are most often found on the middle part of the face.

Case Description

In December 2017, a patient with infiltrinal erythematous eruptions in the central part of the facial skin, on the forehead, nose and cheeks with the present multiple pustules with a thin lid and single scabs after evacuation of purulent content came to the Department of Dermatology, Venereology and Allergology in Gdańsk. At the same time, the patient was burdened with ulcerative colitis. Skin deterioration occurred during exacerbation of inflammatory bowel disease. Due to the fact that RF can be induced by non-specific inflammatory bowel disease, the patient was consulted gastroenterologically and the dose of mesalazine and budesonide was increased. At the same time iron supplementation was started due to severe anemia. In the first phase of treatment, lecithicin cream was used at a dose of 10mg / g locally. Then, after the remission of colitis ulcerosa and improvement of the skin condition, isotretinoin was included.

Discussion

RF is a severe disease, therefore it is necessary to quickly include systemic therapy and eliminate possible factors inducing and exacerbating the course of the disease. There are no therapeutic guidelines for the treatment of this form of acne.

Syphilis in pregnancy - two case reports

Presenting author: Barbara Osowska - WUM
Authors: Barbara Osowska, Natalia Jaczyńska
Supervisors: Ewa Romejko-Wolniewicz, Agnieszka Dobrowolska-Redo, Joanna Kacperczyk-Bartnik

Background
Syphilis is a sexually transmitted disease caused by the spirochete Treponema pallidum. It is of special concern during pregnancy because of its adverse pregnancy outcomes and prenatal transmission.

Case Description
A 26-year-old patient in the second pregnancy, positive for CMV IgM, HCV, rubella and VDRL, for which she was neither diagnosed nor treated, reported to the hospital at thirty weeks of gestation with subabdominal pain. USG revealed ascites of the fetus and centralization of its circulation. The patient left the hospital on her own request coming back after a few hours with PPROM and labor in progress. The cesarean section was performed due to the incorrect CTG record and breech presentation of the fetus. Alive son was born (1600/46, 4-6-7 points Apgar score) with respiratory failure, ascites, anemia and anorectal obstruction. The newborn was transferred to The Pediatric Hospital for the surgery of the malformation. He was found to be negative for CMV and HCV, whereas positive for rubella and syphilis yet without any clinical symptoms of congenital syphilis. Nevertheless, the treatment of crystalline penicillin was administered.

A 20-year-old, primiparous patient was referred to the hospital at thirty-nine weeks of gestation due to the suspicion of fetal hypotrophy. The patient suffered from gestational diabetes, pathological obesity and early latent syphilis diagnosed and treated at 1st trimester yet without any documentation of treatment and control after that. Due to the genital warts of vulva and anus, cesarean section was performed. A healthy daughter was born (3080/52, 10 points Apgar score). USG examination of the newborn revealed bilateral thalamic vasculopathy, and physical examination – clubfeet, especially on the left side. Yet the clinical, ophthalmological and X-ray examinations did not reveal any symptoms of congenital syphilis. The serological diagnosis excluded the disease. Due to the lack of documentation regarding treatment of maternal syphilis, crystalline penicillin was administered to the

newborn.

Discussion

Screening and early penicillin treatment can reduce the risk of complications related to prenatal transmission of Treponema pallidum. However, despite the lack of treatment or its inappropriate administration, the pregnancy with maternal syphilis may end in a completely different way.

Crohn's disease as a diagnostic trap

Presenting author: Karolina Sobańska - Poznań University of Medical Sciences
Authors: Karolina Sobańska, Adrian Tomczyk
Supervisors: Liliana Łykowska-Szuber

Background

Crohn's disease (CD) belongs to the group of non-specific inflammatory bowel diseases of unknown etiology. It's a disease with various clinical images. The severity of inflammatory changes in the gastrointestinal (GI) tract isn't always reflected in the laboratory and imaging tests - that arises big diagnostic problems.

Case Description

73-year-old female was admitted to the hospital in July 2017 in order to broaden the diagnostic process due to epigastric and mesogastric pain, and weight loss (7 kilograms in one month). In patient's history attention was drawn by Ulcerative Colitis, that was diagnosed 40 years ago, but patient didn't get any treatment. During hospitalisation, laboratory tests revealed elevated GGTP, ALP and inflammatory markers(OB, CRP). CT scan and MRI showed extrahepatic and intrahepatic bile ducts dilatation and thickened wall of the duodenal bulb. Gastroscopy showed bile reflux in the stomach and ulceration of the duodenal bulb. In biopsy materials, gained during gastroscopy, test for H.pylori was negative. Due to ulceration in duodenum, IPP treatment was implemented. During next stays at the clinic laboratory, endoscopic and imaging tests were performed. Despite treatment with IPP, ulceration of the duodenal bulb was still present. Based on histopathological examination, neoplastic growth was excluded. In December 2017 (4th stay in the clinic) colonoscopy was performed, because of elevated fecal calprotectin. Colonoscopy showed image that resembled CD in the ascending colon, hepatic flexure, transverse colon and sigmoid colon. Steroid therapy was recommended. Throughout next six months, patient didn't experience any symptoms. In September 2018 patient was admitted to the clinic with severe epigastric pain. CT scan and endoscopic examination showed colonic-duodenal fistula. Patient was referred to the surgery department. Laparotomy revealed massive adhesions and extensive inflammatory infiltration in abdominal cavity. Right half of the colon with the colonic-duodenal fistula was removed. After surgery patient died in intensive care unit due to sepsis and post op complications.

Discussion

Course of CD is often underhanded with uncharacteristic symptoms. Despite advancement in medicine, it's not always possible to evaluate the severity of inflammatory changes in the GI tract, based on biochemical, imaging and endoscopic tests.

Challenges in diagnosis and treatment of acquired hemophilia A in 67 year old woman.

Presenting author: Joanna Styszko - Gdański Uniwersytet Medyczny
Authors: Joanna Styszko, Andrzej Mital
Supervisors: Ewa Zarzycka

Background

Acquired hemophilia A (AHA) is a rare condition caused by the development of autoantibodies directed against plasma coagulation factor VIII (FVIII). Patients usually present with hemorrhages into the skin, muscles or mucous membranes.

Case Description

We report a rare presentation of AHA in a 67 year old woman with a 15 year long history of treated rheumatoid arthritis. The patient hospitalized for exacerbation of rheumatoid arthritis presented with expanding bruises on lower extremity; slight bruising had started 3 months earlier. Laboratory tests revealed an isolated prolongation of activated partial thromboplastin time (APPT) of 50s and a reduced level of FVIII to 0,82%. The FVIII inhibitor was not found probably due to the long-lasting steroid and methotrexate administration. The patient was given recombinant factor VIIa (rFVIIa) and her immunosuppressive drugs dosages were escalated. Based on normalization of APPT, FVIII level and clinical improvement after the treatment, acquired hemophilia A secondary to rheumatoid arthritis was diagnosed. Despite treatment of primary autoimmune disease with methotrexate and methylprednisolone under the control of a rheumatologist, 5 relapses of AHA occurred over the course of 3,5 years. The patient was hospitalized because of massive subcutaneous hemorrhages or episode of intra-articular bleeding following inhibitor appearances and prolongations of APPT. Bleedings were stopped through the use of sequential therapy using activated prothrombin complex concentrate (aPCC) and rFVIIa. In order to eradicate the inhibitor, immunosuppression was gradually escalated to cyclosporine, mycophenolate mofetil, pulses of cyclophosphamide and azathioprine. Following unsuccessful attempts to eradicate the antibodies against FVIII, the patient is now waiting for rituximab therapy.

Discussion

This case illustrates the difficulties in the diagnosis and management of acquired hemophilia A. Unfortunately, some diseases fail to show the common symptoms, which warrants further discussion and diagnosis practices. In the aforementioned patient, there was an undetected inhibitor of FVIII which could mislead a diagnostician. To conclude, AIHA should be always considered when isolated APPT appears because if it goes unrecognized and untreated, it is a potentially life-threatening condition with mortality rates up to 22%.

Effect of Autologus Hematopoietic Stem Cell Transplantation on a Patient with Systemic Sclerosis

Presenting author: Karolina Sukackaite - Vilnius University

Authors: Karolina Sukackaitė
Supervisors: Rita Rugienė

Background

Systemic sclerosis is a heterogenous autoimmune connective tissue disease that takes its effect on skin and vital organs. There is lack of treatment that could stop the progression of this disease. For patient with diffuse progressive form, usual treatment with medicaments does not lower the rate of mortality. Autologous hematopoietic stem cell transplantation (AHSCT) is one of the newest treatments for systemic sclerosis and it is recommended for the patients with diffuse systemic sclerosis when the vital organs lesion is medium.

Case Description

59 years old male patient was admitted to the Vilnius University Hospital Santaros Klinikos (VUHSK) in 2010 June because of progressive systemic sclerosis. In 2009 has startedRaynaud's phenomen, patient's skin gradually began to harden in limbs, abdomen and back. The skin on both hands became thicker and there were ulcers, pitting scars on the fingertips. There were changes in facial appearance, such as thinner lips, difficulties to open the mouth widely and circumoral furrows around it. Modified Rodnan skin score was 47 points of 51. The esophagogastroduodenoscopy revealed erythemic gastropathy and gastroesophageal reflux. The spirometry showed 40 % of diffusing capacity for carbon monoxide (DLCO) and lung computer tomography revealed pneumofybrosis. The patient was treated by pentoxifylline, methotrexate, intravenous injections of vasaprostan and intravenous cyclophosphamide (9 infusions) but medicament treatment was inefficient. The patient was assigned to a high risk group due to a number of comorbidities – Wolff-Parkinson-White syndrome, right shin atherosclerosis and endarteritis, right eye embolia. The disease was progressed very quickly and in 2014 October AHSCT was accomplished. The stem cells were mobilized from patient's bone marrow using granulocyte colony-stimulated factor with cyclophosphamide and collected. The patient's immune system was maximally suppressed with cyclophosphamide without destroying the bone marrow and CD34+ stem cells were transplanted. After this treatment ulcers on the fingertips become smaller and some of them recovered, Raynaud's phenomen has reduced. Modified Rodnan skin score reduced till 27 points. The spirometry showed that DLCO is 56 %. The patient's well-being and functional status have improved more than 50 per cent, but the biggest problem is flexure contracture on both hands which strongly limit the patient's daily activities and quality of life.

Discussion

Systemic sclerosis was one of the first autoimmune diseases challenged with high-dose immunosuppressive treatment followed by AHSCT. This was a real disease modifying treatment inducing better long term survival in comparison with intravenous cyclophosphamide and other medications. This case shows a benefit in skin involvement, better functional status, stabilization of lung condition and regression of fibrosis in lung examination.

A case of twin gestation complicated by cholestasis and oligohydramnios.

Presenting author: Aleksandra Szczęsna - Warszawski Uniwersytet Medyczny
Authors: Aleksandra Szczęsna Szczęsna
Supervisors: Joanna Kacperczyk-Bartnik, Joanna Kacperczyk-Bartnik, Joanna Kacperczyk-Bartnik, Joanna Kacperczyk-Bartnik, Joanna Kacperczyk-Bartnik

Background
The prolongated use of non-steroidal anti-inflammatory drugs (NSAIDs) antenatally is well described in literature to be damaging for fetus. However, a case of renal vasoconstrictive insufficiency in fetus following ingestion of statins and ibuprofen has not been described yet. Hereby a case of twin gestation with oligohydramnios and renal vasoconstrictive insufficiency in the setting of maternal cholestasis, gestational diabetes mellitus and tobacco abuse is presented.
Case Description
A 37-year-old woman gravida 7 para 7 in 30th week of twin dichorionic diamniotic gestation was referred to the hospital due to severe oligohydramnios. On the admission she presented jaundice, low body-mass index and fatigue. Her laboratory blood test showed anaemia, transaminitis, elevated serum bile acids concentration. Ultrasound obstetrical examination confirmed oligohydramnios and cardiotocography revealed profound decelerations. A decision to deliver urgently was set on the basis of fetal condition. A 6-7 apgared 1130g female fetus (twin A) and a 6-6 apgared 1130g female fetus (twin B) were born by a Cesarean section with a meconium staining of amniotic fluid in both amniotic sacs. Neonates were admitted to the NICU for preterm status, fetal acidosis and respiratory distress.

Twin A was diagnosed with acute kidney injury (AKI) on the basis of laboratory blood test and ultrasound image. During the hospitalisation process AKI elapsed and the infant was discharged from the NICU on the 52nd day of life. Twin B suffered birth asphyxia, anuria, perinatal cardiovascular and respiratory insufficiency. The child died on second day after delivery. Maternal postpartum course was uncomplicated. The medical history was reassembled after the event and the patient reported rosuvastatin intake until the 7 week of gestation and analgesics intake throughout the pregnancy.
Discussion
In the setting of oligohydramnios with significant mother's transaminitis and ICP, consideration of substance intake proves to be important during differential diagnosis.

In conclusion, early counselling should comprise an education about over-the-counter obtainable pharmaceuticals and their adverse effects on pregnancy.

