iMEDIC 2017 Bydgoszcz

2nd International MEDical Interdisciplinary Congress 2017 Bydgoszcz

Abstract Book

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Dear Friends and Collegues

We are honoured to cordially invite you to the 2nd International MEDical Interdisciplinary Congress – iMEDIC 2017. The event will be held 10-11th June in Bydgoszcz, Poland.

This congress aims to create an opportunity for the young researchers, PhD students and doctors to share and present their scientific work, discuss a new developments and exchange experiences in wide range of fields.

IMEDIC is designed to be inspiring and motivating meeting, where you have a chance to share ideas and contemplate our honorable guests' lectures.

We feel obligated to provide you a meeting platform stimulating a creative exchange of scientific ideas, likewise enjoyable social event where you can meet scientifically enthusiastic friends from all over the world.

We look forward to welcome you in Bydgoszcz!

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iMEDIC 2017 | Bydgoszcz

2nd International Medical Interdisciplinary Congress

Medical, Pharmaceutical and Health Sciences

June I Bydgoszcz, Poland

AGENDA – 10th June

– 9 Curie Skłodowska Street, Patomorphic didactic building, Bydgoszcz, 85-094

	Lecture hall A	Lecture hall B	Lecture hall C	Lecture hall D	
08:00	Registration				
09:00	Lecture hall A Opening ceremony *(45min)*				
	Coffee Break				
10:00	Psychiatry *(110min)*	Case reports – Surgical *(110min)*	Pharmacy, Laboratory Diagnostics & Microbiology *(80min)*	Internal Medicine & Oncology 1 *(80min)*	10:00
			Coffee Break *(20min)*		11:20
11:50	Coffee Break *(20min)*		Gynecology & Obstetrics *(110min)*	Internal Medicine & Oncology 2 *(110min)*	11:40
12:10	Physiotherapy & Orthopedics *(120min)*	Case reports – Non-surgical 1 *(120min)*			
			Lunch *(40min)*		13:30
14:10	Lunch *(40min)*				14:10
14:50	Public Health *(150min)*	Case reports – Non-surgical 2 *(140min)*	Geriatric *(100min)*	Basic Science & Molecular Biology *(100min)*	
			Coffee Break *(20min)*		15:50
			Sensory Organs *(100min)*	Paediatrics & Neonatology *(80min)*	16:10
	17:15	17:05	17:45	17:25	

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Basic Science & Molecular Biology Session

Jury:

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dr hab. n. med. Rafał Różalski

dr n. med. Iga Hołyńska-Iwan

dr inż. Krzysztof Skowron

Moderator:

Agnieszka Krawczyk

Katarzyna Sas

1st prize in Basic Science & Molecular Biology Session

Title: 1→3-ß- D-glucan as a marker invasive fungal disease in patients undergoing hematopoietic stem cell transplantation

Authors: Monika Przybylska, Artur Bandura

Affiliation: Student Scientific Group of Hematology and Bone Marrow Transplantation, Department of Hematology and Bone Marrow Transplantation, Poznań University of Medical Science

Introduction: Hematopoietic stem cell transplantation recipients are at substantial risk of fungal infections depending upon the degree of immunodeficiency, time elapsed since transplantation and exposure to pathogens. Invasive fungal disease (IFD) is an important contributor to morbidity and mortality (alloHSCT). 1→3-ß- D-glucan (BDG) represent a major cell-wall component of medically important fungi and its detection represent promising method of early diagnosis of IFD in immunocompromised pts.

Aim: Determinate the clinical usefulness of BDG as a marker of IFD in pts undergoing alloHSCT.

Materials and methods: BDG level was measured in 45 frozen serum samples collected from 13 pts after alloHSCT in a single transplant unit. From each serum sample BDG was measured twice with use of Fungitell® assay Kit. BDG concentration was determined as positive if >80pg/ml, uncertain: 60-80pg/ml and negative: <60pg/ml. Single positive BDG was sufficient to classify serum result as positive. Diagnosis
of IFD was based on EORTC/MSG criteria including galactomannan (GM) level (serum and BAL), HRCT and histology if needed.

Results: Pts were classified as: proven (4), probable (3), possible (5) IFD (1pts had no signs of IFD). All BDG samples fulfilled quality control with correlation coefficient >0.98. In the analyzed group only in 1 pts serum GM was positive, whereas BDG was positive in 7/12 pts with suspected IFD (p= 0.009). Within proven and probable IFD group, BDG was positive in 75% and 40% of pts, respectively (p=0.294). All pts with proven IFD (aspergillosis-1, geotrichosis-1 and candidiasis-2) have shown negative results of serum GM.

Conclusions: BDG could be a reliable noninvasive tool supporting the early diagnosis of IFD in pts undergoing alloHSCT and enabling faster implementation of antifungal therapy. BDG results should be interpreted only with routinely performed investigations. Further study performed on a larger group of transplant pts should be done.

2nd prize in Basic Science & Molecular Biology Session

Title: In vitro effects of ciprofloxacin on urinary bladder and prostate cancer cells

Authors: Kamil Szeliski, Tomasz Kloskowski, Marta Pokrywczyńska, Tomasz Drewa

Affiliation: Chair of Urology, Department of Regenerative Medicine,
Collegium Medicum, Nicolaus Copernicus University

Introduction: Urinary bladder and prostate cancers together makes group of most prevalent carcinomas among man in Poland. The main reason of failure in treatment of these type of cancers is insufficient efficiency of currently used chemotherapeutics. Ciprofloxacin is fluoroquinolone antibiotic with documented cytotoxic properties against many different types of cancer cell lines in vitro. Its mechanism of action is based on inhibition of DNA topoisomerase. Promising properties of ciprofloxacin can be used in the treatment of urinary tract cancers, mainly because this antibiotic can achieve very high concentrations in urine.

Aim: Aim of this study was to determine differences in cytotoxic effect of ciprofloxacin between cancer and normal cell lines of urinary bladder and prostate.

Materials and methods: Four human cell lines were used in this study: uroepithelium (SV-HUC1), urinary bladder carcinoma (T24), prostate (RWPE-1) and prostate carcinoma (DU-145). Cells were exposed to different concentrations of ciprofloxacin (25-800µg/ml) for 24 and 48 hours. Changes in morphology of cells were observed under light microscope. MTT assay was used to determine the effect of different concentrations of ciprofloxacin on cells viability. Obtained results were used to calculate LC10, 50 and 90 (concentrations that cause death of 10, 50 and 90% of cells). Additionally, real time cell analysis of tested cell lines was performed with use of xCELLigence RTCA DP in order to check their proliferation potential after ciprofloxacin treatment..

Results: Our results showed that ciprofloxacin induced cytotoxic properties on tested cancer cells in time and concentration depending manner. In the case of urinary bladder cell lines after 24h incubation LC10 and 50 and after 48h LC50 and 90 were higher for normal cells (SV-HUC1), than for cancer cells (T24). In the case of prostate cells after 24h incubation only LC90 and after 48h only LC10 was higher for normal cells (RWPE-1) than for cancer cells (DU-145). Real time cell analysis confirmed results obtained with MTT assay. Microscopy observations showed that all cell lines used for analysis change their morphology and shrink after exposure to high concentrations of ciprofloxacin.

Conclusions: The results of our study showed that ciprofloxacin has very promising properties for urinary bladder cancer treatment, because in concentrations achievable in urine after oral administration it showed significantly higher cytotoxicity for cancer cells compared to normal uroepithelium. For confirmation of this results additional experiment on animal model should be performed. Results obtained on prostate cancer cell line suggested that potential use of ciprofloxacin in clinic may be possible only with infusions, because positive differences in cytotoxicity between cancer and normal cell lines were observed only in high concentrations.

3rd prize in Basic Science & Molecular Biology Session

Title: Morphological variations in the Circle of Willis on time-of-flight MR angiograms – a preliminary study

Authors: Mateusz Wilczek, Renata Bugaj, Joanna Ryczkowska, Anna Konobrodzka, Marta Dworek, Krzysztof Dyrda, Dominik Spałek

Affiliation: Students' Research Group, Department of General Radiology and Neuroradiology, Poznan University of Medical Sciences

Introduction: Collateral circulation in the Circle of Willis (CW) has an important role in maintaining flow in case of obstructive disease in the main arteries. Morphological variants with incomplete CW may occur in over 80% of cases, depending on the population. Studies suggest a correlation between incomplete variants of the CW and the risk of certain cerebrovascular diseases, including ischaemic stroke.

Aim: To assess prevalence of the anatomic variants in the CW and determine whether age- or sex-related differences occur in the circle's anatomy in a randomly selected group of patients who underwent head MRI due to various indications, and to compare these results to available publications.

Materials and methods: 147 patients, aged 18–77, referred for head MRI at the Heliodor Święcicki Clinical Hospital in Poznań between September and October 2016. All subjects underwent 3D time-of-flight MR angiography of the CW, the images were retrospectively analysed by a group of eight students. R 3.4.0 environment was used for statistical analysis.

Results: Out of 147 cases, 133 (90%) subjects had a complete anterior part of the CW, 98 (67%) had a complete posterior part, 91 (62%) demonstrated an entirely complete arterial circle. Seven types of variation in the CW were identified. The most common one, present in 32 (22%) subjects, was foetal type of the posterior cerebral artery. There were no statistically significant differences in the occurrence of an incomplete CW between sexes and age groups.

Conclusions: Women and younger subjects tend to have a higher presence of a complete CW in a great number of available publications, however we did not observe such correlations. The reason for this intriguing difference could be that we did not exclude patients with intracranial pathologies. To further analyse the subject we intend to expand the study group and verify how different inclusion criteria will affect the results.

Title: The role of testin in human cancers

Authors: Aneta Popiel, Piotr Cierpikowski

Affiliation: Wrocław Medical University, Poland

Introduction: Testin is a protein expressed in all normal human tissues. Testin function is related to cell motility and adhesion. Moreover, the altered expression of this protein was found in ovarian, breast, endometrial, colorectal, prostate and gastric cancers. Latest reports indicate that TES is a tumor suppressor gene which can contribute to cancerogenesis but the mechanism of loss TES gene is still unknown.

Aim: To review the literature about testin focusing on the role of this protein in cancerogenesis.

Materials and methods: The English language literature was reviewed for articles about the role of testin in all types of cancers. The search was conducted using the PubMed database.

Results: Testin participate in the processes of angiogenesis, tumor growth and metastasis. Elevated testin protein level correlate with increased percentage of cells in G1 phase what can indicate the role of this protein in cell cycle . Overexpression of testin caused increased apoptosis and decreased colony forming ability. One from the major processes that regulate metastasis is epithelial-mesenchymal transition (EMT). Decreased testine expression associate with loss by cells epithelial morphology and gain migratory and invasive properties of mesenchymal cells.

Conclusions: Testine can be potential target in immunotherapies. Understanding the molecular regulation of this protein may be crucial in developing personalized treatment.

Title: The role of TNF-family proteins in the pathogenesis of B-cell malignancies – a review of the literature

Authors: Katarzyna Schab[1], Magdalena Urbańczuk[2], Marcin Urbańczuk[3]

Affiliation: 1) Department of Clinical Immunology, Medical University of Lublin;
2) Department of Pathomorphology, Medical University of Lublin;
3) Department of Family Medicine, Medical University of Lublin

Introduction: B-cell malignancies are a heterogenous group of neoplasms derived from B-cell lineage. Lymphoma/leukemic cells are characterised by a complex dysregulation in terms of proliferation and apoptosis, however, its all mechanisms and causes seem still not studied well enough. A discovery of recent years are the proteins BAFF and APRIL, belonging to TNF cytokines' family and playing important role in regulation of B lymphocyte's crutial functions such as cell's divisions, maturation, chemotaxis, class-switching, antibody production and apoptosis.

Aim: The aim of this study was to present recent data concerning the significance of TNF-family proteins in the patogenesis of B-cell malignancies in human.

Materials and methods: For the purpose, the latest literature has been reviewed. The data has been collected with using Pubmed database.

Results: The BAFF and APRIL proteins as well as their receptors are overexpressed on the cells of many types of B-cell lymphomas and chronic lymphocytic leukemia.The observed overexpression of these proteins is proved to be connected with an inadequate cell's survival and increased oncogene's expression. Such effects appear to be mediated by NF-kB activation, expression of anti-apoptotic proteins (Bcl-2, Bcl-xL) and those connected with the cell cycle progression (c-myc, p27Kip1, cyclin D). Thus, it has been suggested that changes in BAFF or APRIL levels might contribute to severe dysregulation of B cell's biology and cancer transformation. Many studies have been undertaken to elucidate the role of TNF-family proteins in the pathogenesis of lymphoproliferative diseases. In this paper we present and discuss the results of these studies.

Conclusions: Elucidation of the TNF-family proteins' role in the development of lymphoma/leukemic B cell's dysregulation can be a one more step toward better understanding of the lymphoid malignancies' biology. In the longer perspective it can also give a chance to find useful prognostic markers and targets for future therapy.

Title: Prostate cancer cells and prostate cancer stem cells: where is the difference?

Authors: Karolina Macniak[1], Karolina Matulewicz[2], Anna Bajek[2], Małgorzata Maj[2], Tomasz Drewa[3]

Affiliation: 1) Chair of Urology, Department of Tissue Engineering, Collegium Medicum, Nicolaus Copernicus University
2) Chair of Urology, Department of Tissue Engineering, Collegium Medicum, Nicolaus Copernicus University
3) Chair of Urology, Clinic of General and Oncological Urology, Collegium Medicum, Nicolaus Copernicus University, Department of Urology, Nicolaus Copernicus Hospital

Introduction: Conventional treatment for prostate cancer, including surgery, chemotherapy, and radiotherapy removes rapidly growing, diverse cancer cells, reducing tumor mass, but probably much less effectively eliminates cancer stem cells, which can cause disease recurrence. Cancer stem cells (CSCs) are a small subpopulation of cells within tumors with capabilities of self-renewal, differentiation, and tumorigenicity. It is suspected that these cells are responsible for cancer recurrence and chemoresistance. Common strategies for CSC identification and characterization are based on immunophenotyping. Here, we used magnetic labeling system to enrich the CD133+ population for tumor initiating cells.

Aim: To compare the viability and proliferation between CD133+, CD133- and heterogenous population of 22Rv1 cancer cells.

Materials and methods: Human prostate carcinoma cell line 22Rv1 (ATCC) was used as a primary research material. Cells were labeled with CD133 MicroBeads (CD133 MicroBead Kit, Miltenyi Biotec), placed in the magnetic field, and then eluted as a positively selected fraction. Isolated CD133-expressing cells were cultured in RPMI-1640 (ATCC) under standard conditions. Two aspects of cell function were investigated after the isolation i.e. viability (In Vitro Toxicology Assay Kit, MTT based, Sigma-Aldrich) and proliferation potential (BrdU Cell Priliferation Kit, Abcam).

Results: Our results showed that 22Rv1 cell line contain CD133-expressing cells within the range from 0,15% to 0,75%. After 72h culture viability of CD133-enriched cells was reduced by 35% in comparison to heterogeneous population (unlabeled cells). Under the same conditions viability of CD133-depleted population decreased by only 28%. In turn, proliferation of CD133+ cells was reduced by 36%, but proliferative potencial of CD133- was similar to that of heterogeneous population.

Conclusions: The results of our study revealed that CD133+ cells exhibit lower viability and proliferation potential than CD133- cells and heterogenous population. However, observed differences between stained and unstained cells indicate that isolation procedure modulates biological properties of 22Rv1 prostate cancer cells. It is important to take it into consideration when analyzing results of further experiments.

Title: Deletion of the long arm of chromosome 13 (13q-) analysis in patients with BCR-ABL1-negative myeloproliferative neoplasms

Authors: Katarzyna Osmańska[1], Katarzyna Sobecka[2], Barbara Mucha[1]

Affiliation: 1) Department of Clinical Genetics, Faculty of Medicine, Nicolaus Copernicus University in Toruń, Poland
2) Medical Genetics Department, The Institute of Mother and Child in Warsaw, Poland

Introduction: Myeloproliferative neoplasms (MPNs) are clonal proliferative disorders that arise from hematopoietic progenitor cells and are characterized by an increased number of terminally differentiated myeloid elements. MPNs that do not contain BCR-ABL1 fusion gene, include polycythemia vera (PV), essential thrombocythemia (ET), and primary myelofibrosis (PMF). The genomic features of MPNs are poorly understood – there are only few known genes whose mutations are associated with this group of diseases. Deletion of the long arm of chromosome 13 (13q-) is one of the cytogenetic aberrations found in MPNs. RB1 (retinoblastoma gene), a tumor suppressor gene, is located in the long arm of chromosome 13.

Aim: The aim of the investigation was to characterize the frequency and type of deletion of the long arm of chromosome 13 in MPN patients.

Materials and methods: In this retrospective study, genomic changes were investigated with the use of GTG-banding and fluorescent in situ hybridization (FISH) in 128 patients, and additionally with array-based comparative genomic hybridization (aCGH) in 2 patients. RB1 Deletion Probe (Cytocell Aquarius) was used for FISH analysis.

Results: GTG-banded karyotype showed a partial deletion of the long arm of chromosome 13 in two patients (1,6% of tested group) – one with PMF and one with PV. 13q deletions were not sole abnormalities – both karyotypes contained at least 2 aberrations. FISH analysis revealed 13q deletion in only one patient, because the region of deletion in the second patient was different from the region covered by the FISH probe. aCGH analyses confirmed the presence of 13q deletion in both patients, however of different size and locus of deleted region.

Conclusions: Deletion of the long arm of chromosome 13 is a rare phenomenon in patients with MPN. Different type of this deletion can be distinguished in each patient. Further analyses, especially molecular ones, are needed to help to determine the association of the type of this aberration with clinicopathologic features and further treatment results.

Title: Proliferation of endothelial cells under conditions of hyperglycemia cultured with addition humic substances

Authors: Katarzyna Szot, Krzysztof Góralczyk, Małgorzata Michalska, Danuta Rość

Affiliation: Department of Pathophysiology, Faculty of Pharmacy,
Nicolaus Copernicus University in Toruń, Collegium Medicum in Bydgoszcz, Poland

Introduction: Diabetes has become an epidemic and being a risk factor of cardiovascular disease. Chronic hyperglycemia is the source of the endothelial activation. Vascular endothelium play a key role in haemostasis and is involved in pathogenesis of various diseases including diabetes. High glucose concentration induces delayed replication and excess cell death in cultured vascular endothelial cells. In spite of significant progress in medical treatment of diabetes high blood sugar causes severe clinical implications. The mechanisms underlying this phenomenon are likely to be multifactorial and further work on this subject is warranted. Humic substances occuring in water, represent the organic material mainly widespreaded in nature and clinical studies have shown positive physiological effects. The biochemical and molecular mechanisms underlying these events are only partially known.

Aim: High glucose concentration (30 mM/L) in the culture medium imitates conditions as uncontrolled diabetes. This model may contribute to better understanding the mechanism of diabetic vascular complication and can be useful in evaluation of impact of humic substances in treat of diabetes complications.

Materials and methods: Endothelial cells (HUVEC line) were derived from human umbilical veins by the enzyme method using collagenase. Cells were cultured in M199 media supplemented with 20% fetal bovine serum (FBS), 100 U/ml penicillin, and growth factors 50 μg/ml endothelial cell growth supplement and heparin. The cells were incubated at 37˚ C in humidified atmosphere with 5% CO2. In study group (with 30 mM/L glucose) 1% humic water solution was added to the culture medium. The experiment was repeated three times with three independent cells isolations. The study was conducted in four group: 1- no glucose
in culture medium, no humic substances (control group); 2- no glucose, humic substances added; 3- glucose in culture medium, no humic substances; 4- glucose, humic substances in culture medium. The endothelial cells on the bottom were harvested by using trypsin and counted by Buerker hemocytometry in method using trypan blue.

Results: The number of HUVECs was highest in group 2 (humic substances) (Mean = 4.44 x105), and slightly lower in control group (Mean = 4.21 x105). The lowest number was observed in group 3 (Mean = 3.39 x105) cultured under hyperglycemic conditions. While the number of cells in group 4 with glucose and humic substances (Mean = 4.24 x105) reached the level similar to the control group.

Conclusions: The lowest number of endothelial cells cultured under hyperglycemic condition indicates the negative impact of high glucose concentration on the proliferation. It appears that the adverse effects of hyperglycemia on vascular endothelial cells may be corrected by addition of humic substances. The impact of humic substances indicate enhance of cell proliferation.

Title: Comparison of different methods for establishing primary cell culture of urinary bladder cancer cells

Authors: Krzysztof Cisewski, Tomasz Kloskowski, Filip Kowalski, Marta Pokrywczyńska, Tomasz Drewa

Affiliation: Chair of Urology, Department of Regenerative Medicine,
Collegium Medicum, Nicolaus Copernicus University,

Introduction: Bladder cancer is the second most common urogical malignancy. In Poland, it is the 4'th most common cancer in men and 8'th in women. It can be classified into two groups: superficial tumors like transitional cell carcinomas cancer and muscle-invasive tumors, which often recur after intravesical therapy or require radical cystoprostatectomy. Unfortunately, reports about successful primary cultures of superficial urothelial carcinomas are sparse. However, a reliable bladder cancer cells cultures would be the source of information about cells interactions and could be extremely useful for testing chemotherapeutics preventing cancer recurrence.

Aim: The objective of the current study is to find the best method of enzymatic isolation and establishment of urinary bladder cancer cell culture obtained from patients' tumors, using different enzymes, cell culture media, and supplements.

Materials and methods: The small fragments of tissue are collected via biopsy of the urinary bladder. Afterwards, primary tumor samples were subjected to mechanical and enzymatic dissociation in collagenase or collagenase-dispase solution. After incubation cells were isolated from the digested tissue by sterile cell strainer and they were counted using the Neubauer Chamber. Then cells were seeded in cell culture flask of adequate growth area (12,5, 25 or 50mL culture flask, seeding density: 12000-18000 cells/cm^2). Isolated cells were cultured using KBM-Gold™ Medium with KGM-Gold™ SingleQuot Kit supplements (Lonza), CnT-PR-BM.1 Medium with CnT-57 supplements (CELLnTEC) and DMEM/F12 with Fetal Bovine Serum (Corning).

Results: The effectiveness of isolation often depends on the weight of the tissue taken and the type of used digestive enzymes (180.000 – 4.560.000 cells per isolation). So far, we have managed to isolate cells from acquired patients' tissues with 100% effectiveness. Average survival rate of cell culture is 1 month (about 3 passages).

Conclusions: Most studies analyzing superficial urothelial carcinomas used animal models or cancer cell lines. Because there are specific differences between rodent and human urothelial carcinomas, findings from animal studies are of limited evidence for the understanding the therapy of human urothelial carcinoma.
To date, all permanent cell lines possess one or more of these alterations, limiting their value for studying superficial urothelial carcinomas. Due to the very short time frame of the culture systems used, it remained unclear whether the cells were still viable or able to proliferate, making the results hard to interpret.

Title: The impact of chronic Pseudomonas aeruginosa colonisation on cystic fibrosis adult patients' lifespan

Authors: Wojciech Czaiński, Witold Czerniak, Joanna Goździk-Spychalska

Affiliation: Department of Pulmonology, Allergology and Respiratory Oncology at Poznan University of Medical Sciences

Introduction: Cystic fibrosis (CF) is a genetic susceptible, incurable disease, which always leads to premature death. Chronic bronchopulmonary disease develops into respiratory insufficiency which is the most common cause of death in this group of patients. Dynamics of CF course depends mostly from an infection of Gram-negative bacterium Pseudomonas aeruginosa (PA). This pathogen is one of the most frequent isolated bacteria from respiratory tract secretion in adult CF patients.

Aim: To investigate how chronic PA colonisation influence lifespan in cystic fibrosis adult patients.

Materials and methods: The study included 115 adult CF patients (F=64) treated in Department of Pulmonology in years 2011-2015 (Average age=28,8; Min=18,6; Max=52,1). The patients were divided into groups depending on presence or lack of chronic PA colonisation. This division, in accordance with Leeds definition, was created on microbiological tests' results which were based on secretions from respiratory tract. Moreover, from chronically colonised with PA patients, according to antibiogram results, non-multidrug resistance (non-MDR) and multidrug resistance (MDR) groups were specified. To statistic analysis Cox's F test was used. Kaplan-Meier plots were drawn for patients survival possibility

Results: In groups of patients with chronic PA colonisation (PA+) (n=83; 72,17%) and uncolonised with PA (PA-) (n=32; 27,83%) Kaplan-Meier curves showed tendency to shorten lifespan in PA+ group. Moreover in groups: non-MDR (n=25; 32,89%) and MDR (n=51; 67,11%), Kaplan-Meier curves showed tendency
to shorten lifespan in MDR group. However, in Cox's F test there were no statistically significant difference in lifespan between PA+ and PA- groups (Cox's F test F=1,277; p=0,269) and also between non-MDR and MDR groups (Cox's F test F=1,691; p=0,175).

Conclusions: According to literature and obtained Kaplan-Meier plots, chronic PA colonization's negative influence on CF patients' lifespan can be observed. However, due to little sample size statistical dependence has not been proved. This signifies the importance of broadening further research out into different factors influencing lifespan in studied group of patients.

Internal Medicine & Oncology Session

Jury:

dr hab. n. med. Paweł Stróżecki

dr n. med. Ewa Szynkiewicz

dr n. med. Maria Bogdan

Moderator:

Dawid Adamkiewicz

1st prize in Internal Medicine & Oncology Session

Title: Density measurement of adrenals tumors depending on the ROI's surface area and its influence on the diagnostic process

Authors: Anna Loroch, Mikołaj Nawrocki, Marta Strzyż, Maja Strześniewska, Paula Szydłowska, Wojciech Świdurski, Anna Grzybowska, Michał Olejarz, Marika Martelus, Monika Sykutera, Agata Lipińska, Michalina Staśkiewicz

Affiliation: Student Research Group of General Radiology and Neuroradiology, Poznań University of Medical Sciences, Poland

Introduction: Adrenal adenomas occur quite frequently and their diagnostics remain a clinically significant issue. Majority of them is clinically silent and manifests itself on radiologic tests as incidentalomas. The diagnostic process encompasses the measurement of size and density in computed tomography images. Benign adrenal tumors contain an abundance of lipids, which is reflected in density below 10 HU. In case of tumors with density exceeding 10 HU, the probability of a malignant mass increases and one has to implement contrast enhanced CT and assess the washout index. So far there are no strict guidelines regarding the methodology of density measurement and the choice of the region of interest for the density measurement is to be made by the radiologist.

Aim: The aim of the following study is to compare the density measurements of adrenal tumors, made with ROIs covering 50% and 80% of the tumors surface area.

Material & Methods: This study was retrospective, with material of 184 adrenal tumors with a diameter equal to or greater than 15 mm diagnosed in years 2015 – 2017 in 141 patients of the Department of General Radiology and Neuroradiology at the University of Medical Sciences in Poznań. The density measurements from ROIs covering 80% and 50% of tumors surface areas were performed by two non-communicating students groups. The statistical analysis was carried out in R environment 3.3.1.

Results: The difference between the means of adrenal tumors densities measured in two groups was not statistically significant and for the groups 80% and 50% equaled -3.7HU and -3.4 HU respectively (p=0.65, Wilcoxon). The qualification of the tumor's type by each of the study groups was equal in 91% of cases, which was not statistically significant(p=0.61, McNemar). There was however a statistically significant correlation between the tumor's size and the discrepancy in the density measurements (p=0.01, Spearman). For tumors with the surface area above 350 mm2 mean densities were statistically different, measuring -6.4 HU and -3.2 HU for 80% ROI and 50% ROI accordingly (p=0.02, Wilcoxon). However, this finding did not affect the assessment of the tumor's type (p=0.62, McNemar).

Conclusion: This study proves that confirmation of a benign character of the tumor is not dependent on the tumor's surface area taken into consideration in density measurement. The significant relationship between tumor size and the discrepancy in density measurement was observed, with a tendency to lower the measurement when 80% of tumor's surface area was taken into account. However, it did not prove to influence the diagnostic process, as most of the measurement were below 10HU.

2nd prize in Internal Medicine & Oncology Session

Title: Stop the heart to live – comparison of two types of cardioplegia used in adults' cardiac surgery.

Authors: Jakub Kuciński, Aleksandra Górska

Affiliation: Medical University of Silesia, Poland

Introduction: Del Nido (DN) cardioplegia provides a heart in diastole lasting up to over 60 minutes. Single-dose DN cardioplegia may be a better solution for myocardial protection strategy than multi-dose cold blood Buckberg 4:1 cardioplegia (CB).

Aim: Compare myocardial protection using DN cardioplegia as alternative for classic CB cardioplegia in adults' cardiac surgery.

Materials & Methods: The study comprised 1344 patients, who underwent coronary artery bypasss grafting (CABG=806) or operation of heart valves (OHV=538; with CABG=189/ without=349) between 1 January'16 and 31 December'16. Patients from both groups were divided into two sections based on the type of cardioplegia administered during surgery. We compared postsurgery troponin levels, aortic cross clamp (ACC) and cardiopulmonary bypass times (CPB). For calculation we used Mann-Whitney test.

Results: In CABG between DN and CB group no significant differences were found between the presurgery troponin level, median age, EuroSCORE. ACC and CPB times were significantly longer in DN section: 32(25-40) vs 28 (22-38) min. for ACC, 57 (44-69) vs 51 (40-65) min. for CPB; p<0,001. In OHV between DN and CB group no significant difference was found between the presurgery troponin level. Median age, EuroSCORE were significantly higher, ACC and CPB times were significantly longer in DN: 64 (51-80) vs 53 (43-70) min. for ACC, 86 (68-107) vs 75 (56-94) min. for CPB; p<0,001. There was no significant difference between the postsurgery troponin level in both groups: CABG DN: 0,25 (0,17-0,4) vs CB: 0,26 (0,18-0,4) ; OHV DN: 0,36 (0,22-0,7) vs CB: 0,4 (0,24-0,8).

Conclusions: Despite longer ACC and CPB times and higher EuroSCORE cardioplegia del Nido ensures similar myocardial protection to cold blood based on postsurgery troponin levels.

3rd prize in Internal Medicine & Oncology Session

Title: The evaluation of selected oxidative stress parameters in patients with toxic nodular goiter after radioiodine treatment

Authors: Aleksandra Polak, Paulina Lisiewicz, Aleksandra Konopka, Maciej Janica, Karolina Lomperta

Affiliation: Medical University of Białystok, Poland

Introduction: Oxidative stress is an important factor of the hyperthyroidism pathogenesis. Hyperthyroidism induces the acceleration of the basic metabolism and increases cellular oxygen utilization, consequently intensifies reactive oxygen species production and disturbs the oxidant- -antioxidant balance.

Aim of the study: We aimed to determine whether radioiodine therapy has benefit effect on the oxidant and antioxidant status in patients with toxic nodular goitre.

Materials & Methods: 40 patients with toxic nodular goiter (31 females and 9 males, aged 21-65) and 12 healthy individuals were enrolled in the study. All the patients were in mild hyperthyroidism with serum TSH levels was less than 0.1 mU/l and effective half-life was more than 3 days at the time of treatment. Malignant changes were excluded in all nodules by fine needle aspiration biopsy. In the investigated groups, we evaluate malondialdehyde (MDA) as a marker of oxidative stress, glutathione (GSH) and glutathione peroxidase (GPx) activity as a parameters of antioxidant system before and 6 months after radioiodine therapy. The serum fT4, fT3 and TSH were evaluated before and monthly up to 12 months after RIT. Thyroid ultrasound, and thyroid scan were done after12 months of 131I therapy to assess thyroid volume. The activity dose was calculated by Marinelli's formula and ranged between 280 and 800 MBq. The absorbed dose ranged between 160 and 300 Gy, and was proportional to thyroid volume.

Results: A Significant increase in MDA level with significant decrease in GPx activities and GSH level were observed in these patients before treatment compared to controls subject. Achievement of euthyroidism after 6 months of radioiodine administration resulted in a significant decrease of MDA level, significant increase of GSH level and in GPx activities. Euthyroidism was achieved in 36 patients and hypothyroidism developed in 4 patients. Thyroid volume reduced to about 46% (average).

Conclusions: Our results confirm that hyperthyroidism in patients with toxic nodular goiter increases oxidative stress and disturbs oxidant-antioxidant balance in the body. Radioiodine therapy improve these balances

Title: Anticoagulant therapy in hemodialysis patients with atrial fibrillation – between the hammer and the anvil

Authors: Beata Bulwin, Kacper Białowąs, Małgorzata Nowicka, Paweł Stróżecki, Jacek Manitius

Affiliation: Department of Nephrology, Hypertension and Internal Medicine, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Atrial fibrillation (AF) is one of the most common supraventricular arrhythmias. The prevalence of AF in the population over 20 years is 3%. AF was found in about 3.5 to 27% of hemodialysis (HD) patients. The data on benefit and risk of anticoagulant therapy in HD patient with AF are ambiguous.

Aim of the study: The aim of the study was to assess the prevalence of AF in HD patients, to assess the risk of thromboembolic and hemorrhagic complications, and to analyze usage of anticoagulant therapy in HD patients.

Materials & Methods: All patients undergoing chronic HD treatment at Dialysis Unit University Hospital No 1 in Bydgoszcz were investigated in cross-sectional study. Data were obtained from medical records. The study population involved 121 patients, aged 22-90 years (64±16). AF was diagnosed in 26(21%) of HD patients (AF+). AF+ patient were compared with HD patients without history of AF (AF-). In AF+ patients the risk of thrombotic complication was assessed using CHA2DS2–VASc and ATRIA scale, while the risk of bleeding was assessed using HAS-BLED. Unstable INR was defined, if >40% measurements of INR in 2016 were beyond target range 2-3.