Acuteliverfailureand suddendeath due to hepatitis A

Presenting author: Ewelina Truszkowska Truszkowska - Uniwersytet medyczny im. Karola Marcinkowskiego w Poznaniu

Authors: Ewelina Truszkowska, Cyntia Szymańska
Supervisors: Iwona Mozer-Lisewska

Background

Hepatitis type A is caused by HAV (hepatitis A virus), which is usually transmitted by the fecal-oral route. What is important to realize is that hepatitis A rarely, only in ~0,2% cases, causes acute liver failure. Elderly people, females and patients who already suffer from liver diseases are at risk, however, taking into consideration how rare this condition is,the data is limited. When it comes to viral factors, initially high viral replication can lead to excessive immune response, which may induce severe onset of the disease. Also, higher rate of substitution in the 5' untranslated region (UTR) and P2 region encoding nonstructural protein 2B and 2C of the HAV genome contribute to the development of acute liver failure.

Significantly,there is no specific treatment available.The infection may be present without any symptoms or subclinically. Initially, symptoms are nonspecific: vomiting, stomach pain, nausea and weakness. They are followed by more characteristic ones such as jaundice and hepatomegaly. Hepatitis A can be diagnosed on the basis of a positive test for HAV-specific IgM antibodies in the blood, clinical symptoms and elevation of ALT, AST, bilirubin, alkaline phosphatase and GGT.

Case Description

65 year old female patient came to ER because of jaundice and weakness. The first flu like symptoms have occurred 6 days before. Importantly, patient had a contact with her daughter who was recently discharged from the same hospital were she was diagnosed with hepatitis A. On the day of admission positive anti-HAV antibodies, significantly elevated aminotransferase activity, hyperbilirubinemia and INR prolongation were detected. The patient was transferred immediately to the Infectious Diseases Clinic. The first signs of encephalopathy have been observed on the next day, so intensive treatment was introduced to lower ammonia levels and prevent liver failure. However, patient's condition deteriorated from hour to hour. Consequently, the clinic consulted the case with transplant centers whether it is necessary to perform liver transplant. Nonetheless, the answer was negative.

On the third day of hospitalization, logical contact with the patient was lost, and at night she stopped responding to pain stimuli. In the morning, four days after admission to the ward, the patient died as a result of heart failure.

Discussion

Described case of hepatitis A presents typical clinical characteristics of this disease, with extremely rare severity of symptoms. What is exceptional when it comes to this case is that hepatitis A is often recognized as mild, unnoticeable condition. However, this case proves that acute liver failure because of hepatitis A occurs in clinical practise, not only in medical textbooks. Therefore, HAV infection cannot be underestimated and prevention measures, for instance vaccination, are advisable.

Spontaneous pregnancy during HRT therapy in a patient suffering from POI

Presenting author: Aleksandra Urban - Warszawski Uniwersytet Medyczny
Authors: Aleksandra Urban, Weronika Bronkiewicz, Kamil Mierzejewski
Supervisors: Monika Grymowicz, Monika Grymowicz

Background

Premature ovarian insufficiency (POI) is a medical term describing ovarian dysfunction of various etiology and heterogeneous course, which may also have multiorgan consequences resulting from premature ovary deprivation of sex hormones. Ovarian failure is not always permanent, what differentiates this condition from menopause. It affects approximately one in 100 females under the age of 40. POI most often proceeds with elevated gonadotropins, in particular FSH, and irregular or absent menstrual periods in reproductive age. Besides causing infertility, it is associated with multiple health risks.

Case Description

A 26-year-old woman was referred to the Gynaecological Endocrinology Clinic with oligomenorrhoea and periodic stomach and spine pains. Menarche occurred at the age of 16 years and was followed by regular menstrual bleeding. Patient commenced on birth control pills at the age of 19 years and continued for three years. History for previous surgery or other relevant pathologies was negative. Laboratory tests were performed and showed elevated FSH level at 102.2 mIU/ml (3.03-8.08 mIU/ml), estradiol at < 10 pg/ml (21-251 pg/ml), and LH at 45.9 mIU/ml (1.8-11.78 mIU/ml). AMH was at the very low level of 0.01 ng/ml. TSH, prolactin, and androgen status were within normal limits. Performed lower pelvic transvaginal USG delineated non-pathological view of pelvic organs. Karyotype tests were also conducted and the results corresponded to the normal female karyotype. After determining the final diagnosis by repeating laboratory tests, hormone replacement therapy was implemented to minimize bone density loss and decrease the risk of cardiovascular events. The patient was treated with cyclical hormone therapy using estrogen with the addition with progestin for 14 days in the cycle. Our patient spontaneously conceived after six months on HRT. After recognizing the pregnancy, HRT treatment was discontinued. During the first trimester of pregnancy, several episodes of vaginal bleeding occurred. Progesterone therapy was then implemented. Pregnancy proceeded without any further complications. At the 39th week of gestation a healthy child was born.

Discussion

In the treatment of pregnant patients with POI it is crucial to educate and reassure them that spontaneous pregnancies in women with this condition are not associated with higher obstetric morbidity or neonatal risk as compared with the general population, and may, just like in the presented case, lead to the birth of a healthy child. Patients should be also informed about the necessity of contraception usage if they do not want to get pregnant, because of the very small but still present risk of pregnancy as a result of spontaneous resumption of ovarian activity. Diagnosis of POI is usually sudden and very distressing for the patient. It is also of great value to take care of the mental health of the patient exposed to the prospect of infertility or significant difficulties in the process of conceiving.

Progressive supraglottic scarring as a sign of IgG4-related disease

Presenting author: Jakub Wielgat - Uniwersytet Medyczny w Łodzi
Authors: Jakub Wielgat, Magda Barańska, Magdalena Kowalczyk
Supervisors: Wioletta Pietruszewska

Background

IgG4-related disease (IgG4-RD) is a chronic inflammatory condition of unknown etiology characterized by lymphoplasmacytic infiltration, storiform fibrosis and obliterative phlebitis, which leads to organ failure. IgG4-RD may affect any tissue, but mostly affects the salivary glands, kidneys, pancreas and lacrimal glands. Clinical presentation is varied and depends on the organ involved.

Case Description

In December 2018, a 75-year-old female patient who suffered from episodes of acute dysnpnea was admitted to Department of Otolaryngology at the Medical University of Lodz. Similar episodes have been occuring 2-3 times a month within 3 years. It was treated for over a year with azathioprine and systemic steroids due to suspicion of Granulomatosis with polyangiitis. During the hospitalization diagnostics was extended for pemphigus and granulomatosis with polyangiitis. Tissue biopsy from supraglottal area, which was swollen and scarred was taken. IgG4-RD was recognized on the basis of histopatology and IHC reaction. Immunosuppressive therapy and steroid pulse was included. The patient remain in observation.

Discussion

It is estimated that IgG4-RD occurs with frequency 0,28–1,08/100 000. Despite the fact that there is an extensive literature concerning the disease, there are a few case studies of isolated manifestation in larynx. The diseases was described as organ specific, nowadays is classified as IgG4-related. Changes are usually multiorgan (about 58%). In this case isolate damage of larynx is the only manifestation and is a challenge for the surgical and endoscopic treatment. The lack of systemic symptoms, obliterative vasculitis and eosinophilia cause the therapeutic difficulties in the ENT clinics and extend the time for make diagnosis.

Diagnostic difficulties in liver failure – a case report

Presenting author: Julia Wrzesińska - Uniwersytet Medycznym im. Karola Marcinkowskiego w Poznaniu
Authors: Julia Wrzesińska
Supervisors: Iwona Mozer-Lisewska

Background
The main reasons behind acute liver failure are viral infections and drugs. Clindamycin induced hepatotoxicity is rare, yet reported.
Case Description
A 22-year-old male was admitted to hospital for diagnosis of jaundice lasting for 5 months. The patient had an episode of fever with flu-like symptoms treated with clindamycin. After the first dose of the drug appeared jaundice and pruritis. A primary EBV infection was diagnosed with concurrent exclusion of other hepatotropic viruses. Later, hemochromatosis and Wilson's disease were excluded in biopsy. The total bilirubin levels remained elevated (18,7 mg/dL at the admission) and finally lowered after a month of treatment with albumin plasmapheresis, ursodeoxycholic acid and L-ornithine L-aspartate to 3,9 mg/dL. The MR confirmed liver enlargement, but excluded primary sclerosing cholangitis.
Discussion
Eventually, the nature of liver failure was not definitely settled with both clyndamycin-induced liver injury and EBV hepatitis being plausible.

The diagnosing of drug-induced liver injury requires excluding numerous other conditions with invasive or expansive methods. Moreover, confirming the cause effect relationship between the disease and medication proves challengeable.

Clinical Case Reports - Oncology, Hematology, and Surgical Oncology (Friday 12.04 - 12:00-14:15)

Cutaneous hypersensitivity reactions to chemotherapeutic drugs: A case report.

Presenting author: Magdalena Antoszewska - Medical University of Gdansk
Authors: Magdalena Antoszewska Antoszewska, Dorota Mehrholz, Wioletta Barańska-Rybak, Roman Nowicki
Supervisors: Dorota Mehrholz

Background

Patients undergoing chemotherapy commonly experience dermatological side effects including cutaneous hypersensitivity reaction. Cetuximab is a monoclonal antibody targeting the epidermal growth factor receptor (EGFR) currently used for the systemic treatment of metastatic colorectal cancer patients alone or in combination with chemotherapy. The largest amount of toxicity with anti-EGFR agents is dermatological, with more than 80% of patients developing a cutaneous event. A drug-induced reaction is usually best managed by stopping the suspected drug. However, in some cases treatment is more sophisticated, compromises are needed, and interdisciplinary cooperation is required.

Case Description

A 34-year-old man, previously diagnosed with metastatic colorectal cancer, was admitted to the Clinic of Dermatology, Venerology and Allergology MUG with massive erythematous skin lesions localized mainly on face and trunk. Patient primarily underwent Hartmann's Procedure, followed by FOLFIRI + Cetuximab regimen as adjuvant therapy. During the treatment, the patient experienced typical acne-like eruption to Cetuximab. According to the guidelines, doxycycline treatment was given with a good effect. Unfortunately, skin deteriorated. Erythematous and follicular changes appeared on face and cleavage. Impetiginization appeared. The phototoxic reaction due to chemotherapeutics was suspected. Although all suspected drugs should have been discontinued, in agreement with oncological specialists it was decided not to stop chemotherapy. The patient was treated systemically with prednisone (20mg) and topically with tannin wraps, glucocorticoids, mupirocin and octenidine solution to relieve symptoms. SPF 50+ sunscreen was recommended for UV protection.

Discussion

According to guidelines of the treatment of drug-induced hypersensitivity reactions, chemotherapy should be discontinued and immunosuppressive treatment is recommended. In this case, despite the cutaneous hypersensitivity reaction, chemotherapy was not stopped. Continuous chemotherapy was superior to the treatment of phototoxic-related skin changes.

Parotid Gland Cancer - Therapeutic Difficulties

Presenting author: Karolina Bełdzińska - Gdański Uniwersytet Medyczny
Authors: Karolina Bełdzińska
Supervisors: Wojciech Brzoznowski

Background

Salivary glands tumors are rare and represent only about 3% of the whole group of head and neck cancers. Most of them (80%) affect parotid gland and 15% of them are malignant tumors. An average age of patient suffering from cancer of salivary gland is 47 years. Acinic Cell Carcinoma represents 7% of salivary glands malignant tumors and affects more women than men. About 4% of Acinic Cell Carcinomas affect patients below age of 20. Recurrence is observed in about 30% of cases.Surgery is the main treatment of salivary gland cancers. In case of parotid gland cancer superficial or total parotidectomy is main recognized treatment.

Case Description

The Case Report describes a history of a 14-year-old girl who was admitted to the Clinic of Otolaryngology at the University Clinical Center in Gdansk in November of 2018 because of the suspicion of the local recurrence of tumor in the left parotid gland.She had undergone an enucleation of the tumor of the left parotid gland in June 2018, in other Clinical Center in Poland. Then, the histopathological examination of enucleated tumor had confirmed a presence of cells of Acinic Cell Carcinoma (ACC). Because of the suspicion of local recurrence patient underwent a complete parotidectomy of the left parotid gland and intraoperative histopathological examination was carried in Novemeber of 2018.

Discussion

The case report emphasizes the need of correct surgical treatment – performing parotidectomy instead of enucleation only – to attain complete remission and avoid recurrence.

A case of primary urethral carcinoma with MRI findings

Presenting author: Weronika Bernard - Gdański Uniwersytet Medyczny
Authors: Weronika Bernard
Supervisors: Oliwia Kozak, Michał Studniarek

Background

Primary urethral carcinoma (PUC) is considered a rare disease accounting for less than 1% of genitourinary malignancies. Due to urethral cancer rarity optimal management may cause a therapeutic dilemma, especially in high-grade cancers. Radiological examination should concentrate on local staging and detection of lymphatic and distal metastatic spread.

Case Description

A 65-year-old male presented with periodical hematuria. A month earlier the patient had undergone circumcision, due to the posttraumatic phimosis. Urethrocystoscopy had not been carried out because of urethral stenosis. The performed MRI revealed infiltration of the membranous and bulbous parts of urethra over a distance of 6 cm with thin irregular lumen in the upper section of the infiltration. The lesion presented restriction of diffusion and pathological marginal vascularization. A malignant character of lesion was suggested. The performed cystourethrography documented presence of severe stenosis and irregular outline of bulbous part of the urethra. The image supported the diagnosis of circular neoplastic infiltration of the urethra. Urine sediment examination revealed moderate amount of epithelial cells with a minor atypism.

Discussion

Primary urethral cancer is not one malignancy but a spectrum of diseases characterized by various histologies. In men urothelial carcinoma is the predominant type of urethral cancer, with the occurrence of 78%. Squamous cell carcinoma (SCC) and adenocarcinoma (AC) are significantly less frequent with estimated incidence of 16-22% and 10-16% respectively. Diagnostic urethrocystoscopy and biopsy enables primary assessment of a urethral tumor in terms of its extent, location and underlying histology. Regarding staging accuracy, magnetic resonance imaging has increasing evidence to be superior to computed tomography. The treatment is dependent on the progression of the disease and may include preoperative chemotherapy, chemoradiotherapy, or penile-preserving surgery alone.

Clinical implications in a patient with malignancy induced hemophagocytic lymphohistiocytosis

Presenting author: Barbara Brzezinska - Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu
Authors: Barbara Brzezinska, Barbara Brzezinska
Supervisors: Monika Joks

Background

Hemophagocytic lymphohistiocytosis (HLH) is a life-threatening disease associated with an overwhelming cytokine storm and severe inflammation. It may develop due to genetic abnormalities, infection, autoimmune disorders or malignancies. It can occur as the first manifestation of disease. Due to the non-specific symptoms, HLH is underdiagnosed. The clinical course of HLH is fulminant and untreated leads to death.

Case Description

A 37-year-old man was admitted to the regional hospital due to the fever, weakness, abdominal pain and peripheral oedema. USG, Computed Tomography (CT) and blood count examination showed hepatosplenomegaly, ascites and pancytopenia. Due to the bad general condition, steroid therapy was included and the axillary lymph node was taken. Histopathological examination revealed changes after steroid therapy that caused the material was non-diagnostic. The patient was transferred to the Department of Hematology and Bone Marrow Transplantation in Poznań. In physical examination the general condition was severe, the patient feverished up to 40 degrees, hepatosplenomegaly, ascites and peripheral oedema were detected. Laboratory test revealed elevated ferritin (14998ng/ml ref.=10-150) and transaminases, high CRP, hypertriglyceridemia and hypofibrinogenemia. CT scan showed fluid in pleural cavities, peritoneum cavity and hepatosplenomegaly.

In the bone marrow examination hemophagocytosis and TCR-G rearrangement was detected. According to the Histiocyte Society guidelines, six of the eight diagnostic criteria was fulfilled for diagnosis HLH. Therapy based on the HLH-2004 protocol was introduced. It was decided to perform a splenectomy. In histopathology we found angioimmunoblastic lymphoma. The patient was qualified for chemotherapy in the CHOP protocol. Moreover, between the next series of CHOP, severity of symptoms HLH were observed: fever, oedema, hepatomegaly. After five cycles of CHOEP we confirmed refractory disease. The patient received the second line therapy: 2 x ESHAP. PET/CT scan revealed disease metabolic active lesions in bone marrow, liver, lymph nodes and omentum. After one course of IVE chemotherapy the patient died due to multiorgan failure.

Discussion

HLH is rare, mortal condition and may be undiagnosed due to non- specific clinical manifestation. Clinicians should be alert to patients presenting fever of unknown origin with pancytopenia, hyperferritinemia, hypertriglyceridemia who are not responding for antibiotics. When HLH is confirmed it should be performed diagnostics for infection, autoimmune disease and malignancy. The treatment of HLH is very difficult and often leads to death, even if was carried out correctly.

Hypercalcemia as first manifestation of pancreatic neuroendocrine tumor (NET).

Presenting author: Aleksandra Czapla - Medical University of Gdansk
Authors: Aleksandra Czapla, Ewa Zalewska
Supervisors: Anna Lewczuk - Myslicka

Background

Neuroendocrine tumours are a heterogeneous group of uncommon neoplasms classified as well or moderately differentiated (grade 1 or 2). They are made of cells that are usually able to produce, secrete and store hormones and amines causing distinct clinical syndromes. The secretion of parathyroid hormone-related peptide (PTHrP) in neuroendocrine neoplasms is extremely rare and causes humoral hypercalcemia of malignancy(HHM).Only seven studies, reporting a total of 30 patients with PTHrP secreting pancreatic NETs, have been published. The largest published single-center (ENETS Centre of Exellence Erasmus Medical Center in Rotterdam) case series consists of medical history of 10 patients.

Case Description

We report a case of 35-year-old woman with nonspecific abdominal pain, nausea, vomiting and fatigue, which lasted for almost a year. Further testing revealed severe hypercalcemia (5mmol/l) as well as numerous tumours in the liver and one in the pancreas on imaging. Core biopsy confirmed the diagnosis of moderately differentiated neuroendocrine tumour of the pancreas. Due to difficulties in the treatment of hypercalcemia and extremely low levels of parathyroid hormone, PTHrP secretion was suspected and later confirmed. Resistant hypercalcemia was patient's main medical concern. It was managed with various methods such as: intravenous saline, bisphosphonates, loop diuretics, glucocorticoids, somatostatin analogs(SSAs), radiolabeled SSAs (PRRT) and surgery. Usually only partial and short reduction of calcium levels was achieved.

Discussion

Despite the rareness of PTHrP induced hypercalcemia, it should be taken into consideration in differential diagnosis of elevated calcium levels in patients with pancreatic NETs. Furthermore, humoral hypercalcemia of malignancy is very difficult to treat, even with proper management of the underlying tumour and hypercalcemia itself. The rarity of PTHrP secreting NETs poses a challenge to specify clinical guidelines, it is therefore essential to present case reports' outcomes of various treatment approaches.

Case report of an extremely rare neoplasm.

Presenting author: Aleksandra Derwich - Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu

Authors: Aleksandra Derwich
Supervisors:Katarzyna Stencel

Background

Primary small cell carcinoma of the esophagus (SCCE) is an extremely rare tumor whose occurrence is estimated at 0.4-2.5% of all esophageal neoplasms. It is characterized by an aggressive behavior and poor prognosis. Histopathologically it is indistinguishable from the pulmonary equivalent (SCLC). Its histogenesis still remains unclear.

Case Description

A 42-year-old female was admitted to the Department of Oncology with the diagnosis of anaplastic small cell carcinoma of the esophagus for qualification for chemotherapy. In the medical history, the patient complained of dysphagia six months earlier. The endoscopy examination was performed, which showed extensive and profound ulceration covering approximately half of the esophagus circumference between 30 and 40 cm. The CT revealed numerous, heterodense meta lesions in the liver, circular thickening of the esophagus from the Th8 level to the thickness of approximately 12 mm extending over the length of 73 mm and pathological lymph node in the supraclavicular area. Histopathology results from esophagus samples revealed visible preserved fragments of the formation of small-cell malignant tumor among necrotic masses. Based on Immunohistochemical markers anaplastic small cell carcinoma of the esophagus was diagnosed. Due to the clinical picture, the patient was qualified for chemotherapy in the PE (cisplatin + etoposide) protocol. It was administered every 21 days for 3 days, intravenously. After two cycles of chemotherapy abdominal CT shown reduction of the metastatic lesions in the liver. After the last, 6th course of chemotherapy the patient was discharged in good general condition. Due to metastatic lesions in the liver the patient was qualified to the clinical trial with Nivolumab, anti-PD-1 monoclonal antibody,

Discussion

Esophagus is the most common extrapulmonary localization of small cell carcinomas in the gastrointestinal tract, with a frequency of <1.5%. It involves mainly middle and the lower third of the esophagus. It usually occurs in the sixth to the eighth decade with male dominance. This cancer is highly chemosensitive (like SCLC), however, the clinical course is much more aggressive and the response to the treatment is worse because in most cases tumor has metastasized at the time of diagnosis.

Oligometastatic disease in prostate cancer in an 80-year-old patient

Presenting author: Aleksandra Drzewiecka - Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń

Authors: Aleksandra Drzewiecka, Aleksandra Drzewiecka

Supervisors: Róża Poźniak-Balicka

Background

Oligometastatic disease in course of prostate cancer is a condition in which a patient presents no more than 5 distant metastases in one or more organs, and in addition to the primary tumor being under control, these metastases can be amenable to local treatment. Some patients affected by this disease may be subjected to a curative therapeutic strategy.

Case Description

80-year-old man with multiple morbidities, being also under the care of urological clinic due to benign prostatic hyperplasia, undergoing basic laboratory tests regularny every 6 months, as well as PSA level assay. In April 2016, the patient's PSA score was normal, until October that year when it increased to 8.4 ng/ml. The urologist ordered a prostate biopsy, the resultsrevealed the moderately differentiated adenocarcinoma (Gleason 7) in approx. 10% of the section areas. The level of testosterone in the blood was 283 ng/dl. Anti-androgen therapy combined with LHRH agonist, and additionally finasteride and tamsulosin were implemented. The patient was taken under the supervision of an oncologist.

A bone PET scan was performed, oncological suspicions were aroused only by a single lesion at the level of the C2 vertebra on the right side. There were no other changes suggesting metastases of prostate cancer diagnosed. CT scan of pelvis with contrast showed a strengthening lesion in the right lobe, enlarged right seminal vesicle, as well as a single enlarged lymph node near the right obturator vessels and a single enlarged lymph node where right inner iliac vessels arise. No other disturbing changes were found.

The patient was referred to the Clinical Department of Radiotherapy and the Department of Radiotherapy at the Provincial Clinical Hospital in Zielona Góra. MRI of the cervical spine with contrast confirmed a single metastasis to the cervical vertebra. The patient expressed a strong will to undergo the treatment. The metastatic lesion of the C2 vertebra was irradiate by stereotactic technique, in 3 fractions to 18.0 Gy. Then, teleradiotherapy by dynamic techniques was applied to the area of the prostate and seminal vesicles, 62.4 Gy were administered in 24 fractions for 5 weeks. The patient was discharged home with the recommendation of continuation of LHRH agonist therapy.

Control PET scan and MRI with contrast after 3 months from irradiation of metastatic lesion showed its regression. After 3 months from irradiation of the primary tumor, the PSA concentration was <2ng/ml. Currently: PSA <0,1 ng/ml, testosterone <6ng/dl.

Discussion

Even a small primary prostate malignant tumor can be metastasized to distant organs, usually bones. The qualification of oligometastatic disease as a separate clinical condition carries clinically significant consequences, because the patient being so affected undergoes therapy allowing cure or prolongation of the period without troublesome ailments, of course if his condition allows the implementation of therapy and he expresses a strong will to be treated.

31 years old female with malignant gastrointestinal neuroectodermal tumor- case report.

Presenting author: Wojciech Dudzic - Medical University of Gdansk
Authors: Wojciech Dudzic
Supervisors: Cezary Płatkowski, Marek Dobosz

Background
Malignant gastrointestinal neuroectodermal tumor (GNET) is a rare malignant neoplasm which originates from mesenchymal tissue. In most cases it is localized in the small intestine but it can also arise in stomach or colon. The characteristic histological feature for this type of tumor is a nested population of oval, epithelioid and spindle cells.
Case Description
31 years old female with pain in right hypochondriac region of unknown origin, lasting for 3 months. Signs of GERD and gastropathy were revealed during gastroscopy. A lesion of unknown type was visible in CT, becoming filled after contrast was administered.During resection, surgeon found a tumor of small intestine - jejunum, localised 80 centimeters from the Bauhin valve, connected to the greater omentum and the proximal loop of the small intestine. Enlarged, soft lymph nodes were found in the mesentery. Other organs of peritoneal cavity were unchanged. Structures which neighboured the tumor - greater omentum and mesentery were resected within the limits of healthy tissues. Histopathologically malignant gastrointestinal neuroectodermal tumor was diagnosed. Neoplasm cells were positive for vimentin, S100 protein, synaptophysin, CD56, bcl-2. Ki 67 was around 20%. Melanocyticmarkers were negative. EWSR was positive. It was confirmed that the resection was within the limits of healthy tissue. Resected lymph nodes were free from neoplasm.
Discussion
GNET is a extremely rare finding which is why it could be easily misdiagnosed in histopathological examination. Presence of neuroendocrine markers and absence of melanocytic ones should suggest GNET as a possible diagnosis.

IDH2 mutated AML patient treatment with Enasidenib

Presenting author: Rūta Jakimavičiūtė - Vilnius University
Authors: Rūta Jakimavičiūtė, Rūta Jakimavičiūtė
Supervisors: Andrius Žučenka, Andrius Žučenka

Background

Acute myeloid leukemia (AML) is the most common form of acute leukemia characterized by a clonal proliferation of myeloid precursors with a reduced capacity to differentiate into more mature cells. There is an accumulation of leukemic blasts/immature forms in the bone marrow (BM), peripheral blood (PB), tissues, with a variably reduced production of normal blood cells. Patients with AML generally present complications of pancytopenia. The AML diagnose is made via examination of the PB smear (leukemic blasts (>20%)) and BM aspiration. Proliferative advantage and differentiation block in AML blasts is the hallmark of the disease. Mutations in isocitrate dehydrogenase proteins (IDH1/IDH2) is one of the mechanisms of impaired differentiation through epigenetic deregulation. Enasidenib (E) is a 1st-in-class, oral, selective inhibitor of mutant-IDH2 enzymes. We would like to present an interesting IDH2 mutated AML patient who is now receiving E.