Results: AF+ were older than AF- patients. There are no difference between AF+ and AF- with regard to gender, history of stroke, and history of significant bleeding. In AF+ patients higher prevalence of heart failure (81%vs48%;p<0,05) and coronary artery disease (58%vs32%;p<0,05) was found. Mean (±SD) CHA2DS2–VASc score was 4,9±1,6 (median 5, range 2-8). Twenty five of 26(96%) AF+ patients had CHA2DS2–VASc score ≥ 2, and 15(58%) patients had ATRIA score >7. Mean HAS-BLED score was 3,9±0,8 (median 4, range 3-5). In AF+ group 13(50%) patients were treated with oral anticoagulant (OAC), and 6(24%) patients received low molecular weight heparin. Among patients on OAC 10(77%) had unstable INR. Mean INR was 2,41±1,14.

Conclusions: HD patients with AF are at high risk of both: thrombotic and hemorrhagic complications. Despite the lack of recommendations for anticoagulant therapy in HD patients with AF, the most of these patients were treated with anticoagulant therapy. OAC therapy in HD patients is associated with unstable INR results. To identify HD patients with AF, who will benefit from anticoagulant therapy it is necessary to create a new risk scale dedicated for these patients.

Title: Incidence of colorectal intermediate and high-risk lesions and colorectal cancer in dependence of body mass and gender in screening programme.

Authors: Anna Sikorska, Dawid Adamkiewicz, Klaudia Bigorowska, Artur Arutjunjan

Affiliation: Department of Gastroenterology and Nutrition Disorders, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Colorectal cancer is the second most common cancer amongst Polish women and the third amongst Polish men. Plenty of publications have confirmed the correlation between BMI and CRC. Approximately half of the Polish population is overweight and recent studies have shown that the prevalence of obesity is also associated with the increased risk of cancer diseases, including CRC.

Aim of the study: The aim was to examine the association of overweight and obesity with the risk of colorectal high-risk lesions and CRC depending on gender.

Materials & Methods: The retrospective single centre study at the Department of Gastroenterology and Nutrition Disorders was part of the Screening Programme for Early Detection of Colorectal Cancer. In 2014-2015, 1194 patients in the age of 50-65 underwent colonoscopy. In order to eliminate one of the main risk factors of CRC, 573 non-smokers were qualified to the research. The group was divided into 178 men and 395 women. We adopted National Comprehensive Cancer Network criterion of intermediate and high risk lesions of colorectal cancer. The assessment of the body weight was based on BMI.

Results: Colorectal intermediate and high-risk lesions or CRC were diagnosed among non-smoking women with normal body mass (30,23%), overweight (27,89%) and obesity (28,95%) [p=0,89] and non-smoking men with normal body mass (28,57%), overweight (46,15%) and obesity (61,54%) [p=0.017].

Conclusions: Frequency of intermediate and high risk lesions rises together with BMI increase in male group, but there is no significant correlation in female group. BMI is improper method of risk assessment of CRC for women population due to the disparate distribution of body fat.

Title: Radioiodine therapy - Non surgical approaches to the management of non-toxic nodular goitre with large cold nodule.

Authors: Aleksandra Polak, Maciej Janica, Karolina Lomperta, Michał Sankowski, Natalia Królik

Affiliation: Medical University of Białystok, Poland

Introduction: The surgical treatment is considered as a standard therapy for patients with nontoxic goiter with large cold nodule. However, it is not without risk, especially in eldery patients and in those with cardiopulmonary diseases. Also most of the patients with benign cold nodules refuse to undergo surgical operation, so the Radioiodine therapy (RIT) is the treatment of choice for these patients.

Aim of the study: The aim of our study was to evaluate the effectiveness of radioiodine therapy as an alternative for surgery to reduce thyroid volume in patients with cold nodule by the use of two doses of radioiodine.

Materials & Methods: Our study included 42 patients with non-toxic nodular goitre with large cold nodule, aged 21-64 years. The thyroid volume was measured by ultrasonography and ranged between 50 and 115 ml, initial 24 h radioiodine uptake (RAIU) was ranged between 17–48%, and effective half-life was more than 3 days at the time of treatment. Malignant changes were excluded in all nodules by fine needle aspiration biopsy. The activity dose was calculated by the use of Marinelli's formula and ranged between 280 and 800 MBq. Thyroid ultrasonography, and thyroid scan with RAIU at 24 was done before and after 6 and 12 months of RIT. Follow up control was done every 6 weeks.

Results: After 6 months RIT in all the patients the large cold nodule changes to hot nodule. Fourteen patients were treated with single dose of I131and the mean decrease of thyroid volume was 45%.28 patients received second dose of RIT to decrease the nodule which was cold and turned to hot after the first dose. After 12 months of the second dose of radioiodine a mean thyroid volume reduction of 54% was achieved. After 12 months of RIT euthyroidism persist in 54% of patients, and hypothyroidism develop in 46% of patients.

Conclusions: Radioiodine is non-invasive, safe and cost effective method of therapy for reduction of large non-toxic goitre even with cold nodule. The reduction of the cold nodule and the thyroid volume, were due to well accurate measurement of administered activity, relatively high effective half-life and well-organised follow up.

Title: Benefits of massage-myofascial scar release in patient after coronary artery bypass grafting surgery. Preliminary reports.

Authors: Anna Grochowska, Karolina Klimkiewicz-Wszelaki

Affiliation: Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: The consequence of all artery bypass grafting surgery is a postoperative scar. Some scars do not heal in proper manner and still produce collagen what could lead to hypertrophy and keloid. Myofascial Release is one of therapy used to treat both soft tissues and scars.

Aim of the study: The aim of the study was to determine usefulness of massage-myofascial scar release in patient after surgery coronary artery bypass grafting.

Materials & Methods: The study included 21 patientsaged 57 to 79 who took part in cardiac rehabilitation in Daily Department of Cardiac Rehabilitation after myocardial revascularization. Besides a series of cardiac rehabilitation the patients were undergoing themyofascial scar release treatment.

Results: The study showed that the scar after coronary revascularization have an impact on the quality of life and the physical activity. After surgerymajority ofpatients felt discomfort, loss of mobilityand pain around the scarealtought healing occurs.All patients consideredimprovement of mobility of scar anreducing of discomfort and pain, after a series ofmyofascial release.

Conclusions: The vast majority of patients aftercoronary artery bypass grafting surgery canfeel discomfort and restrictions related to post surgical wounds. The pathological healing ofscar can be source of limitation of motion,stiffnessand pain.It is necessary toundertake further studies to examine a larger group of participantsin order to confirm benefits of myofascial mobilization of scars to reduce time needed to allow for recovery.

Title: The influence of cardiac rehabilitation on exercise tolerance and fatigue evaluation in patients after myocardial infarction.

Authors: Anna Grochowska, Karolina Klimkiewicz-Wszelaki, Alicja Żdanuk, Aleksander Goch, Kornelia Kędziora-Kornatowska

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Introduction: Comprehensive cardiac rehabilitation is now the standard of treatment in patientsafter myocardial infarction. Poland has proposed the Askanas and Rudnicki three consecutive cardiac rehabilitation program. One of them is outpatient rehabilitation for patients after the completion of stage rehabilitation hospital.

Aim of the study: The aim of the study was to evaluate the impact of cardiac rehabilitation outpatient change in exercise tolerance and fatigue evaluation of patients after myocardial infarction.

Material & Methods: The examination group of 27 patient aged 45-85 years (average 63.8 ± 8.7), aimed at cardiac rehabilitation outpatient. Before rehabilitation and after the (three-month training includes 24 training sessions) conducted an exercise test on a bicycle cycloergometer, according to the protocol 25 Wat. The analysis parameters were: resting heart rate and maximum, systolic blood pressure at rest and maximum, diastolic blood pressure at rest and maximum duration of the test, metabolic equivalent [MET] and the cause of the interruption sample and the degree of sense of fatigue according to the Borg scale. In addition, the patient after rehabilitation fill a questionnaire on the state of before and after rehabilitation.

Results: After a series of cardiac rehabilitation was a significant improvement in exercise capacity ($p < 0.001$), the extension of the duration of the tests ($p < 0.05$), reduction in resting systolic blood pressure and a reduction in the average number of points on the Borg scale (against 15.9 after 13.9). Decreased levels of perceived fear of taking exercise (down by 15%).

Conclusions: Well programmed prior myocardial infarction cardiac rehabilitation in an outpatient setting a positive impact on the parameters of exercise tolerance and fatigue evaluation of patients after myocardial infarction. It should be widely used form of rehabilitation.

Title: Analysis of results of implantation ICD with subcutaneous electrode array, according to electrophysiological and clinical data

Authors: Dominika Wojdat, Kacper Białowąs, Justyna Remiec

Affiliation: Department of Cardiology, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Cardiac arrest(CA) is one of the most common cause of mortality and hospitalizations in the world. About 4,25 of patients die each year due to sudden cardiac arrest. The incidence of CA predisposes to next episode. The most prominent Risk factor of CA is a systolic heart failure. To prevent sudden death patients with risk factors are indicated to implant ICD, which early detect and interrupt malignant arrhythmias Ventricular Tachycardia (VT) and Ventricular Fibrillation (VF). In some cases such therapy can be insufficient due to high defibrillation threshold (DFT). Subcutaneous electrode array is a method to decrease high DFT.

Aim of the study: The aim of study was to prove an effective decreasing defibrillation threshold by subcutaneous electrode array and evaluation of its effectiveness during one year after intervention.

Material & Methods: The retrospective single-center study was performed. We examined procedures of implantation subcutaneous electrode array Medtronic 6996(SQ) – 58cm in 17 patients (F=3, M=14; average age 56,42 ± 15,45) treated in Cardiology Department at University Hospital No 1 in Bydgoszcz, Poland between 01/2005 and 12/2016. Outpatient follow-up of these patients in Cardiac Arrhythmia Clinic was studied. All data required for this study was obtained using OPEN CARE system and electrophisiologic team database.

Results: Among from evaluated patients 47,06% got ICD with subcutaneous electrode array in primary prevention and 52,94% in secondary prevention (2/3 of them had implanted ICD before and it didn't stop arrhythmia). Average defibrillation threshold after implantation was 24,02+-7,22 Joules. In 94,11% patients defibrillation threshold was reduced by implantation of SQ , 5,89% electrode didn't reduce it and was turned off. 23,53% i procedures were complicated(50% episodes of atrial fibrillation, 50% asymptomatic pneumothorax). In 31,25% patients had episodes of VT/VF during one year after implantation, the total number of them were 28. This arrhythmias were significantly more often in the group of patients with CA in past (55%vs0%; $p<0,05$). 3,6% VT/VF didn't stop despite of implantation the electrode, 6,25% patients had unnecessary discharges. 25% of patients needed hospitalization caused by cardiac arrhythmia and 6,25 needed to delete ICD with the electrode. There was electric storm in 12,5% patients.

Conclusions: CD with subcutaneous electrode array is method that allows obtaining acceptable defibrillation threshold. In most cases it prevents CA during one year after implantation.

Title: Prevalence of coronary artery pathology in a population of Polish patients.

Authors: Jakub Chmiel, Weronika Stryszak, Aleksandra Śliwińska, Paweł Iwaszczuk MD (tutor)

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Introduction: Cardiovascular diseases have mortality rate of 37.5% in European Union and as high as 45.8% in Poland, which accounts for an excess of 177 000 deaths per year. Coronary heart disease (CHD) is responsible for more than 60% of cardiovascular deaths.

Aim: To evaluate the prevalence of coronary artery pathology in an all-comer Polish population of patients undergoing coronary angiography (CAG), with emphasis on inter-sex differences.

Materials & methods: We reviewed 1755 consecutive patients undergoing CAG in our department, regardless of reason or diagnosis. Study group comprised 628 females (35.8%) and 1127 males (64.2%). Presence of coronary stenoses, occlusions, myocardial bridges, ectasia, aneurysms, and fistulas, as well as evidence of previous percutaneous transluminal coronary angioplasty (PTCA) or coronary artery bypass grafting (CABG) was recorded. Stenoses were considered critical if ≥50% in left main coronary artery (LM) or ≥70% in any other epicardial artery, borderline if 40-49% in LM or 50-69% in other instances. For each patient only the latest CAG result was considered. Epidemiological data on stenoses and occlusions was inferred only from a subgroup of patients without evidence of prior PTCA or CABG (N=1206). Statistical analysis was performed using StatSoft Statistica 12 software. We used Pearson's Chi2 test with Yates' correction, if applicable. Differences were considered significant if $p<0.05$.

Results: 27.1% of patients had evidence of prior PTCA and 7.6% of CABG (31.3% had either). In the remaining 68.7% angiographic evidence of atherosclerosis was found in 74.8%. Critical LM stenosis was present in 2.4%, other critical stenoses occurred in 34.8%, borderline stenoses in 24.1%, and occlusions in 25.0%. All atherosclerotic lesions were more common in males than in females: occlusions (33.4% vs. 13.1%, $p<0.001$), critical stenoses (39.8% vs. 27.6%, $p<0.001$), borderline stenoses (28.7% vs. 17.4%, $p<0.001$), any atherosclerosis (82.4% vs. 63.7%, $p<0.001$), except for the LM disease which did not reach statistical significance (3.1% vs. 1.4%, $p=0.10$). Other coronary pathologies included aneurysms or ectasias in 2.7%, myocardial bridging in 1.6% and coronary fistulae in 0.4%. Aneurysms and ectasia were more prevalent in males (3.6% vs. 1.1%, $p=0.004$), the other two were evenly distributed between sexes.

Conclusions: Three quarters of patients without evidence of prior invasive CHD treatment, that undergo CAG, have angiographic evidence of atherosclerosis and more than one third have critical stenoses. Both coronary atherosclerosis and ectasia are more common in men than in women.

Title: Ablation – highly effective method of treating different types of arrhythmia – retrospective single-centre experience

Authors:1. Jakub Rzeszuto, Beata Bulwin, Katarzyna Borkowska, Maciej Kocon, Mateusz Pomykała, Mariusz Racinowski, Dominika Gapska, tutor: Małgorzata Ostrowska, MD, PhD

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Introduction: The percutaneous catheter ablation (Radiofrequency Ablation (RFA) and cryoablation) is the invasive, well-established technique for treating arrhythmias. According to the literature this procedure is characterized by high efficacy and low risk of complications. However, there is still remarkable percentage of patients with recurrence of arrhythmia after ablation, especially in patients with persistent atrial fibrillation (AF).

Aim: The aim of this study was to evaluate the early effectiveness of ablation procedure.

Materials & Methods: Our retrospective single-centre study was conducted at Cardiology Department at University Hospital No 1 in Bydgoszcz between 01/2015 and 12/2016. Data of 416 patients (207 females [F], 209 males [M]), who underwent catheter ablation was collected. Analyzed arrhythmias were: atrio-ventricular nodal re-entrant tachycardia (AVNRT) – 131 (31.5%), pre-excitation syndrome – 71 (17.1%), atrioventricular re-entrant tachycardia (AVRT) – 24 (5.8%),atrial tachycardia (AT) – 8 (1.9%), atrial flutter (AFL) – 63 (15.1%), AF – 45 (10.8%), ventricular tachycardia (VT) – 27 (6.5%), ventricular extrasystole (PVC) – 46 (11.1%), supraventricular extrasystole (PSVC) – 1 (0.2%). Direct efficacy and recurrence of arrhythmia before the day of discharge were evaluated. Additionally, the effectiveness of ablation in patients, who have had the procedure before was focused on. Ablations were performed using two methods: RFA – 337 (81.0%) and cryoablation – 79 (19.0%). Collected data included: basic clinical characteristics, comorbidities, occurrence of complications and details of ablation procedure.

Results: The ablation procedure was successful in 385 patients, what translated into direct efficacy of ablation of 92.5%. According to the type of arrhythmia the rate of success was 97.7% for AVNRT, 93.0% for pre-excitation syndrome, 91.7% for AVRT, 100% for AT, 90.5% for AFl, 84.4% for AF, 85.2% for VT, 91.3% for PVC, 100% for PSVC. Partial efficacy was noted in 11 cases (2,64%). In 40 patients (10.1%) recurrence of arrhythmia occurred. There were 36 patients (8.7%), who have had previous ablation for the same arrhythmia before. In this subpopulation ablation was directly effective in 32 cases (88.9%), however arrhythmia returned in 4 patients (11.8%) before the day of discharge. The effectiveness of ablation according to the method was similar for both approaches, accounting 93.2% for RFA and 90.0% for cryoablation. Complications occurred in 17 patients (4.1%) and the most common complications were temporary phrenic nerve paralysis - 4 (1.0%), hematoma - 4 (1.0%) and atrioventricular block - 4 (1.0%).

Conclusions: Ablation is highly effective and safe method of treating different types of arrhythmia. Both RFA and cryoablation have similar rate of success. The risk of arrhythmia recurrence is low, accounting 10%.

Title: Expression of TETs and plasma concentration of vitamin C among breast cancer patients compared to a control group

Authors: Justyna Szpotan, Kinga Linowiecka, Martyna Modrzejewska, Marek Foksiński

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Introduction: The most common cancer among women is breast cancer, with almost 1.7 million new cases diagnosed per year globally. Like other malignancies, breast cancer is characterized by genomic instability which may arise as a result of global hypomethylation. The active DNA demethylation process requires ten-eleven translocation (TET) enzymes to catalyze the stepwise oxidation of 5-methylcytosine to 5-hydroxymethylcytosine and further oxidation products. Furthermore, the TET family proteins has three members, namely TET1, TET2 and TET3, which are α-ketoglutarate and iron-dependent dioxygenases. Interestingly, vitamin C (ascorbic acid) is an additional cofactor of TETs and plays a crucial role in the demethylation processes. Numerous papers have shown that vitamin C enhances the catalytic activity of TET proteins in vivo and in vitro.

Aim: The main objective of this study is to find out whether expression of TET genes in leukocytes or the level of vitamin C in plasma play any role in disease development or have a prediction power of an outcome of breast cancer? Further work needs to be done to evaluate the relationship between the level of vitamin C in plasma and the level of the key molecules of DNA demethylation process (5-(hydroxymethyl)-2'-deoxycytidine, 5-formyl-2'-deoxycytidine, 5-carboxy-2'-deoxycytidine). There have been no studies concerning this subject yet.

Materials & Methods: We have examined the expression of TET genes in leukocytes and the concentration of vitamin C in plasma of women suffering from breast cancer, as well as in the control group. The expression of TETs has been evaluated using quantitative RT-PCR, whereas for plasma total vitamin C analysis Waters Acquity (Milford, MA) ultra-performance liquid chromatographic (UPLC) system with UV detection has been used.

Results: Preliminary results have showed that the expression of TET2 and TET3 of breast cancer patients is declined compared to control group, while the expression of TET1 is enhanced in the same trial. Surprisingly, our results have not indicated considerable differences in concentration of vitamin C in plasma of breast cancer patients than the control group.

Conclusions: The proposed study is particularly important in the context of the pathogenesis and therapy of breast cancer. It is worth mentioning that indicated changes in expression of TETs of breast cancer patients could be related to disturbance in the demethylation process. This work was supported by the National Science Center grant number DEC-2015/17/B/NZ5/00640.

Title: Brain tumor metabolite analysis using non-invasive method SPME and platform LC-MS. Introduction research.

Authors: Kamila Chmara[1*], Paulina Zofia Goryńska[1*], Krzysztof Goryński[1], Karol Jaroch[1], Dariusz Paczkowski[2], Marek Harat[2], Barbara Bojko[1]
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Introduction: In the last few years incidence of neoplasms has been constantly growing. In spite of multiplicity of diagnostic method for discovering type and stage of brain tumors, neither is quick enough to verify and confirm type of brain tumor with absolute certainty. This knowledge is crucial for initiating therapy immediately after surgery, as treatment could be drastically different for various tumor types. Examination of tumor pathology often takes a week, and in consequence medical treatment is not applied immediately after surgery. It causes high mortality and high risk of tumor recurrence

Aim: Current methods for brain studies consist mainly of neuroimaging techniques, which cannot provide timely in vivo information regarding the biochemistry of the brain, nor quantitative information regarding concentrations of given analytes i.e. biomarkers. Untargeted metabolite analysis is relatively new approach and it develops dynamically. Low molecular weight compounds, which amounts in the tissue changed under various conditions are investigated. Sample collection can be considered as the most import_ant step in metabolomics studies, because if processed incorrectly it may result in introduction of contaminants at the very beginning of analytical workflow or degradation of unstable metabolites in case of inappropriate quenching. In the past few years solid phase microextraction (SPME)has been successfully applied to metabolite profiling. SPME is compatible with mass spectrometry, as the technique allows minimizinge matrix effects by eliminating absorption of salts and because it is non-exhaustive extraction method.

Materials & Methods: In this research metabolite profiling of 43 brain tumors was performed. The size of the probe used for the studies is ca. 0.2 mm diameters, thus providing minimal tissue damage. For that reason, the piece of tissue used for histological studies can be also used for metabolomics analysis. So the amount of information obtained would be significantly greater and complementary to each other.To identify as many compounds as possible with different polarity, in current study two stationary phase were used: pentafluorophenyl and HILIC. Additionaly, to increase recovery of the extracted metabolites various desorption solvents were used. Data processing and statistical analysis were performed using Compound Discoverer 2.0.

Results: Received data enabled identify number of highly specific compounds, which differentiate various types of brain tumors in humans. In both column types the separation between different neoplasms was observed.

Conclusions: The proposed SPME method is an important step toward fast and low-invasive in vivo sampling method, which could be a valuable tool for early diagnosis of tumor type. It could allow to begin the treatment directly after surgery. The work was supported by National Science Center grant (2015/18/M/ST4/00059).

Title: Epigenetic changes in breast cancer – comparison the expression of genes involved in proper demethylation activity: IDH, and their product: 2–ketoglutarate.

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Introduction: Epigenetic processes, including DNA methylation, may modulate key genes involved in the cell metabolism. The most dynamic process which regulate DNA methylation pattering is recently discovered active demethylation, which involves TET family proteins. TET proteins oxidate 5-methylocytosine (5-mCyt) to 5-hydroxymethylocytosine, and then to 5-formylocytosine (5-fCyt), and 5-carboxycytosine (5-caCyt). Modified cytosines (5–fCyt, 5–caCyt) are subsequently excised by thymine DNA glicosylase (TDG) in DNA repair system. TET proteins are dioxygenases, and in order to maintain their catalytic activity, they require 2-ketoglutarate (2-KG) as a co-substrate, and iron (II) and ascorbate as co-factors. 2-KG is metabolite produced in the course of the tricarboxylic acid (TCA) cycle by the isocitrate dehydrogenase (IDH). IDH protein family consists of IDH1, IDH2 and IDH3 members, which are found in mitochondria (IDH2) and cytoplasm (IDH1, IDH3). Impaired activity of IDH results in 2–hydroxyglutarate (2–HG) production instead of 2-KG, which in turn may lead to inhibition of TETs function. DNA methylation and demetylation are considered as crucial events in epigenetic reprogramming. Changes in DNA methylation pattern may be involved in cancer development.

Aim: In order to explain connection between cancer development and impaired activity of IDH, and in turn 2–KG level, we undertook examination of IDH1 and IDH2 expression in leukocytes and 2–KG level in plasma from patients with diagnosed breast cancer.

Materials & Methods: We examined leukocytes and plasma from 10 breast cancer patients. As a control group we analyzed leukocytes and plasma from 10 healthy subjects. Expression of IDH1 and IDH2 was evaluated using quantitative RT-PCR with hybridization probes, whereas 2–KG level was measured by ultra performance liquid chromatography system with tandem mass spectrometry detection (UPLC/MS/MS).

Results: The expression of IDH1 and IDH 2 genes in leukocytes from breast cancer patients were reduced compared to control group. We also observed differences between expression of IDH genes both in breast cancer patients and in control group: IDH1 expression was lower in comparison to IDH2. Moreover, we noticed relationship between IDH1 expression and 2–KG level.

Conclusions: Impaired IDH expression in patients with breast cancer suggests incorrect DNA demethylation in the course of cancer. Our findings indicate that alterations in IDH expression may imply changes in 2–KG level. In addition, this process may induce changes in TET proteins activity, and successively in DNA methylation pattern. The work was supported by the Polish National Science Center (grant number DEC-2015/17/B/NZ5/00640).

Title: Parameters of peripheral hemodynamic, heart rhythm variability, morphometrical characteristics of erythrocytes in patients with stable angina and their changes under the influence of metabolic therapy.

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Introduction: From the recent statistics of WHO, world mortality rate of cardiovascular diseases 17.5 million every year. Nowadays important direction of the treatment of IHD is metabolic therapy.

Aim: The aim was to establish clinical characteristic, peripheral vascular resistance (PVR), heart rhythm variability (HRV), bicycle ergometry and morphometrical characteristics of erythrocytes (RBC) and their catecholamine containing properties in patients with stable angina pectoris (SAP) III functional class (FC) and their dynamics in the course of basic therapy and combination with metabolic therapy.

Methods & Materials: We analysed case histories of 105 patients with stable angina pectoris III FC at an average age of 42-79 years. The first group (n=52) were administered the standard treatment of SAP. The 2nd group of patients (n=53) were given a combination of basic therapy with IV mildronate 10% of 5 ml solution (Grindex, Latvia) for 12 days.

Results: The patients with SAP were characterised reduction of threshold power, double works and run time on bicycle ergometer, increased PVR and predominance of central sympathetic regulation with decrease in vagal regulation, structural-functional RBC reconstruction and decrease their content and concentration of catecholamine. After treatment in both groups, we determined improvement of tolerance to physical exertion, reduction in PVR and sympathetic activity, RBC area and raising their catecholamine content.

Conclusion: Combination therapy with mildronate, significantly reduced the activity of central part of sympathetic nervous system and PVR, increased the threshold power, run time, improve morphometrical characteristics of RBC and their catecholamine containing properties than standard therapy.

Title: Assessment of nutritional status of patients with cancer of the digestive system before laparotomy. The location of the tumor and the levels of malnutrition.

Authors: Natalia Lossy, Anna Wiczołek, Marta Wojciechowska, Marta Lewicka

Affiliation: Department of Surgical Oncology, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introdution: Malnutrition is a phenomenon inherent in the digestive tract cancer and occurs in a significant number of patients at the time of admission to hospital.

Aim: Assessment of nutritional status of patients with cancer of the digestive system before laparotomy. The early identification of patients with malnutrition.

Materials & Methods: Our material is based on data of questionnaires assessing nutritional status (NRS 2002, SGA, MNA) and data from documentation of hospitalized patients in surgical oncology clinic in Nicolaus Copernicus University. The survey was carried out in patients qualified for laparotomy for cancer.

Results: The study group consists of 86 patients qualified for laparotomy for cancer. The greatest number of patients - 60% of patients with colorectal cancer, 24% are patients with stomach cancer, the remaining patients had an established diagnosis of cancer: esophagus, pancreas, liver, gallbladder. After analyzing the data from the survey NRS 50% of patients received ≥3 points. Analyzing the scale of SGA, wasting was detected in 1% of patients - from stomach cancer, malnutrition were detected in 7% - mainly patients with cancer of the esophagus, rectum and stomach. The high risk of malnutrition - 33%, especially patients with cancer of the liver, pancreatic cancer localized in the colon. The data from scale MNA showed malnutrition in 6%.

Conclusions: The analyzed material confirmed that malnutrition is often found in patients with gastrointestinal tumors before treatment. It should be very carefully assessed the nnutritional intervention, which has an impact on the improvement of cancer treatment - surgery and systemic.

Title: The role of circulating tumor cells in personalized medicine

Authors: Piotr Cierpikowski, Aneta Popiel

Affiliation: Wrocław Medical University, Poland

Introduction: Circulating tumor cells (CTCs) are cells derived from a primary tumor and are carried around the body with the blood circulation. It is claimed that CTCs can migrate to distant organs and to form metastases. Although CTCs are not currently used in clinical practice, researchers are focused on characterization of CTCs and their role in cancer progression which can have potential utility in novel therapies.

Aim: The aim of our study was to show the current state of knowledge about potential clinical utility of CTCs in personalized medicine.

Materials & Methods: We performed a comprehensive English literature research published from 1st January 2012 to 30th April 2017 in PubMed database about CTCs.

Results: The presence of CTCs in peripheral blood have been investigated in many types of cancer. Numerous studies show that CTCs present potential diagnostic, prognostic and predictive role in lung, breast, prostate and colorectal cancer. Moreover some researchers observed that CTCs may give opportunity to study cytostatic susceptibility for better treatment management.

Conclusions: The clinical utility of CTCs should be investigated in larger studies. CTCs seem to play crucial role in cancer metastases and treatment resistance. Better understanding of CTCs biology may lead to development of new anticancer strategies.

Case Report Surgical Session

Jury:

Dr n. med. Maciej Nowacki

lek. Katarzyna Nowacka

lek. Łukasz Kafarski

Moderator:

Radosław Perkowski

1st prize in Case Report Surgical Session

Title: True giant transverse colon diverticulum as an extremely rare cause of nonspecific intestinal symptoms

Authors: Mateusz Wilczek, Natalia Stranz-Walczak

Affiliation: Department of Radiology and Neuroradiology, Poznan University of Medical Sciences, Poland

Introduction: Giant colonic diverticulum (GCD) is a rare manifestation of diverticular disease of the colon. By definition GCD are greater than 4 cm in size. GCD are divided into three types. Types 1 and 2 are pseudodiverticula, not formed by all the layers of intestinal wall, unlike the type 3 true diverticula of congenital origin, the least common ones. Fewer than 200 cases of GCD have been reported in the literature. Most of them occur in the sigmoid colon, the transverse colon is an extremely rare location reported in five cases, among which only two were classified as type 3 true diverticula. CT is the most accurate method in GCD diagnosis. The preferred treatment is resection of the diverticulum and adjacent colon with primary colonic anastomosis.

Case report: A 40 y.o. woman with a history of nonspecific intestinal symptoms – flatulence and fullness – was initially referred for a barium swallow test, that revealed a pathology: an enlarged intestinal loop in the projection of the transverse colon. More radiological examinations followed. Double contrast barium enema turned out to be the most conclusive one: the images suggested a cyst or a large diverticulum of the colon. The patient underwent a laparotomic surgery, during which a true giant transverse colon diverticulum was identified. An extended right hemicolectomy with ileocolic anastomosis was performed; the postoperative course was uneventful.

Conclusions: Presented here is a unique case of a true GCD located in the transverse colon – only two such examples exist in the literature. Due to the rarity and nonspecific clinical presentation of GCD, their diagnosis is not obvious and depends mainly on imaging, where CT is considered the most sensitive modality. In this case, however, double contrast barium enema provided a result closest to the final intraoperative diagnosis, thus emphasizing the usefulness of classical imaging methods.

2nd (*ex aequo*) prize in Case Report Surgical Session

Title: Diagnostic difficulties and surgical management in an infant with recurrent diaphragmatic hernia

Authors: Edyta Węgrzyn, Kacper Kroczek,Konrad Kamiński

Affiliation: Department of General and Oncological Surgery for Children and Adolescents, A. Jurasz 1st University Hospital in Bydgoszcz, Faculty of Medicine, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Congenital diaphragmatic hernia (CDH) is a congenital life-threatening defect requiring surgical repair in the neonatal period which affect about one in 2500 live births. Recurrent diaphragmatic hernia could be challenging in term of diagnosis and type of surgical treatment.

Case report: Male infant aged six months was admitted to Paediatric Surgery Unit with suspicion of recurrent CDH located on the left side. In his medical history, procedure of left diaphragmatic hernia reconstruction with prosthetic patch was carried on. After surgery his condition was poor. At 8th day of life, plain x- ray revealed pneumoperitoneum and infant was qualified for surgical treatment because of duodenal wall perforation. After stabilization patient was discharged home full fed. Six months later the 'additional crackle' during respiration was noticed by parents of patient, infant was anxious and constantly crying. After clinical, radiographic, ultrasound and computed tomography diagnostic workup, the left-sided recurrent diaphragmatic hernia was diagnosed. During thoracoscopy partial dehiscence of posterior part of the patch was noted, defect was corrected endoscopically. Postoperative course was uneventful.

Conclusions: Patients with history of CDH are at risk of other congenital anomalies, often require intensive care after birth and have prolonged hospitalization. After discharge from the hospital, they may have long-term complications such as cardiopulmonary insufficiency, hernia recurrence or gastroenterological dysfunctions. Infants with large defects, those who have received ECMO, or those with a patch repair are at highest risk. These patients, require long-term periodic follow-up by a multidisciplinary team. Structured follow-up for these patients facilitates early recognition of recurrence and treatment of these complications. Surgical treatment in these cases should by individualized. In centers experienced in minimally invasive surgery (MIS) techniques also endoscopic approach is possible. All advantages of such techniques in this cases are utilized.

2nd (*ex aequo*) prize in Case Report Surgical Session

Title: Isolated external iliac artery dissection: a case report

Authors: Justyna Remiec, Zuzanna Zubrycka

Affiliation: Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Isolated dissection of the external iliac artery(EIA) without dissection of common iliac artery or aorta is an extremely rare pathology. In the available literature, we found only a few cases with similar pathology. The etiology of this phenomenon remain unclear. Described cases were spontaneous or related to fibromuscular dysplasia(FMD), endofibrosis, kidney transplantation and highly trained athletes. Risk factors, which can be associated with iliac artery dissection, include connective tissue disorders, traumas, FMD, atherosclerosis and high level of physical training.