Case Description

A 61-year-old female presented to Vilnius University Hospital Santaros Klinikos in 2013-01 with a history of recurrent infections. A routine blood count showed leucopenia, anemia. The BM aspirate smear showed 70% of immature blast cells. 2013-05 flow cytometric analysis showed an expanded myeloid population with CD45+bl, CD34+, CD38+ het, CD117+, HLA-DR+, CD13+, CD123+, cMPO+ bl, CD33- expression. SNP showed no cytogenetic abnormalities. NGS TSM panel revealed mutations in ASXL1, DNMT3A, EZH2, RUNX1, PHF6 and IDH2 genes. The patient began induction chemotherapy 7+3,the 1st CR was achieved with negative MRD by flow (< 0,1%). Consolidation treatment with 1 cycle of high dose Cytarabine was administered, in 2013-09 she received AlloSCT. After 3 years of CR, in 2016-10 she relapsed with 56% of blasts in BM. 2nd remission was achieved after salvage FLAG-Ida chemotherapy and 3 donor lymphocyte infusions (DLI) were performed. In 2017-03 second relapse was confirmed with 42,59% of blasts in BM. She was refractory to IV cycles of Decitabine and IV cycles of low dose Cytarabine+Venetoclax. The patient achieved 3rd CR after induction therapy Venetoclax+Actinomycin D+Metformin. In 2018-03 – haploidentical alloSCT. In 2018-10 mollecular relapse was confirmed, 2 DLIs were performed with 1 cycle of Sorafenib however in 2018-12 progression with 37% of blasts in BM. IDH2 mutation remained detectable thus 7th line treatment with E was initiated through compassionate use program.

Discussion

New insights into the pathogenesis of AML have shown that there are patients with an increasing disease heterogeneity. Nowadays treatment strategies generate excitement about the future. Studies showed that E was well tolerated with an overall response rate of almost 40% and a median OS >9 months in patients with relapsed/refractory mutant-IDH2 AML. Our case shows an exceptionally fit patient successfully receiving multiple lines of conventional, experimental treatment regimens with 2 allotransplants and now being treated with novel targeted therapy.

Myxofibrosarcoma - a diagnostic pitfall

Presenting author: Jakub Kramek - Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu
Authors: Jakub Kramek
Supervisors: Maciej Zieliński, Maciej Zieliński

Background

We present the extremely rare case of myxofibrosarcoma (MFS) diagnostic pitfall in the young patient. The result of the primary histopathological examination revealed no malignancy and led to the misdiagnosis of lymphatic edema.

MFS is a rare variant of the malignant fibrous histiocytomas. It is one of the most aggressive types of soft tissue neoplasms. It usually develops in elderly patients predominately in extremities, within the dermis and subcutis. The clinical presentation is not pathognomonic. The histological aspects are highly heterogeneous, frequently delaying the diagnosis or leading to misdiagnosis. Complementary histochemical and immunohistochemical stainings are mandatory to achieve the diagnosis of MFS. MFS can recur locally or metastasize to lungs and bones. Treatment consists of local resection followed by radiotherapy. Chemotherapy may be considered.

Case Description

A 52-year-old male who presented in 2016 with left lower extremity edema and tenderness. Due to recent ski shoe pressure trauma, the patient was referred to orthopedic surgeon and physiotherapy. Edema deteriorated even though compression therapy. The ultrasound examination showed a cystic space filled with fluid. The preliminary diagnosis was necrosis of subcutaneous tissue; the patient underwent surgical debridement. Specimens were sent for histopathological examination which did not reveal any malignant lesions (synovitis chronica). Edema gradually enlarged and within four months a painful lemon-sized mass recurred. Lymphatic vessels damage was suspected, and the patient was referred to the vascular surgeon. A lymphography showed a cavity filled with fluid - a surgical revision and drainage were performed. A cyst was filled with blood and some solid debris, which was removed. Compression therapy combined with lymphatic drainage rehabilitation enabled wound healing. Three weeks postoperatively swelling aggravated. The next debridement was performed-lymphatic vessels were transfixed, and the samples were harvested. The result of the histopathological examination was myxofibrosarcoma (G2 - high grade). There might also be a correlation between Adalimumab therapy from 2013 to 2016 (psoriatic arthritis). Due to the large size of the tumor patient receive preoperative chemotherapy - to enable limb salvage resection.

Discussion

MFS is a clinical mimicker and might present histologic difficulties. A large series of histochemical and immunohistochemical stainings are recommended. Extensive surgical excision with adjuvant radiotherapy or chemotherapy presents the optimal therapeutic option.

Pancreatic squamous cell carcinoma effectively treated with resection and systemic therapy

Presenting author: Iga Rupniak - Collegium Medicum im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Authors: Iga Rupniak, Justyna Gąsiorowska, Patrycja Sobańska, Jakub Husejko

Supervisors: Karolina Horbacka, Maciej Słupski

Background

Squamous cell carcinoma of the pancreas (SCCP) is an extremely rare type of pancreatic malignancy. It is classified as non-endocrine neoplastic process of different origin, mostly arising from a ductal cell. Although in the current literature SCCP is described as highly aggressive cancer, poorly responsive to treatment, with bad prognosis and survival rates, we describe a case report of a successful outcome.

Case Description

A 69-year-old man was admitted to the Department of General, Hepatobilliary and Transplant Surgery, Collegium Medicum in Bydgoszczon 21st July 2015 with the suspected pancreatic lesion incidentally discovered on ultrasound, confirmed later in CT scan. The patient was in a good general condition and did not haveany complaints. The level of tumor markers (CEA, CA19-9, AFP) was within the normal range. On 3rd August 2015 he underwent pancreaticoduodenectomy (Whipple's operation) with the removal of portal vein infiltration. Intraoperative histopathological examination revealed squamous cell carcinoma infiltration. However after the examination of the specimen the final histopathological report turned out to be adenocarcinoma (pT3N1M0). The patient received adjuvant chemotherapy, his condition improved and the results of imaging did not show any reccurence. On 12 February 2017 a suspected lesion, size 27x26x28mm, SUV 9,40 above the left renal vein was detected during PET/CT. The patient underwent laparotomy with the resection of the lesion localized along superior mesenteric artery without any signs of wall infiltration, followed by adjuvant FOLFIRI chemotherapy. Histopathological examination revealed squamous cell carcinoma and after re-checking of the previous specimen, the diagnosis of SCC was established. On 27thSeptember 2017 PET/CT revealed suspected 18 mm lesion (SUV 5,29) above VCI, near to superior mesenteric artery. On 15th November 2017 laparotomy with the resection ofa 3 cm lesion near VCI and lymphadenectomy was performed. In 2018 all imaging examinations were clear.

Discussion

SCCP is a rare type of cancer which occurs in only 0.5% to 5% of all pancreatic neoplasms. Despite the fact that it is a very aggressive and invasive cancer, usually locally advanced and metastatic at the time of diagnosis and poorly responsive to radio- and chemotherapy with a short life expectancy, our patient has been living for over 3 years in a good general condition. Surgical resection is of a crucial value and combined with targeted systemic therapy may contribute to a significant extension of the patient's life.

Immunotherapy and steroidotherapy at the same time? Lung cancer with metastases to adrenal glands

Presenting author: Cyntia Szymańska - Poznań University of Medical Sciences
Authors: Cyntia Szymańska, Ewelina Truszkowska
Supervisors: Katarzyna Stencel

Background

Cancer immunotherapy uses elements of immune system such as CD8+ T cells to destroy tumor. In non-small cell lung cancer (NSCLC), there are two main goals: CTLA inhibition and PD-1 checkpoint blockade. When CTLA is concerned, it is an antigen expressed on the surface of T cells which prevents their activation. Consequently, the use of CTLA inhibitor allows T cells to fight with tumor. PD1, on the other hand, is expressed on tumor cells and also suppress T cells. Antibodies, which target PD-1/PD-L1, are pembrolizumab and nivolizumab directed against receptor as well as atezolizumab against its ligand. In many clinical trials efficacy of those antibodies was proved asmonotherapy and in combination with chemotherapy. Significantly, expression of these molecules occurs in half of NSCLC, so treatment is available for large group of patients.

Case Description

In February 2016 50-year oldwoman, non-smoker, started to suffer from pain in her shoulder, which was tried to cure with different analgesics. Then, in October, MRI was done and the reason of patient's complaint was revealed: tumor infiltrating Th3vertebra and pleura as well aspathological fracture of the same vertebra. CT scan and fine-needle biopsy presented squamous cell carcinoma of right lung T4N2M1b. Patient underwent palliative radiotherapy (8 Gy in spine Th1-Th4, 1 fraction), followed by chemotherapy (carboplatin+taxol). In June 2017 proton therapy was done. Five months later, PET presented tumors in both adrenal glands, which in MRI were recognised as distant metastases. In March 2018 patient underwent bilateral adrenalectomy. Due to progressive ischemia, left nefrectomy was performed on the next day.In June patient was enrolled to TAIL clinical trial (atezolizumab in patients withIIIb/IV stage of NSCLC), even though she was taking corticosteroid substitution due to lack of adrenal glands. Partial response in RECIST was confirmed.

Discussion

Lung cancer is often diagnosed as an advanced tumour, when surgery cannot be performed. However, in recent years immunotherapy emerged as a new method of treatment and it already have proven its clinical efficacy. Atezolizumab and other monoclonal antibodies are becoming more and more essential in lung cancer treatment. Taking corticosteroids, although often considered as a contraindication,may be accepted in cases when dose is low enough, equaling less than 10 mg prednisone.

Diagnostic pitfalls in melanoma

Presenting author: Stanisław Żadkowski - Gdański Uniwersytet Medyczny
Authors: Szymon Zdanowski, Stanisław Żadkowski
Supervisors: Kamil Drucis

Background

A dermoscopic evaluation is routinely used for diagnosing skin lesions. Several scales are used for that purpose e.g. 'three-point checklist of dermoscopy' (Soyer et al., 2004). In spite of the fact that its' specificity and sensitivity is about 90% and 70% respectively there are some cases in which it is not enough.

Case Description

A thirty five year old patient consulted his doctor because of a lesion present for the last two years. Macroscopic morphology and dermoscopic assessment indicated melanoma: blue-white structures and asymmetry. The lesion was removed with a narrow (2mm) margin, along the line of the lymphatic vessels for the purpose of further diagnostics. Despite imitating melanoma in the visual examination, the lesion was classified as an angiokerathoma histopathological examination.

Discussion

Angiokeratomas are benign and extremely rare. However, their dark purple or black colour may mimic that of a melanoma. Because of that, they pose a diagnostic challenge in visual diagnosis and it is important to take them into consideration. The presented case shows the importance of a histopathological examination and emphasizes its position as the method crucial for further clinical decision in such cases.

Clinical Case Reports - Pediatrics (Saturday 13.04 - 14:45-17:00)

Pediatric vascular anomalies treated with sirolimus – from experiment to routine

Presenting author: zahraa Al-hakeem - Medical university of gdansk
Authors: Zahraa Al-hakeem, Rema Said, Hawra Alfrdan, Khaled Karanouh, Aamir Hasan, Ewa Maria Sokolewicz
Supervisors: Ewa Bień

Background

Generalized lymphatic anomaly (GLA) is the abnormal overgrowth of lymphatic vessels that may be seen at multiple body sites. It is a rare condition associated with significant morbidity and mortality. Sirolimus, produced by Streptomyces hygroscopius, is an inhibitor of mammalian target of rapamycin (mTOR), a kinase in the PI3K/Akt pathway that regulates cellular processes. It is widely used as an immunosuppressive drug. Mutations in PI3K/Akt/mTOR have been identified in lymphatic disorders supporting the role of sirolimus as a treatment option in GLA. Sirolimus has been shown to improve the general condition of patients by controlling the symptoms and halting the disease progression.

Case Description

Patient 1: A 7-year-old female presented in 2004 with multiple bruised masses in inguinal, perineal and sacral regions. Computed Tomography showed lymphatic and venous malformations in minor pelvis, rectal wall, uterus, vagina, and posterior mediastinum, affecting multiple bones. In 2007 chronic disseminated intravascular coagulation (DIC) appeared. The patient was treated with subcutaneous Interferon alpha-2b, which was stopped after 15 months due to severe side-effects. It was introduced again for 4 years due to massive disease progression with exacerbation of DIC-related bleedings. In March 2015 the diagnosis of GLA combined with venous anomalies was made and Sirolimus therapy was introduced in a dose adjusted to the drug serum levels. Therapy was approved by the Ethics Committee of Medical University of Gdansk (MUG) and led to complete stopping of haemorrhages and significantly improved quality of life. Regression of pathological masses has also been observed, however; life-threatening infection, hypertension and thrombocytopenia have complicated the therapy.