Case report: We present the case of 45 years old, non-athletic, non-smoking man with isolated external iliac artery dissection. The incident was preceded by the intermittent claudication of the right lower limb at a distance of 10-20m. The other symptoms, which appeared 11 days earlier, were pain and the increase of blood pressure up to 160/110mmHg. The patient didn't treat hypertension or suffer from diabetes and he didn't have surgery or trauma in the past. In family medical history – his two sisters have Hashimoto disease. In physical examination, the right lower limb was pale with no palpable pulse and on the median surface of right thigh there was a huge ecchymosis extending from the right inguinal ligament to the knee. An USG examination revealed an EIA critical stenosis throughout its entire length and extensive retroperitoneal hematoma adjacent to the right EIA and femoral artery(FA). Whereas angio-CT scan showed dissection of EIA with near occlusion. Right FA was surrounded by a soft-skinned infiltration. Flow in the right FA was retained. The patient was qualified to a hybrid surgery. In regional anesthesia the area of the common artery bifurcation was dissected. Due to extensive inflammation circumfluent the FA, the precise exposure of vessels was difficult and risky, so the FA was directly punctured and the balloon expandable stent was inserted into the EIA with a technical and clinical success. The most interesting in this case is an extensive, over 3cm inflammatory infiltration surrounding the EIA and femoral arteries(FA), which in USG examination looked like hematoma. Unfortunately we don't know its cause yet.

Conclusions: Only a few cases of isolated external iliac artery dissection have been reported in literature. Etiology of this very rare pathology isn't fully understood, but most of the described cases were associated with FMD. In this case we can exclude iatrogenic and traumatic etiology, but the patient needs further diagnostic. For now, we must also seek for such diseases as FMD, disorders of the vessels walls and alpha-1-antitripsin deficiency, but extensive inflammation and family history may suggest an autoimmune disease.

2rd (*ex aequo*) prize in Case Report Surgical Session

Title: Recurring liposarcoma and lipoma of the mediastinum in 60-years old female.

Authors: Maciej Spałek, Marta Korycka

Affiliation: Department of Thoracic Surgery, Poznan University of Medical Sciences, Poland

Introduction: Liposarcoma is the most common soft tissue sarcoma in adults. It is rare to develop liposarcoma from preexisting lipoma. The most common localizations of liposarcoma are retroperitoneum and limbs.

Case report: This paper presents a case of a 60-years-old patient who had three resections of mediastinal tumours. In 2005 she was admitted to hospital with dry cough and dyspnea. In chest x-ray tumour of left pleural cavity was visible. The patient underwent left thoracotomy. Histopathology showed lipoma with microfoci of liposarcoma. In 2011 the patient had local recurrence of tumour in the anterior mediastinum. Sternotomy and resection of tumour was performed. Histopathology showed lipoma. In 2015 patient had local recurrence of tumour in the anterior mediastinum. The patient underwent right thoracotomy. No postoperative complications occurred. Histopathology showed liposarcoma. The patient took adjuvant chemotherapy. She was released home in a good condition.

Conclusions : It can be difficult to differentiate liposarcoma from lipoma even for experienced pathologists. It is rare to develop liposarcoma from preexisting lipoma but when it occurs it is associated with severe consequences.

2rd (*ex aequo*) prize in Case Report Surgical Session

Title: Old but gold – classic diagnostics in an unclassical complication of sleeve gastrectomy.

Authors: Paula Ziajka, Marcin Kiszka, Natalia Stranz-Walczak

Affiliation: Department of Radiology and Neuroradiology, Poznan University of Medical Sciences, Poland

Introduction: Obesity is a major issue, both social and medical in Poland as well as in other developed countries. The WHO estimates that by 2030 28% of men will be obese, as well as 18% of women. Surgery is one of the methods of treatment and sleeve gastrectomy with duodenal switch is one of the recommended procedures. It involves resection of the stomach along greater curve, reducing its volume by 80%, is effective and has low percentage of complications. If any, the most common are bleeding (0,9%) and leakage (0,7%). In case of complications, there are no guidelines concerning diagnostics. Contrast radiography of upper gastrointestinal tract is a widely-available method of imaging its functionality, wall-lining and patency, and is being used in medicine since 1910's.

Case report: The patient, J.J., diagnosed with severe obesity underwent sleeve gastrectomy with duodenal switch. After the surgery, patient complained about supra-abdominal pain and dyspnea, which later appeared to be a symptoms of anastomosis leakage. Despite relaparotomy, a patient's condition didn't improve. As a result, a stent had been applied to the esophagus to seal the anastomosis, and patient was admitted to Intensive Care Unit, and spent there over a month. A stent location was controlled by following imaging, from which only the contrast radiography of gastrointestinal tract could unmistakably reveal further leakage due to stent dislocation. The stent had been repositioned, and after three months it was removed.

Conclusions: Laparoscopic sleeve gastrectomy, despite being known for its low complication rate, as every invasive procedure needs to be carefully observed after the surgery to avoid any short and long term consequences. Furthermore, modern surgery allows the rediscovery of classical imaging.

Key words: gastrectomy, obesity

Title: Schwannoma of the biliary tract- case study.

Authors: Tomasz Aleksiewicz, Michał Grabysa, Igor Kunicki

Affiliation: Department of Liver and General Surgery, Collegium Medicum, Nicolaus Copernicus University, Bydgoszcz, Poland

Introduction: Schwannomas are benign peripheral nerves tumours derived from Schwann cells. Localization in the biliary tract is extremely rare.

Case report: We present a case of 34-year-old patient with tumor of the porta hepatis mimicking malignant lesion. Intraoperative examination showed that tumor arise out of the left hepatic duct. Diagnosis of schwannoma based on immonohistochemistry and histopathology studies.

Conclusions: Only 18 cases of Schwannoma of the biliary tract have been reported in the medical literature worldwide. In only one case the schwannoma of the biliary tract was expected. The vast majority of patients is overtreated because schwannoma of the biliary tract can lead to a diagnosis of malignant lesions.

Title: Spinal subdural hematoma after spinal anesthesia as complication after total hip replacement

Authors: Edgars Barlots[1], Ērika Bitiņa-Barlote[1], Prof. Andris Jumtiņš MD

Affiliation: Traumatology and Orthopedics Hospital, Rīga Stradiņš University, Latvia

Introduction: Spinal subdural hematoma (SSH) is a rare but a devastating complication associated with trauma, lumbar puncture, hemorrhagic disorder, anticoagulant therapy, spinal surgery, tumor, vascular malformations, and spinal or epidural anesthesia. It usually occurs shortly after the operation. If left untreated, it can result in severe irreversible neurologic deficits.

Case report: 73-year-old woman (180 cm, 88 kg) with primary osteoarthritis of left hip was advised to undergo THR. The patient complained of pain in the left hip joint for several years. She also had night pain and morning stiffness. Comorbidities: the permanent form of atrial fibrillation; gastritis; hyperthyroidism; and 3 years ago right leg v. saphena magna thrombophlebitis, scoliosis and lumbar spondylosis. On admission patient was hemodynamically stable, without neurological deficit. Coagulation tests and total blood count were in normal range. Patient used 100 mg acetylsalicylic acid for atrial fibrillation. She did not use anticoagulants regulary. Before operation enoxaparin 0.4 ml s/c was prescribed. Spinal anesthesia was performed with G25 catheter. It was difficult manipulations because of vertebral morbidities and repeated puncture in the L2-L3 level was performed (with bupivacaine and morphine). Operation was proceeded without complications. 12 hours after operation there were no complaints about pain or sensory deficits, and 40 mg of enoxaparin s/c was prescribed. 19 hours after operation patients complained about sensory and motor deficit in her legs associated with lower back and right hypochondriac region pain, nausea. Neurologist diagnosed cauda equina syndrome. Emergency MRI was made and showed a subdural hematoma with spinal canal stenosis on many levels. Emergency decompressive laminectomy of L2-L3-L4 and half of L5 was performed under general anesthesia involving L2-L3, L4-5 transpedicular fixation with „S-4". Nerve roots were released and dural bag pulsation was renewed. In postoperative period , neurological complication slowly decreased, muscle strength in thigh was improved, but foot paresis and bladder dysfunction remained. During hospitalization, transient ischemic attack episode with left hemiparesis and aphasia, but symptoms regressed. After removing stitches from lumbar wound superficial fistula appeared, size 1 x 1.5cm, large „pocket" under the skin throughout the length of the wound without signs of inflammation of the serous fluids. Wound revision was made with resection of fistula. During her stay in hospital the patient showed improvement of motor function and she was transferred to a rehabilitation center.

Conclusions: SSH is an extremely rare complication of spinal anesthesia and may lead to cauda equina syndrome or permanent paraplegia. It generally occurs in patients with coagulation disorders, receiving anticoagulant therapy and with traumatic or difficult insertion of spinal needle like in our case.

Title: 57 year old woman with schizophrenia-like psychosis and epileptic seizure - case report

Authors: Justyna Janowska[1], Wojciech Stemplowski[2], Natalia Sokołowska[2], Remigiusz Sokołowski[2], Aneta Popiel[3].

Affiliation: 1. Provincial Hospital for Neurotic and Mentally Ill, Swiecie, Poland
2. Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland.
3. Wrocław Medical University, Poland.

Introduction: Brain tumors' clinical manifestation is often non-specific and late to present. In patients with mental illness masses may mimic disease symptoms and delay diagnosis. Some of the tumors are treatable and symptoms could be reversible when tumor is cured.

Case report: 57-year-old female patient was admitted to the mental hospital, after a social worker and police intervention due to her abnormal social behavior and aggression against neighbors. The patient for the last 25 years presented with delusions – mainly persecutory, auditory hallucination, disordered thoughts and speech, distortions of self-presence and anxiety disorders. She never took neuroleptic medications. The neurological examination did not show any abnormalities. Antipsychotic drug olanzapine was gradually administrated, with no improvement after 5 weeks. In the sixth week patient presented tonic-clonic seizures for the first time in the life. The cranial CT was conducted and revealed mass lesions in the area of frontal lobe. The MRI demonstrated 5cm mass with area of swelling After the consultation with neurosurgeons patient was transferred to the specialist department for the tumor resection surgery. She was discharged against medical advice due to her will.

Conclusions: Schizophrenia can increase the risk of seizures likewise antipsychotic drugs can do but in patients with mental health problems an attack should cause further diagnostics to exclude most of all tumor proliferation. Besides the seizures, tumor also can be the reason of many of the typical schizophrenia-like symptoms. Coincidence of schizophrenia and brain tumor is not often but early diagnose of the lesions may result in significant reduction of symptoms, better response to treatment and life quality improvement.

Title: Aneurysm of the extracranial internal carotid artery: A case report

Authors: Zuzanna Zubrycka, Justyna Remiec

Affiliation: Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Aneurysm of the extracranial internal carotid artery (ICA) is a rare pathology. Recent reviews estimate carotid aneurysm frequency rate for only 0,4-4% of all aneurysms and the aneurysm of the extracranial ICA is even rarer. The aneurysm can present as pulsating mass in the neck and provoke local compression. It can remain asymptomatic until the rupture and manifestation of ischemic neurological symptoms. Due to high risk of its unfavorable natural history it is important to detect and treat it early. The most common location of the extracranial ICA aneurysm is the carotid bulb and proximal part of ICA.

Case report: We present the case of 69 years old woman with the extracranial ICA aneurysm, well controlled hypertension and mild asthma. The aneurysm was diagnosed seven months before the admission by USG examination and confirmed by CTA. The postponement of surgical treatment was a consequence of an unexpected finding of asymptomatic cerebral aneurysm in CT, that needed to be treated in the first place. Neck CT scan showed a kinking of right ICA (RICA) and a saccular aneurysm above the carotid bulb 20mm in length and 18mm in diameter. The patient reported a headache behind the eyes and a presence of pulsatile neck mass. The patient denied having any history of trauma, infections or procedures affecting cervical area. Due to presence of RICA kinking the endovascular treatment was impossible and the patient was qualified to open surgery under regional anesthesia. The aneurysm removal was performed with the incision in the anterior edge of right sternocleidomastoid muscle. The carotid arteries and aneurysm were exposed. After administration of 1500U of heparin, the clamping of carotid arteries was done. The aneurysm has been successfully removed. Using 5-0 prolene sutures the end-to-end anastomosis of ICA was made. There was no complications during the surgery or post-operative period.

Conclusions: The paucity of literature and treatment algorithms push us to individualized evaluation for intervention. Current treatment methods include nonoperative, endovascular and surgical options. The preferred method of treatment remain open surgical repair. Endovascular therapy, if technically possible, may be considered in cases with surgically inaccessible aneurysms (distal ICA), neck pathology and patients with multiple comorbidities. The nonoperative management with antiplatelet and anticoagulant therapy can be appropriate for patients with high-risk for surgery and small asymptomatic aneurysm.

Key words: aneurysm, internal carotid artery

Case Reports – Nonsurgical Session

Jury:

prof. dr hab. n. med. Kornelia Kędziora-Kornatowska

Moderator:

Weronika Topka

1st prize in Case Reports – Nonsurgical Session Session

Title: Toxic liver damage caused by ritual of Kambo

Authors: Aleksandra Polak, Tadeusz Łapiński

Affiliation: Department of Infectious Diseases and Hepatology Medical University of Bialystok

Introduction: The secretion from the frog Phyllomedusa bicolor, known as Kambo ritual, has traditionally been used as means of purification of the body in numerous countries in South America. During Kambo rituals the excretions of Phyllomedusa bicolor are applied to the fresh wounds. In recent years the use of the secretion of the frog Phyllomedusa bicolor is becoming more popular in Europe, but its use can lead to serious multiple organs damage.

Case report: 34-year-old man was referred to hospital due to icterus. The patient complained of skin itching, weakness and pain in the upper abdomen which appeared a few days before hospitalization. The patient has had an intake of 3 beers a day for the past two years and sometimes smoked cannabis. The patient has stopped drinking alcohol and smoking cannabis since 2 months. At that time, once a week, he performed the ritual of Kambô to purificate the body. Physical examination revealed a slight icterus, overweight (BMI = 26) and a curious scar on the abdomen, which consisted of five regularly spaced and aligned dots. Blood tests showed elevated liver enzymes: ALT - 2155 U/l, AST - 878 U/l, GGTP - 203 U/l, Bilirubin concentration - 3.02 mg/dL, prothrombin time- 14.2 s, ammonia concentration - 137 mg/dl and creatinine concentration - 1.03 mg/dl. The abdominal ultrasound showed increased echogenicity of the liver. The HBV, HAV, HCV, CMV, EBV and HIV infection were excluded, as well as hemosiderosis, AIH and Wilson's disease. The patient received symptomatic treatment: lactuloses, silymarin and ornithine and his condition improved after a few days.

Conclusions: : In the described case, there is an association between liver damage and performed a ritual Kambo. The most common cases of illness and deaths after Kambo rituals are associated with depressive impact of derivatives of opioids on the CNS and the effects of toxins on the cardiovascular system. However, it might be damaged by toxins kidney, pancreas and liver. All the peripheral and most of the central effects of the secretion can be ascribed to the exceptionally high content of active peptides, easily absorbed through scarificated skin. Mucus has deltorphin and dermorphin, which are potent opioid delta receptor agonists. These substances relieve pain as well as morphine but also affect the central nervous system, causing respiratory depression. Occurs in mucus phyllomedusin is a tachykinin which contracts smooth muscles. The next the compounds isolated from the secretions was peptide dermaseptin B2, which exhibits strong anti-tumor activity by stimulation of tumor cell necrosis. Secretion also been isolated phyllokinin and phylloseptin, which possess antimicrobial and antiviral activity. Phyllocaeruleina detected in mucus leads to a decrease in blood pressure, tachycardia, increased secretion of bile and pancreatic enzymes.

2nd prize in Case Reports – Nonsurgical Session Session

Title: 1→3-ß- D-glucan in diagnosis of invasive aspergillosis in recipient of allogenic hematopoietic stem cell transplantation.

Authors: Monika Przybylska1, Artur Bandura1 tutor: Lidia Gil MD PhD

Affiliation: Studenckie Koło Naukowe Hematologii i Transplantacji Szpiku, Katedra i Klinika Hematologii i Transplantacji Szpiku UM w Poznaniu

Introduction: Invasive fungal disease (IFD) is a life-threatening condition affecting 22-28% patients undergoing hematopoietic stem cell transplantation (HSCT). The most common is invasive aspergillosis (IA), which develops in approximately 5–15% of HSCT patients with mortality of 60%, probably due to difficulty in establishing the early diagnosis and delayed treatment.

Case report: 31-year old woman was diagnosed with high risk acute myeloid leukemia in 2015 and underwent allogeneic HSCT from matched unrelated donor in July 2016. On 21st of October, 3 months after procedure, she was admitted to hospital due to pancytopenia with suspicion of graft failure. The patient presented cough and dyspnea and was febrile. During diagnostic work-up probable pulmonary aspergillosis was confirmed, based on serum galactomannan (GM), positive on 7thNov2016, characteristic for IA HRCT on 10thNov2016 and positive GM in bronchoalveolar lavage on 30thNov2016 (EORTC/MSG criteria). Treatment with voriconazol was started with good response after 6 weeks. The patient was qualified for the second alloHSCT in good general condition. Retrospective assessment of 1-3-beta-D-glucan (BDG) in serum showed positive result on 24thOct-2016, 14 days before first positive result of GM.

Conclusions: This case shows that BDG is a useful clinical biomarker of IFD, enabling early diagnosis and early antifungal treatment. BDG is positive not only in Aspergillus spp, but also Fusarium spp. and Candida spp.- therefore could probably play a crucial role in diagnosing IFD in hematooncological patients in nearest future.

2nd prize in Case Reports – Nonsurgical Session Session

Title: Case report of 88-years old female patient with rectus sheath hematoma during warfarin treatment

Authors: Katarzyna Mądra - Gackowska1, Sylwia Płusa2, Radosław Perkowski1, Joanna Androsiuk-Perkowska1, Małgorzata Gajos1, Agnieszka Kujawska1, Weronika Topka1, Natalia Skierkowska1, Sławomir Kujawski3

Affiliation: 1) Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland. 2) Department of Pathophysiology, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland. 3) Department of Hygiene, Epidemiology and Ergonomics, Division of Ergonomics and Exercise Physiology, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland.

Introduction: Authors presented a case report of 88-years old female patient with rectus sheath hematoma during warfarin treatment. Management of anticoagulation in elderly patients represents a particularly challenging issue. Indeed, this patient population is at high thromboembolic risk, but also at high hemorrhagic risk.This case demonstrates that multidisease and diagnostic and clinical difficulties are typical in geriatrics population.

Case report: A 88- years old female patient with congestive heart failure was presented to the Geriatry Department. She reported dyspnoea for about five last days and coughing. She has a history of atrial fibrillation, hypertension, chronic renal failure and chronic anemia under medical therapy. She was being treated with warfarin (a dose connected with INR, then it was 3 mg/day). Her blood pressure was 150/90 mmHg, her heart rate was irregular and about 80 per minute, respiratory rate 16 per minute. Examination revealed no obvious oedemas. Testing revealed a anemia – hemoglobin 9,2 mg/dl and INR of 3,29. An electrocardiogram revealed atrial fibrillation with a ventricular rate of 80-100 beats per minute . A chest radiograph showed mild pulmonary congestion. The patient was treated for heart failure using diuretic and anticoagulant drugs (warfarin). After the treatment, her symptoms were alleviated Significant improvement in symptoms was noted in second day in the hospital. Patient report an abdominal pain, mostly in right parts. The abdomen was soft, with normal bowel sounds and without tenderness or distention. She has no fever or vomiting. The X-ray of the abdomen showed small fluid levels. There was no pathological changes in ultrasound examination and CT scan. Surgical consultation was ordered. The pain persisted for two hours. Three days later patient reported abdominal pain once again. The pain was severe (described as 8 of 10). She stated that the pain worsened with movement and change in position. Physical examination revealed a large mass in the right upper quadrant of the abdomen extending to the lower abdomen. Ultrasound examination of the abdomen confirmed a nonmobile heterogeneous mass on the right upper quadrant extending below the liver with a suspect of intestinal loop within the mass. Further imaging study of computerized tomography (CT) revealed a hematoma on the abdominal wall. Complete blood cell count examination on the 5th day of admission revealed a decrease in the hemoglobin (5,0 g/dl). After intravenous fluid replacement, erythrocyte transfusion, fresh frozen plasma and analgesic treatment patient was admitted to the Surgery Care Unit and then due to the hemodynamic instability patient was referred to the Intensive Care Department.

Conclusions: Rectus sheath hematoma is a known complication of abdominal trauma, surgery and excessive strain on the abdominal musculature. The increasing use of anticoagulant therapies especially among elderly persons could led to an increase in rectus sheath hematoma in patients without obvious medical precipitating events. Rectus sheath hematoma can frequently mimic other common abdominal emergencies leading to delayed diagnosis.

3rd prize in Case Reports – Nonsurgical Session Session

Title: "Puff of smoke" disease

Authors: Ērika Bitiņa-Barlote, Tutor: Assoc. prof. Evija Miglāne

Affiliation: Rīga Stradiņš University, Latvia.

Introduction: Moyamoya disease is a chronic, progressive occlusion of the Circle of Willis arteries that leads to the development of characteristic collateral vessels seen on imaging, particularly cerebral angiography (CTA). It is characterized clinically by the onset of one or more cerebral ischemic events and/or the development of one or more cerebral hemorrhages. The mainstay of treatment is based on surgical revascularization.

Case report: 46 years old woman was admitted to Pauls Stradins Clinical University Hospital due to the weakness and involuntary movement in the left hand which last for 8 months. Focal neurological symptoms were not detected. Digital subtraction angiography (DSA) of brachiocephalic arteries showed occlusion of terminal segment of right internal carotid artery with revascularisation by pial collaterals from the posterior circulation at the level of middle cerebral artery. Anterior cerebral artery (ACA) was suboccluded in the ostial segment and M1 segment of left middle cerebral artery was stenosed by 50%. The patient was discharged from the hospital with the diagnosis of vasculitis of large and medium sized arteries of unknown origin. After one year patient was hospitalized for the follow up, and after additional examination diagnosed with Moyamoya disease. Genetic testing approved this diagnosis. Neurological symptoms did not change significantly during the next two years, but progression of the disease was observed radiologically, therefore it was decided to make extra/intracranial bypass (EICA). The function of EICA have been controlled every year by DSA and/or CTA during the last 3 years. Patients subjective condition is satisfactory and objective neurological investigation shows only mild focal symptoms, she is clinically observed.

Conclusions: Moyamoya is a rare disease, especially in Europe, but it is very important to diagnose this condition timely and to apply surgical revascularization using EICA which can improve the symptoms and ensure optimal long-term outcomes.

3rd prize in Case Reports – Nonsurgical Session Session

Title: Chronic epidural hematoma as a rare cause of the first adult epileptic seizure

Authors: 1. Dominik Kobylarek 2. Natalia Stranz-Walczak

Affiliation: Poznan University of Medical Sciences

Introduction: Extradural hematoma (EDH) is a dynamic state associated with head injuries and cranial fractures requiring a prompt surgical intervention. EDH is unlikely to manifest as chronic. In the scientific literature only few similar cases were presented. Moderate clinical symptoms of chronic EDH, including headache and discrete psychological changes, are found most commonly.

Case report: This case is to reveal how an omission of the acute state of a patient may lead to the epilepsy as a late complication. 32 years old patient was admitted to the Department of Neurology as a result of epileptic seizures that were presented in the last 2 months. No meaningful injuries were reported during consultations. CT scan and Magnetic resonance angiography was performed. Blood at different stages of evolution was detected by MR SWI and DWI sequences as a well broaded mass of horizontal dimension 49 x 55 mm and 82 mm height. The presence of aneurysm was excluded by CT scan and angiography. The suspicion of EDH was ejected and was eventually confirmed during the operation of removing the mass.

Conclusions: EDH most frequently is an acute state connected with an injury, urging a rapid surgical intervention. 11% of the cases are estimated to become chronic. Nevertheless, EDH of such dimensions has never been reported before, which was associated with such a modest injury interview. The only evidence of EDH manifested by this patient was the epileptic seizure as a late complication of an acute state that had been omitted.

3rd prize in Case Reports – Nonsurgical Session Session

Title: Full thickness chemical burn caused by exposure to giant hogweed (Heracleum sosnowskyi) in a 46 years old HIV and HCV positive patient - case study

Authors: Adam Krucki, Krzysztof Piersiala

Affiliation: Student Society of Infectious Diseases, Poznan University of Medical Sciences

Introduction: Chemical burn due to giant hogweed (Heracleum sosnowskyi) has been reported as a cause of burn injury in the literature both in humans and animals. Phytophotodermatitis is a common cutaneous phototoxic reaction produced by contact with a variety of plant substances, followed by sunlight exposure. Cutaneous burns induced by giant hogweed are caused by contact with its photoactive sap containing plant furocoumarins. There have been no published articles in the literature presenting a course of this kind injury in patients with any kind of immune deficiency.

Case report: We report the case of a 46-year-old man with a full thickness chemical burn on his right pretibial area due to phytophotodermatitis (PPD) following contact with giant hogweed (Heracleum sosnowskyi). The patient was diagnosed with HIV and HCV infections in 2006. He is on ARV therapy with a good immunological outcome. At first the wounds were surgically dressed and a pharmacological procedure was introduced (analgesic treatment, targeted antibiotic therapy and antithrombotic prophylaxis). He was discharged with a recommendation to treat the affected areas with a steroid cream. After almost two years (II.2017) the wound is still in process of healing. The area of open wound decreased by 50% compared to V.2015.

Conclusions: This review and case report are timely to raise awareness of phytophotodermatitis and burns caused by plants. It is crucial to alert all patients to the risk of being in areas with high-dense vegetation in condition of high sunlight exposure. There is lack of information on burns caused by plants in HIV positive patients, who are put on aggressive ART therapy that may lead to increased photosensitivity of the skin.

Title: Diagnostic difficulties in a case of a female patient with bipolar disease and obsessive- compulsive disorder**.**

Authors: Marta Kułaga, Ewa Goździewska, Kacper Miętkiewicz, Anna Grzesińska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Bipolar disease is a serious mental disorder. It requires noticing a manic or a hypomanic episode to diagnose it. Obsessive compulsive disorder has the following criteria: obsessions, and/or compulsions. The purpose of my paper is to present a case report of a patient diagnosed with bipolar disease and obsessive-compulsive disorder. Her diagnosis was changed frequently. I will differentiate the diseases and propose a proper diagnostic strategy for similar cases.

Case report: Female Patient, 29yo. At the age of 11 occurred the first episode of depressed mood with reduced energy and suicidal thoughts. At the age of 12 She started having obsessions and compulsions. In 2002 she was diagnosed with depression and OCD. Her obsessions were accompanied by compulsions. In 2004 occurred her first manic episode. Bipolar disease and OCD were stated. In 2016, the diagnosis was changed from Bipolar to borderline personality disorder. After 6 months without drugs, occurred a depression episode and her compulsions aggravated – fluoxetine was prescribed. After one week of treatment patient got delusional. Her diagnosis was changed again to Bipolar disease and obsessive – compulsive disorder. Currently the patient has low mood and drive. She has a lot of compulsions that accompany her all the time every day.

Conclusions: Discussion/Conclusions: In this patient's case it is reasonable to reconsider the legitimacy of the diagnosis. On her example I would like to set a guide to differential diagnosis. For borderline enforces low self-esteem of the patient. Patient calls herself impulsive and easily triggered by closest relatives. She had low reaction to antidepressants and lithium. Against borderline: lack of intense, unstable relationships, no fear of abandonment, clear image of herself, changes of moods were long lasting For bipolar: genetic burden, change of moods goes from depression to elation, not from euthymia to anger. Manic episodes induced by drug treatment: patient's manic episodes seem to be connected to fluoxetine intake. However patient had hypomanic episodes before starting pharmacological treatment. OCD needs to be differentiated with obsessive- compulsive personality disorder. Y-BOCS will come in handy estimating how severe the symptoms are. Obsessions and compulsions decrease outside depression periods, especially during manic episode. It may lead to diagnosing personality disorder. However, the symptoms have occurred every day, for many years now. Additionally, for OCD stands the patient's inability to oppose them. It tires the patient, lowers her mood and self-esteem constantly, and also interferes with her functioning. In case of this patient I would recommend diagnosing comorbidity of Bipolar type 1 and Obsessive-compulsive disorder.

Title: 71-year old woman with iatrogenic methadone addiction, falls and urine incontinence - diagnostic difficulties.

Authors: Justyna Janowska[1], Wojciech Stemplowski[2], Aneta Popiel[3], Remigiusz Sokołowski[2], Natalia Sokołowska[2].

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3. Wrocław Medical University, Poland.

Introduction: Dementia is a general term for a brain changes that cause a long term and progressive decline in a mental ability affecting the person's functioning and more advanced than one expected due to ageing. The cause of most dementia is irreversible and pharmacological treatment benefits are rather minor. There are only a few types of this disorder which can be curable and one of them is normal pressure hydrocephalus (NPH) also known as Hakim's syndrome. NPH occurs usually in the sixth and seventh decades of life and is characterized by the classical triad of the symptoms known as Adams or Hakim's triad: dementia or cognitive disorders, gait disturbance and urinary incontinence. Nonetheless the diagnosis is considered as difficult because none of the combinations of the cardinal findings mentioned above is pathognomonic and may occur among elderly. There are two types of NPH: idiopathic - about 60% of cases and secondary as an effect of central nervous system disorders. Imaging of a brain reveals ventriculomegaly due to temporary increased ventricular pressure caused by abnormal accumulation of cerebrospinal fluid (CSF).

Case report: 71-year-old female patient was admitted to the mental hospital, three months after the last psychiatric hospitalization, due to significant worsening of neurological symptoms, severe decline in cognitive function, aggression and newly occurred urine incontinence. During the first stay the main symptoms as dizziness, gait disturbance and falls, which she presented for about one year were regarded as related with Parkinson disease symptoms, which she was diagnosed with by a neurologist, iatrogenic methadone addiction and benzodiazepine abuse. In addition, the woman had a femur fracture due to fall in the ward. We gradually stopped giving mentioned above drugs to the patient and she was discharged with improvement and fracture healing. During the next hospitalization for the sake of lower MoCA test score and urine incontinence we conducted cranial CT which revealed dilated ventricles. With suspicion of NPH the patient was transferred to the neurosurgical department where the diagnose was confirmed by additional test and ventriculoperitoneal shunt was performed. Post-operative recovery proceeded smoothly, with gradual improvements in mental ability and motor functions.

Conclusions: NPH is potentially reversible cause of dementia but remains difficult to diagnose because deficits are often misinterpreted as a consequence of the old age. In case of decline of mental functions accompanied by worsening of neurological symptoms highlighting urine incontinence, diagnosis requires neuroimaging and radioisotope studies. If brain imaging reveals ventricular dilatation ventriculoperitoneal shunt should be considered. Noticeable improvement after CSF drainage is the confirmation of NPH diagnosis. As shown above correct diagnose and prompt treatment may result in significant reduction of symptoms and life quality improvement.

Title: Measles as diagnostic problem – case report

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Introduction: For the past 20 years, WHO has presented another dates to finish the worldwide measles eradication program, which aims to reduce incidence to less than 0.1 case per 100,000. The last missed deadline was the year 2015. Despite the activities undertaken since 2010, there is a clear increase in the incidence of illness, especially in European countries. The highest number of cases (2013-2014) was recorded in Germany (2580), France (368) and Austria (315). Also in Poland the incidence of measles exceeds the target rate. Between 2011 and 2016, 38, 60, 84, 110, 48 and 132 cases were reported, and incidence was 0.1, 0.16, 0.22, 0.29, 0.12, 0.34, respectively.

Case report: . A 7-month-old infant was admitted to the clinic with fever, runny nose, cough and rash. Patient was without any previous significant illness history, vaccinated according to polish vaccination calendar. Two weeks before admission the child was in Germany (Munich). Symptoms of the disease appeared on day 10 after return to Poland (runny nose, cough, fever up to 39°C, conjunctivitis and rash present on head and trunk). Boy was admitted to the Department of Pediatrics and Infectious Diseases on the fourth day of the symptoms. At the admission he still had fever. Red maculopapular rash present on the head, trunk, single lesions on the lower limbs were noticed. On the mucous membranes of the mouth were present changes, that may correspond to Koplik's spot. The mother of the child was vaccinated in the past, she did not get measles. Virological and serological tests have been performed to confirm measles infection. In the following days, the measles-specific evolution of rash was observed. There were no early complications or secondary illnesses in the child's environment.

Conclusions: Polish doctors should be prepared to diagnose measles despite the good epidemiological situation. There is an increased risk of transmitting measles from countries where the infection is endemic or epidemic. Non immunized infants are at risk of developing measles because of the poor quality of the mother's immunity (usually vaccinated). The benign course of the disease and lack of complications could be due to infection controlled by mother antibodies.

Title: Cerebral arteriovenous malformations not only in MRI: a pathology visible in noncontrast CT

Authors: Mateusz Wilczek

Affiliation: Poznan University of Medical Sciences, Poland

Introduction: Arteriovenous malformations (AVMs) have an incidence of ≈1 per 100 000, their prevalence in adults is ≈18 per 100 000. Due to imaging techniques being more commonly used, more and more AVMs are detected before rupture. The golden standard of AVM diagnostics is arteriography. MRI is very sensitive as well, noncontrast CT, however, much less. Depending on the risk of rupture, AVMs are just observed, undergo direct surgical treatment, radiosurgery, or endovascular embolization. AVMs cause 4% of all primary intracerebral haemorrhages overall, but in young adults they are responsible for as much as one third of these incidents.

Case report: A 25 y.o. man with headache and somnolence underwent a routine noncontrast head CT. The cause of the patient's symptoms was identified as an intracerebral haematoma in the left thalamus, with blood present in the ventricular system. CT also revealed the origin of the haemorrhage: a vascular malformation in the adjacent area, probably an AVM. A few hours later in MRI angiography a progression of the haemorrhage was visible: since the CT scan the ventricular system has been enlarged by the extravasated blood. The assumption based on the CT was confirmed – the cause of the haemorrhage was a large AVM, comprised of vessels arising from the left internal carotid artery and forming a large vein emptying into the confluence of sinuses. An endovascular embolization of the malformation was performed.

Conclusions: Noncontrast CT is not a method dedicated to diagnose intracranial vascular abnormalities. However, it is usually the first imaging technique used in patients with symptoms suggesting an intracranial haemorrhage. In some cases a large enough vascular pathology, being the cause of a haemorrhage, can be identified in this first imaging test, and therefore improve further diagnostic and therapeutic process.

Title: A patient with a family history of rectal cancer

Authors: Jan Ziółkowski, Łukasz Szukalski, Michał Bejger

Affiliation: Palliative Medicine Unit - Antoni Jurasz University Hospital No. 1 in Bydgoszcz, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz

Introduction: In Poland, the number of patients with rectal cancer is still rising. It usually affects males aged 50-65 years, who often smoke cigarettes and do not eat properly (their diet has too high fat content, lack of vegetables, and vitamin A, C or E deficiency). Usually, rectal cancer does not grow rapidly, so it does not cause specific symptoms early, that can alert patients.

Case report: The authors present the case of a 62-years-old patient, who was treated at the Palliative Medicine Unit of A. Jurasz University Hospital No.1 in Bydgoszcz just 2 months after the diagnosis process started. He checked himself into the emergency room with chronic constipation and severe perianal pain, which was caused by massive tumour invasion in gluteal muscles. This tumour growth also caused anal fistula an perianal abscess. The patient underwent colostomy, then followed by drainage of perianal abscess. Despite having relatives with rectal cancer (both parents, siblings and maternal cousins), the patient had not tried to seek medical advice. The disease was so advanced, that after surgical treatment and oncological consultation he was transferred to the Palliative Care Unit for symptomatic treatment (a palliative chemotherapy course at Professor F. Łukaszczyk Oncology Centre among other things) and comprehensive care.

Conclusions: : The patient sought medical advice extremely late, despite the fact that a number of his family members suffered from rectal cancer. Such conduct might have been a defensive reaction to the fear caused by the family history, which resulted in denying the ongoing disease. It is, therefore, important to help patients face the risk of falling ill and encourage an active attitude in coping with the disease.

Title: A patient with interstitial lung disease in the course of polymyositis

Authors: Łukasz Szukalski, Jan Ziółkowski, Michał Bejger

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Introduction: PM or polymyositis is a systemic disease of the connective tissue classified as an idiopathic inflammatory myopathy whose etiology is still unknown. PM's main feature is its chronic inflammatory process going on in the muscles causing their weakness and gradual atrophy. Lesions in internal organs are often observed in this disease, with interstitial lung disease being particularly common.

Case report: The authors present the case of a 54-year-old woman patient with a full spectrum of polymyositis symptoms. The patient fulfils all the diagnostic criteria: symmetrical and increasing weakness of the shoulder and hip girdle muscles; a histopathologic myocutaneous specimen examination showed inflammatory lymphocytic and plasma cell infiltrations in the interstitial tissue, causing the destruction of muscle fibres; elevated activity of muscle enzymes in the serum (creatine kinase, aspartate aminotransferase) and features of primary muscle damage in electromyography. Apart from that, immunological examinations show antisynthetase antibodies presence in the serum, which is characteristic of PM (anti-Jo-1). Interstitial ground-glass lesions visible on HRCT scans draw particular attention. In view of the fact that the patient displayed Raynaud syndrome, capillaroscopy was performed, which confirmed the presence of advanced lesions in the capillaries, such as areas of avascularisation, neoangiogenesis, dilated and dendritic capillaries.

Conclusions: : Polymyositis is a systemic connective tissue disease so in the diagnostic process it is necessary to consider the possibility of organ lesions, especially in the respiratory system. The most common manifestation of PM is interstitial lung disease. Its occurrence may substantially deteriorate the prognosis and requires treatment intensification.

Title: Nerve and function restore in case of excessive thermal burn

Authors: Anna Chałupka, Paulina Bukowska, Zuzanna Czypicka, Marta Wieloch

Affiliation: Upper Limb Physiotherapy Students Scientific Group Poznan University of Medical Sciences

Introduction: High developed scar tissues after thermal burns are great problem not only for medical stuff, but most of all for patients. Skin transfers are one of the methods of treatment but without proper rehabilitation protocol patients would not be able to accomplish everyday living activities. Full range of motion, muscle strength and sensory recovery are most import_ant issues which will give the patients the ability to be active during daily and work activities. Manual techniques of scar tissue are a good solutions for burned patients. The therapy leads to soft tissue dynamic mobilization, activation of blood circulation and sensory recovery and what is also very import_ant it leads to visual improvement which positively influence patients mental condition and daily comfort.

Case report: 30 years old patient after thermal burns (stage II and III) of upper, lower limbs and trunk underwent 4 month complex physical therapy. The therapy consists of soft tissue therapy, core stability and proprioceptive exercises, manual exercises, manual therapy and sensory reeducation. The superficial sensation was measured by two point discrimination test (2PD) and Semmes-Weinstein Test. Patient function and condition was assessed by range of motion measurement and functional tests. After 4 months therapy the range of motion improvement was observed – for example horizontal abduction was increased from 110 degrees to 160 degrees. The improvement of superficial sensation was also significantly improved which leads to patients quality of life rise. In two point discrimination test we observed the sensory improvement in all upper limb nerves. The similar improvement was observed in monofilaments test where we obtain the improvement of pressure sensation in upper limbs and hands. The patients functional condition was significantly improved for example in walk test from 178 steps to 238 steps provided in 2 min.

Conclusions: Such great improvement achieved in such short time is great therapeutic effect for therapist but what is the most import_ant for patient. A holistic approach to the patient gives more chances to recovery. Physiotherapy is an excellent method of treating patients after extensive thermal burns, and can bring great therapeutic effects both visual and functional. Manual work, scar tissue therapy and exercises has provided nerve and functional restore.

Title: Pediatric melanoma- two case study

Authors: Daria Kania, Paula Trojan

Affiliation: Students' Scientific Society at Department of Pediatric Hematology and Oncology, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz. Tutors: M. Richert-Przygońska MD, PhD, K. Czyżewski MD, PhD

Introduction: Melanoma malignum is a rare solid tumor in pediatric population. Although the incidence of melanoma has been increasing recently it is still challenging in terms of diagnosis, clinical evaluation, staging and adjusting the proper treatment. The clinical manifestation and histopathological features of pediatric melanomas differ from those seen in adults

Case report: Case 1: 4-years old patient with skin lesion on the right arm. Because of the progressive growth and ulceration the resection was performed. The histopathological examination confirmed a Spitz-like melanoma. With radiological imaging (CT, MRI and PET CT) axillar lymph node metastasis was found. Reoperation with margins extension and lymphadenectomy were done. Due to the final staging: Clark V, AJCC III, BRAF mutation negative, the interferon therapy was administered. Two years after finishing the treatment, no recurrence is observed. Case 2: 16-years old patient with the skin lesion on right ear lobe. Histopathology and imaging confirmed nodular malignant melanoma without lymph node invasion. Total resection and reconstruction of the ear was performed simultaneously. Staging: Clark level-III, AJCC IIA. No further treatment was needed. Two years after finishing the surgical treatment remission is still documented.

Conclusions: The surgical resection of the lesion is a primary treatment of melanoma malignum. Further treatment with chemotherapy, immunotherapy or radiation therapy should be individualized and based on staging and biological features of the tumor to increase the chance of recovery. Treatment for each patient must be individualized to increase the chance of recovery. Further patient observation is always necessary because the recurrences may occur.

Title: In the age of utilizing modern technology does the physical examination still play an essential role in diagnostics?

Authors: Dominika Tomczak, Mariusz Racinowski, Dominika Gapska, Michał Kołuda, Maciej Kocon

Tutor: dr n.med. Maria Bogdan

Affiliation: Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz

Introduction: Infective Endocarditis (IE) is a relatively rare infectious disease with serious prognosis and consistently changing clinical picture which creates significant diagnostic difficulties. It usually includes aortic and mitral valves. Despite the continued progress in treatment methods, the death rate is still about 25%. It affects twice as many men as it does women.

Case report: Patient, 30 years old, undiagnosed cardiologically thus far. Admitted to hospital February 2017 with hemoptysis and exacerbation of the functionality of transplanted in 2011 kidney. Patient has been treated for the chronic kidney disease and hypertension since babyhood. He had had two kidney transplants. He has been repeatedly hospitalized for the chronic transplant rejection and secondary anemia. Three weeks prior to the recent hospitalization the blood culture has been commissioned due to high temperature.Identified Sepsis and treated with antibiotics for two weeks. During the fourth day in hospital the cardiology examination resulted in discovery of a loud systolic-diastolic murmur in the aortic region. The blood pressure (BP) was 142/40 mmHg. There were clinical symptoms of the Chronic Heart Failure in a II/III classes of The New York Heart Association Functional Classification. The clinical picture showed significant dysfunction of the aortic valve most likely because of IE. Moreover the patient had tumescence in the right upper limb with the expanded fistula drainage vessel with an extensive thrombus. Echocardiography and magnetic resonance imaging showed vegetation on the right-coronary cusp and the non-coronary cusp and the broad reverse blood flow to the papillary muscles. Additional tests confirmed the initial diagnose which was based mainly on the interview, physical examination and measurement of BP. This time the result of the blood culture was negative, although it were done while the patient was on the antibiotics due to pneumonia diagnosed at the admittance. The patient was examined by a cardiac surgeon, initially qualified for the repair surgery of the aortic valve. During the 50th day in hospital the patient's condition drastically declined, the Pulmonary Oedema developed with an oxygen saturation of 83% that required an immediate hemodialysis. The patient was immediately transported to the Cardiac Surgery Clinic where he was operated on, the surgery was a success. At this moment the conservative treatment is being continued for the IE.

Conclusions: The portrayed characteristics shows the fundamental significance of all - accurate interview and physical examination, critical symptom analysis and the appropriate rating of the performed additional tests in the diagnostics of the IE. In particular it concerns people with no previously documented heart failures, not infrequently treated for another severe diseases for years.

Title: Palmoplantar keratoderma -problems encountered in the processes of treatment and diagnosis.

Authors: Joanna Ziółkowska,Olga Zjadewicz,Kornelia Pietrauszka,Mateusz Kowal
Affiliation: Medical University of Silesia in Katowice

Introduction: Palmoplantar keratodermas(PPK) are a diversified group of genodermatoses, characterized by chronic hyperkeratosis of the skin of palms and soles. The following forms of PPK can be distinguish: hereditary, acquired, isolated and connected with other skin or systemic disorders. Hereditary PPK is considered when an early onset and positive family history is present. Clinical spectrum of PPK ranges from pure PPK – restricted to skin abnormalities to forms accompanied by various symptoms like dental anomalies, problems with vision or cancer. Acquired PPK can be related to e.g. cancer, keratoderma climacterium, pregnancy, psoriasis.

Case report: 18-year-old, female patient, admitted to Department of Dermatology Medical University of Silesia in Katowice. The main reason for this hospitalization was to establish the right diagnosis and subsequent treatment regime. Investigation tests (such as chest-X-ray, abdominal ultrasound and gastroscopy) have been ordered. PPK manifested itself in the early months of her life. Her palms and soles are covered by diffuse, hyperkeratotic changes on erythematous background with exfoliation. She also suffers from hair loss without any changes to her scalp (since the age of fourteen).The initial treatment was based on: topical keratolytics followed by UVA phototherapy. Subsequently patient was ordered acitretin(25mg/d).Slow regression with barely visible effects were obtained.

Conclusions: Determining the form of the PPK(acquired/hereditary) is essential to establish the right diagnosis and to decide on further treatment. In hereditary PPK one must check if there are any organ changes. PPK has a serious influence on patient's life and consultation with a psychologist is often needed. PPK treatment still remains a serious therapeutic problem. New approach must be implemented to achieve full recovery and permanent improvement in patient's life. We may have particularly high hopes for molecular treatment, including siRNA using. Cooperation between dermatologists and geneticists is key to establishing effective treatment in the future.

Title: Hemophagocytic lymphohistiocytosis in 15-years old boy.

Authors: Maciej Spałek, Wiktor Schmidt

Affiliation: Department of Pediatric Rheumatology, Poznan University of Medical Sciences

Introduction: Hemophagocytic lymphohistiocytosis (HLH) is an aggresive, life-threatening syndrome of excessive immune activation. It is very difficult to diagnose the HLH, but more difficult is to choose the best treatment and decide how aggressive treatment should it be. The purpose of this case report is to describe the process of diagnosing HLH.

Case report: 15-years old boy presented to the hospital with 10 days fevers of up to 39,6 degrees Celsius, weakness, sore throat, musculoskeletal complaints. In primary care he received antibiotics due to high CRP and ESR level. The fever persisted and the systolic murmur occurred and the patient was admitted to hospital with suspicion of bacteriemia and carditis. Concentration of inflammatory variables were high, the blood specimen was taken and the patient received intravenous antibiotic without response. Bone marrow examination excluded the cancer process and suggested the reactive process. Due to deterioration with hepatosplenomegaly, generalised lymphadenoparthy, intermitted skin rash he was admitted to the pediatric reumatology ward with suspicion of Still disease. . Together with laboratory and clinically findings the patient meet five of eight criteria of HLH, thereby the diagnosis was made. The treatment of protocol 2004 for HLH was used. Within one day following the first dose of solu-medrol his fevers, cytopenias, coagulopathy, liver function improved significantly. During 3 month follow up period the patient remainder complete remission.

Conclusions: One of the problems with the diagnostic criteria for HLH is the need for tissue confirmation of hemophagocytosis. It is important to realize that failure to demonstrate hemophagocytosis does not negate the diagnosis of HLH. It is desirable to start therapy as fast as the suspicion of HLH is pulled.

Title: Immersion pulmonary oedema associated with stress cardiomiopathy in 49-years old male.

Authors: Maciej Spałek[1], Magdalena Błońska[2]

Affiliation: 1) Department of Rheumatology and Osteoporosis, Poznan University of Medical Sciences, 2) Department of Endocrynology, Poznan University of Medical Sciences

Introduction: Immersion pulmonary oedema occurs when fluids from the blood leak incorrectly from the small vessels of the lung into the airspaces. This disease usually occurs during exertion in conditions of water immersion, such as diving or swimming.

Case report: We would like to present a case of a 49-years-old male diver with presumed pulmonary oedema associated with diving. At a depth of 15 msw he complained of dyspnoea and after receiving oxygen he was brought to the emergency department. Decreased saturation, auscultatory evidence of pulmonary oedema and characteristic plain chest X-ray abnormalities were found. Other investigations indicated acute coronary syndrome – the high level of troponins, abnormal electrocardiography and heart hypokinesis visible in echocardiography. The patient underwent cardiac catheterization that revealed no changes in coronary arteries. Diuretic therapy was implemented with a significant reduction of symptoms. During the treatment the patient developed intermittent left bundle branch block.

Conclusions: The scuba divers‘ pulmonary oedema may mimic the acute coronary syndrome, thus careful differential diagnosis of cardiac symptoms in divers is obligatory. Due to increasing popularity of triathlon we should be aware of possbility of occurence of pulmonary oedema in triathlonists.

Title: An interesting case of bilateral kidney infarction and spleen rapture in 37-year-old man.

Authors: Aleksandra Rubin, Małgorzata Milnerowicz, Joanna Adamowicz

Affiliation: Department of General Radiology, Interventional Radiology and Neuroradiology, Wroclaw Medical University

Introduction: Polyarteritis nodosa (PAN) is a systemic necrotizing vasculitis that predominantly affects medium-sized and small arteries. Unlike some other vasculitides, PAN is not associated with antineutrophil cytoplasmic antibodies (ANCA). Most cases of PAN are idiopathic but there are also so-called secondary PAN co-occuring with e.g. HBV or HCV infection. Among others the kidney and gastrointestinal vessels are commonly involved with the resulting ischemia or infarction of tissue, causes varied clinical manifestations. Angiography and biopsy are crucial for confirming diagnosis.

Case report: We would like to introduce an interesting case of 37-years-old man, who was admitted to the Emergency Department because of a few-days lasting abdominal pain.The angio-CT of abdomen were performed and the thickening of vessel walls and aneurysmal dilations of branches of the renal arteries with coexistent bilateral renal infarction were shown and the PAN was suspected. Further blood examination showed elevated CRP level and blood and erythrocytes in urine sample. Due to elevated D-dimer level and suspicious of renal vein thrombosis based on USG examination, the unfractionated heparin were administered. To eliminate potential viral and autoimmune cause of the disease the proper blood tests were done, all of which were negative. During hospitalization the patient's medical condition deteriorated rapidly. The control angio-CT of abdomen showed dissection of splenic artery and extensive spleen infarction with suspected dissection of common hepatic artery. In the meantime, the spleen rapture took place and the patient were immediately transfer to Surgery Department in order to perform splenectomy. Because of the severity of the disease the proper treatment and immunotherapy were administered.

Conclusions: PAN is associated with a poor prognosis, but the outcome has improved in patients receiving treatment. This shows that immediate and proper diagnosis with implementation of recommended immunosuppressive treatment, even before histopathological diagnosis confirmation, is crucial in terms of patient life expectancy and prevention of organs complications.

Title: Triple spontaneus cervical artery dissection in a young patient having transistent ischemic attack (TIA). Case report.

Authors: Małgorzata Milnerowicz, Aleksandra Rubin, Joanna Adamowicz

Affiliation: Department of General Radiology, Interventional Radiology and Neuroradiology, Wroclaw Medical University

Introduction: P Cervical artery dissection (CAD) is a major cause of ischemic stroke in young adults and can be either spontaneous or traumatic. A dissection is deemed spontaneus if no evidence of preceding trauma is found. Frequently, dissection involves multiple neck arteries, accounting for one third of the total CAD cases.

Case report: A 32-year-old woman presented to the emergency departement with 6 h history of mild right-sided hemiparesis and motor aphasia which has occured suddenly during jogging. The symptoms were preceded by the left occipital headache with transistent aura in the form of hypersensitivity to light and experience of light flashes in the left eye. The patient has also reported the left-sided pulsating tinnitus located in the back of the neck presistent for several days before the hospitalisation.

Computed tomography (CT) of the head was then performed and showed no stoke, no hemorrhage and no bone fracture. Hovewer magnetic resonance imaging (MRI) revealed the hiperintensities of the bilateral internal carotid arteries (ICA) and left vertebral artery (VA) and the suspicion of the multiple dissection has been raised. It was confirmed in angio-CT and Doppler ultrasoud imaging (DUS) which showed bilateral 80% stenosis of ICA and 50% stenosis of the left VA with increased flow rate by arteries of basilar circulatory system and decreased flow rate by arteries of anterior circulatory system corresponding to post-stenotic flow by dissected arteries with collateral circulation by posterior communicating arteries supplied mostly by the intact right VA.

One the basis of genetic research and blood testing thrombophilic diseases Marfan syndrome and thrombophilic diseases were excluded. Due to no progression of neurologic symptoms neither new ischemic events the patient was disqualified from endovascular or surgical menagement and antithrombotic therapy with low molecular weight heparin and aspirin was applied. However, because of a delayed allergic reaction the treatment was changed to a double antiplatelet therapy and the patient was discharged. 3 months later in control hospitalisation a partial resolution of the stenosis of the right ICA and left VA was observed. USD showed also normalization of the flow rates in the anterior and posterior circulatory system except the left anterior cerebral artery which remained decreased. No neurological deficits were observed. Atithrombotic treatment was reduced to single antiplatelet therapy with aspirin for a lifetime.

Conclusions: Cervical arterial dissection should be suspected when young patients complain of intense unilateral posterior cervical or occipital pain with transistent or pesistent neurological deficits.

In multiple carotid artery dissection antithrombotic therapy is the treatment of the first choice and provides to be effective with the favourable outcome. Endovascular menagement is usually reserved for progression of neurologic syndrome of failure of medical therapy.

Title: Hypernatremia as a complication of intracranial tumour surgery

Authors: Marcin Łata, Maria Łata, Dominika Gil

Affiliation: Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Hypernatremia is a common electrolyte problem that is defined as a rise in serum sodium concentration to a value exceeding 145 mmol/L. It is strictly defined as a hyperosmolar condition caused by a decrease in total body water (TBW) relative to electrolyte content. Early symptoms may include a strong feeling of thirst, weakness, nausea, and loss of appetite. Severe symptoms include confusion, muscle twitching, and bleeding in or around the brain.

Case report: The aim of this study is to present a case of 21-year old patient after intracranial tumour surgery, who was admitted to the internal diseases department due to hypernatremia. On the basis of the whole clinical status the patient was diagnosed with diabetes insipidus and disturbance of sensation of thirst which may result in hypernatremia. Physical examinations were conducted as well as some additional tests which allowed the diagnosis of combined pituitary hormone deficiency. In this situation the disorders of sodium level were rebalanced and hormonal substitution in terms of antidiuretic hormone , adrenocortical hormone, thyroid hormone and testosterone was started.

Conclusions:: Hypernatremia is an electrolyte imbalance with differential ethiology. Rebalancing of this disfunction needs thouroughness in estimating deficiency of water and quickness of correction. In cases of too quick adjustment of hypernatremia it is very important to point out that there is a possibility of occurance of a phenomenon called hypotonic overhydration .While equalizing hypernatremia it is crucial to carry out diagnostics. Causes of this disfunction maybe complex and may require an application of various therapeutic methods including surgical treatment.

Title: Schmidt's syndrome as an example of an autoimmune polyendocrine syndrome

Authors: Maria Łata, Marcin Łata, Dominika Gil

Affiliation: Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Schmidt's syndrome is a rare (1.4 - 4.5/100,000), autoimmune endocrine disease in which the patient suffers from primary Addison's disease and primary hypothyroidism . Currently, Schmidt's syndrome has been classified as a part of the inheritable Polyglandular Autoimmune Syndromes (PAS). They are characterized by immune dysfunction affecting two or more endocrine glands as well as certain non-endocrine organs. The PAS syndromes are classified as two main types: PAS Type I and PAS Type II. PAS Type I consists of Addison's disease, hyperparathyroidism and chronic mucocutaneous candidiasis. PAS Type II consists of Addison's disease, autoimmune thyroid disease and Type I diabetes, Grave's disease, autoimmune thyroiditis, and can be associated with other autoimmune disorders like myasthenia gravis, primary hypogonadism, vitiligo, alopecia and serositis .

Case report: The aim of this study is to present the case of Schmidt's syndrome. A 31 year-old female with Hashimoto's disease was admitted with weakness, apathy, nausea , periodical vomiting, weight loss of 10 kg, diarrhoea and recurrent infection. She also had complaints of decreased ability to perform normal daily living . There were no complaints of fever, seizures and focal neurological deficit. Also there was no history of hair loss, joint pain and other features of autoimmune disease. Physical examination revealed BMI of 17.5 kg/mt2 , pulse rate of 75/min, and blood pressure of 90/60 mmHg. Rest of the examination was normal except for brown discolouration on elbows, knees, dorsal part of hands, under eyes, flexion lines inside of a palm and neck and also scratches on the skin .Serum electrolytes such as Na+ and K+ were as stated: Na+ 129mmol/L and K+ 4.7 mmol/L . DHEA-S and cortizol were below limit while ACTH was as high as 1617 pg/ml which was suggestive of primary adrenal insufficiency. Based on the history and laboratory findings, the patient was diagnosed to have Addison's disease. Diagnosis of Polyendocrine syndrome Type II (Schmidt's syndrome) had been made - patient had both Hashimoto's and Addison's disease . She was started on hydrocortisone i.v. and 0.9% NaCl. She improved symptomatically with the treatment over three days and at the time of her discharge the patient's complaints of nausea and weakness had improved. During her follow-up after one month she was completely normal and is doing really well on her regular follow-ups.

Conclusions:: Though Schimdt's syndrome is a rare disease, but can be a life threatening condition if not diagnosed and treated early. Not typical presentations of such condition are possible and it is recommended that every patient with idiopathic endocrine deficiency should be screened for insufficiencies of other endocrine organs. A high index of suspicion is needed for an early diagnosis and appropriate hormonal replacement therapy for Schmidt's syndrome.

Title: Be broken-hearted

Authors: Marta Różańska, Natalia Sala, Kajetan Hadzik, Grażyna Rusak

Affiliation: Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz

Introduction: Left ventricular pseudoaneurysms are false aneurysms that result from contained myocardial rupture. Free wall rupture of the left ventricle is a rare but life-threatening complication of acute myocardial infarction. Very rarely such rupture may be contained by the adhering pericardium creating a pseudoaneurysm. It develops only in 3% of patients with heart attack, mostly when the vast majority of the left ventricle is ischemic and the whole thickness of the wall myocardium is affected. Nevertheless, its mortality rate reaches 25%. Asymptomatic patient are in the minority - about 10% of cases.

Case report: Case study of 68 years old male patient diagnosed with massive left ventricle pseudoaneurysm, which undergone rupture due to coexistence of septicemia and bacterious pericarditis. In this case, affected area was relatively small and included area supplied by second branch of diagonal artery, what itself didn't leads to this serious condition. However, recurring septicemia coexisting with bacterial pericarditis and pericardial tamponade, had weakened the wall of left ventricle and led to its rupture and formation of spectacular pseudoaneurysm in the size of 112x85mm. Despite of the size of this pseudoaneurysm, it was almost asymptomatic. Moreover, it was diagnosed by coincidence during hospitalisation primarily due to fever and septicemia. For the most accurate visualization and evaluation a MR scan was performed. Applied treatment consisted of excision of the pseudoaneurysm and ventriculoplasty. As it was mentioned before, mortality is high, but in this case the outcome was good.

Conclusions: : Special care must be taken over patients who have experienced myocardial infarction. Active searching for early complications must be considered. In this group of patients, echocardiography is essential. It shows not only abnormal contractility of the heart wall segments, but also other complications, like pseudoaneurysm with characteristic neck narrower than the diameter. Furthermore, magnetic resonance imaging has a great value in diagnosing and planning the treatment of ventricular pseudoaneurysms

Paediatrics & Neonatology Session

Jury:

dr n. med. Małgorzata Filanowicz

dr n. med. Ewa Barczykowska

Moderator:

Katarzyna Urtnowska

1st prize in Paediatrics & Neonatology

Title: Mean Platelet indices in pediatric sepsis.

Authors: Agnieszka Jank[1], Monika Sypniewska[1], Natalia Ławrecka[1], Marcin Kawałkiewicz[1], Monika Richert-Przygońska[2]

Affiliation: [1] Faculty of Medicine, Nicolaus Copernicus University Ludwik Rydygier Collegium Medicum in Bydgoszcz

[2] Department of Paediatrics, Haematology and Oncology, A. Jurasz University Hospital No. 1 in Bydgoszcz

Introduction: The increase in the mean platelet volume (MPV) has been discussed as a novel prognostic indicator in critically ill patients.

Aim: To determine whether MPV, MPV/platelet count ratio or other platelet indices can be used as diagnostic markers for sepsis in children.

Materials and methods: The retrospective data analysis of children diagnosed with sepsis was performed. Platelet indices were analyzed in the first blood sample after meeting the sepsis clinical and/or laboratory criteria.

Results: 53 patients diagnosed with sepsis were studied comparatively in 2 subsequent groups: culture proven (n=40) and probable sepsis (n=13). Among both groups 7 patients died (13,2%). We found a statistically significant difference of initial MPV in between groups (p=0,0371). Mean platelet count (PLT) on the day of diagnosis was lower in the group with culture proven sepsis, but no significant difference was found (p>0,05). The values of plateletcrit (PCT), platelet distribution width (PDW) and MPV/PLT ratio did not differ significantly in between groups. Moreover there was no significant difference of any of the platelet indices in between non-survivor group and survivor group (p>0,05).

Conclusions: Initial values of MPV were higher in the group of culture proven sepsis. None of the platelet indices were found to be significantly different in between survivors and non-survivors. Studied parameters might not be used as a prognostic markers of mortality in pediatric patients with sepsis. However platelet indices might be considered as predictors or severity of illness.

2nd prize in Paediatrics & Neonatology

Title: Are the childhood cancer survivors at risk of vitamin D deficiency?

Authors: Milena Osińska, Anna Pazik

Affiliation: Student's Scientific Group at Department of Pediatric Oncology and Haematology, Medical University of Bialystok, Bialystok, Poland.

Introduction: Recent studies indicate that childhood cancer survivors (CCS) have increased risk for vitamin D deficiency, which is associated with the prevalence of immune dysfunction, diabetes and malignancy itself. Assessment and adequate replacement of vitamin D status is important in this group of children and might improve the quality of life of oncological patients. However, data on 25-hydroxyvitamin D (25(OH)D) status among CCS are limited.

Aim: The aim of the study was to evaluate the serum level of 25(OH)D in childhood cancer survivors depending on: age, gender, diagnosis, TSH and cholesterol level.

Materials and methods: The study group included 124 CCS (male: 71, female: 53), between the age 3-24 (mean age at the study- 13.37± 4.26). Patients were treated due to: acute lymphoblastic leukemia (n= 66; 53.23%), lymphoma (n= 13; 10.48%) and solid tumors (n= 45; 36.29%). Mean time from diagnosis and mean age at diagnosis were 7.58± 3.96 and 5.75± 4.25 years, respectively. The results were compared with control group consisted of 60 healthy children (35 boys, 25 girls). The 25(OH)D level was assessed using immunochemical method. The Mann-Whitney U test and t-Student test were used. The statistical significance was defined as $p< 0.05$.

Results: We found statistically significant differences in serum level of 25(OH)D between study and control groups (mean: 16.64± 8.21 ng/ml vs. 20.84± 10.23 ng/ml, p= 0.013). Almost seventy percent of the patients (n= 84) had vitamin D level below the range norm [20-60 ng/ml]. The 25(OH)D status was similar in both sexes (male: 17.18± 8.62 vs. female: 15.91± 7.65 ng/ml, p= 0.398). No statistical differences between level of 25(OH)D in patients with ALL (16.19± 8.79 ng/ml), lymphoma (16.82± 7.34 ng/ml) and solid tumors (17.25± 7.69 ng/ml) were found (p= 0.801). Serum level of 25(OH)D in patients under 10 years old (mean: 19.44± 8.95 ng/ml) was statistically significant in comparison to patients between 10 and 15 years (mean: 15.23± 7.23 ng/ml; p= 0.026). There was no correlation in the level of vitamin D and TSH (r= -0.144) or cholesterol (r=-0.117).

Conclusions: We found high prevalence of 25(OH)D insufficiency in childhood cancer survivors. Half of the patients in the control group also had level below the range norm. Adequate supplementation of vitamin D seems to be important in CCS. Additional studies, especially on larger groups are needed.

3rd prize in Paediatrics & Neonatology

Title: The prevalence of TSH receptor antibodies in chilldren with autoimmune thyroid diseases.

Authors: Aleksandra Polak, Karolina Stożek, Artur Bossowski

Affiliation: Department of Paediatric Endocrinology, Diabetology with Cardiology Division, Medical University of Białystok, Poland.

Introduction: The most common causes of thyroid disorders in paediatrics are the autoimmune thyroid diseases (Graves' disease, GD and Hashimoto's thyroiditis, HT). Graves disease is found as a main reason of hyperthyroidism and Hashimoto as the most frequent type of thyroiditis among children. Both diseases are characterized by the presence of antithyroid autoantibodies.

Aim: The aim of the study was to investigate the prevalence of TSHR-Ab in Polish children with thyroid and non-thyroid autoimmune diseases. We also observed the relations between orbitopathy and level of TSI in GD and HT patients.

Materials and methods: The study was based on analysis 240 serum samples obtained from 205 paediatric patients with autoimmune diseases during years: 2006-2012. Analyzed groups demonstrated different autoimmune diseases: 32- Graves' disease, 69- Hashimoto's thyroiditis, 66- type 1 diabetes and 5- juvenile arthritis. Control group consisted of 33 healthy children. In all samples we measured TSH and TSI levels. TBI was assessed in every HT and JA specimen and in most cases of GD and some cases of T1D. Some patients were tested few times. TSHR-Abs were measured by bioassay. TSI was reported as percentage of specimen-to-reference ratio (cut-of 140 SRR%). Blocking activity was defined as percent inhibition of luciferase expression relative to induction with bovine TSH alone (40% inhibition).

Results: All control patients, children with JA and T1D without thyroid involvement were negative for TSI and TBI. Fourty-seven out of 53 (88,7%) children with GD had positive TSI while those with orbital involvment were positive for TSI in 95,8% (23/24 samples). Only one HT sample had positive TBI value in whole analysed group. Mean TSI levels in GO (416±134,71) were singnificantly higher in comparison to group without orbitopathy (319,86±156,55)

Conclusions: TSI is prevalent in children with GD and children with AITD and orbitopathy show high serum TSI levels

Title: The interdisciplinary challenge of sacrococcygeal teratoma: Prenatal MRI imaging vs. postnatal computed tomography.

Authors: Oliver Firszt, Szymon Florek

Affiliation: Student Research Group at the Chair and Department of Radiology in Zabrze, Medical University of Silesia in Katowice, Faculty of Medicine in Zabrze

Introduction: Of all congenital tumors, sacrococcygeal teratoma (SCT) is the most common with studies reporting an incidence of 1:35.000-40.000. However, some newer sources suggest that nowadays, since epidemiological data for true incidence is scarce, true incidence may be much higher. While the majority of these tumors are benign, perinatal mortality rates are high and range from 13% to 16% for prenatally diagnosed SCTs. These deaths are caused mostly by preterm delivery, cardiac failure or damage to the tumor resulting in hemorrhage. The multitude of possible perinatal complications require adequate imaging in order to prepare the medical staff for the delivery and management of newborns with SCTs.