Patient 2: A 9-year-old girl presented with multiple lymphatic malformations in her chest and abdomen, seen on Magnetic Resonance (MR) in December 2015. Lesions were seen in posterior mediastinum, retroperitoneal space, spleen, hilum of left kidney, pelvic bones and lumbar vertebrae. This led to GLA diagnosis so the biopsy was not performed but careful monitoring by USG and MR were recommended. Follow up MR showed progression of lymphangiomas in chest and abdomen, henceforth Sirolimus (approved by the Ethics Committee of MUG) was started in 2017. The dose was adjusted to the drug serum level. Occasionally, the patient reported headaches and vomiting. The control MR on August 2018 revealed decrease in the size of the lesions.

Discussion

1. Sirolimus is a relatively well-tolerated drug, controlling the disease progression and significantly improving the quality of life of children with GLA.

2. Side effects of sirolimus are usually acceptable, however the risk of secondary malignancies and teratogenic risk are a concern.

3. Since 2017 sirolimus has been officially accepted as a standard therapy for all types of angiomatoses in children in Poland.

Neonatal hypoglycemia as the most common problem in newborns with risk factors - Case report.

Presenting author: Marta Basińska - Uniwersytet Medyczny w Poznaniu
Authors: Marta Basińska
Supervisors: Katarzyna Wróblewska-Seniuk

Background

Neonatal hypoglycemia defined as a condition in which the amount of blood glucose is lower than 40 mg /dl in the first days of life is a common metabolic problem in newborns. It is usually asymptomatic and transient however it may also present with severe central nervous system and cardiopulmonary disturbances. Risk factors include prematurity, small size for gestational age, macrosomia, perinatal stress, birth asphyxia and being born to a diabatic mother. Persistent or severe hypoglycemia increases the destructive impact on the central nervous system and poor neurodevelopmental outcomes in further life of the newborn.

Case Description

A pre-term female newborn was delivered via caesarean section in the 36th week of pregnancy by a mother with gestational diabetes class G2. The birth weight was 1940g, Apgar score: 7/6/7/7. From the local hospital, On the 3rd day of life the infant was admitted to the Neonatological Clinic from the local hospital to persistent hypoglycemia (glucose blood level less than 20mg / dl). On admission the neonate was fed partly parenterally and required a constant glucose infusion of 11 mg/kg/min. Despite the increase in the glucose supply, glycemia remained at the limit values (41 mg/dl; 33 mg/dl at the 5th day of life). Hydrocortisone was included, resulting in a slight improvement. In the 8th day of life due to the occurrence of subsequent episodes of hypoglycemia (32; 44 mg/dl) and high insulin concentration (42.18 uU/ml), hyperglycemic treatment (diazoxidum) was included resulting in a normal or slightly elevated glucose levels in the following days. From the 11th day of life, the neonate was fed completely enterally, the doses of drugs were gradually reduced and on the 23rd day of life the hyperglycemic treatment was terminated. The newborn was discharged home in good general condition on the 25th day of life with recommendation of the endocrine and neonatological clinic control.

Discussion

Neonatal hypoglycemia is usually a transient and asymptomatic condition that requires immediate treatment to prevent the damage of the central nervous system. Newborns such as reported patient that present risk factors (prematurity small size for gestational age, macrosomia, perinatal stress, birth asphyxia and being born to a diabatic mother) are more likely to develop severe or persistent hypoglycemia, therefore they should be paid special attention and frequent monitoring of blood glucose levels after delivery. Furthermore these neonates should be also covered with special neurological control to exclude the persistent brain damage and long-term sequelae such as mental retardation, recurrent seizure activity and developmental delay caused by hypoglycemia.

Unusual clinical outcome of a Salmonellosis in a 2-month-old boy.

Presenting author: Aleksandra Derwich - Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu

Authors: Aleksandra Derwich
Supervisors: Katarzyna Mazur-Melewska

Background

Salmonellosis is a disease caused by Gram-negative rod-shaped bacteria from the Enterobacteriaceae family. The infection is usually spread by drinking water or eating contaminated food, though it may also be transmitted person-to-person. Infants and young children are the more likely to have an invasive infection. Salmonella meningitis carries a risk of severe neurological complications and higher mortality than any other bacterial infection. The treatment is complicated, and the relapse rates remain high.

Case Description

A 2-month-old boy was transferred to the Department of Infectious Diseases and Child Neurology due to seizure in the left upper limb, with suspicion of the stroke of a central nervous system. In medical history, an infant breastfed, perinatal history without complications, three days before hospitalization the high fever and diarrhea occurred, and outpatient treatment was insufficient. In the stool test, S. enteritidis was found. The infection was transmitted from the mother. In the neurological examination, the boy presented inferior mobility of the upper and lower limb and significant body asymmetry. In CT, a hypodense lesion in the right center of the semiovale was found, MRI showed a vast, irregular area of high intensity in T2 and low intensity in the FLAIR sequence, suggesting stroke or inflammatory changes. In the cerebrospinal fluid test - increased cytosis (2000 cells /µl) and protein level (9,900 mg/dl). In laboratory tests - increased WBC (23 * 103 cells /µl), PLT (848 * 103 cells /µl) and CRP. Based on the clinical picture and the ordered tests the S. enteritis meningitis was diagnosed and broad-spectrum antibiotics and anti-inflammatory treatment were implemented. In the next days, the patient's general condition improved, and the biochemical parameters were within normal limits. On the 20th day of hospitalization, an MRI examination was performed, and malacic cavitation at the site of the previously described lesions and a bilateral dilatation of a subdural space with solid blood-suppurative content were found. The surgical drain was placed. The next MRI, on the 34th day of hospitalization, showed a reduction of fluid space. The boy was discharged in good general condition, with recommendations of permanent, multi-specialized care.

Discussion

Meningitis can be caused by pathogens that are primarily infecting the gastrointestinal tract. When Salmonella infection become invasive, it may cause life-threatening sepsis, and the extra-intestinal infections affect mostly children under 1-year-old. This is a significant pediatric problem due to the possibility of infection in every age group, even among the youngest children. The disease can be transmitted person-to-person. Therefore, the important element of prophylaxis is parents' education about the pathways of disease transmission.

Systemic-onset juvenile idiopathic arthritis complicated by the macrophage activation syndrome in a 14-month old boy – a case report

Presenting author: Patrycja Iwańczyk - Wroclaw Medical University
Authors: Patrycja Iwańczyk, Karolina Klee, Fanny Arnhold, Ahmed Zuhair
Supervisors: Daiva Gorczyca

Background

Juvenile idiopathic arthritis (JIA) is a common rheumatic disease in children. Systemic onset JIA (sJIA) is the rarest form of JIA. Macrophage Activation Syndrome (MAS) is a potentially life-threatening complication of systemic autoimmune disorders. There is an uncontrolled and dysfunctional immune response leading to excessive secretion of proinflammatory cytokines which can induce multi-organ failure. We present the diagnosis and treatment of sJIA complicated with MAS.

Case Description

A 14-month old boy, diagnosed with sJIA, manifested by quotidian fever up to 40°C, maculopapular rash, hepatosplenomegaly, and arthritis of the ankles, which was confirmed by an ultrasonography of the joints. After exclusion of infection, other autoinflammatory diseases and malignancy, the diagnosis was made on the 20th day of fever. Immunosuppressive therapy with methylprednisolone was started, 30 mg/kg/day for three days and then switched to oral prednisolone 2 mg/kg/day. Already at admission, hyperferritinemia 3338 ng/ml was observed. Although the boy received repeated pulses of methylprednisolone with the addition of cyclosporine (6 mg/kg/day), he developed MAS. The fever and rash recurred, with an increase in the levels of acute-phase reactants. Additionally, the boy became apathetic, sleepy and reluctant to walk. The laboratory tests revealed hyperferritinemia (>40000 ng/ml), hypertriglyceridemia (625 mg/dl), hemoglobin concentration 8.9 g/dl, platelets count 106,000 per µl.

Methylprednisolone pulses were switched to dexamethasone, peroral cyclosporine was continued and one time infusion of intravenous immunoglobulin (2g/kg) was added. This therapy resulted in clinical and laboratory improvements in the 11th week from onset of the disease. The patient remained stable and without relapse of MAS during the follow-up period of three months.

Discussion

This case reports a rare and life-threatening systemic complication like MAS during sJIA in an approximately 1-year old child. Hyperferritinemia in combination with clinical findings can be a precocious indicator and enables to start a prompt diagnosis and treatment.

Thymectomy as a therapeutic option for prepubertal myasthenia gravis

Presenting author: Olga Kałużna - Medical University of Gdańsk
Authors: Olga Kałużna, Agata Knurowska
Supervisors: Marta Szmuda

Background

Juvenile myasthenia gravis is a rare disorder acquired in childhood, representing 10% to 15% of all cases of myasthenia gravis. Like the adult form, it is generally characterized by an autoimmune reaction against the neuromuscular junction. Most patients present with ptosis, diplopia, and fatigability. Some advanced cases may also depict with bulbar symptoms and limb weakness. Myasthenic crisis is defined as severe respiratory distress and occurs in 25% of patients.

Case Description

We report herein a case of a 10-year old girl with a generalized form of prepubertal myasthenia gravis who developed a respiratory crisis in approximately six months since the onset of the illness. At the time of diagnosis she had presented with distal muscle weakness, dysarthria, dysphagia and diplopia. A positive myasthenic test was demostrated. Serum anti-acetylcholine receptor (anti-AchR) antibodies was elevated at 9.63 nmol/L and CT showed persistent thymus. Initial treatment with pyridostigmine bromide and subsequent with ambenonium chloride, immunoglobulin and glucocorticosteroids didn't have sufficient clinical effect. The patient experienced several episodes of dysphagia on the course of a few months and after one of them, she was admitted to the Intensive Care Unit in serious condition with respiratory failure and severe aspiration pneumonia caused by persistent gagging with food and vomiting, whereby she was intubated and treated with antibiotics. Before the incident, symptoms such as fatigability, dysphagia and impaired mastication had been increasing visibly. After improvement of the patient's condition, she was transferred to the department of pediatric neurology, where she was treated with glucocorticosteroids, high dosage of immunoglobulin and the antibiotic therapy was continued. The girl was discharged from the hospital in good general condition. Two weeks later, thoracoscopic thymectomy was performed. Although the dosage of ambenonium chloride and prednisone couldn't have been reduced, the patient didn't present any neurological symptoms a week after the surgery and the myasthenic test was negative.

Discussion

Most cases of prepubertal MG are seronegative ocular forms. Generalized type of MG in prepubertal children is less common and, in most cases, the progress of the disease is milder than in postpubertal type of myasthenia, with lower probability of aggreviation and crisis. Treatment of juvenile myasthenia gravis is controversial and there are no conclusive guidelines. There are some reports of positive outcomes of thymectomy in prepubertal type of MG, though its value is continuously unclear. It should be considered as potentially beneficial, especially in young children with severe course of generalized AChR antibody-positive MG, like the presented patient.

Stroke in a teenager – why did it happen?

Presenting author: Joanna Karolewska - Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu
Authors: Joanna Karolewska
Supervisors: Aleksandra Uruska

Background

Type 2 diabetes is a known independent risk factor for ischemic and hemorrhagic stroke, however type 1 diabetes (DM1) also increases the risk, although to a much lesser degree. DM1 may be complicated by episodes of diabetic ketoacidosis that occur in about 10:100 000 cases of children and young adults. It has been estimated that only 10% of intracerebral complications of diabetic ketoacidosis are due to hemorrhage or ischemic brain infarction. Moreover DM 1 increases the risk of premature mortality after a stroke especially in young patient.

Case Description

A 19-year-old male was admitted to the Department of Internal Medicine and Diabetology due to malaise, nausea, dysesthesia in left lower limb and balance disorders. The patient had been hospitalized one week before due to diabetic ketoacidosis. He was diagnosed with type 1 diabetes at the age of 10. Increased glycemia (433 mg/dl) in venous blood was found in performed laboratory tests, as well as acetonuria and glucosuria without deviations in blood gas analysis. Glycated hemoglobin level was 8%. During the following days the patient experienced ptosis in the left eye, drooping left corner of the mouth, dysesthesia in both hands, dysmnesia and eventually gait disturbance. A CT scan revealed ischemic foci of the right hemisphere of the brain (parietal lobe and temporal lobe deep structures). A therapy with acetylsalicylic acid and low-molecular-weight heparyn was implemented and he was transferred to the Neurology Department.

Discussion

Those patients with poor blood sugar management are particularly vulnerable to cardiovascular complications. Especially people with hyperglycemia and diabetic ketoacidosis are prone to thrombosis. The risk for ischemic and hemorrhagic stroke rise with glycated hemoglobin levels. Risk for ischemic stroke increased significantly with glycated hemoglobin levels at or above 6.9%.

Unfortunately stroke has become an increasingly recognized cause of morbidity and mortality in children and young adults.

Neonatal Abstinence Syndrome - a case report

Presenting author: Barbara Osowska - WUM

Authors: Barbara Osowska
Supervisors: Ewa Romejko-Wolniewicz, Agnieszka Dobrowolska-Redo, Joanna Kacperczyk-Bartnik

Background

Opioid use disorder in pregnancy is a phenomenon that still gains an importance as opioid addiction incidence increases worldwide. Heroin use during gestation involves maternal, gestational and neonatal risk, including miscarriage, stillbirth, abruption of placenta, premature rupture of membranes, labor and delivery, intra-amniotic infection, septic thrombophlebitis, etc. Infant may also present neonatal abstinence syndrome.