Aim: Our aim was to compare the diagnostic value of fetal MRI and postnatal CT scans in the assessment of sacrococcygeal teratoma.

Materials and methods: Between 2009 and 2013, 5 cases of sacrococcygeal teratoma were diagnosed in MCD Voxel in the Autonomous Public Clinical Hospital no 1 in Zabrze: 2 male and 3 female. The pregnant women were referred for outpatient magnetic resonance after a diagnosis of sacrococcygeal teratoma was made during routine prenatal ultrasound screening. MR imaging was performed using a 1.5T General Electric HDx magnet using FSPGR T1fs, SSFSE T2 and 2D FIESTA sequences. CT scans were executed on a Toshiba Aquilion 16 CT platform. In some cases, contrast was administered intravenously. Layer thickness was 1,25mm; delayed phase was registered after 10 minutes.

Results: In 4 of the reviewed cases, type I sacrococcygeal teratoma was diagnosed with one instance of a type III tumor. In all 5 instances, cesarean section was performed pre-term because of the size and growth rate of the tumor. There was 1 perinatal death due to tumor rupture during the C-section, resulting in hypovolemic shock caused by profuse bleeding.

Conclusions: The management of sacrococcygeal teratomas requires strict cooperation between the obstetrician, radiologist, neonatologist and surgeons. As a complex, interdisciplinary problem, adequate prenatal and postnatal imaging is required to provide the physicians with necessary information for the management of these patients. Fetal MRI, thanks to its high soft tissue resolution allows for a precise assessment of the tumor's extent, contents and size. However, CT appears to be the superior modality for the assessment of the tumor's vessels which is of vital importance to the surgery team. Both imaging modalities should be considered as valuable assets in the ma nagement of SCTs.

Title: Does the treatment for childhood cancer affect on vitamin D status during intensive chemotherapy?

Authors: Milena Osińska

Affiliation: Student's Scientific Group at Department of Pediatric Oncology and Haematology, Medical University of Bialystok, Bialystok, Poland.

Introduction: Recent knowledge on vitamin D has shown that its active form not only regulates calcium and phosphate metabolism but also has significant antimitotic and cell differentiation effects. Due to its pleiotropic effects, vitamin D deficiency during anticancer therapy may adversely affect the function of many organs and increase the complications of chemotherapy. However, data on changes in 25-hydroxyvitamin D (25(OH)D) status in patients during anticancer treatment are limited.

Aim: The aim of the study was to evaluate changes in the serum level of 25(OH)D in children during anticancer treatment.

Materials and methods: The study group included 40 patients treated for childhood cancer (male: 24, female: 16), between the age 7/12-17 years (mean age at the study: 5.29 ± 3.94 years). Patients were treated due to: acute lymphoblastic leukemia (n= 28; 70%), lymphoma (n= 6; 15%) and solid tumors (n= 6; 15%). The serum level of vitamin D was assessed in two points: before anticancer therapy and during intensive treatment; mean time between measurements was 6,4 months. The 25(OH)D level was assessed using immunochemical method. The Wilcoxon test was used. The statistical significance was defined as $p< 0.05$.

Results: We found statistically significant differences in serum level of 25(OH)D in patients before and during anticancer treatment (mean: 22,38 ± 10,84 vs. 28,23 ± 12,64 ng/ml, $p=0.012$). There were statistically significant changes of 25(OH)D in patients treated for ALL ($p=0.032$) and in group of girls ($p=0.029$) between the two time points. Forty percent of the patients before therapy (n=16) and 25% of patients during intensive treatment (n=10) had vitamin D level below the range norm [20-60 ng/ml]. There were no correlations in the level of vitamin D and calcium ($r=0.094$) or phosphate levels ($r=0.022$).

Conclusions: We observed that vitamin D supplementation during intensive chemotherapy significantly increases its concentration. Owing to the high prevalence of vitamin D insufficiency in cancer patients and significant risks of its further decrease after anticancer therapy, it seems that determine the 25(OH)D level should become a standard procedure. Additional studies, especially on larger groups are needed.

Title: Assessment of knowledge about body postural defects among parents.

Authors: Karolina Klimkiewicz-Wszelaki, Anna Grochowska, Natalia Sokołowska, Remigiusz Sokołowski, Paulina Kasperska, Wojciech Stemplowski.

Affiliation: Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Postural defects became in recent decades significant problem, both medical and social. Many examinations show that faulty posture affect about 60-80 per cent of children. The rapid development of technology has led to limiting of physical activity which manifests itself by massive occurrence of faulty posture. Therefore it is extremely important to increase the parents knowledge and awareness of the prevention and correction of faulty posture as well as benefit from physical activity.

Aim: The aim of the present study was estimation parents knowledge about faulty posture and verification who knows more – parents who have children with correct posture or these who have children with postural defects as well as parents who encourage children to exercise or these who don't do this.

Materials and methods: A survey was conducted in a group of 60 parents. First group: 30 parents of children attending the The Postural Defect Clinic, second group: 30 parents of children attending School Complex No. 8 in Bydgoszcz. The original questionnaire was used for the study. Questionnaire to the estimation of parents knowledge consisted of 19 questions: metric questins and knowledge test. The results were analyzed statistically ($p<0,05$).

Results: Parents who enroll children for extra sports are more knowledgeable than parents who do not ($p<0,05$). Parents whose children have postural problems have no higher knowledge than parents whose children have a correct posture ($p>0,67$). Parents with higher education have more knowledge about posture defects.

Conclusions: Parents knowledge on the prevention and correction of faulty posture is sufficient (mean: 56 per cent correct answers). Nowadays, knowledge should be at a higher level by looking at the frequency of postural defects.

Title: Vaccination refusal - observation of the phenomenon occurring among parents of infants born at the Prof. W. Starzewski Memorial Health Center for Women and Children (CZKiD) in Zabrze during two years of its functioning

Authors: Adrianna Jagosz, Anna Talik, Ewelina Dorobisz, Justyna Czubilińska-Łada

Affiliation: School of Medicine with the Division of Dentistry in Zabrze, Students' Scientific Society at the Department of Neonatal Pathology, Medical University of Silesia, Katowice, Poland

Introduction: Vaccinations are safe and effective way to protect against infectious diseases. They are particularly important in the neonatal and infancy period when the immune system is not yet fully developed. The growing strength of the controversial trend for not-vaccinating children can not be omitted. In Poland more and more parents decide not to vaccinate.

Aim: The aim of this study was to extract the proportion of infants born in CZKiD during its two years of functioning, that is in the period from 2014 to 2016, unvaccinated becauce of parents convictions.

Materials and methods: Retrospective analysis of cases of newborns whose parents did not agree on vaccination recommended during the first 24 hours of life. The work was prepared on the basis of medical documentation.

Results: 59 (1.86%) of the babies born in the analyzed period have not been vaccinated. The vast majority of newborns were eutrophic (48) and came from on-time deliveries (57). General condition of all newborns was assessed on the basis of the Apgar score as good. There was no statistical differences between first and second year of the study. Attempts to discuss the matter with parents, who initially expressed their consent to the vaccination of their children, resulted in vaccination approval in some cases.

Conclusions: Our experiences show that parents who do not accept vaccinating, made their decision even before birth, and from the beginning of hospitalization were determined not to allow vaccination. There was no increased occurrence of refusal of vaccination during the study period.

Title: Comparison of patients with West syndrome and with infantile spasms without hypsarrhythmia.

Authors: Barbara Nowacka, Jakub Malkiewicz, Veronica Palazzo

Affiliation: SKN Department of Pediatrics and Neurology of Developmental Age - Inborn errors of metabolism, Medical University of Silesia, Katowice, Poland

Introduction: West Delphi consensus distinguishes West syndrome (infantile spasms in clusters with hypsarrhythmia) and infantile spasms without hypsarrhythmia. Epileptic spasms usually occur before second year of life, but cases with later onset are noted. ACTH therapy is one of the most accepted treatments. However, the exact mechanism of action, optimal form, dose and duration are still unknown.

Aim: The aim of the study was to compare patient with infantile spasms in clusters with and without hypsarrhythmia who were on ACTH treatment.

Materials and methods: We analysed history of 42 patients with infantile spasms on ACTH treatment, hospitalized in the Department of Pediatric Neurology of Medical University of Silesia in Katowice in the years 2009 – 2017. Mean age of the patients at onset of treatment was 9,1 months SD=6,6 . 9,4 months SD=6,1 in group with West syndrome and 8,8 months SD= 7,4 in group with infantile spasms without hypsarrhythmia. 25 patients had hypsarrhythmia and 17 did not have hypsarrhythmia in EEG. ACTH in dose 0,02mg/kg/d were administrated for 8 weeks. All patients took other antiepileptic drugs before ACTH treatment. Adverse events were noted. MRI, EEG, psychological evaluation, metabolic and genetic tests were performed. Many factors, that could influence the outcome, were compared, including: mean age at epilepsy onset, mean age at ACTH therapy onset, the effectiveness of treatment, family history, pregnancy and delivery period abnormalities, occurrence of other types of seizures, dysmorphic features, microcephaly, optic nerve atrophy and developmental delay.

Results: Complete cessation of spasms was obtained in 92% of patients with West syndrome and in 71% without hypsarrhythmia. Statistically significant difference was found in mean age at onset of epilepsy. Patients without hypsarrhythmia were younger. We do not find others statistically significant differences.

Conclusions: Differences between infantile spasms with and without hypsarrhythmia seems to be small.

Pharmacy & Laboratory Diagnostics Session

Jury:

prof. dr hab. n. chem. Jerzy Krysiński

dr hab. n. chem. inż. Konrad Misiura

dr hab. n. farm. Barbara Bojko

Moderator:

Karol Jaroch

Łukasz Fijałkowski

1st prize in Pharmacy & Laboratory Diagnostics Session

Title: Saliva drug testing by SPME-LC-MS – a promising complement to traditional antidoping control?

Authors: Łukasz Sobczak[1*], Krzysztof Goryński[2*], Michael Pasek[1*], Janusz Pawliszyn[3], Barbara Bojko[2]
*These authors contributed equally

Affiliation: 1) Scientific Circle of Mass Spectrometry and Microextraction Techniques, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz Nicolaus Copernicus University in Toruń, Poland
2) Department of Pharmacodynamics and Molecular Pharmacology, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz Nicolaus Copernicus University in Toruń, Poland
3) Department of Chemistry, University of Waterloo, Ontario, Canada

Introduction: According to the latest Anti-Doping Testing Figures report by the World Anti-Doping Agency (WADA), 3809 out of 303369 analyzed samples were reported as adverse analytical findings. Aforementioned numbers indicate that 1,26 percent of sportsmen tested positive. Since vast and ever increasing number of compounds can be used to enhance performance, research and analytical chemists need to impose advancements at the rate of or exceeding cheats.

Nowadays, trends in doping control suggest screening as many drugs of interest as possible at once, without compromising time span or sensitivity in the process. Solid phase microextraction (SPME) is already a well-established sample preparation technique meeting given criteria and recently analytical protocols for the analysis of doping substances in urine and plasma were proposed [1,2]. However, assembling urine or plasma samples from athletes could be troublesome. Blood collection is invasive, while obtaining urine is considered intrusive. In addition, due to high risk of specimen adulteration, the sampling procedure needs to be performed in the presence of appointed doping control officer. For this reason, alternative matrices such as exhaled breath, dried blood spots, hair, nails or saliva are evaluated for doping testing. Up to date, none of those, including saliva, were accepted by WADA for standard procedures, mainly due to lack of in-depth investigations on sample collection and preparation, considering variability of their properties.

Aim: The main objective of the presented study is to prepare an analytical approach based on SPME for oral fluid analysis, drawing closer to the introduction of saliva to routine testing.

Materials and methods: Protocol was optimized using SPME as sample preparation method merged with high sensitive triple quadrupole mass spectrometer Shimadzu LCMS-8060. The proposed SPME in fiber format was evaluated in terms of extraction efficiency of the compounds covering wide range of polarity, carry-over and matrix effects. Method was validated against FDA and WADA criteria including Minimum Required Performance Level (MRPL). Moreover, comparison of SPME with alternative liquid liquid extraction was performed.

Results: In the presentation, results of the SPME protocol optimization for anti-doping testing of saliva samples will be discussed in the view of choosing optimal solvents for SPME fibers preconditioning and desorption as well as selection of essential extraction parameters such as time length, agitation and pH value.

Conclusions: The proposed SPME-LC-MS protocol makes important step towards fast and reliable on-site antidoping control method. All of this whilst saliva offers sampling in a non-invasive way without adulteration or compromising privacy of the athletes.

2nd prize in Pharmacy & Laboratory Diagnostics Session

Title: The interaction of selected drugs with human serotonin transporter - the molecular docking study.

Authors: Łukasz Fijałkowski, Alicja Nowaczyk

Affiliation: Department of Organic Chemistry, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń.

Introduction: Recently, we experience a growing importance of various *in silico* studies in the drug discovery and development process. Docking-based drug design by the use of structural biology remains one of the most logical in the drug discovery process to be able uncovers new application or mechanism of action for drugs already in the market as well as new substances. A lot of the modern generation of antidepressants act as inhibitors of the serotonin transporter (hSERT). Due to this, recently the structural information about hSERT has been the subject of intensive research.

Aim: In current analysis we investigated the affinity of serotonin and selected drugs and monoamines to hSERT using molecular docking technique. Moreover we performed comparative analysis between selected monoamines and drugs registered in depression treatment.

Materials and methods: The 3D structures of investigated molecules were downloaded from the ZINC database. Subsequently, geometry optimization was carried out for each compound using the Gaussian v. 09. Finally, the Gasteiger charges were assigned to each compound using the Autodocktools program. The X-ray structure of the ts3 hSERT was obtained from RCSB Protein Data Bank (pdbcode 5I6X; organism: homo sapiens). The calculation procedures applied in the survey are typical for docking studies. Molecular docking was performed using the Autodock 4.2 suite of program.

Results: During performed analysis we gained ligand affinities and their inhibition constant. It was found that all investigated drugs could interact with active site of hSERT. The binding modes of all compounds with hSERT were examined in detail.

Conclusions: One of the more significant findings to emerge from this study is that the investigated compounds according to actual knowledge reveal *in silico* affinity to the active site of the hSERT. As a final point, we expect that obtained results will contribute to the development of new drugs.

3rd prize in Pharmacy & Laboratory Diagnostics Session

Title: The use of SPME in cell culture-based analysis

Authors: Karol Jaroch[1], Ezel Boyaci[2] , Germán Augusto Gómez-Ríos[2], Nathaly Reyes-Garcés[2], Janusz Pawliszyn[2], Barbara Bojko[1]

Affiliation: 1) Department of Pharmacodynamics and Molecular Pharmacology, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, Poland
2) Department of Chemistry, University of Waterloo, Ontario, Canada

Introduction: Due to a great number of potent compounds in drug development industry, it is required to perform experiments in a high-throughput screening (HTS) for cost and time effectiveness. Cytotoxicity screening is the most common cell-based *in vitro* HTS assays. However, data obtained from such tests is limited only to inhibition of cell proliferation. Use of immunostaining with antibodies is superior in order to get detailed information about drug mechanism of action. Unfortunately, the number of antibodies that can be used in a single procedure is limited, and because the procedure itself is terminal for the cells, increasing number of antibodies needs to result in more extensive use of cells.

Use of solid phase microextraction (SPME) for cell culture metabolomic analysis allows getting a more sophisticated data from *in vitro* cell cultures than with aforementioned techniques. Moreover, SPME enables performing multiple extractions from a single sample, thus doing time course study using the same system, which results not only in decreasing the number of samples, but also inter-batch variability, which for cell culturing might be significant.

Aim: This work aims to show the capability of SPME to measure the influence of combretastatin A4 phosphate (CA4P) on non-small cell lung cancer cell line (A549).

Materials and methods: Solid phase microextraction was employed for determination of metabolomic change after induction of non-small cell lung cancer cell line (A549) with combretastatin A4 phosphate. For that purpose, drug was added to cancer cell cultivated in 96-well plate. After given period of time the SPME probe was inserted directly into culture medium for extraction. Metabolites attached to the fiber were subsequently desorbed and injected to liquid chromatography coupled with the Q-Exactive Orbitrap with H-ESI source (Thermo Fisher), which was used for untargeted analysis. Also, SPME probes after extraction were directly coupled with mentioned mass spectrometer. The whole procedure can be considered as HTS and „non-invasive" for cells.

Results: We found that the prodrug was transformed into an active form, combretastatain A4. This *in vitro* metabolism pattern is in good accordance with *in vivo* results where phosphate bonding is cleaved rapidly in the presence of phosphatases. The uptake of both CA4P and CA4 was also found. It was observed that the extracellular metabolic pattern of cells was changed after administration of the tested drug. This suggests pharmacological activity of the administered compound towards studied cell line model.

Conclusions: The results indicate, that using a direct SPME immersion from cell cultures after exposure to drug allows obtaining information about uptake, metabolism, and metabolomic changes during single experiment without affecting cells growth. The study was supported from Nicolaus Copernicus statutory grant No. 451

Distinction in Pharmacy & Laboratory Diagnostics Session

Title: Synthesis and antibacterial activity of a new amidrazone-derived gold(III) complex.

Authors: Renata Paprocka[1], Bożena Modzelewska-Banachiewicz[1], Daria Niedzielska[2], Leszek Pazderski[2], Liliana Mazur[3]

Affiliation: 1) Department of Organic Chemistry, Faculty of Pharmacy, Nicolaus Copernicus University in Toruń

2) Department of Analytical Chemistry and Applied Spectroscopy, Faculty of Chemistry, Nicolaus Copernicus University in Toruń

3) Department of General and Coordination Chemistry, Faculty of Chemistry, Maria Curie-Sklodowska University

Introduction: Amidrazone derivatives are known for their wide biological effects: bacteriostatic, antiviral, antiproliferative, antitumor, anti-inflammatory, antinociceptive, anticonvulsant and others. On the other hand gold complexes are described as antimicrobial or antiproliferative agents.

Aim: The aim of this study was just to prepare new Au(III) complex with amidrazone as potent antibacterial agent.

Materials and methods: New gold(III) complex was synthesized in reaction of N3-substituted amidrazone dissolved in methanol with $HAuCl_4$ aqueous solution. The structure of new complex was confirmed by 1H, 13C NMR and IR spectroscopy and single crystal X-ray crystallography. Antibacterial activity of gold(III) complex was evaluated by microdilution method against Gram-negative bacteria Escherichia coli ATCC 25922 and Klebsiella pneumoniae ATCC 700603 as well as Gram-positive bacteria Staphylococcus aureus ATCC 25923, Sarcina lutea, and Bacillus subtilis. Tetracycline and amoxicillin were used as reference drugs.

Results: During synthesis cyclization of amidrazone moiety lead to the [1,2,4]triazolo[1,5-a]pyridine ring system formation, followed by Au(III) chelation. Obtained complex was tested in vitro as an antibacterial agent, exhibiting good antibacterial activity against Staphylococcus aureus and proved to be more potent than amoxicillin against Bacillus subtilis and the drug resistant strain of Klebsiella pneumoniae.

Conclusions: New synthesized gold(III) complex showed stronger antibacterial activity than other gold(III) complexes reported so far. More studies on this field are needed to determine whether observed antimicrobial effect could be improved in similar compounds.

Title: The key physicochemical parameters analysis of triarylnipecotic acid as potential neurological drugs.

Authors: Ewelina Gruczyk, Małgorzata Kozar, Paulina Andruszkiewicz, Łukasz Fijałkowski, Alicja Nowaczyk

Affiliation: Department of Organic Chemistry, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń.

Introduction: The introducing a new drug to the market is very expensive procedure and computational chemistry is important part of this process *In silico* methods allow to use various software such as Osiris DataWarrior. It allows to predict potential biological properties and select molecules with eligible chemical features. One of the most important parameters were determined by Lipinski and Veber rules.

Aim: In this work we investigated and analyzed the relationship between molecular structure and biological activity with an analgesic profile in the aryl group of nipecotic acid derivatives using computational chemistry.

Materials and methods: During the survey investigated molecules were divided into two groups. First database contained the triarylnipecotic acid derivatives. In the second group antilepileptics, sedatives, anesthetics and drugs used in Parkinson disease were included. Both libraries were studied according to Lipinski and Veber rules.

Results: Among investigated compounds almost all indicated parameters compatible with Lipinski and Veber rules. Total molecular weight was the most differential parameter.

Conclusions: The conducted analysis confirms that Osiris DataWarrior software is good tool for preliminary selection compounds with potential activity. The analyzed triarylnipecotic acid derivatives exhibit similar molecular properites to registered analgesics drugs.

Title: Screening for Combretastatin A4 metabolism using On-line Electrochemistry coupled with Mass Spectrometry.

Authors: Karol Jaroch[1*], Paulina Goryńska[1*], Krzysztof Goryński[1*], Tomasz Stefański[2,3], Stanisław Sobiak[4], Barbara Bojko[1]
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Introduction: Xenobiotic's metabolism assessment is crucial for getting a deep insight into knowledge about toxicity and/or mode of action, as well as drug-drug interactions of a given drug candidate. Due to an enormous number of new chemical entities (NCE) synthesized during drug development process, it is required to enhance a throughputness of in vitro metabolism generating systems. To date, a standard procedure is to incubate an NCE with microsomes pooled from liver. Although this technique is well established, the need of sacrificing animals or getting liver from human donors is required. This fact leads to development of new techniques for generating of in vitro metabolism.

Aim: The main goal of the study was to generate metabolites of combretastatin A4 (CA4) using electrochemistry coupled on-line with mass spectrometry. Generated metabolites were compared with literature findings concerning rat liver microsomes incubation of a parent drug.

Materials and methods: For metabolism generation, a dedicated for the mass spectrometry (MS) system, named ROXY ™ (Antec ® Scientific), was used. In this system, a drug is infused to the reaction cell, in which electrodes are placed. After applying voltage, a chemical reduction–oxidation reaction takes place. Metabolites generated in the reaction cell are transferred via tubbing directly to MS for instrumental analysis. In this study, the Q-Exactive Orbitrap with H-ESI source (Thermo Fisher) was used for untargeted analysis.

Results: After applying voltages there was a decrease of signal for parent drug, whereas signals from other mass-to-charge (m/z) features were increased. This leads to a conclusion that reaction was successful. Then, after comparisment with literature findings, metabolites generated by rat liver microsomes incubation were identified. Moreover, additional m/z features were found, which are probably a pattern of degradation of CA4.

Conclusions: On-line Electrochemistry coupled with Mass Spectrometry has been successfully implemented for generating metabolism of combretastatin A4. Due to online connection to MS, the results were obtained immediately with no need for development of liquid chromatography method, which is both time-consuming and cost-generating. The presence of additional features leads to a suggestion that use of electrochemistry is suitable for pattern of drug degradation assessment.

Title: The toxological properties analysis of the nipecotic acid ether derivatives – in silico study.

Authors: Małgorzata Kozar, Ewelina Gruczyk, Paulina Andruszkiewicz, Łukasz Fijałkowski, Alicja Nowaczyk

Affiliation: Department of Organic Chemistry, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń.

Introduction: Neuropathic pain is a particular type of pain. According to current knowledge, in addition to typical analgesics, antidepressants play an important role in the treatment of neuropathic pain as well as in situations where pain coexists with depression. Medicines of the first choice in the neuropathic pain pharmacological treatment are: tricyclic antidepressants and serotonin and noradrenaline reuptake inhibitors. Despite many surveys in the field, treatment of pain remains a major diagnostic and therapeutic challenge. This prompts researchers to intensively seek new painkillers.

Aim: In this work, the physicochemical parameters of registered antidepressants and etheric derivatives of nipecotic acid have been investigated using modern methods of computational chemistry.

Materials and methods: The research was conducted on a variety of computer systems and programs such as OSIRIS DataWarrior and admetSar. For each of the analyzed structures, selected physicochemical and biological parameters of tested compounds were determined.

Results: As a result of the studies, it was found that the test compounds have similar physical and chemical parameters to the registered antidepressants. The etheric derivatives of nipecotinic acid, however, showed considerable hepatotoxicity. About 80% of all compounds were potent inhibitors of cytochrome p450. Tested derivatives also have cardiotoxic effects but no carcinogenic effects.

Conclusions: The studied structures were characterized by good values of pharmacokinetic parameters, which shows similar analgesic properties as antidepressants. The admetSar analysis showed that the investigated structures are toxic to the liver and the heart, indicating the need for further research in this field.

Title: The analysis of selected physicochemical parameters for the nipecotic acid oxime derivatives as potential analgesics drugs.

Authors: Paulina Andruszkiewicz, Michał Denkiewicz, Małgorzata Kozar, Ewelina Gruczyk, Łukasz Fijałkowski, Alicja Nowaczyk

Affiliation: Department of Organic Chemistry, Faculty of Pharmacy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń.

Introduction: The Nowadays, we have access to huge number of medicines, but pain still remains as therapeutic and clinical problem. As a result, researchers constantly looking for new substances with analgesic activity. Introducing the new medicine on the market is laborious and costly. The development of computational chemistry methods has allowed for the pre-selection of compounds, which speeds up and reduces research costs.

Aim: The purpose of this study was to assess the physicochemical properties of nipecotic acid oxime derivatives. Moreover, comparative analysis between investigated compounds and selected painkillers were conducted.

Materials and methods: During research we created three different chemical databases, where investigated derivatives and the painkillers data were included. The structure of the oxime derivatives were collected from publications of Lars Knutsen. We have conducted research using modern computational chemistry methods, such as OSIRIS DataWarrior. We designated physicochemical parameters and then we performed the comparative analysis between chosen parameter groups.

Results: The investigated nipecotic acid oxime derivatives have similar physicochemical properties as most of opioid drugs. Significant deviation, especially in the field of MW and LogP among analgesics and antipyretics drugs is observed.

Conclusions: The nipecotic acid oxime derivatives have similar properties to registered opioid drugs, which may be indicative of their analgesic activity. The Osiris DataWarrior software is a good tool for initial analysis of a substance activity.

Geriatric & Palliative Medicine Session

Jury:

dr n. med. Marta Podhorecka

dr inż. Ewa Szymelfejnik

dr inż Michał Gośliński

Moderator:

Alina Jaroch

1st prize in Geriatric & Palliative Medicine Session

Title: Effect of aging on saccadic duration.

Authors: Dagmara Witkowska, Jan Ober

Affiliation: Nalecz Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw, Poland

Introduction: Saccades are fast movement of the eyes, which allow moving the object of the interest into the central region of the retina (Leigh & Zee 2006). Warabi et al. (1984) as well Moschner and Baloh (1994) showed a significant decrease in the saccadic peak velocity in elderly but only in case of saccade characterized by large amplitude (respectively 40 ° or 30 °). Also Abel et al. (1983) showed only slight and insignificant aging effect on saccadic duration and velocity. Saccadic velocity and duration are related parameters of saccadic dynamics however there is a possible of situation when peak velocity reduction t is not accompany the prolongation of its duration [Schik et al. 2000] and vice versa [Munoz et al. 1998]. According to Schik et al. (2000), in the case of small amplitudes, peak saccadic velocity is a better (that saccadic duration) indicator of changes in saccadic dynamics that accompany that aging.

Aim: The aim of the study was evaluation of the aging effect on duration of 10-degree saccades. We evaluated the differences between the young older adults as well as the differences between the results gathered with one-year interval.

Materials and methods: Saccadometer was used for measuring eye movements and projecting the stimuli. Participants performed prosaccadic step task and were asked to move their eyes on target appearing randomly either on the left or right side with eccentricity of ±10 degree from the central fixation. The 44 older subjects and 36 young adults were tested two times with one-year interval.

Results: Older subjects showed significantly greater saccadic duration times those young adults. There were no differences between the result before and after one year in any group.

Conclusions: Obtained results showed that aging effect on saccadic duration can be revealed even for of 10-degree saccade (however one year is too short period to notice significant changes). The result may suggest that this parameter can be used for evaluation of age related changes in saccadic dynamics also in case of 10-degree saccades.

2nd prize in Geriatric & Palliative Medicine Session

Title: Vitamin B12 levels in patients with mild and major neurocognitive disorder after 60 years of age.

Authors: Eliza Oleksy[1], Remigiusz Sokołowski[1], Natalia Sokołowska[1], Wojciech Stemplowski[1], Paulina Kasperska[1], Karolina Klimkiewicz-Wszelaki[1], Justyna Janowska[2].

Affiliation: 1. Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland.
2. Provincial Hospital for Neurotic and Mentally Ill, Swiecie, Poland.

Introduction: The new diagnostic criteria in the DSM-5 e xtract major neurocognitive disorder (NCD) being determinant of dementia and mild NCD considered minor cognitive impairment without dementia, similar to the commonly used concept of mild cognitive impairment (MCI). Vitamin B12 plays a key role in the proper functioning of the nervous system, taking part in the process of myelination of neurons of the spinal cord and cerebral cortex. Its deficiency can cause NCD.

Aim: Comparing the level of vitamin B12 in reference values in patients with NCD after 60 years old.

Materials and methods: The study was conducted at the Department and Clinic of Geriatrics Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University. The study included 112 people 2 distinguished research groups: i) a group of mild neurocognitive disorders - NCD mild (n = 69); ii) a control group without NCD – non NCD (n = 53). The mean ages were 78,74 years for mild NCD, 75,09 years for non NCD. The 72 of patients were woman (59%). The study included detailed inclusion and exclusion criteria. For statistical analysis we used U Mann Whitney in the Statiscica 12.5 software.

Results: Mean level of B12 for mild NCD was 314,7 pg/ml (95%CI 286,6-342,8) and for non NCD was 359,2 pg/ml (95%CI 314,2-404,2). The level of B12 at mild NCD was statistical significant compare to non NCD (p=0,044).

Conclusions: Vitamin B12 levels in the patients' serum suffering from mild is significantly lower than in patients without NCD despite the normal ranges of reference. It is suggested to conduct more numerous research sample of people over the age of 60 in order to verify the reference values of vitamin B12 in this age group. Values within the normal reference range may indicate the beginning of mild NCD.

2nd prize in Geriatric & Palliative Medicine Session

Title: The challenges set for Palliative Medical Unit. Medical specialties – their part in palliative care.

Authors: Jan Ziółkowski, Łukasz Szukalski, Michał Bejger, Paweł Flisiński

Affiliation: Palliative Medicine Unit, Antoni Jurasz University Hospital No. 1, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: It is crucial to know that palliative care is provided not only by physicians - palliative care departments consist of interdisciplinary group of specialists who ensure holistic solicitude to their patients. The WHO definition of health says that mental well-being is an integral part of health, so it is obvious that psychologists are a crucial part of the palliative care system. Physiotherapists and physicians of specialties other than palliative medicine also help many patients of palliative care wards.

Aim: The aim of this study is to show that many medical specialists – not only physicians of a wide range of medical fields, but also clinical psychologists and physiotherapists are vital part of palliative care system. The study is supposed to show what kind of help is needed by palliative medicine doctors to improve their patients' lives.

Materials and methods: The study is a retrospective analysis of medical data of patients treated at the Palliative Medicine Unit of the A.Jurasz University Hospital in Bydgoszcz in the years 2014-2016. It counts all patients who needed consultations by: psychologists, non-palliative medicine physicians and physiotherapists. It also divides medical doctors by their specialty to show which medical field is most helpful to palliative care patients.

Results: There were 274 patients studied, who needed 277 consultations. 84 of them were consulted by psychologist. 76 times physicians of non-palliative care unit were needed to treat or diagnose patients' problems. The most common specialty was otorhinolaryngology with 19 consultations, followed by anaesthesiology and intensive care, needed 15 times. Patients were also visited by physiotherapists 117 times.

Conclusions: Palliative medicine physicians often realise that their patients need help of psychologists, other doctors and physiotherapists . It is important for medical specialists of many fields to know that they might help with some problems of patients treated at palliative care wards and that consultations provided by them can improve the quality of patients' lives. The kind of consultation is directly linked with the patients' disease, for example – patients with amyotrophic lateral sclerosis are consulted by anaesthesiologists and those with nephrostomy need to be seen by urologists.

Title: How seniors form Bydgoszcz spends their retirement.

Authors: Radosław Perkowski[1], Joanna Androsiuk-Perkowska[1], Małgorzata Gajos[1], Agnieszka Kujawska[1], Weronika Topka[1], Natalia Skierkowska[1], Sławomir Kujawski[2]

Affiliation: 1) Department of Geriatrics,
2) Department of Hygiene, Epidemiology and Ergonomics, Division of Ergonomics and Exercise Physiology,
Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: High level of physical activity and regular undergoing physical exercises are two of the most important factors to keep organism in good condition. Interestingly, taking part in social activities is another important health factor. Moreover, physical activity has a positive impact on social life, improved well-being and prevents to depression. Regular physical exercises improves cardiovascular outcomes, play important role in the prevention of falls and loss of muscle mass. In turn, above factors can facilitate social engagement of older people.

Aim: The aim of the study was assess the level of social and physical activity among seniors living in Bydgoszcz.

Materials and methods: In this study we enrolled 127 participants who were examined in Clinic of Geriatric acquired by Physical Activity Questionnaires and Leisure Activity Questionnaires.