Case Description

A 35-year old woman in fourth pregnancy was admitted to the obstetric clinic in 35 week of gestation, according to her relation, with labor in progress. The patient was heroin-addicted and had no obstetric care during pregnancy. She smoked cigarettes and used heroin every day during gestation. She was also positive for HCV, S. agalactiae and had leg ulcers. Amniotic fluid was purulent. She gave birth to a daughter, 2340 g, 50 cm, with 10 points in Apgar score. The mother was discharged from the hospital after 4 days postpartum in general good condition without her child. She was directed to the drug rehab clinic. Due to suspected abstinence syndrome, the newborn was transmitted to The Neonatal Unit for observation. She was being given morphine for 23 days with gradual dose reduction. She also obtained standard antibiotic therapy as her mother was positive for GBS, discontinued after 2 days in the absence of infection parameters. Neurological consultation and cranial ultrasound examination revealed no signs of focal damage to the CNS and let estimate the gestational age at delivery as about 38 weeks. However, abdominal ultrasound scan revealed cystic ovaries, bilaterally enlarged. Ophthalmological consultation firstly revealed a narrow line without vessels located temporally and a small supraretinal extravasation in left eye, however control consultation showed no abnormalities. The newborn was given fluconazole p.o. as she had severe nappy rash. Due to neonatal acne the infant was bathed in KmnO4. The case was sent to the court who decided to pass the custody over the child to the orphanage. The girl was discharged after 35 days of hospitalization in general good condition, 3740 g, 52 cm.

Discussion

The occurrence of neonatal opioid withdrawal syndrome is connected with rising opioid painkillers and heroin use, also among women of childbearing age. The main goal of maternal therapy is to minimize abstinence syndrome symptoms in the newborn. The methadone or buprenorphine therapy is preferred rather than sudden opioid withdrawal in pregnancy. Methadone clinic admission of heroin-dependent pregnant women may be also beneficial as it allows to provide an obstetric care for these women, which was absent in presented case. Psychosocial intervention is also urgent, as pregnant woman may be deprived of the rights to the child.

Recognition and diagnosis of mucopolysaccharidosis II (Hunter syndrome)

Presenting author: Dovilė Pileckė - Vilnius University

Authors: Dovilė Pileckė
Supervisors: Gražina Kleinotienė

Background

Mucopolysaccharidosis is a group of autosomal recessive metabolic disorders caused by the absence or malfunctioning of the lysosomal enzymes needed to break down molecules called glycosaminoglycans. These are long chains of sugar carbohydrates in each cell that help build bone, cartilage, tendons, corneas, skin, and connective tissues. Mucopolysaccharidosis type II, also known as Hunter syndrome, is a condition that affects many different parts of the body and occurs almost exclusively in males. It is a progressively debilitating disorder; however, the rate of progression varies among affected individuals. This condition is inherited in an X-linked recessive pattern. It is very rare that condition is due because of spontaneous mutation as in this case.

Case Description

A male 2 year 2 month old child of healthy, unrelated parents presented with a delayed development of speech and language skills, fine and gross motor skills was transferred to neurology department. Medical history reported that at 3 months old he had both sided inguinal hernia repair surgery, at 7,5 months old diagnosed with heart murmur, chest wall deformity, kyphosis, scoliosis congenital and had frequent respiratory infections. Clinically, on physical examination the patient had rough facial features, flat nasal bridge, thick lips, enlarged mouth, dysplasia, joint stiffness, umbilical hernia therefore was sent to genetic counseling. Mucopolysaccharidosis type 2 was confirmed after running genetic urine test and enzyme replacement therapy was prescribed.

Discussion

Mucopolysaccharidosis is a rare inherited multisystem disorder which presents variety of clinical findings. It is possible to suspect it based on the clinical representation. Early detection of the disease is recommended because appropriate management through a multidisciplinary approach alleviates somatic symptoms and improves quality of life. Genetic counseling is recommended to proband's mother because women are at risk of being a carrier and should undergo genetic testing as MPS2 is X-linked recessive. Approximately 10% patients like in this case can have mutation de novo so chance for siblings to have mucopolysaccharidosis reduce to less than 1%.

Long term gastrointestinal bleeding in Henoch-Schönlein Purpura in two year old boy - a case report

Presenting author: Kateryna Moroz - Medical University Wroclaw
Authors: Katie Musial, Kateryna Moroz, Angela Berska, Daniel Schaefer
Supervisors:Daiva Gorczyca

Background

Title: Long term gastrointestinal bleeding in Henoch-Schönlein Purpura in two year old boy - a case report

Authors: Kateryna Moroz1, Katie Musial2, Angela Berska3, Daniel Schaefer4

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Henoch-Schönlein Purpura (HSP) is one of the most common childhood systemic vasculitides. Common symptoms of HSP include skin findings with a palpable purpura, abdominal pain, joint pain, and renal involvement. Serious gastrointestinal bleeding is very rare in HSP. We report a case of severe gastrointestinal bleeding resistant to standard treatment.

Case Description

A two year old boy was admitted to the hospital due to petechial lesions on the upper and lower extremities, face and left ear accompanied with vomiting, fever and malaise. Shortly after admission, hematemesis and hematochezia occurred. The boy was treated with prednisone at a dose of 1 mg/kg/day, which was increased to 2 mg/kg/day. Fecal occult blood stopped for a few days but then recurred together with vomiting containing blood. An abdominal ultrasound showed no significant findings. The child's condition worsened but there were no indications for further surgical interventions. The abdominal computed tomography excluded polyarteritis nodosa. An intravenous methylprednisolone pulse therapy (25 mg/kg/day) was administered for three consecutive days. After such therapy the boy was still in a serious state. Due to no improvement, high dose intravenous immunoglobulins (1.5 g/kg) were added. The next day the boys condition significantly improved but due to blood in the stool, methylprednisolone pulse was repeated. Two year follow up shows complete recovery and no secondary complications.

Discussion

During the course of HSP serious bleeding may occur, especially in a case presenting with intense skin purpura. Treatment with methylprednisolone pulse therapy and high doses of intravenous immunoglobulins lead to complete remission.

Inflammatory myofibroblastic tumor of the tongue – treatment options in inoperable lesion.

Presenting author: Małgorzata Styczewska - Gdański Uniwersytet Medyczny
Authors: Małgorzata Styczewska Ewa Maria Sokolewicz
Supervisors: Ewa Bień, Małgorzata Krawczyk

Background

Inflammatory myofibroblastic tumor (IMT) is a very rare neoplasm affecting mainly children and adolescents. It occurs in various sites, the most common being the lungs and abdominopelvic region. Only six cases of IMT of the tongue have been reported to date.

IMT is a tumor of borderline malignancy, which may uncommonly recur and/or metastasize. The pathogenesis of IMT is still poorly understood. Histologically, it consists of two distinct components – myofibroblasts and inflammatory infiltration of plasma cells, lymphocytes, eosinophils and neutrophils. Approximately 50% of IMTs carry rearrangements in ALK gene; recently also mutations in ROS-1, PDGFR and NTRK3 genes have been reported.

Surgery is a mainstay of treatment and is usually curative. Due to rarity of the neoplasm, no therapeutic guidelines for inoperable or recurrent/metastatic IMTs have been established.

Case Description

We describe a case of a 10-year-old girl treated for an IMT of the tongue since VIII' 2016. The patient was initially admitted to Otolaryngology Department due to a fast-growing, painless, non-bleeding mass localised in the central part of the tongue, measuring 24x22x21mm in an MRI.

The tumor affected swallowing and speech. Based on histopathological examination of the tumor biopsy sample, the diagnosis of IMT was established. A non-mutilating radical excision was impossible, therefore in X'2016, treatment with oral prednisone was introduced to diminish the tumor. After two months, partial regression of the lesion was stated in USG examination. The tumor remained stable for the next 6 months, however, prednisone was withdrawn in V'2017 due to iatrogenic Cushing syndrome.

In I'2018, due to slow tumor progression, the girl was referred to the Department of Pediatrics, Hematology and Oncology, UCK. In VI'2018, iv. chemotherapy (metothrexate, vinblastine) acc. to CWS Guidance protocol for non-rhabdomyosarcomas was introduced. Unfortunately, severe hepatotoxicity caused to stop chemotherapy after four cycles only. Subsequently (VIII-IX'2018), based on anecdotal case-reports, clarithromycin was given, resulting in partial tumor regression, still not allowing for a surgery. Then, COX-2 inhibitor (etoricoxib) was tried, however with minimal response. A FISH assay of the tumor tissue excluded ALK rearrangement. Molecular testing (NGS) revealed a rare ROS-1 mutation, therefore since I'2019 the girl has been qualified to targeted therapy with Critozinib, resulting so far in slight regression of the tumor.

Discussion

1. There are no established guidelines for treatment of inoperable IMTs, therefore in such cases therapeutic strategy may include treatment with steroids, nonsteroidal anti-inflammatory drugs, clarithromycin, chemotherapy and targeted therapy, based on literature data.

2. In patients with inoperable/recurrent/metastatic ALK-negative IMTs, molecular testing should always be performed in order to find other possible targets for kinase inhibitor treatment.

Temporal bone fracture causing a posttraumatic convergent strabismus- a case report

Presenting author: Ewelina Wojciechowska - Gdański Uniwersytet Medyczny
Authors: Ewelina Wojciechowska
Supervisors: Hanna Garnier

Background

Head injuries and posttraumatic brain damage are the leading causes of death and disability in the pediatric population. In the United States about 500000 children annually are presented to emergency departments due to the head trauma, but only 10-19% of them require hospitalization or neurosurgical intervention. The accompanying skull fractures are more common in younger children. The parietal bone is one of the most commonly broken skull bones (about 60-70% of all the skull fractures), followed by the occipital, frontal and temporal bones (10%). Vehicle accidents and unfortunate events remain nowadays the primary causes of the temporal bone childhood fractures. There are various clinical presentations, such as an intracranial bleeding and a reduced level of consciousness (GCS). An important but uncommon complication is the unilateral abducens nerve palsy. Of all the cranial nerves the cranial nerve VI has the longest and the most sophisticated intracranial course. Thus it is exposed to many pathologies associated with the head injury (especially in the temporal region) or the intracranial hypertension. A bilateral abducens nerve palsy following trauma is extremely rare due to the potentially lethal force required to cause it.

Case Description

A 5-year-old boy was admitted to the Clinic of Surgery and Urology for Children and Adolescents due to the crush head injury caused by a television set of an approximate weight of 25 kg. On admission, the patient was in a stable general condition, conscious, confused, answering simple questions (GSC 12) with an external auditory canal bleeding. The computed tomography (CT) scan revealed a bilateral temporal fractures with no posttraumatic central nervous system (CNS) damage. The neurological examination revealed: anisocoria L>R, convergent strabismus,left-sided facial paralysis, drooping left eyelid and loss of blinking control on the affected side. The Solumedrol and Omeprazole treatment was initiated. After the two-week treatment, the patient was released from the hospital in good general condition but with the neurological symptoms described above. Three months after the accident, the patient presents no posttraumatic symptoms other than anisocoria. The boy remains under the care of the ophthalmology outpatient clinic.

Discussion

The temporal bone fractures represent approximately 18% of all skull fractures caused by head injuries. Ulrich's classification distinguishes two forms of the fractures: longitudinal or transverse. One of the most uncommon but an important posttraumatic sign in children is the isolated abducens nerve palsy, caused by injuries and tumors. The spontaneous recovery rate of unilateral traumatic sixth nerve palsy is usually observed after 3-6 months. However, a permanent palsy and diplopia requiring a surgical intervention are also observed in the literature. Injection of botulinum toxin into the medial rectus muscle is the most recommended intervention in the treatment of the convergent strabismus.

Clinical Case Reports - Surgery (Saturday 13.04 - 14:45-17:00)

A striking delivery

Presenting author: Beata Adrianowicz - Jagiellonian University Medical College
Authors: Beata Adrianowicz, Paulina Danił
Supervisors: Magdalena Nowak Małgorzata Radoń-Pokracka

Background

Lightning strike occurs very rarely, being still the third most common cause of storm-related deaths in the world. The incidence of such an event in a pregnant woman is ultimately low with only about 13 cases reported in the literature. The effect of lightning strike in pregnancy may vary from an unpleasant sensation felt by the woman and no harm to the fetus to a death of both the mother and the child.

Case Description

A 27-year-old woman in the 33rd week of her second pregnancy was admitted to University Hospital in Krakow for evaluation after a lightning strike. She reported a pain in her right upper and left lower extremities. Physical examination revealed multiple skin abrasions on the arms and legs. The only abnormality on ultrasound was an accelerated fetal heart rate (189/min). The woman remained under observation.

One hour after the admission vaginal bleeding occured and the patient was qualified for an emergency caesarean section due to a placental abruption. C-section was performed without any complications. The patient stayed in a hospital under observation for another 4 days and on the 4th day after caesarean section she was discharged home without a child.