Results: Result of the survey showed that almost all participants read newspaper (87%) and books (84%) daily. Watching TV and listening to the radio with daily frequency is undertaken in more than 70% of examined population. 69 % among the participants use personal computer every day (46%) or a few times a week (16%). Overall physical activity rate is larger than overall social activity rate in our sample group. 64% of participants went out to the restaurant at least one time in last year. 82% participants were going out to the theater and on concerts. 76% of participants attend on religious events in the church, 53% among them participate in the once a week, and 16% do that – several times a month/year. 96% participants are visiting friends or family, 43% play in card/chess and 35% take part in charity activity. 71% participants engage in crosswords solving. 84% of our sample group spends their free time on short walks near house and 72 % take part in long walks (more than 20 minutes). Forms of physical activity in elderly appeared as follows: gymnastics (65%), work in the garden (52%), dance (45%), bike riding (43%), nordic walking (42%), swimming (29%), team games (basketball, volleyball etc.) (7%), jogging (5%), sailing, horse riding, tennis (3%), and skiing (2%). 68% went on holidays during the last year, 65% went on one day trip, 54% went on multi-day trips, 53% had a stay in sanatoriums, 13% were done hiking and only 5% went on camping/tent.

Conclusions: In summary, the survey results show that examined sample is highly physically active. In addition to high rate of physical activity, a large percentage of participants engage in mental activities such as watch TV, listen to the radio, read books which may indicate is standardly related with sedentary part of their free time. In overall, the results of the physical activity survey confirmed that physical activity and leisure activities among the elderly are on very high level.

Title: Lifestyle of people aged 60+ who apply for a preventive examination.

Authors: Monika Ameryk[1], Małgorzata Szamocka[1], Agnieszka Augustyniak[1], Alina Jaroch[2,3], Maciej Świątkowski[1]

Affiliation: 1) Department of Gastroenterology and Nutrition Disorders
2) Department and Institute of Nutrition and Dietetics,
3) Department of Geriatrics,
Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Diet, food quality, nutritional status and physical activity are a common research focus, especially broken down into age groups. Between 1989 and 2014, the population of elderly people in Poland increased by almost 3 million. This age group is particularly affected by lifestyle as a factor essential for their health status and quality of life.

Aim: The aim of the study was to assess the lifestyle of people aged 65 and older who participated in screening aimed at the early detection of colorectal cancer (CRC).

Materials and methods: CRC screening examinations were conducted in 100 participants at the Clinic of Gastroenterology and Nutrition Disorders, the Jan Biziel University Hospital no. 2 in Bydgoszcz, Poland. The participants completed two surveys, one regarding their lifestyle now and in the past, and the other regarding the assessment of their eligibility for colonoscopy screening. The study involved a physical examination and anamnesis, with basic anthropometric parameters (body weight and height) measured, and was followed by a colonoscopic examination. The results were analyzed statistically using STATISTICA PL 13 software. The threshold of statistical significance was set at $p<0.05$.

Results: The participants had a mean BMI value of 27.8 ± 6.5 kg/m2—overweight as defined by WHO. Women showed a two times higher likelihood of having a correct body weight than men (33% vs. 15%) and were also less likely to be obese (20% vs. 26%). Only 13% of the participants reported practicing physical activity every day and almost 1/3 admitted having a sedentary lifestyle. As many as 70% of the participants watched TV or used a computer for 2 to 3 hours a day. As for the nutrition, nearly 60% of the participants had modified their diet. The colonoscopic examinations demonstrated colorectal abnormalities in 44% of the participants, with colorectal cancer identified in 6 of them.

Conclusions: The study revealed numerous errors in the participants' lifestyle, including inappropriate diet, food quality and nutritional status. In light of these results, Polish health care institutions should be urged to initiate health promotion programs that would raise lifestyle awareness among people from their childhood, but also to conduct prophylaxis programs tailored for people aged 50 and older.

Title: Is autumn years are the dark time of life?

Authors: Weronika Topka[1], Sławomir Kujawski[2], Agnieszka Kujawska[1], Małgorzata Gajos[1], Radosław Perkowski[1], Joanna Androsiuk-Perkowska[1], Kornelia Kędziora-Kornatowska[1]

Affiliation: 1) Department of Geriatrics,
2) Department of Hygiene, Epidemiology and Ergonomics, Division of Ergonomics and Exercise Physiology,
Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Depression is so common disease nowadays, that it is called the "The Common Cold of Mental Health". In older people it is included into so-called Geriatric Giant. The "big black dog" accompanying older people can effectively take away the sense of happiness and make them to perceive things as worse than they objectively are. Therefore, depressive disorder can decreases the quality of life.

Aim: The purpose of the study was to examine the relationship between depressive state and quality of life among group of older participants.

Materials and methods: The study was conducted in a group of 128 older people. The study used a standardized World Health Organization Quality of Life Questionnaire (WHOQOL-BREF) to assess quality of life and a shortened version of the Geriatric Depression Scale (GDS), which was used to assess the risk of depression. Statistical analysis was performed using STATISTICA 13.1. R-Pearson correlation test was used for correlation analysis.

Results: Among people surveyed, 79% had no depression, GDS results indicated mild depression in 19% people, and severe depression in 1 %. The overall result of the scale of quality of life positively correlated with GDS results ($r = -0.59$, $p < 0.0001$). Physical health, psychological, social relationship and environment domains of the scale of quality of life also positively correlate with GDS results ($r = -0.32$. $p = 0.0007$; $r = -0.43$, $p < 0.0001$; $r = -0.53$, $p < 0.0001$; $r = -0.51$, $p < 0.0001$), respectively.

Conclusions: The conducted statistical analysis showed that the more severe symptoms of depression as measured by the scale of GDS coexists with the worse quality of life of patients. Depression is related to the inferior subjective feeling of the quality of life, especially in the area of social relationship and the environmental domains of life.

Title: Functional assessment of people over 60 years of age with depression.

Authors: Remigiusz Sokolowski[1], Natalia Sokolowska[1], Karolina Klimkiewicz-Wszelaki[1], Paulina Kasperska[1], Wojciech Stemplowski[1], Justyna Janowska[2], Kornelia Kedziora-Kornatowska[1]

Affiliation: 1. Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland.
2. Provincial Hospital for Neurotic and Mentally Ill, Swiecie, Poland

Introduction: Seniors are in the group of people who are particularly vulnerable to depression. Despite the growing knowledge of mental illnesses and disorders, in many cases old age depression remains unrecognized and untreated. This, in turn, worsens the quality of life of patients and carries a number of consequences, both medical and economic. The causes of this situation can be traced to stereotypes of old age and overlapping other health problems. Often, seniors themselves are convinced of the inevitable deterioration of their health, including their mental health during aging. The elderly suffer from depression as often as the younger ones (the prevalence of depression in the population of 65 is about 15%). In certain patient populations may be much more, especially in caregiving institutions.

Aim: In our study, we performed a functional evaluation after 60 years of age with depression as part of a Comprehensive Geriatric Assessment.

Material and methods: Cross-sectional study 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 - February 2017. The study involved 261 participants, including 176 people assigned to the group without depression, and 85 to the group with mild depression. Recruitment for both groups took place on the basis of specific inclusion and exclusion criteria.

Results: Mean GDS score for people with depression was 13,84 (95%CI 13,34-14-33), and for without depression was 5,65 (95%CI 5,24-6,06). Mean BMI for people with depression was 26,82 (95%CI 25,55-28,10) and for without depression was 28,64 (95%CI 27,88-29,41). Mean IADL score for people with depression was 24,88 (95%CI 24,33-25,43) and for without depression was 25,53 (95%CI 25,20-25,86). Mean Tinetti Score for people with depression was 21,06 (95%CI 20,00-22,13) and for without depression was 23,12 (95%CI 22,50-23,74). Mean FACIT score for people with depression was 65,72 (95%CI 57,84-73,61) and for without depression was 85,85 (95%CI 81,29-90,42).

Conclusions: In our study we found that people over 60 years old with depression was significantly lower BMI, higher risk of fallen, lower functional efficiency and lower quality of life. There is no difference between age and cognitive functions for people with or without depression. Lower functional efficiency may be a major factor in increasing the risk of depression. Therefore, it is important to carry out geriatric rehabilitation in the elderly, taking into account factors of illness, mental and socioeconomic factors."

Title: Tests assessing nutritional status of patients with frailty syndrome.

Authors: Alina Jaroch[1,2], Emilia Główczewska-Siedlecka[2], Monika Ameryk[3], Karol Jaroch[4]

Affiliation: 1) Department and Institute of Nutrition and Dietetics,
2) Department of Geriatrics,
3) Department of Gastroenterology and Nutrition Disorders,
4) Department of Pharmacodynamics and Molecular Pharmacology,
Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: According to the regulation of the Polish Minister of Health each hospitalized patient must be assessed with nutritional status using one of two tests: Nutritional Risk Score (NRS-2002) or Subjective Global Assessment (SGA). The most commonly used screening test, recommended by ESPEN, is the NRS-2002, which was developed on the basis of intervention studies. Another sensitive and specific tests, adequate to use during hospitalization are MUST (Malnutrition Universal Screening Tool) and MNA (Mini Nutritional Assessment). Poor nutritional status directly affects the patients' health, contributing to the development of anorexia, dysfunction of organs and body systems and progression of chronic diseases, such as frailty syndrome.

Aim: Main aim of this analysis was to analyze nutritional status of patients with frailty syndrome and compare different nutritional screening tests in context of proper identification of patients with malnutrition.

Materials and methods: Study took place in the Clinic and Department of Geriatrics, University Hospital No. 1 in Bydgoszcz from May 2015 till May 2016. Results form 31 geriatric frail patients were analyzed. Due to small number of men (6 patients) no separate analyses for gender were made. Nutritional status of the patients using anthropometry and nutritional screening test was assessed during hospitalization.

Results: Mean age was 84,2 ± 6,4. BMI of the group was 21,1 ± 3,3 kg/m^2 in accordance with Lipschitz et al. indicating malnutrition. Nearly all patients had weight loss (87%), which mean value was 11,9 ± 7,7 %, low calf circumference (29,6 ± 3,7) and lowered handgrip strength (11,7 ± 5,0). Results from NRS-2002, MUST, MNA screening test were 3,7 ± 1,1; 2,2 ± 1,1; 14,0 ± 4,0 respectively. All nutritional screening tests correlated well with the BMI value and CC ($p<0.001$).

Conclusions: Geriatric patients with frailty syndrome are malnourished, have severe weight loss and low values of anthropometric measurements, as well as nutritional screening test. Used nutritional screening test are valuable methods of properly assessing nutritional status, but a special attention should be paid for used BMI ranges, as they may incorrectly indicate a proper body weight.

Nursing & Public Health Session

Jury:

dr n. med. Dorota Jachimowicz-Gaweł

dr inż. Marek Szczutkowski

Moderator:

Anna Maria Dobosiewicz

Katarzyna Sas

1st prize in Nursing & Public Health Session

Title: Assessment of selected endothelial parameters in short-term after bariatric surgery or balneological treatment in morbidly obese patients.

Authors: Katarzyna Szot, Krzysztof Góralczyk, Małgorzata Michalska, Danuta Rość

Affiliation: Department of Pathophysiology, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Morbid obesity is a progressing illness that consists of exaggerated accumulation of adipose tissue with the BMI > 40 kg/m2. Endothelium, is considered as dynamic endocrine organ indispensable for the maintenance of vascular hemostasis, is a crucial element that combines obesity with other metabolic disorders. Vascular dysfunction is associated with insufficient or excessive production of specific markers of endothelial function. Bariatric surgery or non-surgical procedures such as diet therapy and balneological treatments are the current interventions to control or limit obesity. Nevertheless, the effectiveness of the available therapies experienced by obese patients over the past decades remain unprecedented.

Aim: Present study has been dedicated to assess the differences in changes of endothelial markers in short-term after start of treatement in regard of used method of weight loss: bariatric surgery and balneological treatement.

Materials and methods: The study was conducted in 72 patients, divided into two groups based on the applied method of treatment (bariatric surgery and balneological treatment). First group consisted of 36 morbidly obese patients with mean of BMI 47 kg/m2. These subjects were qualified for elective gastric bypass surgery: LAGB- laparoscopic adjustable gastric banding. The morbidly obese patients were evaluated before (baseline) and 1 month after the surgery. The second study group consisted of 36 patients, during the 3-week observation they were on a low-calorie diet and balneological treatment.The mean value of BMI before the treatment (baseline) was: 44 kg/m2.The following tests were performed in the citrated plasma of the venous blood by immunosorbent method (ELISA): concentrations of soluble thrombomodulin (sTM), soluble forms of selectin E (sE-selectin) and tissue plasminogen activator (t-PA:Ag).

Results: The average decrease in BMI in the group treated with bariatric surgery was 3.26 kg/m2, balneological treatment contributed to a reduction of 2.45 kg/m2. There were not significant changes in the concentration of sTM, after 4-weeks in both study groups. Weight loss resulted in significant decrease and normalization of sE-selectin in bariatric surgery group. The balneological treatment significantly reduced tPA:Ag to levels comparable with those of their normal weight individuals.

Conclusions: The study confirm that regardless of method, the body mass reduction reached in short time improves some endothelial functions. Although not all endothelial markers normalize in short time after weight loss, which may suggest different temporal patterns and indicate that distinct mechanisms are involved in their regulation. The normalization of sE-selectin level after bariatric surgery indicate reduction of inflammation on the endothelial surface. Balneological treatment indicate beneficial effect of this method on the fibrinolytic biomarkers.

2nd prize in Nursing & Public Health Session

Title: Assessment of knowledge about Malaria and using antimalarial drugs in Ghana's population

Authors: Agnieszka Krawczyk[1], Katarzyna Sas[1], Katarzyna Kosecka[1], Ewa Zieliński[2]

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Introduction: In Ghana antimalarial drugs are available over the counter in pharmacies and chemical shops and can be sold by people without medical education. Local community takes it when first disease symptoms occur, usually without consultation with any healthcare worker or carrying open-access rapid diagnostic tests. Presented symptoms in many cases are not connected with Plasmodium species infection. Ghanaians use antimalarial drugs as soon as possible. They are afraid of severe malaria's complications and want to quickly improve their general comfort. Social countenancing impacts on medicines overusing. Improper usage can enhance drug resistance of malaria parasites in Ghana's population and causes inefficiency of future therapy. One of the most common source of knowledge about malaria symptoms, prevention and treatment are informational programmes provided by various healthcare organizations.

Aim: The aim of study was assessment of knowledge about malaria and using antimalarial drugs in Ghana's population.

Materials and methods: The study was conducted based on self-constructed questionnaire distributed in Accra and Yendi in Ghana between February and March 2017. The survey determined knowledge about symptoms, ways of transmission and diagnosis of malaria as well as using antimalarial drugs without prescription. Multivariate regression modelling was used to assess demographic factors with level of knowledge about malaria and consuming of antimalarial drugs.

Results: The study included 156 respondents (100 females and 56 males) presenting various age, level of education and place of residence. Consumption of antimalarial drugs without prescription were observed among 86.54% of overall population, although higher education level leads to decrease described factor. 36.26% of respondents believe that antimalarial drugs can not cause harmful effects on human body. Only 23.72% of population use rapid diagnostic tests, 48.08% of population don't know about availability of this tools. More than 90% of respondents know the way of malaria transmission and prevention.

Conclusions: General knowledge about malaria among Ghana's population seems to be satisfactory but awareness of harmful effects of antimalarial drugs and its improper using are insufficient. Currently conducted prevention programmes provide appropriate information about malaria, however they should be enriched in advices related to responsible usage of antimalarial drugs, which can minimize amount of drug-resistant Plasmodium species in Ghana.

3rd prize in Nursing & Public Health Session

Title: Just like the real thing? Evaluating the fidelity of multivenous iv-training arms in medical training.

Authors: Oliver Firszt, Adrianna Jagosz, Dawid Marciniak, Tamer Bsoul, Szymon Goliński

Affiliation: Student Research Circle, Departament of Anaesthesiology, Intensive Care and Emergency Medicine, Medical University of Silesia in Katowice, Poland

Introduction: Intravenous lines' establishment is of utmost importance in anesthesiology, intensive care and emergency medicine. Consequently, the procedure should be properly taught and trained over the course of medical studies. In recent years, a growing trend to use advanced patient simulators for medical training continues to develop. They allow proper schooling of medical trainees in an immersive clinical setting without exposing patients to the associated risks. While many papers confirm that simulation brings several benefits to both medical students and professionals' training, data on their accuracy and fidelity in emulating a real patient is scarce

Aim: The aim of our work is to evaluate the accuracy of multivenous iv-training arms and to assess their suitability for medical training of future paramedics, nurses and doctors.

Materials and methods: In our research, we used two Ambu IV Trainer iv-training arms. A survey consisting of 6 questions was prepared to be answered by nursing staff from various departments, including the Intensive Care Unit who were asked to start an IV line on the training arm simulator. Our work had 50 respondents. Every question was to be answered on a scale from 0 to 10, where 10 represents an accuracy corresponding to that of a human patient.

Results: The overall fidelity of the simulator was evaluated at an average of 7.2. With an average score of 9.5, our survey revealed that the simulator's best feature was the possibility of emulating the preparation process preceding the i.v. line establishment. Compared to a human patient, it's worst quality with an average score of 6.8 was the simulator's skin. Asked if training on the iv simulator could completely substitute schooling on a human patient, the respondents rated this possibility with a 5.3 score.

Conclusions: IV-training arms are a useful tool in the schooling of medical trainees, but they differ significantly from a human patient. While their overall accuracy is good, there are certain elements that could still be improved for even better fidelity.

Title: Nutritional knowledge and the impact of advertising on the perception of food by early school children.

Authors: Augustyniak Agnieszka, Ameryk Monika, Szamocka Małgorzata, Sikorski Piotr, Pujanek Małgorzata

Affiliation: Department of Gastroenterology and Eating Disorders, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: The way we feed our preschool and kindergarten children is very different. Disproportions are due to easier access to an assortment of highly processed foods, acquired experiences related to out-of-home consumption and peer influence of primary school pupils. Increases the time spent on television and computer or other device (tablet, telephone) with Internet access, which increases the exposure of children to food and food advertising, while also affecting their perception of food and the way they think about eating properly.

Aim: The aim of the study was to present the perception of food by early school children from primary schools in Toruń and Chełmno counties.

Materials and methods: The study group consisted of 283 primary school students from Toruń County and Chełmno county. The perception of food and nutrition was examined by means of worksheets prepared for the public task "Nutrition education of children of the second and third primary schools and their parents from the Toruń and Chełmno counties" co-financed by the Kujawsko-Pomorskie voivodship. The data obtained was analyzed in Statistica STAT SOFT 13.1.The subjects were the students' answers to the questions on the two work cards and graphic visuals of the leaflet design. The questions concerned the consumption of products and milk products, food of animal and plant origin, identification of sources of wholesome protein, carbohydrates, fats, vitamins and minerals, and how TV advertising works for the perception of food products.

Results: Analysis of Worksheet 2 shows how, according to early school children, they would look like a menu and a leaflet of restaurants serving healthy meals for primary school students. Pupils also showed knowledge of the sources of nutrient nutrients necessary for proper functioning of particular organs of the human body.

Conclusions: The results of the study indicate the appropriateness of nutritional education of early school children and the need to continue education in order to strengthen the correct picture of healthy food and to develop proper eating habits.

Title: Retrospective Analysis of Dietary Behaviors in the Context of the Health Status of Female Patients Receiving Dietary Counseling.

Author: Agnieszka Kudanowska

Affiliation: Department of Geriatrics , Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: The reasons of weight disorders are very complex and are composed of many factors in addition to inadequate diets. However, poor diet is a silent ally of civilization diseases, as well as inappropriate eating habits or even errors in nutrition during lifetime induce changes in body health that become apparent after many years in worsening condition through increased BMI, raised blood pressure, diabetes, heart disease, obesity disorders, hormonal or metabolic syndrome. Negligence in this ground results in time-consuming and expensive treatment, significantly reducing quality of life, lower self-esteem, leading to social exclusion. The second aspect is the physical activity that affects the metabolism and its improvement. This aspect is often neglected and leads to disruption of body weight, worsening blood test results such as lipids and fasting glucose, hypertension and, consequently, in the long term for diseases of civilization. This issue affects many patients and their dietary counseling health problems are due to the errors related to the lack of knowledge and inadequate nutrition and omission of the necessary physical activity.

Aim: The aim of this study was to explore the associations between weight disorders, poor eating habits, physical activity and health factors. The main purpose of the study was to analyze medical documentation, studying dietary habits, health behaviors and lifestyle of the examined group and analysis of patients' health status. Another objective was to analyze body composition in relation to the health status and age of patients and to confirm the correlation with age, increase in body fat, as well as the most common nutritional deficiencies.

Materials and methods: The retrospective analysis of medical records of a group of 80 female patients, aged 20-66 years old, from the years 2012-2015 has been done in this study, consisting of habits interview, as well as, pressure measurements, BMI, body composition on Tanita 418BC, anthropometric measurements and blood tests. There was no control group in the study.

Results: The analysis showed the relationship between poor eating habits and poorer health and ignorance on proper diet and overweight and obesity, errors in the proper selection of ingredients and their balancing as well as the supply of energy appropriate for age and physical activity. 50% of the subjects had a BMI in the standard range, but with age, the number of people with normal BMI decreased, so that in the 60+ age group all people were either overweight or obese. Calculating the percentage of fat tissue in this study indicated that 47.5% of people were within the normal range, but unfortunately in the 60+ age group, all patients were classified as overweight - 40% of people and obesity 60%. In the group of people over 60 years of age no one had a waist slimmer than 80cm.

Conclusions: Dietary mistakes were reflected in the results of lipid levels in blood, increased waist circumference, elevated blood pressure, weight gain. Long-term changes in the body due to negligence of diet, lack of physical activity require cooperation from the team of professionals: nutritionist, doctor, trainer in order to the effective therapy and long lasting results.

Title: Relationship between chronic rhinosinusitis and comorbid diseases and environmental risk factors

Authors: Angelika Romańska,Karolina Wasicka, Zuzanna Rzetelska, Aneta Nowicka, Marta Budzińska

Affiliation: Department of Clinical Immunology, Poznan University of Medical Sciences, Poland

Introduction: Introduction: Chronic rhinosinusitis (CRS) is a heterogeneous disorder that affects a large proportion of the population world-wide. It is still increasing in prevalence, significantly impairing patient's quality of life health condition and is associated with a high socioeconomic burden from direct and indirect costs. Its impact on quality of life is comparable with other chronic. The CRS is subdivided into cases with polyps (CRSwNP) and cases without polyps (CRSsNP). There are many factors taking into consideration in pathogenesis of the disease, such as environmental and occupational risc factors as well as comorbidities.

Aim: The aim of the study: The aim of this study was to determine if there is relationship between CRSwNP and various environmental and occupational risc factors and comorbid diseases.

Materials and methods: Materials and methods: The study included 38 patients who were being treated in the Head and Neck Surgery of Poznan University of Medical Sciences. The research was carried out by diagnostic poll method. It was prepared by the researches on the bases of professional literature. The local Ethics Committee of Poznan University of Medical Sciences approved the study, and informed consent was obtained from all participants before including them in the study. Exclusion criteria were: systemic steroids within 3 weeks before inclusion, immunodeficiency and immotile cilia syndrome.

Results: In the present study, 12 patients with CRS (42,86 %), had asthma. We observed statistically significant difference between control and patients group (Chi2(1)=4.33, p=0,03733). CRSwNP was also significantly associated with intranasal corticosteroids treatment (Chi2(1)=9,370; p=0,00221). Moreover 21.05% respondents admitted that they smoke cigarretes. The number of patients who smoke was higher in CRSwNP group (66.67%).

Conclusions Our study identified comorbidities as well as environmental exposures with positive correlations to the development of CRS, which might facilitate a better understanding of the epidemiology of CRS and provide important information for CRS prevention

Title: Mortality due to Parkinson's Diseases - Polish population of patients.

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Affiliation: 1. Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland.
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Introduction: Parkinson's Diseases (PD) is one of the most common neurological diseases of the elderly. The classic symptoms of PD are motor slowdown, muscle stiffness, resting tremor and postural reflex. With disease progression additionally occur: apathy, depression and dementia. After 17 years of illness, that symptoms manifests in about 80% of patients. The incidence of PD in female population is lower and the age of the disease is later than that of the male. The peak of morbidity for the general population is between 85-89 years old. The annual incidence in Europe is estimated at 11-19 per 100,000 persons. There is no accurate data on the population of Polish patients.

Aim: Carrying out epidemiological descriptive study of deaths and mortality of PD is the first step in getting to know the profile of the Polish population of patients. The results of the study together with the data on morbidity will allow to better predict the needs of the public health sector.

Materials and methods: We used public demographic database for Poland published by Polish Central Statistical Office including years 2002-2013 - data on population status and deaths due to PD are encoded according to ICD10 as G20. In analysis we used descriptive statistics and epidemiological indicators as: calculated per 100.000 mortality rate (*MR*), female/male mortality rate (*F/Mm*) and female/male death rate (*F/Md*). Indicators were calculated for the population during the analysed period, also for the 5-year age group, then by sex and residence. In paper we used graphs to illustrate findings.

Results: From 2002 to 2013 number of deaths and *MR* due to PD increased 2.5 times (min - 377 deaths in 2002, max - 953 deaths in 2013). Increase in *MR* and death predominate in the oldest age groups. *F/Md*-1.04 does not show the prevalence of deaths among genders, despite twice higher *MR* of men in particular age groups. Before 55 years, deaths are sporadic. In older age group occurr gradual growth in the number of deaths, which has been highly accelerated since the 70 years old to reach max in the 80-84 age group. After that, number of deaths decreases in the older age groups. *MR*, on the other hand, tends to grow steadily to the oldest age groups. There is an predominance in number of deaths in cities which is not reflected in *MR* indicator.

Conclusions: (1) Trend of deaths and *MR* are typical for old age diseases. The shorter life expectancy of men partly explain greater *MR* in older men, despite the similar deaths number of both sexes. (2) Growth of *MR* from 2003 to 2013 may be due to increase in population morbidity or more accurate collection of statistics. (3) Aging of population from demographic boom does not explain the changes in *MR* in 5-year age groups wchich canbe explain by prolonged life of patients with PD or Shifting upward the average age of disease incidence. (4) Obtained data of much lower *MR* than morbidity given in the review of literature can be explain by: poor diagnosis, inadequate judgment about the cause of death, death of patients due to other causes such as cardiovascular disease, cancer, accidents, etc. or simply a different incidence for Poland.

Title: Legal and ethical aspects of remote health service

Authors: Katarzyna Maria Zoń

Affiliation: Department of Civil Law and Private International Law, Administration and Economics, University of Wrocław, Poland

Introduction: To start with, it should be pointed out that the dynamic development of modern science is significantly influenced on providing health service. Technological advance is also a reason to change the present perception of the doctor-patient relationship. The fundamental element of this close personal bond is confidence.

Aim: The aim of the present paper is to indicate legal framework to the issue of remote health service in the light of Polish law. It means that doctor and patient (or other doctor) are not in the same physical location and they use various types of information and communication technologies for the exchange of valid information.

Materials and methods: An analytical and legal research method has been used to present the subject matter of the paper. In this context both statutory (Act of 5 December 1996 on the medical and dental professions regulations) and deontology regulations (the Code of Medical Ethics) are carefully studied.

Results: According to the art. 2 Act of 5 December 1996 on the medical and dental professions practice, the profession of a physician could provide health services with teleinformatic or communication systems. The text of above regulation is in force since 12 December 2015. Additionally from 1 October 2015 cardiac and geriatric teleconsultation is reimbursed by the National Health Fund. That procedures are government-funded from the state budget. However according to the art. 9 of the Code of Medical Ethics the doctor is obliged to treatment only after medical examination. The exception to this rule is when medical advice can be given only at a distance.

Conclusions: To sum up, providing health services with the teleinformatic or communication systems are admissible in the light of Polish law. It should be highlighted that using this kind of tools depend mostly on medical presumptions. There is no doubt that legal regulation will not replace the doctor's decision, which should be based on experience and circumstances deal with particular patient as illness, health conditions or age.

Title: Obesity: Where Do We Come From? What Are We? Where Are We Going?

Authors: Katarzyna Szot

Affiliation: Department of Pathophysiology, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Background: Over the past 35 years there has been a dramatic increase in obesity and the number of people with excess body weight – BMI > 25kg/m2 has doubled. Body weight is strictly controlled by complex homeostatic mechanisms. Obesity is a condition in which energy intake chronically exceeds energy expenditure. The rising prevalence of obesity results from contemporary environmental and lifestyle factors such as increased access to palatable foods and reduced requirements for physical exercise in comparison to ancient hunter-gatherer lifestyles that were characterized by unpredictable periods of starvation. However, a recent notion has proposed that obesity may be driven by a person's dependence on food in a manner similar to a person's dependence on drugs of abuse, potentially stimulating a pathway contributing to sustained overeating and obesity. The brain biology explain that the circuits with dopamine are involved in motivation of human live and are taken over by addiction process. Vast amounts of resources are invested each year to target the prevention and treatment of obesity, but results tend to be unsatisfactory, and most people regain any lost weight within 2 years.

Aim: This review seeks to attempt describe and explain the usefulness of treatment using in obesity and research investigating the etiology of this condition.

Materials and methods: The paper reviews the scientific literature, clinical trials as well as results of the author's own research concerning epidemiology, pathogenesis and treatment of obesity.

Results: A total of about 29,000 diet programs have been developed so far and many therapeutic programs have been implemented. Interestingly, the long-term effectiveness of weight loss in obesity in the form of diet and lifestyle modifications have been between 3% -5%. Surgical treatment for obesity have reported about 16% of efficacy. To date, pharmaceutical agents have had a limited role in anti-obesity treatment. Strategies adopted included inhibition of absorbtion from the gastrointestinal tract but long term results have remained disappointing. Many drugs for the treatment of obesity despite proven efficacy have been withdrawn due to unacceptable side effects. Althought, strong benefits has been reported for some of these drugs, this agents are relatively rare ways use to treat obesity.

Conclusions: There is no single unifying theory to explain the etiology of obesity. Dietary and psychotherapy treatments of obesity have been proven to be unsuccessful. Modern surgical treatments of obesity have been shown to be effective in achieving significant weight loss with consequent reduction in morbidity but its use concern only morbid obesity and is limited by contraindications. Pharmacological treatment based on the mechanisms against addictions should be considered as a effective and worthwhile matter to develop in obesity treatment.

Title: Diseases which coexist with Clostridium difficile Infection in elderly patients

Authors: Martyna Andreew, Monika Kokot

Affiliation: Scientific Society Department in Internal Medicine, School of Public Health in Bytom, Medical University of Silesia, Katowice, Poland

Introduction: The number of infections caused by Clostridium difficile rises in last years, mainly within elderly, hospitalized persons. The new, high virulent strains of Clostridium difficile (NAP1/BI/027), producing toxins A and B, may be a cause of mild, uncomplicated diarrhoea, through sepsis, right up to death inclusive. They very often provoke more frequent reinfections or hard course of infection. Severe illnesses or co-occurencing diseases, especially requiring a course of antibiotics or extended hospitalization, also enhance a risk of infection of this bacteria.

Aim: The aim of the study is the evaluation of the frequency of diseases which co-occur with Clostridium difficile Infection in elderly patients.

Material & Methods: Retrospective research, leaned against medical documentation analysis of hospitalized patients in Department of Internal Medicine of Specialistic Hospital, in years 2014-2016. Analysis of results was made using Microsoft Excel and Statistica 12.0.

Results: The most frequent reasons of patient's admissions, in which Clostridium difficile was confirmed, using bacteriological test, were: diarrhoea (53,33%), dehydration (46,67%), weakness (40,00%), vomiting (26,67%) and fever (20,00%). Very often among concomitant diseases were: hypertension (73,33%), atherosclerosis (60,00%), less often: rheumatoid arthritis, degenerative disease (20,00% - every). Therapeutic process lasted from 11 to 21 days. Diarrhoea quite often stayed from 15 to 21 days (35,71%). As a result of Clostridium infection, 2 patients died, which corresponds to 13,33% of subjects.

Conclusions: Cardiovascular system diseases was the group of diseases which mainly accompanied hospitalized patients in elderly with Clostridium difficile Infection.

Title: Neurological symptoms - urgently admissions

Authors: Monika Kokot, Martyna Andreew, Agata Malczyk

Affiliation: Students Scientific Society, Department of Internal Medicine, School of Public Health in Bytom, Medical University of Silesia in Katowice, Poland

Introduction: Neurological disorders consist a major medical problem affecting mainly patients who seek hospital emergency service. Proper diagnosis is essential to make rational decisions regarding the conduct and use of effective treatment, especially in neurology. Symptoms suggesting a disease of the nervous system are very commonly reported by patients. Many of these symptoms require urgent hospital treatment. Proper assistance in emergencies is one of the main tasks of hospitals in Poland. This requires appropriate financial resources, proper organization of work in the unit, suitable equipment, qualified personnel and coordinated efforts of many entities.

Aim: Analysis of neurological symptoms that are the most common cause of urgent admissions.

Materials and Methods:. The study group comprised 1908 patients, divided into 4 age groups who reported for acute neurology in 2014. The basis of the study was a retrospective analysis of patients' documentation of the Hospital Emergency Room. Analysis of results was made using Microsoft Excel and Statistica v8.

Results: Patients with neurological symptoms, who were admitted to the emergency room were most often referred by ambulance - 42%, out-patient clinics and specialist clinics - 34%, hospital wards - 8% and other units such as detoxification unit - 0,4%. A significant part of the patients came to the emergency room without a referral - 11%. Of all the patients who visit the emergency room 68% (1254 persons) were admitted to hospital.

Conclusions: 1. Symptoms suggestive of peripheral or central nervous system disease are very often reported by patients of different age groups during the acute neurological duty.2. Headaches and back pains are the most frequent cause of seeking help at the emergency room in the group of young patients, while transient cerebral disturbances, consciousness disturbances, dementia, cancers and Parkinson' disease dominated in patient aged over 65 years. 3. Symptoms of neurological diseases represent a significant health, diagnostic and economic problem.

Title: Assessment of social attitudes towards people over 60 years old in Poland

Authors: Kasperska Paulina, Sokołowska Natalia, Sokołowski Remigiusz, Mazur Ewelina, Podhorecka Marta, Stemplowski Wojciech, Klimkiewicz-Wszelaki Karolina, Główczewska Jadwiga, Kędziora-Kornatowska Kornelia

Affiliation: . Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: The problem of Increasing ammount of older adults in society discrimination in this group age will become a greater importance in the future. Ageism is subject tackled in medical, psychological, social science, etc. Ageism has increasing interest of researchers around the world. Social contacts are the backbone of the proper functioning of society.

Aim: The aim of the study was to determine attitudes towards older adults in the age group of 18-30 years old and to identify the most positive / negative attitudes according to Kogan scale.

Materials and methods: The study included 209 people. The average age of women was about 22, men about 23 years old. Mainly people came from Kujawsko – Pomorskie voivodeship 37% of respondents, themain part in the study, have taken women 85% of respondents. Most of the respondents have completed secondary education. The main study group were pupils, students, doctoral 67% mainly related to medical studies 68%. To evaluate society attitudes towards older adults was used Kogan scale. Statistical analysis was carried out on the basis of the Shapiro-Wilk test, Student's t-test, U Mann-Whitney test, Spearman rank correlation coefficient. For the level of statistical significance was set $p \leq 0.05$.
Results: The results did not confirm the assumed thesis that social attitudes to older people is negative.

Conclusions: Data analysis showed that respondents in the group of 18 - 30 years old, presents ambivalent attitude to the older adults, with tendency to positive attitudes.

Title: E-cigarettes as a healthy way to break up with addiction?

Authors: Piotr Cierpikowski, Aneta Popiel

Affiliation: Students Scientic Society of Thoracic Surgery, Wrocław Medical University, Poland

Introduction: Poland is country where nicotinism is still a public problem. Last years the electronic nicotine delivery system (e-cigarette) has become more popular among smokers as a safer alternative of traditional cigarettes and as a way to break up with smoking. At the same time, with the increasing popularity of e-cigarettes, there are new reports about their toxic effects on body.

Aim: The aim of our study was to analyse current state of knowledge about toxicity of e-cigarettes, their impact on health and application of e-cigarettes in nicotine replacement therapy.

Materials and methods: We performed a comprehensive English literature research published from 1st January 2012 to 30th April 2017 in PubMed database about e-cigarettes.

Results: Numerous studies show that there is a lack of unequivocal evidences that e-cigarettes are effective in reducing or quitting with smoking. E-cigarette still contains of harmful nicotine and additional substances like acetaldehyde, formaldehyde, acrolein, propanal and carcinogenic nitrosamines. Moreover exposure to these substance depends on the type of e-liquid flavour and heating conditions. Smokers are often not aware of consequences. Poor law restrictions about e-smoking may influence on increased usage than traditional cigarettes.

Conclusions: Although e-smoking seems to be related with lower toxicity for people, it is too early to claim that e-cigarette is a safer alternative of traditional tobacco. E-cigarettes cannot be taken into consideration as a healthy way to quit smoking, because we do not know long term effects of e-smoking on our health. Nicotine included in e-cigarette has still an addictive function and smoker is not able to control real dose of nicotine currently.

Title: The relationship between sense of self-efficacy and the health locus of control among diabetics

Authors: Weronika Topka[1], Sławomir Kujawski[2], Agnieszka Kujawska[1], Małgorzata Gajos[1], Radosław Perkowski[1], Joanna Androsiuk-Perkowska[1],Natalia Skierkowska[1], Anna Andruszkiewicz[3]

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3) Department and Health Promotion Facility, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Diabetes is one of the most common diseases of the 21st century. It is called a silent killer and when untreated, often leads to very serious complications. Therefore, the public's awareness of diabetes should be constantly developed. Sense of self-efficacy affects the functioning of a patient. The higher the patient's subjective self-efficacy is, the greater is their impact on the course of the disease and more often demonstrate healthy behavior.

Aim: The aim of the study was to examine the relationship between sense of self-efficacy and the health locus of control in patients with diabetes.

Materials and methods: The study was conducted on 52 patients (28 women and 24 men). The age range was between 19 and 80 years old. Standardized Generalized Self– Efficacy Scale (GSES) adapted by Juczynski and the Multidimensional Health Locus of Control Scale (MHLC)-version B were used. Pearson's r test was used for the analysis of the level of correlation.

Results: Statistical analysis showed that self-efficacy positively correlated with internal locus of health control (r=0,32, p=0,024). No significant correlation was found between self-efficacy and influence of others people (r=0,27, p=0,062) and between self-efficacy and coincidence (r=0,14, p=0,333).

Conclusions: Internal health locus of control was found to predominate among diabetic patients. The greater the sense of self-efficacy, the greater the sense of responsibility for one's own health. The observed trait dominance and their co-occurrence may predispose the examined group to better self-control. Also, health education in the above group will probably be more effective.

Psychiatry & Psychotherapy Session

Jury:

prof. dr hab. n. med. Alina Borkowska

dr hab. n. med. Wiktor Dróżdż

mgr Dominik Chmiel

Moderator:

Katarzyna Kosecka

Kosma Kołodziej

1st prize in Psychiatry & Psychotherapy Session

Title: Compare the effectiveness of Montreal Cognitive Assessment 7.2 and Mini-Mental State Examination in the detection of mild neurocognitive disorder in people over 60 years of age with type 2 diabetes.

Authors: Eliza Oleksy[1], Remigiusz Sokołowski[1], Natalia Sokołowska[1], Karolina Klimkiewicz-Wszelaki[1], Paulina Kasperska[1], Wojciech Stemplowski[1], Justyna Janowska[2], Kornelia Kędziora-Kornatowska[1].

Affiliation: 1. Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland.
2. Provincial Hospital for Neurotic and Mentally Ill, Swiecie, Poland.

Introduction: The prevalence and incidence of type 2 diabetes mellitus (DM) increase with aging. DM is associated with increased risk for mild neurocognitive disorder (mild NCD) in the elderly population, but also seems to accelerate the progression of mild NCD to dementia in elderly people with DM. A meta-analysis of longitudinal studies showed diabetes increased the risk of mild cognitive impairment by 21%.

Aim: This study compares the usefulness of Montreal Cognitive Assessment 7.2 (MoCA 7.2) to Mini-Mental Status Exam (MMSE) for diagnosing mildNCD in DM population.

Results: Cross-sectional study 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 - February 2017. The study involved 204 participants, including 140 people assigned to the group without NCD, and 64 to the group with mild NCD with DM. Recruitment for both groups took place on the basis of specific inclusion and exclusion criteria. Average MoCA 7.2 and MMSE scores demonstrated statistically significant difference between the groups with and without mild NCD ($p < 0.001$). In the ROC curve analysis of the MoCA results, area under the curve (AUC) was 0.736 ($p < 0.001$). The optimal cutoff point for mild NCD was 23/24 with a sensitivity and specificity of 76,3% and 57,7% respectively. In the ROC curve analysis of the MMSE results, area under the curve (AUC) was 0.0,711 ($p < 0.001$). The optimal cut-off point for mild NCD was 27/28 with a sensitivity of 65,8% and specificity of 65,4%..

Conclusions: MoCA 7.2 and MMSE detect mild NCD similary. We propose the use of 23/24 cutoff point for MoCA which has a higher sensitivity than the recommended 27/28 cutoff point. MoCA 7.2 therefore can be used by primary health care and in the geriatric practice as a screening tool in detecting early cognitive impairment in people over 60 years of age with DM.

2nd prize in Psychiatry & Psychotherapy Session

Title: Studies of excessive prolactin secretion may shed light on the pathopsychology of mood disorders, including depression.

Authors: Sara Świerczyńska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Background: The study of prolactin secretion may be informative of the status of the central dopaminergic system in depressed patients. The dopaminergic system is not the only neuroendocrine system regulating the release of PRL. Since dysregulation of the central neurotransmitters function has been reported in depression, studies of prolactin secretion may shed light on the pathophysiology of mood disorders. Stress is a critical factor that may lead to depressive disorders. Prolactin is also secreted from the pituitary in response to a number of stressors. It has been hypothesized that prolactin modulates the activity of the HPA axis through a reduction of neural inputs to the hypothalamus.

Aim: The aim of the present review is to examine the relationship between hyperprolactinaemia and the occurrence of symptoms of depression, as well as to show the relationship between excessive secretion of prolactin and increased stress. Another purpose is to evaluate depression levels and health status and its relationship with insulin resistance and decreased estrogen in hyperprolactinaemic population.

Materials & methods: This review is based on English-language studies published since 1995 searched with PubMed database. Keyword search combinations were extensive, including depression, prolactin, hyperprolactinemia and more. Final list of articles described research, in which the role of prolactin in the pathophysiology of depression was shown.

Results: The results of many researched studies have confirmed the correlation between oversecretion of prolactin and psychiatric disorders with emphasis on depression. All analysed research works have indicated that hyperprolactinaemic patients were more depressive. Hyperprolactinaemic patients may express more prolactin receptors in the brain. Chronic stress exposure and depressive states are known to affect neurogenesis. According to several reports prolactin may regulate neurogenesis and play a role in mood regulation. Hyperprolactinemia was also found to be diabetogenic. Reduced glucose tolerance may cause insulin resistance, which is associated with major depression. The prevalence rates of depression in population with diabetes mellitus are 3 times higher than in healthy patients.

Conclusions: In summary, there is a significant relationship between the occurrence of symptoms of depression and elevated serum prolactin levels. It is widely accepted that depression is associated with hyperprolactinaemic state but the mechanism needs to be clarified. Probably, a correlation between depression and decreased estrogen levels may play a role in hyperprolactinaemic patients. Furthermore, insulin resistance may also contribute to the psychopathology of depressive disorder. Recent findings also emphasize a potential role of emotional stress in either prolactin secreting pituitary tumours or idiopathic hyperprolactinaemia. It is conceivable that a reduction in life stress may be beneficial.

3rd prize in Psychiatry & Psychotherapy Session

Title: Difficulties in treating a patient with obsessive compulsive disorder: case report.

Authors: Marta Kułaga, Ewa Goździewska, Kacper Miętkiewicz, Anna Grzesińska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz

Introduction: Purpose of the paper is to present a case report of a patient diagnosed with Obsessive compulsive disorder. In my research, I would like to consider his medical treatment and get to know the mechanisms that cause lack of response to drugs after periods of usage.

Case report: Male patient, 51 y.o. Suffers from obsessive compulsive disorder for 35 years. He was already hospitalised 23 times. Currently he stays at psychotic ward. He has constant obsessions, especially about money and safety. He feels compulsions to wash hands 15 times a day and is anxious if he doesn't check the doors and leaks a few times before going out. His mood is stable and euthymic. He denies any suicidial thoughts now and in the past. The patient cannot connect the beginning of his illness with any life experiences. His disease progressed slowly and his symptoms went worse over time. Furthermore, there are no indications of psychiatric diseases in his family, not even among far relatives. After each hospital stay the patient gets treatment. His symptoms decrease and his state of being elevates. Patient claims he is taking his prescribed drugs regulary, however after around half a year they stop working and his obsessions aggraviates. His treatment gets changed and the cycle begins again. The patient suffers from hypertention aswell. He used to smoke for 6 years, now he quit. Currently the patient intakes pregabalinum, paroxetine, venlafaxinum, gabapentinum, buspiron hydrochloridum, quentiapinum, indapamidum, perindoprilum, amlodypine, mebeverini hydrochloridium. During previous treatment he was prescribed with Sertralinum, duloxetine and vortioxetine. In 2007 he underwent bilateral cingulotomy that didn't give any positive effect.

Discussion/Conclusion: The patient is treated with polypharmacy - drugs that may interact with each other. Lack of therapeutical effect can be also caused by his varriation in CYP genes. Hyperactive CYP2D6 or CYP2C19 can cause rapid metabolism and inefficiency of treatment. It is also possible, that the patient has unstable and hostile atmosphere at home and that causes his slow decompensation after leaving hospital. In case of this patient I would recomment continuing included treatment and adding cognitive-behavioral treatment, although the patient is reluctant. It is also reasonable to consider deep brain stimulation.

Title: Depression and anxiety symptoms in surgical patients

Authors: Michał Mokrzycki, Anna Knapik, Krzysztof Kocot, Diana Sikora, Martyna Kozłowska

Affiliation: Department of Psychiatry and Psychotherapy, Medical University of Silesia, Katowice, Poland

Introduction: In surgical patients proper psychological care positively affects such aspects as hospitalization time (thus reducing the treatment cost), the severity of pain experienced by patients and most importantly, the post-surgical convalescence.

Aim: The aim of the study was to determine the severity of anxiety (both State-Anxiety and Trait-Anxiety) and depressive symptoms in patients prepared for surgical procedures in correlation with psychosocial factors.

Material and methods: Among 300 patients asked to participate in the study 253 people (83,6%) completed all questionnaires – State-Trait Anxiety Inventory (STAI), Beck Depression Inventory (BDI) and sociodemographic questionnaire. The study has been approved by the Bioethical Committee of Medical University of Silesia in Katowice.

Results:In the study group there were 253 patients, 118 females and 135 males,average age was 55.4 years. The meanscore on State-Anxiety Inventory was 41.9 points; 44.7 for women and 39.4 for men. The mean score on Trait-Anxiety Inventory for whole group was 36.2 points; 38.6 for women and 34.1 for men. 33.9% of patients had a BDI score indicating moderate depressive symptoms, while 8.4% - severe depressive symptoms. Among sociodemographic factors positively correlated with State-Anxiety were living in concubinage, divorce and having children.

Conclusions: The group of patients assessed in the study presented relatively high levels of anxiety and depression. Thus, we conclude that this group of patients require pharmacological care to minimalize the discomfort before the surgical procedure. That would result in better convalescence and significantly decrease the hospitalization cost.

Title: Case report of a patient with schizophrenia and frequent relapses.

Authors: Ewa Goździeska, Kacper Miętkiewicz, Marta Kułaga, Anna Grzesińska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: In this paper I would like to present a patient with schizophrenia and consider the reasons of Her frequent relapses despite proper treatment.

Case report: Female patient, 52 years old. She was diagnosed with paranoidal schizophrenia 28 years ago and is frequently hospitalised. She stays at psychotic ward since 27.02.2017.At arrival She was delusional and claimed that She is pregnant or that Her fetal water has gone and that She gave birth to a dead baby. The patient was examined gynecologically, evidence of pregnancy wasn't found. The patient is very religious. She believed God helped to get Her pregnant. She had strong mood swings, Her affect was inappropriate and She showed clear signs of personality desintegration. She was aggresive and had to be restrained and given haloperidol. She reported a lot of somatic pain and demanded medical consultations.Currently She claims She is aware, that She was not pregnant and that She was dellusional. She has euthymic mood and shows clear signs of improvement. She denies the thoughts and tendencies of suicide.In Her medical history there was one more episode of delussions of pregnancy. There have been frequent episodes of escape from home. After hospitalisation Her state was stable.She is treated with aripiprazolum, clozapinum, acidum valproicum, ziprazidonum, haloperidolum.The patient claims that group therapy helps Her. She feel good, at the hospital. In the past She gave birth to 3 children, after each pregnancy She reported lowered drive. Her third child was taken from Her because of Her neglections in upbringing. The patient also has hypertension, type II diabetes and COPD. There was no psychiatric illness in the patient's family.

Conclusions: The cause of the first episode of schizophrenia could have been the death of an uncle 28 years ago. Also 28 years ago the patient gave birth to a baby which could be associated with a deepening of negative emotions and stressors. Taking away Her rights to take care of third baby seems to have strong impact on our patient. During each hospitalisation the patient's symtpoms deccelerate and Her delusions disappear. However after going back home She quickly decompensates. It is reasonable to consider the adherence of the patient. I would recommend checking the drug concentration in plasma. Lack of therapeutical effect might be cause by not taking prescribed drugs. Since the patient is deprived of freedom, I would recommend continuing the patient's therapy with same drugs and instruct her daughter on controlling the patient's drug intake.

Title: Dissociactive disorder. Major diagnostic problem - case study.

Authors: Maksymilian Młodyszewski, Aleksandra Kucza, Sara Szymczak

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Dissociative disorders are characterized by a disruption of the normal integration of consciousness, memory, identity, emotion, perception, motor control, and behavior. This disorder is associated with overwhelming experiences, traumatic events or abuse that occurred in childhood. Somatic symptomes are also present in many cases.

Case report: We present a case of a 20-year-old patient, who was diagnosed with dissociative disorder. Her first symptoms were somatic – amenorrhoea, weight loss, abnormalities of gait, speech or swallowing, muscle weakness or trouble breathing. Due to this fact she was being diagnosed internally, gynecologically and neurologically, however no final diagnosis was settled. In the meantime the patient's contidion was getting worse. As the time passed by, clinicists payed attention to psychopathological symptomes. Therefore, the psychiatric source was concidered as probable. The patient lost proper perception of her body, having significant problems with its control. She did not feel physiological needs – starvation, bellyful, thirst, pressure on bladder. Therefore she controlling it in accordance with specially prepared schedule. She did not feel taste and pain. She claimed she had not felt such emotions like anger, fear, anxiety or happiness. She described herself as a “robot without feelings”. It is of the utmost importance that the patient consequently maintained that her symptoms had been caused by overexploitation of organism, intensive study at school, chronic stress associated with family situation, low self-esteem, insufficient sleep time as well as excessive ambition. The patient is a helpful person who gives priority to other people’s needs. The patient claimed that she had not obtained warm feelings from her mother. Her father is – in her relation – obedient to her mother, yet patient identifies strongly with him. However, both parents and other relatives were rather demanding, putting her under pressure and expecting success at school. Another source of the patient’s stress was the conflict in patient's home between her mother and grandmother. Having regard to the abovementioned circumstances, the patient was diagnosed with dissociative disorder.T hanks to psychotherapeutical process and pharmacotherapy, somatic symptoms weakened. Currently the patient continues psychotherapy, feels motivated and “doesn't want to feel like a robot anymore”.

Conclusions: This case indicates that somatic symptoms, sometimes severe, might result from psychiatric disorders. Role of a psychiatrist in diagnostic process can be significant, however it is important to exclude internal causes of one's disease.

Title: Influence of family life on the course of mixed anxiety disorder, obsessive-compulsive disorder and mixed personality trait on presented patient.

Authors: Kacper Miętkiewicz, Marta Kułaga, Ewa Goździewska, Anna Grzesińska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Etiology of mixed anxiety disorder, obsessive-compulsive disorder and mixed personality trait- anankastic and emotionally unstable impulsive type on presented patient. Mixed anxiety disorder: finding a number of different anxiety disorders, as in the patient the presence of disturbances in the form of social phobia, fear of humiliation, fear of sudden death. Obsessive-compulsive disorder (OCD): recurring obtrusive thoughts and/ or obtrusive activities. Mixed personality traits: anankastic personality- exaggerated care for order, perfectionism, excessive commitment to work. Emotionally unstable impulsive type of personality- unexpected actions without regard for the consequences, tendency to argue and to conflict with others, instability. The purpose of my work is to present the history of the patient's illness and reference to it in the form of analysis of factors mainly family, which caused mixed anxiety disorders, OCD and mixed personality traits.

Case report: 34 years old, male. He comes from a broken family. Father went to the United States when the patient was in kindergarten. Before father's departure there were constants quarrels between mother and father, violence in the family, disloyalty. Parents controled all patient activity. In primary school, first OCD and anxiety disorder In the continuous repeat of one sentence, fear of humiliation. From elementary school to high school, rebellion against mother and stepfather. At the age of 18 dangerous behavior: driving under the influence of alcohol, fights. On studies and after them decreased mood, increasing anxiety disorder- distrust to others, fear of being poisoned and increasing OCD- for example washing hands 10 times after opening the refrigerator. Short relationship destroyed by lack of trust. Psychiatrically treated since 2011 due to anxiety disorders of social phobia and OCD. In therapy in the past there were applied lamotrigine with paroxetine with good response. After using sertraline the patient reported malaise. Patient from december 2016 until march 2017 in the anxiety disorder ward. Psychotherapy is being conducted and pharmacological treatment with valproic acid and fluoxetine.

Conclusions: Psychiatric disorders of the patient have a background in behavior in the family. Mother is associated with control and pedantics, which caused the development of obsession and the development of anankastic traits. The absence of parental love has translated into a lack of trust in people thereby social phobia. Aggressive behavior to others had origin in instinctive hostility to others. The patient developed defensive mechanisms in the form of compulsion in situations in which he feel fear. Emotionally unstable results from experiencing extreme feelings, patient hates his mother but subconsciously feel that despite everything he loved her. Psychotherapy combined with medications give positive results. The patient tries to correct his behavior.

Title: Borderline Personality Disorders and its consequences in adult life

Authors: Kinga Opalińska, Karolina Pawłowska, Maciej Wołkowicki, Anna Grzesińska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Borderline Personality Disorder mainly affects young women and it is characterised by instability in interpersonal relationship, affective instability and difficulty in assessing needs and emotions. Patients with Borderline Personality Disorder present symptoms from a range of affective disorders. Affective instability may predispose to overuse or abuse of alcohol (alcoholism) and other drugs. It may also lead to medications and psychopharmaceutical overdose. Sometimes, in the course of this disorder, psychotic symptoms may also occur, such as single episodes of auditory and visual hallucinations or delusions.

Case report: Our presented clinical example is a 19 year- old woman who was diagnosed with Borderline Personality Disorder a year ago. She also had a depression episode. The patient has been under psychiatric care since the age of 11. During the childhood she was treated for behavioral and emotional disorders. In the past she was hospitalized for high emotional lability, self- harm and suicidal behavior. The family environment, in which the scheme of âperfect family" and âfamily without problems" was noticed, has influenced the development of this disease. The patient has experienced an emotional and physical violence from her parents and the whole home atmosphere was characterized by aggression and emotional coldness. For her, it was difficult to understand the attitudes of parents who had intellectual knowledge of violence and one of them was a healthcare professional. In medical history, the patient expressed her rebellion by using psychoactive substances, drinking alcohol and being aggressive towards other people. Moreover, she showed no need to contact with peers and she displayed the lack of ability to express feelings. She was alleviating her suffering by acting socially in an organization focused on helping people and taking up veterinary school. Working with animals, especially using scalpel and other sharp surgical instruments, gave her consolation and helped to discharge emotions . It was substitute for self- harm what allowed her to relieve emotional tension.

Conclusions: The patient has been under cognitive â behavioral and psychodynamic psychotherapy since childhood. She has been pharmacological treated â currently with lamotrigine and citalopram with a good therapeutic effect. Disorders with suicidal and self-destructive behavior (sometimes confused with bipolar disorder) require special diagnostic and therapeutic attention.

Title: OCD - a disease with multiple symptoms, complicated therapy and significant life impairment

Authors: Wołkowiecki Maciej, Opalińska Kinga, Karolina Pawłowska, Anna Grzesińska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Obsessive-compulsive disorder is a mental disorder, which begins in as many as 80% of cases before the age of 25, without sex's predilection.The sufferer is characterized by the compulsion to perform specific activities, ie compulsion, in order to reduce tension and fear of some absurd event they are aware of or the presence of obsessive thoughts or the occurrence of one or another unanimously Generally, in most cases these experiences are unpleasant. These kind of disorders are chronic, with remissions occurring multifaceted and depending on the patient's current emotional state.In some patients we can observe the complete disappearance of symptoms, while(but) in others the disease unfortunately is constntly progressing.Moreover, it is often associated with another disorder -fear, which is most often a cause of obsessive compulsive disorder.

Case report: We would like to present a case of a 51 year- old patient who has suffered from obsessive-compulsive disorder from the age of 16, psychiatrically treated from age 20.The patient has been hospitalized repeatedly because of recurrent complaints of compulsive disorder and obsessive thoughts, and to the modification of treatment, which was not effective over time.He was given bilateral stereotactic cingulotomy to reduce the symptoms of OCD in 2007.In addition, during the time of illness, the patient had three times the episode of depression, which was probably due to the pharmacological treatment .This disease has led to a significant impairment of the functioning of this patient.His career, social life and family - all of these has been marked by this condition.Whenever patient has undertook new job or met a new woman, symptoms of disorder - obsessions or compulsions were returning due to new sources of a fear. He was not able to maintain relationship any longer, because he was afraid of sexually transmitted disorders and cheating.What is interesting, patient informed that he was in jail for 2,5 years. This situation happened because he did not want to take military service what was associated with his fear and compulsions.Then, according to him, there was a significant deterioration in his mental state.This patient gives an example how setting the correct treatment can be complicated.

Conclusions: The compulsive thoughts, anxiety and depression which is often present in this illness may be a result of treatment or a symptom of a refractory illness due to repeatedly unpleasant feelings and difficulties in daily life make the treatment very complicated. Therapy and drugs covering all these ailments must be constantly analyzed and modified depending on the changing efficacy.

Title: Diagnostic difficulties in patient with anxiety disorders and schizophrenia - Case report.

Authors: Joanna Zielińska, Jakub Piejko, Anna Grzesińska

Affiliation: Department of Psychiatry, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: The diagnosis of schizophrenia requires a multidimensional examination of a variety of symptoms, which the patient presents. What are the causes of their occurrence? In our clinical practice we frequently ask ourselves this question, especially when the patient is a young man whose personality is only emerging. Lack of acceptance, both physical and psychological violence from the relatives certainly have a negative impact on a child's development.

Case report: The patient, 19, a first-year history student, living with his mother and stepfather, under psychiatric treatment since the age of 14. For the very first time psychiatrically hospitalized in 2014, where he joined with signs of a strong suspicion of psychoses diagnosed as ICD10-F21 type of schizophrenia. Has taken olanzapine-10 mg/d and valproic acid – 1500 mg/d. The patient shall be, as a person with a history of many adaptation difficulties from a very young age. According to the patient, since the primary school, in situations stressful for him he has felt anxiety, which was revealed by: cold hands, trembling right hand, numbness in his gums and stomach, tachycardia, and "aphasia". Currently, the anxiety with vegetal symptoms occurs to the patient almost every day. The patient experienced disorganized bonds models, was abused mentally and physically by his father, which was neglected by the other members of the family. The most recent stressful factor seems to be the start of education in the first year of study. The patient's statements indicate that this is a significant event not only in his life but also a breakthrough for his family, as "nobody managed to get so far".The patient is experiencing internal conflicts going as far as the excitement of experiences resulting from having taken such a substantial decision on starting higher education, often highlighting in a bizarre way its uniqueness vs. Depression – a sense of as if it did not fit into this world

Conclusions: Undeniably dramatic consequences for the development of the patient result from the abuse from his father. They do not affect his mental state in a positive way , resulting in: mistrust, anxiety, anger and complexes, which the patient tries to mask by highlighting in an unnatural way his own achievements and expertise. Diagnostic difficulties are associated with flowing in two directions: anxiety disorders and symptoms that meet criteria for ICD10 of schizophrenia. The most important goal now is to cure the main disease which is schizophrenia. To bring it to the state of remission will allow us to take parallel treatment of anxiety disorders applying the cognitive-behavioural therapy. In the case of the patient the highest priority is to regulate the family situation, which will help to stabilize his emotions, leading in the future to the limited number of exacerbations of the disease.

Title: Mental health of the sexual minorities.

Authors: Kosma Kołodziej, Katarzyna Kosecka

Affiliation: Department of Neuropsychology, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: There is evidence of heightened vulnerability to suicidal behaviors among LGBT populations and mental problems which are related with lack of acceptance, minority stress, exclusion and homophobia .

Aim: The specific aim of this presentation is to identify factors related to mental problems, suicides in LGBT individuals and factors protecting against this

Materials & methods: This review is based on English-language studies published searched with PubMed database and own research results collected on the basis of anonymous web-based surveys of 476 people LGBT aged below 25 in Poland conducted in July and August 2016.

Results: The results of many researched studies have confirmed the correlation between non-heterosexual orientation and the number of occurrences depression, suicidal thoughts, suicide attempts, minority stress, eating disorders, etc. Similar results were obtained in own research in group of LGBT youth in Poland where suicidal thoughts occurred in 70% of the study group and episode of suicide attempt in 30%.

Conclusions: Specific predictive factors for suicide in LGBT populations , including significantly poorer mental health. Should be taken care of to the quality of life of LGBT's group And reduce of homophobia and lack of acceptance. It is necessary to educate medical personnel, psychiatrists, psychologists and teachers to strive to improve the quality of life of LGBT youth in a professional way.

Physiotherapy & Orthopedics Session

Jury:

dr n. med. Agnieszka Strączyńska

dr n. med. Agnieszka Radzimińska

dr n. med. Katarzyna Strojek

Moderator:

Radosław Perkowski

1st prize in Physiotherapy & Orthopedics Session

Title: Effects of Myofascial Release in chronic low back pain - review papers.

Authors: Piotr Ożóg, Dawid Natański
Affiliation: Department of Physiotherapy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Dysfunction of the lower back and the resulting symptoms are one of the most common problems of movement patterns among modern societies around the world and their incidence increases with age. Particularly serious problems are chronic, for a long time limiting physical fitness and mobility, but also a significant diagnostic problem. One of the therapeutic options that can be used for chronic low back pain syndromes are myofascial release techniques, one of the latest methods in manual medicine focused on working with the myofascial system.

Aim: To review the recently published literature in the field of manual therapy to evaluate the effectiveness of myofascial release therapy as a treatment for chronic low back pain.

Materials and methods: An electronic search was conducted at four databases: PubMed, PEDro (Physiotherapy Evidence Database), ScienceDirect and Academic Search Premier from last 5 years, with key words myofascial release, myofascial release therapy, myofascial pain, chronic low back pain.

Results: In this overview of the literature, we included 7 studies evaluating the effects of different lengths of series of myofascial release therapy on pain and range of motion, disability, muscle work as well as quality of life in people with chronic low back pain. In addition, the review included 4 studies evaluating the use of self-myofascial release, performed alone by the patient to improve the mobility of the hip and spine, which is very important in case of chronic low back pain.

Conclusions: The results from these studies showed evidence that myofascial release in groups with chronic low back pain reduces pain and disability, improves mobility, and quality of life. This indicates the validity of the use of this type of therapy among people with this disease. In addition, recent studies have confirmed the beneficial effect of self-myofascial release on hip mobility. Given that often people with chronic low back pain have also limitation of mobility of the hip, it is worth to complement the physiotherapist's practice of self-myofascial release exercises performed by the patient to support the therapeutic effects as well as prevent of recurrence of the symptoms.

2nd prize in Physiotherapy & Orthopedics Session

Title: Upper limb biomechanical examination among professional Street Workout players.

Authors: Jakub Myszkowski, Paulina Zawadzka, Weronika Hańczewska
Affiliation: Karol Marcinkowski Poznan University of Medical Sciences, Poznań, Poland

Introduction: Street workout is part of calisthenics which descends from cities in which elements of sprawl were mainly used for exercises with one's body mass. Endurance and strength training aim to develop shoulder girdle and trunk efficiency. Street workout splits into strength and freestyle section. The first one consists of pull-ups, muscle-ups, push-ups, toes to bar, pull overs on bar, dips, strengthening of trunk, abdomen and back muscles. The players aim is to perform the exercise, using as least body chain as possible, kipping and making sure the whole muscle tone is held. In such type of training muscles, tendons and ligament of joints overstraining is desired. The injuries often occur in wrists, shoulders and vertebrae.

Aim: The aim of the study was to assess the upper limb biomechanical parameters and proprioception by joint position sense among professional street workout players.

Materials and methods: 11 street workout players (all men, average age: 29,5) were examined with Biodex System 4 Pro isokinetic protocol for shoulder flexion-extension, abduction-adduction and rotation, elbow flexion-extension and wrist dorsal and palmar flexion. To assess joint position sense the device for shoulder flexion and adduction was provide. Upper limb muscles were assessed by electronic dynamometer. To examine the hand function the global grip strength were measured. To evaluate the risk of injury players filled in the authors questionnaire composed of training specification questions.

Results: There were no significant difference ($p>0,05$) between shoulder muscles groups examined by peak torque, average peak torque, total work, agonist/antagonist ratio measured in flexion, extension, abduction, adduction and rotations due to limb dominance. The same results were observed during the isokinetic biomechanical examination of elbow and wrist muscles. The joint position sense error of active reproduction were 4,7 degrees for dominant and 5,1 for nondominant limb for flexion movement – non significant. Average shoulder flexion strength were 12,4 kg for dominant and 12,3 kg for nondominant limb. The difference between rotators strength were also nonsignificant. The average global grip strength were 51,8 kg for dominant and 52,4 kg for nondominant limb.

Conclusions: The street workout is a developmental training used in army, martial arts, athletics, parkout which fulfills training program. The exercises are performed symmetrically what helps in eliminating the differences between upper limbs action. The exercises are muscle isolated but engage the whole muscle groups. The wide variety of exercises such as planks, front level, back level or human flag have a positive influence on stability of core muscles. It is also important for proproception because the accurate kinaesthetic patterns are being repeated. Street Workout training is responsible for maintaining muscles biomechanical and proprioception equilibrium

3rd prize in Physiotherapy & Orthopedics Session

Title: Comparative analysis of the impact of high tone therapy and vibroacoustic therapy in patients with osteoarthritis of the knee joints.

Authors: Karolina Klimkiewicz-Wszelaki, Anna Grochowska, Natalia Sokołowska, Remigiusz Sokołowski, Paulina Kasperska, Wojciech Stemplowski.