Discussion

Reports of lightning strike in a pregnant woman are exceedingly uncommon. Lightning may cause a variety of injuries to the woman and the fetus- from minor ones (such as unpleasant sensation) to the life-threatening cardiac or respiratory arrests. The most important thing in the management of a pregnant woman after such an event is a multidisciplinary approach, including an evaluation by obstetrician. Although initial emphasis must be on the assessment and resuscitation of the mother, she should be transferred to a maternal-fetal care unit as soon as her condition is stable. As maternal injuries are not predictive of fetal outcome and the lighting strike may lead to spontaneous uterine activity and decreased fetal-placental circulation, continuous monitoring of fetal well-being is essential.

GIANT UTERINE FIBROIDS MIMICKING PELVIC CAVITY CANCER

Presenting author: Eglė Bareikienė - Vilnius University

Authors: Eglė Bareikienė
Supervisors: Sabina Špiliauskaitė

Background

Uterine fibroids are benign smooth muscle tumours of the uterus. Large myomas, greater than 10 kg, are extremely rare. It may cause life threatening complications while pressing vital organs such as heart or lungs. Moreover, fibroids may press the bladder causing a frequent need to urinate, pain during sex, lower back pain, dysmenorrhea, abnormal bleeding. About 20% to 80% of women develop fibroids by the age of 50.

Case Description

We present a case of 48-year old woman who had been diagnosed with a gigantic intra-abdominal mass. The patient complained of increased abdominal circumference, shortness of breath, weakness, anemia and fever. Abdominal and pelvic CT scan revealed a multifocal 32 x 30 cm size mass and free fluid in abdominal cavity. Due to suspicion of the gynaecologic cancer such as uterine sarcoma, ineffective treatment with antibiotics, deteriorative patient's condition, increasing inflammatory markers and dyspnoea, laparotomy was performed. During the operation, a gigantic 35-40 cm diameter intra-abdominal mass, originating from the uterine fundus, with neovascularisation between mass, terminal ileum and mesentery of the sigmoid colon was observed. Also, adhesions with surrounding structures, 2000 ml of serous fluid in the abdominal cavity and enlarged to 2.5 cm paraaortic lymph nodes were found. Total hysterectomy, adnexectomy, selective paraaortic lymphadenectomy and adhesiolysis was performed.

Discussion

A patient was successfully treated with total resection of a 35 cm x 40 cm diameter and 13 kg weight mass. Post operational histological examination revealed the final diagnosis of submucosal, intramural and subserosal uterine fibroids with necrosis and suppuration. Uterine fibroids have to be differentiated with adenomyoma, endometrial carcinoma, uterine sarcoma, pregnancy, ovarian cancer and tumours of gastrointestinal tract. Radiological investigations like sonography, CT scan and MRI are helpful in differentiating uterine fibroids from other masses, but they can be misleading at times. Increased inflammatory markers and dyspnoea could be first and only symptoms of large uterine fibroids. An individual treatment for every woman should be considered depending of the leiomyoma localization, size and performed symptoms.

Abscess of the appendix as a cause of gastrointestinal obstruction

Presenting author: Olga Basiak - Medical University of Warsaw
Authors: Olga Basiak, Olga Basiak
Supervisors: Laretta Grabowska-Derlatka, Laretta Grabowska-Derlatka

Background

Acute appendicitis has different causes. The most common appendicitis is caused by blocking the appendix with fecal stones or a foreign body. Clinical symptoms reported by patients are nausea, pain described at the beggining as diffuse and difficult to locate, and then - due to the progression of inflammation - located in the right lower abdomen. Muscle defense, stoppage of gases, increase of body temperature and increased parameters of inflammation in laboratory tests are common. Long-term and untreated appendicitis can be the cause of perforation or abscess formation. Diagnosis and indications for surgical intervention are established on the basis of the interview, clinical examination and imaging tests - ultrasonography and computer tomography, which is the best diagnostic method.

Case Description

A 26-year-old man was admitted to the emergency room with symptoms of gastrointestinal obstruction. The patient reported pain in the right abdomen, fever and vomiting lasting4 days. The patient was in a hospital in Italy, where appendicitis was excluded, but due to the parameters of inflammation he received an antibiotic. On admission to the hospital, the examination of the abdominal cavity showed several levels of fluid in the expanded loops of the small intestine. CT examination of the abdominal cavity confirmed the presence of occlusion caused by the purulent reservoir with dimension 33x29mm. This reservoir caused pressure on the jejunum loop in the midabdomen, causing obstruction.

Discussion

Acute appendicitis may go atypically, and clinical symptoms caused by complications of appendicitis appear in the foreground of the diagnosis.

Nasal bleeding and impaired nasal patency as the only symptoms of esthesioneuroblastoma

Presenting author: Magdalena Kowalczyk - Medical Uniwersity of Lodz
Authors: Magdalena Kowalczyk, Magda Barańska, Jakub Wielgat
Supervisors: Wioletta Pietruszewska

Background

Esthesioneuroblastoma is a rare nonepithelial neoplasm from the olfactory plate. Its incidence rate is about 1:1000000/year with two peaks occurring in the second and six decade of life and a similar incidence in women and men. It is estimated that esthesioneuroblastoma accounts for 2-5% of all cancers in the nasal cavity. The tumor in the endoscopic examination resembles a fragile, easily bleeding polyp located in the roof of the nasal cavity. It often gives distant metastases and easily recurs. If the tumor spreads in the direction of the brain, it may show symptoms of increased intracranial pressure or visual impairment. Additionally, it can cause difficult breathing through the nose, bleeding, disorder of smell and headaches. Due to the late, non-characteristic symptoms esthesioneuroblastoma is a cancer that is difficult to diagnose and often detected in late stages.

Case Description

The 53-year old female with nasal bleeding and impaired nasal patency which lasted for three months was admitted to the Department of Otolaryngology and Oncologic Laryngology, Medical University of Lodz. In the endoscopic examination there was a polypoid outgrowth which occupied the entire nasal cavity. The patient was treated surgically by tumor removal and bone milling in the operated sinus. Radiotherapy was used as the treatment of choice. Patient were classified with Kadish clinical staging system.

Discussion

In the literature there are mentioned cases of short survival rate of patients with embryonic neuroblastoma and with lymph nodes of various head and neck regions involved. The authors also suggest that distant metastases are a poor prognostic factor. According to original papers and meta-analysis the most effective method of neuroblastoma treatment is the endoscopic surgery . The role of radiotherapy as an adjuvant treatment is also discussed. Our observations suggest that rapid intervention correlates with patients' survival

Turban tumor: plastic surgeon's approach to cylindromatosis.

Presenting author: Natalia Mazur - Gdański Uniwersytet Medyczny
Authors: Natalia Mazur, Natalia Mazur
Supervisors: Jerzy Jankau

Background

Cylindroma is a rare form of benign tumor deriving from appendage background, most likely, a variant of eccrine spiradenoma. Tumors commonly present in the head and neck region, as solitary or multiple tumors. In cases of multiple presentation, a strong link to autosomal dominant genetic defect in CYLD gene located on band 16q12-13 has been proven.

CYLD gene mutations are associated with familial cylindromatosis and Brooke-Spiegler syndrome characterized by multiple skin appendage tumors such as cylindromas. Tumors present as large, smooth, pink to red, hairless lesions, predominantly located on the scalp, forming a turban-like structure which may prominently impact life quality of patients hence surgical treatment is recommended.

Case Description

A 65-year-old male presented with 5 decades long history of cylindromatosis of face, scalp, neck, thorax and upper back. The tumors varied in size, from 1 cm to 7.5 cm, shape and colour and displayed a tendency to overlap and form a distinctive turban-like structure. Upon examination, tumors were limited to subcutaneous tissue and movable with unchanged overlapping skin except for the colour, varying from pink to red. The primary surgery was conducted in 2006 and tumors were successfully excised from patient's scalp followed by skin grafts from patient's lower limbs.

The secondary surgical treatment of extensive, ulcerating lesions from upper back was carried out in 2019 with primary closure performed with skin grafts. Upon removal tumors were heavily bleeding due to extensive vascularisation which was managed with coagulation of blood vessels.

Discussion

Cylindroma is an uncommon tumor, usually benign, deriving from dysplastic skin appendages. It is a rare condition and its exact occurrence is unknown, yet it affects females twice as often as males.

A family history strongly suggests presence of genetic mutation of CYLD gene encoding a cytoplasmatic protein which plays a role in deubiquitinating and causes familial cylindromatosis and Brook-Spiegler syndrome. In this case, patient's two sisters, displayed cylindromas in the typical location of head and neck yet did not wish to be operated on due to less severe presentation.

Each patient's presentation is unique and requires a state-of-the-art personalised surgical approach developed according to patients' needs as not all lesions may be excised simultaneously due to extensive presentation, rich vascularisation network and the need to harvest multiple skin grafts.

The implications of this rare condition are known to affect the patient's mental health due to their curious appearance in highly visible locations such as face, scalp and neck.

Follow-up patient care is recommended because of reoccurrences, new lesions formation and enlargement of existing ones with a potential risk of malignant transformation, especially following ulceration and bleeding of lesions.

Selective intrauterine growth restriction in monochorionic-diamniotic twin pregnancy – a case report

Presenting author: Agnieszka Palus - Medical University of Warsaw
Authors: Agnieszka Palus, Iwona Szymusik
Supervisors: Iwona Szymusik

Background
Multiple gestations are associated with high risk of pregnancy complications and stillbirth. Selective intrauterine growth restriction (sIUGR) is one of them – it occurs more often in monochorionic than in dichorionic twin gestations. In the majority of cases it is due to uneven placental share, which may be accompanied by vessel anastomoses, various in number and size. As a result one twin is growing significantly slower than the other. In utero demise of either of the twins may have tragic consequences for the other.

Case Description
A report of a case of 34-year old woman in monochorionic-diamniotic twin pregnancy complicated by sIUGR is presented.

The patient was referred to the hospital at 16 weeks of gestation due to the significant disproportion of intrauterine growth of fetuses. Initial ultrasound examination revealed sIUGR and oligohydramnios of the second fetus, not meeting the Quintero criteria of twin-to-twin transfusion syndrome. Next imaging tests also showed cardiomyopathy, pericardial effusion, abnormal blood flow and anhydramnios of the smaller fetus. There were no abnormalities in the properly growing co-twin. Moreover, there was a high risk of preeclampsia confirmed at 27th week of gestation in biochemical tests. At 28th week of gestation caesarean section was performed due to a very high risk of intrauterine demise of the second fetus.

The first female fetus with 220g of body weight was born in a critical condition and died 30 minutes after the delivery. The second female fetus was delivered in good general condition, weighing 1100g. During her stay at neonatal intensive care unit the newborn required mechanical ventilation, antibiotics, blood transfusion. She was diagnosed with bronchopulmonary dysplasia and 3rd degree intraventricular haemorrhage. The baby was discharged after 74 days of hospitalization in good general condition, weighing 3090g.

Discussion
Multiple gestation carries an increased risk of adverse perinatal outcomes. Therefore, proper perinatal assessment based on ultrasonography is essential, especially in monochorionic pregnancies. In cases complicated by sIUGR the decision to deliver is especially difficult and requires wide clinical experience in order to increase the chances of survival for any of the two twins and to decrease the risk of complications resulting from prematurity.

A case of brain tumour with two histopathologic components

Presenting author: Jakub Rojek - Gdański Uniwersytet Medyczny

Authors: Jakub Rojek
Supervisors: Wojciech Biernat

Background

Temporal lobe neoplasms are frequent cause of performing brain surgery. This case report points how accurate diagnosis and treatment rely onboth clinical signs and histopathology and that the outcome can depend on early surgical intervention.

Case Description

A 30-year old patient suffering from severe headaches and vomitting was admitted to neurosurgical department as an emergency . Patient was diagnosed having reccurence of left temporal lobe brain tumour.After surgery histologic examination was performed, showing primitive neuroectodermal tumour WHO 4 with component of anaplastic oligodendroglioma.

Previously patient had a history of brain tumour, which was diagnosedin CT when patient was 24-years old. He was refered having control visit what he ignored it. Four years after CT scan patient become severly ill, presenting with somnolentia, severe headaches and bradycardia. After surgical excision histologic examination was performed showing image of anaplastic oligoastrocytoma with component of tissues like primitive neuroectodermal tumour (PNET-like) WHO grade 3/4. Patient had radiotion therapy course and phisician assumpted remission of the disease, till headaches urged patient to came back to the doctor two years after end of earlier therapeutic process.

Discussion

Tumour malignancy progression is not an unusual phenomenon in most common brain tumours (astrocytomas) as well as in less frequently occuring entities-oligodendrogliomas. Early diagnosis and surgery after formation of a lesion in this adult patient, long-term follow-up is essential in this disease, as well as mixed histogenesis of tumour. The disease could have different outcomes depending which stage of the disease the treatment was started

To transplant or not to transplant?- that is the question

Presenting author: Nikola Ruszel - Pomeranian Medical University
Authors:Nikola Ruszel, Michał Kubisa, Piotr Lisowski
Supervisors: Bartosz Kubisa

Background

Cystic fibrosis (CF) is an inherited disease with an average rate of 1 in 2000/3000 among the European nations. In lungs, CF leads to production of thick, immobile secretions. As the disease progresses, the patients need to be hospitalized more often to tackle recurrent respiratory insufficiencies due to severe infections of the respiratory tract. Over the clinical course of CF, the patient's quality of life significantly regresses with the end-stage lung disease requiring a permanent oxygen support and intensive pharmacological solutions. If all pharmacological therapeutic options are exhausted, these patients may be qualified to undergo a more radical treatment - lung transplantation (LuTx). However, there are some contraindications which deny them the right to this procedure. Although the lists of both relative and absolute contraindications undergo dynamic changes, the need for further propagation of taking action in order to overcome them, remains. Without that, many CF patients will be deprived the chance for getting a LuTx.

Case Description

A 37 year old male patient was qualified for a double LuTx in 2014, due to complete respiratory failure, pulmonary hipertension and reocurring hemoptysis. The patient was diagnosed with cystic fibrosis at the age of 10. Since then, he has developed exocrine pancreatic insufficiency, suffered from persistent sinusitis and presented signs of incomplete distal intestinal obstruction syndrome. Despite being self-manageable he continued to regress both physically and respiratory-wise.

In 2015 the patient was found positive for hepatitis C infection (HCV). The virus was successfully eradicated with the sofosbuvir-based treatment and later, in January 2016, the patient underwent a double LuTx performed under extracorporeal membrane oxygenation.

After the LuTx the patient showed a significant progress both in terms of physical condition and respiratory function. 1 month after the procedure, patient's FEV1 raised to 74% (from 20% before the procedure) and 6 months after the LuTx, he was able to ride over 100 km on a bike.

Over 3 years after the procedure, the patient still remains under regular control of the sub-department of Transplantation and presents great health condition.

Discussion

1. Lung function is an important indicator of health and has a great impact on survival rate of CF patients.

2. HCV infection can be successfully eradicated before the LuTx and therefore should not be considered as an indication for exclusion from LuTx referral.

3. LuTx in CF patients is both lifesaving and life-changing, thus overcoming of any relative LuTx contraindications should always be attempted.

Can acromegaly be an obstacle to a laparoscopic cholecystectomy? A case report.

Presenting author: Aleksandra Szczęsna - Warszawski Uniwersytet Medyczny
Authors: Aleksandra Szczęsna Szczęsna
Supervisors: Aneta Obcowska-Hamerska

Background
Cholelithiasis is a common adverse effect of somatostatin receptor ligands therapy in secreting growth hormone pituitary adenomas. In acromegaly common comorbidities are impaired glucose tolerance, dyslipidemia, atherosclerosis, cardiomyopathy, upper airways obstruction, organomegaly, hypogonadotropic hypogonadism and osteopenia with debilitating osteochondrosis. Due to continuous somatostatin receptor ligands ingestion, gallstones of biliary tract can cause chronic fibrosing inflammation and acute cholecystitis. In the setting of acromegaly in a patient of young age at diagnosis, the musculoskeletal features and organomegaly may be a cause of difficulties during laparoscopic surgery.

Case Description
We report a case of 40-year-old man diagnosed with acromegaly 17 years earlier, who was admitted to the surgical department suffering an acute cholecystitis, which was confirmed during an operation procedure. A characteristic constitutional body type of acromegalic patient requires an adequate approach, because the anatomical topography of organs could have been altered. A minilaparotomy to create a pneumoperitoneum was challenging due to abdominal wall thickness, however it reduced the risk of iatrogenic adverse effects such as liver puncture. The laparoscopic dissection of Calot's triangle was complicated by enlarged gallbladder, considerable inflammatory infiltration and hepatomegaly. The resected gallbladder with a part of cystic duct was 22 cm long and its size demanded a specific approach, such as laparoscopic Endobag of higher capacity in comparison to normal-sized gallbladder. Thickened abdominal wall required a thorough loop-suture closing. In spite of associated difficulties that we have encountered, the patient recovered quickly and was discharged from the hospital two days after in a good condition in keeping with ambulatory surgical unit.

Discussion
Long-lasting acromegaly may provoke intraoperative difficulties, when laparoscopic approach was chosen. A few aspects of surgical management should be altered in order to avoid any complications among acromegalic patients. Customized mode of operation and available access to various surgical instruments may provide a sound, safe, ERAS-abided proceeding.

Penile Buschke-Lowenstein tumor in HCV patient – case report

Presenting author: Olga Wawrzaszek - Gdański Uniwersytet Medyczny
Authors: Olga Wawrzaszek, Mateusz Czajkowski, Katarzyna Czajkowska, Małgorzata Sokołowska-Wojdyło, Marcin Matuszewski
Supervisors: Mateusz Czajkowski

Background

Giant condyloma acuminatum called also Buschke-Lowenstein tumor (BLT) has been rare locally aggressive and destructive manifestation of long-lasting HPV infection. BLT is observed in patients infected with low-risk genetic types of the virus – HPV 6, HPV 11. Due to nowadays increasing HPV morbidity, diagnosis of the infection in the early stadium of manifestations should not be a problem. Subsequently, accurate and radical treatment of HPV infections' symptoms is crucial to omit further complications like BLT. This is especially important in patients with comorbidities or immunodeficiency who are prone to develop BLT faster than others.

Case Description

A 55-year-old patient was admitted to the Department of Urology because of penile lesions - multiple beige papillomae with cauliflower-like paved surface presented on glans penis and coronal sulcus. The lesions were bleeding and pinching. The patient reported their appearancefew weeks earlier. At the admission patients' weight was 85kg, high - 1.66m, BMI 30.8. Patient suffer because of liver cirrhosis and metastatic hepatocellular carcinoma (HCC) due to chronic HCV infection, was after hemihepatectomyin fair general condition. C-reactive protein (CRP) value was 8.79 mg/l. Microbiological tests of urethral swab have revealed: HPV 11, Streptococcus agalactiae, coagulase-negative Staphylococcus. The patient underwent total resection of condylomas from glans penis and coronal sulcus. Histopathology examination has revealed giant condyloma acuminatum.

Discussion

Chronic inflammation,immunodeficiency,low socioeconomic status, drug abuse, presence of sexually transmitted diseases, smoking - have been, in between, postulated as main contributing factors. Long lasting BLT can be very destructive, extending into the pelvic organs. Malignant transformation is reported in 35-50% of cases. Proper treatment of every HPV infection is necessary to prevent BLT, and adequate treatment of BLT is necessary to avoid lesion progression, fistulation, secondary infections and others.

Pressurized intraperitoneal aerosol chemotherapy (PIPAC) as an opportunity for patient with stomach cancer and peritoneal dissemination: Case report

Presenting author: Jędrzej Wierzbicki - Collegium Medicum Uniwersytetu Mikołaja Kopernika w Toruniu
Authors: Jędrzej Wierzbicki
Supervisors: Maciej Nowacki

Background

Gastric cancer is the fifth most commonly diagnosed malignant tumor and the third in terms of mortality. Due to diverse, not very specific symptoms it is difficult diagnostic challenge. Diagnosis is often made at an advanced stage of the disease, not infrequently during dissemination to the peritoneum. Patients with inoperable, locally advanced malignancy or peritoneal carcinomatosis have only limited pool of palliative procedures with limited influence on the such important factors as ascites and quality of life. The following paper presents a patient qualified for palliative treatment who received classical chemotherapy combined with pressurized intraperitoneal aerosol chemotherapy (PIPAC).

Case Description

A 43-years-old patient with gastric cancer was initially directed to assess the extent of the cancer process. He underwent positron emission tomography using fludeoxyglucose and computed tomography (FDG-PET/CT) followed by diagnostic laparoscopy. Previously mentioned methods revealed metabolically active neoplastic process in the stomach with infiltration of the surrounding tissues, multiple peritoneal implants and growing ascites. Based on these tests malignancy qualified as inoperable and patient was directed for systemic treatment (FOLFOX 4). It was decided to combine conventional treatment with PIPAC (doxorubicin and cisplatin protocol). The patient has already undergone two PIPAC treatments and is awaiting the third. Almost a year after first PIPAC procedure during follow-up the patient assessed quality of his life as good and he scored an 1 on the Scale of Performance Status. He is still professionally active and continue systemic treatment. An imaging modalities and clinical status indicate stabilization of disease, moreover control of ascites has been obtained.

Discussion

Patient presented in this paper who undergone classical chemotherapy combined with the novel technique of drug delivery obtained clinically significant response to this kind of therapy. The attained results confirm the literature data in which it is indicated that appropriately selected groups of patients may have measurable benefits from undertaking an attempt to treat advanced cancer disease and peritoneal metastases using the PIPAC method.

Recurrent multiple odontogenic keratocysts in a patient with Gorlin-Goltz syndrome - 16-year follow-up

Presenting author: Dominik Woźniak - Warszawski Uniwersytet Medyczny
Authors: Dominik Woźniak, Paulina Urbańska
Supervisors: Zygmunt Stopa, Piotr Regulski, Paweł Pihowicz

Background

Gorlin-Goltz syndrome is a genetically determined disorder with autosomal dominant inheritance. It appears as a result of mutation in the PTCH supressor gene, half of them represent new changes. There is no sexual preference, the prevalence depends on the population and ranges from 1 in 57,000 to 1,600,000. It manifests by abnormalities of the skin, bones, eyes and central nervous system. Diagnostic criteria are divided in two groups. Major include basal cell carcinoma of the skin, odontogenic keratocyst, bilamellar calcification of the falx cerebri and structural disorders of the ribs. Minor include macrocephaly, congenital malformations, skeletal abnormalities and tumours - medulloblastoma and ovarian fibroma. The diagnosis of Gorlin-Goltz syndrome is made in the presence of two major or one major and two minor criteria. Symptoms usually show up about the age of 20 but they may occur as early as in childhood. They appear at different times and are treated by doctors of various specialities, it may cause difficulties in early diagnosis of the syndrome. Many anomalies associated with disorder are located within the stomatognathic system including odontogenic keratocyst, dental abnormalities in the form of impaction or agenesis of the teeth, malocclusion, cleft lip or palate, mandibular prognathism, gothic palate and excessive pneumatization of the paranasal sinuses.

Case Description

In the presented case during the 16-year follow-up the patient was diagnosed with two major diagnositc criteria of Gorlin-Goltz syndrome - odontogenic keratocysts and calcification of the falx cerebri and one minor - macrocephaly. There were recurrences of the cysts after enucleation - once in left maxilla and twice in right side of the mandible. Additionally the patient had symptoms associated with Gorlin-Goltz syndrome in the form of impacted teeth with abnormal morphology, malocclusion and gothic palate. A positive result of genetic examination confirmed the diagnosis of Gorlin-Goltz syndrome.

Discussion

Due to increased predisposition to the development of proliferative lesions in patients with Gorlin-Goltz syndrome early diagnosis and regular long-term controls are required. Treatment is a challenge for doctors of various specialities. Many anomalies associated with the disorder are located within the stomatognathic system. Therefore awereness of them among the dentists is important, they may be the first to be able to direct diagnostics in the right direction and enable appropriate treatment. In case of odontogenic keratocyst in a patient with Gorlin-Goltz syndrome radicalization of surgical procedure should be considered individually due to the higher risk of recurrence and the possibility of neoplastic transformation towards squamous cell carcinoma. A 16-year observation revealed long-term recurrence of odontogenic keratocyst.

Complex urological treatment of casting stone – case report

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Background

The horseshoe kidney (HSK) is the most common type of renal abnormalities. Its prevalence is between 1:400 to 1:800 of newborns. In one third of patients HSK is correlated with other genetic disorders, however the rest of patients stays undiagnosed until adulthood, because of few symptomps. The different structure of kidneys contains ectopic location, incorrect roatation and vascular malformations, what may be the beginning of clinical problems with chronic urinary tract infections, kidney stones, hydronephrosis and increased risk of kidney injury. Patients with HSK have higher risk of kidney cancers such as: renal cel carcinoma (45%), transitional cel carcinoma, Wilm's tumor and renal carcinoid as well as benign tumors such as: angiomyolipoma and oncocytoma.

Case Description

A 63-year old man was admitted to the Emergency Department, Hospital in Łomża with acute kidney failure on December 2017. Patient reported acute pain in right upper loin, high temperature, pain and burning while urinating, frequent urge to urinate. In laboratory tests inflamations markers, creatinine, urea, uric acid were elevated. USG revealed horseshoe kidney with developing hydronephrosis and casting stone of both kidney pelivs. Patient redirected to the Urology Department where JJ catheter was inserted to the right ureter. After a couple days of antibiotic therapy symptoms disappeared and patients was reffered to abdomen MRI. Obtained images showed more detailed description of casting stones, patients was qualified for RIRS (retrograde internal surgery) at a later time.

During the procedure, the aim was to hollow the hole in the center of cast stone in right kidney pelvis. Moreover, the size of stone 40x20mm couldn't allow to remove whole stone during the first intervention. The next step is to use ESWL (Extracorporeal Shock Wave Lithotripsy) to collapse external walls of casting stone.

Discussion

The treatment of this patient is very complex, so that using multistages procedures is needed. Literature describe many HSK cases but in fact, each patient is treated individually because of different anatomy and physiology of kidney. Some of the procedures used normally, in patients with HSK are not acceptable, what gives difficulties in proces of treatment.

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