Affiliation: . Department and Clinic of Geriatrics, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz, Poland

Introduction: Osteoarthritis has already been named a 21st century epidemic due to its prevalence. The initial symptoms appear after 50 years of age. At 65-75 years of age, full-spectrum osteoarthritis is a rule. The most common symptoms in patients are: pain, stiffness of the joint and limitation of mobility, which is often accompanied by muscular dystrophy.

Aim: The aim of this study was comparative analysis of the impact of high tone therapy and vibroacoustic therapy in patients with osteoarthritis of the knee joints.

Materials and methods: The study involved 56 patients aged 52 to 79, who were randomized in two treatment groups. The first group consisted of 28 patients was treated with high tone therapy (WaDiT ®), meanwhile the second group was treated with vibroacoustic therapy (Vitafon-T®). Therapy consisted of 10 treatments performed daily for two weeks. In order to compare the effectiveness of selected treatments, all persons underwent a procedure. The diagnostic part of the study consisted of: questionnaire, assessment of pain (according to VAS scale), measurement of the knee joint by the patella (centimeter measure), functional tests.

Results: In the group I studied, statistically significant decreases in circulars in the knee joints. There was a decrease in swelling on average by 1 cm. In the second group the change was noted by an average of 0.6 cm. Analysis of all results and mean differences in subjective and functional tests showed that better results were obtained in patients who received high tone therapy.

Conclusions: The high tone therapy and vibroacoustic therapy have contributed to reducing pain in knee degeneration. In a similar impact on the reduction of exudation and circumference reduction of the knee joint.

Title: The influence of myofascial therapy on the mobility range - review of the study

Authors: Dawid Natański, Piotr Ożóg

Affiliation: Department of Physiotherapy, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Recently, fascia tissue has been growing in popularity among researchers. It is indicated by a growing number of scientific publications. More researchers discover unusual properties of this structure concerning functioning of the whole organism. Fascia, which belongs to a connective tissue group, initially was treated only as an outer covering for muscles. Further study has revealed that it also takes part in creating ligaments, joint capsules as well as retinaculum. Together with muscle tissue, it guarantees the basic function of a human body which is movement. Being long in static positions as well as lack of physical activity very often lead to appearance of restriction within myofascial tissue. The consequence of this is the stirring of body compensation, which in turn conduces to development of various types of pain. Along with growing knowledge on fascia development, a numerous methods of study with this tissue have arisen. Their implementation conditions not only a decrease of pain, but also correcting body posture within global motion patterns. Removal of restriction within myofascial tissue in a direct way leads to increasing the range of mobility in certain body parts.

Aim: The purpose of this thesis has been garnering the newest scientific reports in terms of the impact of myofascial therapy on the range motion of spine as well as peripheral joint.

Materials and methods: In order to collect the scientific reports, the Internet databases such as: PubMed, Pedro (Physiotherapy Evidence Database), ScienceDirect and Academic Search Premier have been used. For publication, only the theses which appeared during last 10 years have been included. The publications were searched with following keywords: rolfing, myofascial therapy, manual therapy, the range of mobility, trigger point.

Results: The thesis includes 12 publications concerning the influence of different myofascial therapy methods on the range of peripheral and spine joints' movability. Seven out of these concern peripheral joints and five concern spine.

Conclusions: Based on collected materials a following conclusion can be made: the myofascial therapy has a crucial impact on improving mobility range in peripheral joint as well as in spine. In comparison with traditional methods of increasing the mobility range of the whole body, the work on myofascial tissue results in better outcomes. The durability of achieved correction is also much more permanent.

Title: Test and Comparison of the system of postural control between rowers and people who do not practise any sport.

Authors: Dawid Natański[1], Wojciech Hagner[2], Agnieszka Radzimińska[1], Piotr Ożóg[1]

Affiliation: Department of Physiotherapy[1], Department of Rehabilitation[2], Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Postural control of a body is one of the basic motor abilities. It`s effect is crucial during different body activities. Thus, man is able to keep vertical position of their body through the proper action of this complex system. This capacity is essential in case of sportsmen. It guarantees economic movements, furthermore prevents any injuries.

Aim: The aim is to test and compare the system of postural control in case of rowers and people who do not practise any sport.

Materials and methods: Forty people took part in the research, they were divided into two halves. There were twenty members in a control group and twenty members in a research group. In the first one there were people with no experience in professional physical activities. Moreover, there was the research group consisted of the sportsmen from the Rowing Regional Club LOTTO Bydgostia. The research on a postural control system was taken on a posturography platform. It was divided into three levels: firstly a patient was standing on both legs, next he/she was standing on a dominant leg and lastly on a weak one. Each level consisted of two parts: measurements with eyes open and with eyes closed.

Results: A statistic analyze of the research results shows that the rowers gained higher parameters than the matching parameters of the control group members.

Conclusions: People who practice rowing achieved worse posturgraphy parameters. Average length of radius during standing on a weak leg with eyes open and closed, as well as measure of pole height with eyes open and closed, appeared to be a crucial statistic values.

Title: Total hip replacement in primary osteoarthritis: intraoperative and early postoperative complications.

Authors: Edgars Barlots, Prof. Andris Jumtiņš MD

Affiliation: Traumatology and Orthopedics Hospital, Rīga Stradiņš University Latvia

Introduction: Primary osteoarthritis is the most common type of osteoarthritis in the world and also in Latvia. Hip arthroplasty well helps for patients whom conservative therapy does not help relieve pain and daytime functions. This surgery has a low rate of complications and improves patients' quality of life and daily activities. These operations are carried out each year, more and more, for older and more comorbid people. And it might also increase the risk of complications, but at the same time the modern medicine is rapidly developing in the field of hip arthroplasties.

Aim: The aim was to determine the intraoperative and early postoperative complications, their frequency and association with potential risk factors for patients after primary total hip replacement.

Materials and methods: Data was gathered from the Traumatology and Orthopedics Hospital registry of patients with a diagnosis of M16.0 (primary coxarthrosis, bilateral) and M16.1 (other primary coxarthrosis) in the period from 1 March 2016 to 31 May. Data was collected and analyzed according to world's literature about the epidemiology of complications in intraoperative and early postoperative period for patients after primary total hip arthroplasty and compared with the results obtained in the study. As well, complications and their relation to various risk factors were determined.

Results: primary osteoarthritis as diagnosis was 80% (n = 247) from all 309 medical histories, which were examined in the necessary period. Excluding criteria met 62 medical histories. The patients most commonly were overweighted, female, eldery people and polymorbid. That population was similar described in the literature.The overall complication rate was 11.3% of which 7.7% (n = 19) were systemic and 4% (n = 10) were local complications. Severe complications was in 5.3% (n=13) which were stroke, syncope, severe hypotensia, arrhythmias, subdural hematoma, evacuation of hematoma, cement implantation syndrome stage 2, periprostetic fracture B1 type after Vancouver classification, severe bleeding, death.

Conclusions: The overall complication rate is slightly higher than in the literature, but separately comparing each of complications may be concluded, that the incidence is similar, and many complications occurred even less frequently than the literature mentioned. This could be due to the fact, that all patients were prepared for a planned operation. Subdural hematoma with cauda equina syndrome was very uncommon complication, which required most days of hospitalization.

Title: The impact of Kinesiologytaping methods on the functionality and pain of a knee joint in patients with knee osteoarthrosis.

Authors: Piotr Ożóg[1], Dawid Natański[1], Wojciech Hagner[2], Magdalena Weber-Rajek[1],

Affiliation: Department of Physiotherapy[1], Department of Rehabilitation[2], Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: A knee joint is particularly vulnerable to many overloads. Especially, in case of disorders that appear only in a knee area, but also in the rest of a body. Thus, the knee is one of the places that are mainly degenerated. The KinesiologyTaping is a popular physiotherapeutic method, which is used to reduce the symptoms of the knee osteoarthrosis.

Aim: The purpose is to present three actions, which are the most difficult for patients with gonarthrosis. Additionally, the goal is to show an influence of the KinesiologyTaping on the symptoms and functionality of knee joint among the patients with this kind of disease.

Materials and methods: Forty people with symptoms of gonarthrosis, which was verified on the medical diagnosis. The patients were divided randomly into two groups- research and control (without taping). The survey was used in each groups: part A (it was filled once before the examination) – demographics questions and a request about selected risk factors of the disease, and Part B - modified questionnaire WOMAC Osteoarthritis Index, which was filled twice, before and three days after applications on the quadriceps femoris muscles and the patellar ligaments in the research group. In each group also performed twice the measurement of knee flexion and functional test „Timed Up and Go" (TUG)".

Results: The most difficult for the patients is: walking, going in and out of a bath, as well as going up and down the stairs. Statistic analyze presents a crucial difference between the results of both groups. Patients in the KinesiologyTaping group showed significant reduction in pain and stiffness, moreover there is an improvement in the functionality of knee joint.

Conclusions : The greatest difficulty for the patients is : walking, going in and out of a bath, which can be caused by a strong involvement of the quadriceps femoris muscles and an increase of compression on the knee joint area. The KinesiologyTaping has a great influence on the reduction of the symptoms and the functionality of the knee joint improvement among the patients.

Title: Massage During Pregnancy - a systematic literature review.

Authors: Katarzyna Urtnowska MSc [1] Grzegorz Ludwikowski MD PhD [1], Irena Bułatowicz MD PhD [2] , Karolina Suwała MSc [3],

Affiliation: 1) Obstetrics Department, Reproductive Medicine and Andrology Section;

2) Physiotherapy Department, Clinical Physiotherapy Section

3) Public Health Department, Visual System Biology Section, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Pregnancy, as a period of significant and dynamic changes in womans body, often results in serious ailments from the movement system and therefore can be named a therapeutic problem. Massage, however, is one of the most popular forms of treatment for muscoletal illnesses, pain therapy, relaxation and body care. However, prenatal massage is still a new and often controversial subject - future mothers and their doctors often don't know about the possibility of performing this kind of treatment or they are overly concerned about its safety. Conducted under appropriate conditions, with proper methods, however, pregnancy massage can bring a lot of benefits for the future mother.

Aim: The aim of the study was to present the advantages of prenatal massage, to discuss the indications and contraindications, and show how to perform the procedure in a safe way.

Materials and Methods: The method used in the study was the analysis of the available literature on the subject of the massage of a pregnant woman, and foreign publications of studies confirming the beneficial effect of the procedure.

Results: The topic of massage of pregnant women in Poland is extremely rare, there are very few review papers and even fewer research projects confirming the benefits of the procedure. However, foreign studies proved the beneficial effect of relaxing massage in pregnancy such as: reduction of back pain, improvement of mother's well-being, the occurrence of "Baby blues" phenomenon and postpartum depression, strengthening the emotional bond in the case of partner massage

Conclusions: Massage therapy is possible to conduct during pregnancy and brings a lot of benefits for a future mother. There is still not enough knowledge and awareness about the procedure among physiotherapists and massage therapists, even though there are available studies confirming the safety of this method.

Sensory Organs Session

Jury:

dr hab. n. med. Wojciech Kaźmierczak

mgr Waldemar Błoch

Moderator:

Mariusz Gawrych

1st prize in Sensory Organs Session

Title: Epidermolysis bullosa heridiata – an interdisciplinary point of view.

Authors: Mariusz Gawrych

Affiliation: Department of Dermatology, Sexually Transmitted Diseases and Immunodermatology, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Epidermolysis bullosa (EB) is a heterogeneous group of dermatosis with a genetic component. Characteristic is occurring blisters and erosions of the skin and mucosa following trauma. In 2014 EB was classified into 39 subtypes, depending on the etiology, patterns of inheritance and clinical symptoms. There are the various recommendations of treatment according to the subtypes of EB.

Aim: Comprehensive review of treatment of inherited EB**.**

Materials and methods: I collected articles on this subject using various electronic databases. This research includes papers from January 2010 to April 2017. Articles published in accessible English and Polish language journals using the terms "epidermolysis bullosa".

Results: The most common subtype is epidermolysis bullosa simplex localized (old name Weber-Cockayne), which is caused by mutated gene KRT5, with autosomal dominant inherited pattern and characterized by blistering in the area of particularly vulnerable to trauma like hands and foot. Another subtype is epidermolysis bullosa simplex with muscular dystrophy, which mutation is in the PLEC1 gene, with autosomal recessive inherited patter and characterized not only by blisters after the birth with acral predominance but also with muscular dystrophy in infancy to adulthood. Treatment consists of wound care, itch and pain management, substitution therapy, surgical treatment. Moreover, patients with epidermolysis bullosa severe need examination for neoplastic transformation and multidisciplinary approach e.g. physiotherapy and psychological support. Scientists from around the world study new methods to cure patients with EB like gene therapy, bone marrow transplantation, and cell therapies.

Conclusions: Due to chronic and severe disease, the key to excellent EB management is multidisciplinary team support. The outcomes of treatment EB are good, however, more studies are required in this regard

2nd prize in Sensory Organs Session

Title: The link between chronic rhinosinusitis with nasal polyps and macrophages.

Authors: Angelika Romańska, Aneta Nowicka

Affiliation: Poznan University of Medical Sciences, Poland

Introduction: Chronic rhinosinusitis (CRS) is an inflammatory process that involves the paranasal sinuses and affects a large population. There are many factors taking into consideration in pathogenesis of the disease. The issue of innate and adaptive immune response seems to be significant. The CRS is subdivided into cases with polyps (CRSwNP) and cases without polyps (CRSsNP). Macrophages may impact the inflammatory response in many ways and contribute to its chronic course. Pathology presentation may be caused by an immunosupressive function or pro-inflammatory hyperactivation.

Aim: The aim of this study was to determine if there is a correlation between macrophages and CRSwNP.

Materials and methods: Peripheral blood samples and sinonasal tissues were taken from patients undergoing functional endoscopic nasal surgery. The study included 31 patients with CRSwNP in the study group and 10 patients with deviated nasal septum in the control group. The blood and tissue samples were immunohistochemical stained with: CD80, CD86, CD273 and CD274 antibodies. Samples without added antibodies were used as negative controls. In addition flow cytometry analysis was performed.

Results: Patients overall percentage of monocyte/macrophage cells was significantly higher in blood samples than in nasal polyps ($P<0.05$) and we observed statistically significant difference between control and patients group in the nasal tissue ($P=0.046$). It was also significant higher level of monocytes with CD86 expression than CD80 in blood and nasal polyps ($P<0.05$). CD80 showed statistically significant higher expression in nasal polyps than in blood ($P<0.05$). CD274 (PD-L1) expression was significantly higher in the nasal polyps tissue than in blood ($P<0,05$) as well as CD273 (PD-L2) expression ($P<0,05$).

Conclusions: Increased numbers of macrophages in the polyp area may suggest a defective host defense mechanism in the early stage of the disease. These findings suggest that macrophages are mightily involved of network in processes of the recurrent nasal polyp formation. High expression of CD80 in nasal polyps could have important implications for the efforts to establish a vaccine against recurrent nasal polyps formation, if we recognize stimuli, which is responsible for this upghrowth. Higher level of CD274 and CD273 in nasal polyps than in blood of the CRS patients may suggest the importance of the the pathway consisting of CD273 and CD274 as a therapeutic target in CRS and such patients are likely to be screened for existence of viruses in their organism. Identification of the association between tissue biomarkers, their surrogates in blood and clinical features could provide new diagnostic tools and facilitate adequate choice of therapeutic interventions for selected patients suffered from CRS. Our results may propose an insight into potential future targets of recurrent nasal polyps treatment and understanding the inflammatory process of CRS.

3rd prize in Sensory Organs Session

Title: Treatment for lingual nerve injury following dental and maxillofacial surgery.

Authors: Vilkitskaya Kristina

Affiliation: Department of Oral surgery, Belarusian State Medical University, Belarus

Introduction: The third branch of the trigeminal nerve is the most commonly damaged during nerve block anesthesia, wisdom teeth removal, dental implant fixture. Treatment for lingual nerve injury is often associated with sensory functional recovery difficult.

Aim: The aim of research was to investigate the clinical response of electro reflexology in treatment of lingual nerve injury following dental and maxillofacial surgery.

Materials and methods: 6 patients with lingual nerve injury were examined. Among them sensory disturbances of the floor of the mouth and tongue were present in 3 cases after third molar extraction, in 1 – after the submandibular gland excision, in 1 – after extraoral drainage of abscess of the pterygomandibular space, in 1 women – after inferior alveolar nerve block. All patients received electro reflexology using DiaDens device. Local and distal acupuncture points were stimulated. Each course lasted for 10 days and included 30 minutes sessions. A combination of ipidacrine and B vitamins were administered orally.

Results: All patients complained on pain after surgery and loss of sensory modalities in the anterior 2/3 of the tongue and anterior and lateral parts of the floor of the mouth on the affected side. Taste sensation was not distorted. The tongue felt like a «cottonwool» and difficult speaking. After first course of electro reflexology patients mentioned pain relief and improvement in sensitivity. The complete recovery of lingual nerve was observed after 3 courses with a rest period of 7, 14 and 28 days.

Conclusions: Electro reflexology treatment using DiaDens device is characterized by height clinical response for lingual nerve injury following dental and maxillofacial surgery and can be used in patients for recovery of third branch of trigeminal nerve from damage.

Title: Telemedicine in ophthalmology diagnostic.

Authors: Karolina Suwała[1], Jakub Kałużny[1], Przemysław Zabel[1], Martyna Gębska-Tołoczko[1], Katarzyna Urtnowska[2]

Affiliation: 1) Public Health Department, Biology of Visual System Section
2) Obstetrics Department, Reproductive Medicine and Andrology Section, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Ophthalmology is a growing area of medicine, taking advantage of telemedicine capabilities. Available ophthalmic applications can turn mobile devices into specialized medical devices. Ophthalmology can use them in education, remote patient monitoring, and self-monitoring. With ophthalmic applications, you can perform an ophthalmic test without leaving home, for example, they can assess visual acuity, color vision, pupil size or astigmatism. Mobile devices equipped with the camera can be a useful tool for capturing the image of the front and the back of the fundus. Mobile devices can also store information and be useful in long-term patient monitoring.

Aim: The purpose is to present current knowledge about the diagnostic capabilities at a distance in ophthalmology.

Materials and methods: A review of available literature.

Results/Conclusions: Using the new technology, we can send specialized medical data, diagnose the patient at a distance by breaking down any geographical barriers.

Title: Is it worth to lose weight for skin? The impact of obesity on selected skin diseases.

Authors: Justyna Buś, Angelika Bielecka,Beata Polkowska-Pruszyńska

Affiliation: Medical University of Lublin, Polska

Introduction: Obesity is a disorder of body weight regulatory systems characterized by an accumulation of excess body fat. However, the obesity concept means more than body fat deposition because it is connected with a significant increase in mortality and many health risks, including type 2 diabetes mellitus, hypertension, dislipidemia, and coronary heart disease. There are also numerous and different skin diseases associated with metabolic disturbance in obesity. Recently there has been growing interest to detect the impact of obesity selected diseases including psoriasis, acne inversa or androgenetic alopecia.

Aim: The aim of this study was to review current literature data considering association between obesity and selected skin diseases. Materials & methods: Pubmed and Up to Date databases were searched.

Materials and methods: Pubmed and Up to Date databases were searched.

Results: The result of literature review showed that obesity-induced inflammation may play a role in the pathogenesis of psoriasis in obese patients. Moreover obese patients may have poorer long-term clinical outcome of psoriasis. Obesity is considered to be a predisposing factor for the development of acne inversa. Whereas obese patients have increase risk for severe course of the disease skin lesions. Recent studies demonstrated the role of obesity in the development of severe androgenetic alopecia.

Conclusions: Obesity is a chronic disease with many medical complications affecting the skin. Since obesity may be implicated in the pathogenesis of selected skin diseases and influence their course it is important to modify the patient's life style to prevent obesity.

Title: Study of correlation between vision organ dysfunction and various factors in patients with psoriasis.

Authors: Joanna Ziółkowska, Olga Zjadewicz, Kornelia Pietrauszka, Mateusz Kowal

Affiliation: Medical University of Silesia, Poland

Introduction: Psoriasis is a chronic, recurrent systemic disease. It is characterized by increased proliferation of the epidermis, the presence of follicular lesions covered with scales, resigning without scars remain. It affects about 2% of the population. The disease mainly affects the skin, joints, nail plates. Disorders of organ of vision are also observed.

Aim: Evaluation of vision organ dysfunction in patients with psoriasis.

Materials and methods: Ophthalmic symptoms were gauged by questionnaire containing 36 questions. The study included 298 patients with psoriasis (204 women and 94 men). The mean age of the study group was 36.2 years. The survey compared study group with control group, which consisted of 186 healthy respondents.

Results: The study showed that 49 % of patients with psoriasis report complaints from the eyes visual organ, and the most predisposing type is psoriatic arthritis. Women have a greater predisposition to the formation of eye changes than men. Duration of psoriasis has no influence on the occurrence of ocular lesions. Patients who use external treatment are more likely to develop ocular changes. Retinoids and Cyclosporin can be the cause of burning sensation, itchy eyes and dry eye syndrome in patients with psoriasis. A comparison of the control group with the study group showed that four of the analyzed ocular symptoms (sudden change in visual acuity, severe eye pain, blurred vision and change of the eye colour) were more frequent in the study group. These symptoms are part of the clinical picture of anterior uveitis, whose occurrence, according to the literature, is observed more frequently in patients with psoriasis.

Conclusions: The study found an association between psoriasis and the presence of ocular symptoms in patients. Treatment of psoriasis is not without an effect on the organ of vision, it requires close cooperation between dermatologists and ophthalmologists.

Title: Ophthalmological injuries in children and adolescents requiring surgical management - analysis of clinical data.

Authors: Katarzyna Burenok, Stanisław Burkot, Joanna Ziółkowska, Olga Zjadewicz

Affiliation: Medical University of Silesia, Poland

Introduction: Ocular injury is one of the most common cause of children's admission to hospital. The frequency of admissions mirrors the importance of the problem. The consequence of injury could be permanent, partly or entirely vision loss. It results in difficulties in harmonic development of child and lowering the quality of its further life.

Aim: The aim of the study was analysis of cases of ophthalmological injuries in children requiring surgical management in Gibiński's Hospital in Katowice in years 2011-2015.

Materials and methods: The data were collected on the base on books of admissions and medical histories of patients treated in above-mentioned ward from May 2011 to February 2015. We analysed the age of children, the type of injury, time from injury to admission, diagnostic methods, treatment, vision acuity on the day of admission and discharge, and duration of the hospitalization.

Results: We analysed 287 cases of ophthalmic injuries. The average age of child was 5,3 years. The character of injuries was diverse, from most common - dressing the conjunctival and corneal wounds caused by a foreign body to complicated cases which were result of burst of firecrackers, chemical burns, being bitten by the dog or the injury of orbit caused by direct hit into the face. Serious injuries were complicated e.g. by retina detachment or haemorrhage to vitreous humour.

Conclusions: Ocular injuries are an important ophthalmologic and pediatric problem. Children who begin independent motor activity (two-year-olds) are more likely to be injured. Many injuries could have been avoided if they were under proper supervision. Boys are more likely to suffer from ocular injuries. The crucial aspect of the effectiveness of the treatment is the prompt referral by a pediatrician to the Pediatric Ophthalmology Department in case of any doubt and the immediate response of the parents. The significant prediction factor is the time from the injury to admission to the hospital. Appropriate medical care is the basis for reducing the risk of complications, vision loss and the associated consequences for the future functioning of the child.

Title: Metamorphosis in patients with exudative AMD before and after 3 anti-VEGF injections - preliminary reports.

Authors: Karolina Suwała[1], Jakub Kałużny[1], Przemysław Zabel[1], Martyna Gębska-Tołoczko[1], Katarzyna Urtnowska[2]

Affiliation: 1) Public Health Department, Biology of Visual System Section
2) Obstetrics Department, Reproductive Medicine and Andrology Section, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Metamorphosis are a characteristic symptop of Age-related macular degeneration, and can retreat during the treatment by the anti-VEGF injections. These injections are standard in the treatment of AMD.

Aim: The aim of the study is to determine the occurrence and development of metamorphosis in AMD patients treated with anti-VEGF.

Materials and methods: 31 eyes were identified for the study, which showed active CNV characteristics in the Sd OCT. Each patient was tested for the presence and severity of metamorphosis. The selected research techniques are the Amsler test and the original dedicated application installed on the tablet.

Results: On the beginning were 19 eyes with symptoms of metamorphosis in the Amsler test, after 3 injections 24 were recorded. initially The mean level metamorphosis in vertical was 1.97 ', and horizontally 2.16'. After 3 injections the vertical level dropped to 1.52 'and the horizontally increased to 2.26'. In 14 eyes there was a reduction of metamorphosis and in 6 to their severity.

Conclusions: Metamorphoses are a common symptom of AMD, and treatment with anti-VEGF causes, in most cases, a reduction in or a leveling of their progression.

Title: Age-related macular degeneration as an epidemic of 21st century blindness.

Authors: Karolina Suwała[1], Jakub Kałużny[1], Przemysław Zabel[1], Martyna Gębska-Tołoczko[1], Katarzyna Urtnowska[2]

Affiliation: 1) Public Health Department, Biology of Visual System Section
2) Obstetrics Department, Reproductive Medicine and Andrology Section, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

Introduction: Age-related macular degeneration (AMD) is a disease leading to severe visual loss and legal blindness in the elderly population. It is a chronic disease of the central part of the retina – the macula located at the central point. The macula is responsible for the visual acuity and allows for vision the details of the objects. Besides gives the ability to sense contrast and color recognitions. The macula degeneration often leads to irreversible loss of the ability to read, drive and recognize face. AMD can be classified into early (nonexudative) and late (exudative) stages. The nonexudative stage is characterized by mild course and affects most patients (about 80%). The neovascular/exudative stages in turn characterized by a violent course, during which it comes to neovascular membrans develop which may cause loss of central vision.

Aim: The purpose is to present current knowledge about the course and treatment of Age-related macular degeneration.

Materials and methods: A review of available literature.

Results/Conclusions: Actually in the word are 30 milion patiente. In our country we have 1,5 milion cases. AMD is a global problem, but the rise in disease is typical for countries where the populations is rapidly aging. Each year Poland occur 80-120 thousand new cases.

Gynecology & Obstetrics Session

Jury:

dr hab. n. med. Grzegorz Ludwikowski
mgr Katarzyna Szot
mgr Monika Ameryk

Moderator:

Karolina Suwała

1st prize in Gynecology & Obstetrics Session

Title: Renal colic during pregnancy: causes, complications and outcome

Autors: Ērika Bitiņa-Barlote

Affiliation: Rīga Stradiņš University, Latvia
Tutor: Maira Jansone MD , Pauls Stradins Clinical University Hospital, Latvia

Introduction: Renal colic during pregnancy is one of the most common non-obstetric reasons for hospital admission, which is associated with obstruction during kidney stone migration. Urolithiasis often are asymptomatic and in most cases do not require surgical intervention, but there are found association between urolithiasis and repeated abortions, mild preeclampsia, chronic hypertension, gestational diabetes and pregnancy resolution by Caesarean section (SC), as well as urinary tract infections (UTI), pyelonephritis, hydronephrosis and hydroureter development. Also renal colic and its complications increase the risk of premature delivery and premature rupture of membranes (PROM).

Aim: To find the most frequent causes of renal colic, pregnancy complication and outcome of renal colic.

Materials and methods: A retrospective analysis of 101 patient histories with suspected renal colic and diagnosis code O23 and O99.8 was gathered from Pauls Stradins Clinical University Hospital (PSCUH) during the period 2013-2016 year. Collected data was analyzed in MS Excel 2013 and IBM SPSS 22 programs.

Results: Diagnosis was confirmed in 39 cases of 101. There were urolithiasis in 20 cases and unspecified renal colic in 19 cases. The majority of pathologies, which simulated urolithiasis was UTI (n=26), physiologic hydronephrosis (n=22). Other causes like radiculopathy, myofascial pain syndrome, appendicitis, ovarian cysts etc. (n=13) and pyelovesical stricture (n=1) was less common. There were higher incidence of renal colic during 2nd and 3rd trimester (n=35, 89.7%). There was not found statistically significant association between renal colic frequency and parity (primipara: n=20, 51.3% vs multipara: n=19, 48.7%, p>0.05). There was not found higher risk of preterm birth, PROM, pregnancy related hypertension and intrauterine growth restriction (p>0.05). There was higher incidence of gestational diabetes in patients with urolithiasis compared to pregnant women, who were hospitalized to PSCUH for other reasons (5.7 % vs 2.8 %). Also during the study, there was not found statistically significant relation between ureteroscopy and development of premature birth and PROM (n=0). Comparing delivery mode in 2 groups: 1st patient with renal colic and 2nd with other cause of flank pain, there was found statistically significant association between SC and renal colic (1st group: n=12, 35.3% vs 2nd group: n=7, 13.7 %, p=0.02). There was found 3.4 higher risk for SC in patients with renal colic (OR 3.43, CI 95% 1.18 to 9.93).

Conclusions: Renal colic is significantly associated with gestational diabetes and SC. Nevertheless there was not association between renal colic and preterm birth, PROM, recurrent abortions, hypertensive disorders. Ureteroscopy is a safe method that can be used in renal colic treatment during pregnancy. There is need to continue study, because of small study group.

2nd prize in Gynecology & Obstetrics Session

Title: Incidence of hypertension during pregnancy and its influence on length of pregnancy

Autors: Michał Bejger, Jan Ziółkowski, Łukasz Szukalski, Żaneta Szczęśniak

Affiliation: Department of Obstetrics, Gynecology and Gynecological Oncology, Jan Biziel University Hospital No. 2 in Bydgoszcz, Poland

Introduction: Hypertension is one of the most common diseases occurring during pregnancy. It can lead to dangerous situations - pre-eclampsia and eclampsia. In recent years, there is an increasing number of women getting pregnant at their late 30s and 40s, which can make hypertension even more prevalent. Because of this, the influence of hypertension on the gestation period needs to be researched.

Aim: The study is supposed to find whether there is a correlation between the presence of hypertension and pregnancy length. It also has to find in which age group, the problem is the most prevalent. The research is supposed to check the strength of the link between hypertension and gestation duration in all studied groups.

Materials&Methods: The research is based on medical data of 320 patients, collected retrospectively. Only women who had hypertension during pregnancy were divided into smaller groups. It was checked whether hypertension was a pre-existing or gestation induced disease. The length of pregnancy of each of these women was noted. Then statistical evidence was obtained from gathered data.

Results: Hypertension occurred only in 31 out of 320 pregnancies. On average, pregnancies of women with hypertension lasted for 37.9 weeks. Statistical woman with this problem was 32.26 years old. The disease was the most prevalent among 30-34 years old, with 15 cases. Hypertension was least common among teenagers with 0 cases (out of 10 mothers in this age group). It was pregnancy-induced disorder in 27 cases (±87.1%), in which average woman was 32.11 years old, with average gestation period of 37.81 weeks. The remaining 4 woman have had this health problem before getting pregnant, their average age was 33.25. Their average length of pregnancy was 38.5 weeks.

Conclusions: Pregnancy-induced hypertension was ±6.75 times more frequent than pre-existing hypertension among women, whose pregnancies were studied. Women with pre-existing hypertension had longer pregnancies, which suggests that early treatment is an important factor that has an impact on pregnancy. None of these women suffered from eclampsia which proves that proper management of this disease is very important.

3rd prize in Gynecology & Obstetrics Session

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

Authors: Katarzyna Urtnowska MSc [1] Grzegorz Ludwikowski MD PhD [1], Irena Bułatowicz MD PhD [2] , Karolina Suwała MSc [3],

Affiliation: [1]Obstetrics Department, Reproductive Medicine and Andrology Section;
[2]Physiotherapy Department, Clinical Physiotherapy Section
[3] Department of Biolology of Visual System
Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland.

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

Materials and 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.

Title: The impact of a mode of delivery on a process of lactation

Authors: Anna Taylor, Alicja Harmoza, Aleksandra Buska, Aleksandra Lubieniecka, Agnieszka Zając

Affiliation: STN obstetrics, gynecology and oncology gynecology,
Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland.

Introduction: Breastfeeding results in mutual advantages both for a mother and for an infant. It is the most beneficial way of nutrition for newborns. During past years the number of performed caesarian
sections has been constantly increasing. This tendency may influence the process of lactation.

Aim: The aim of this study was to compare a process of lactation in women who underwent a caesarean section and a natural birth. Reasons of difficulties in lactation in both cases will also be presented.

Materials and methods: The study was conducted from January to March 2017. The method was an internet, anonymous questionnaire which consisted of 33 multiple choice questions concerning a mode of delivery and a process of breastfeeding. 1449 women took part in the study. MS Excel and SPSS were used to analyse the data.

Results: Mothers who underwent caesarian section struggled with more difficulties (60,5%) than those who delivered vaginally (51%). Nevertheless, in both groups problems in lactation were the same and occurred in a similar frequency. Moreover, emergency caesarian deliveries were more likely to cause lactation problems (64,4%) rather than elective ones (55,1%). A breastfeeding initiation was taking place within first two hours from birth, however it concerned a higher percentage of women after natural childbirth (75,6%) than after c-section (50,2%). Feeding artificial milk before the breastfeeding initiation was more common after caesarian section (68,8%).

Conclusions: The number of performed caesarian sections should be reduced by following the indications for this mode of delivery more strictly. The initiation of breastfeeding ought to happen as soon as possible, preferably during first two hours after giving birth. Feeding artificial milk before the breastfeeding initiation should be minimized. Medical staff have to pay more attention to education about breastfeeding and dealing with problems with lactation.

Title: Knowledge of Hormonal Contraception Among Young Women in Poland

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Introduction: Using hormonal contraception is extensively widespread among young women. However, two-component oral contraceptive pills may contribute to health complications among young women, especially befor first pregnancy. Insufficiently informed or egzamined in terms of contraindications, young women have no idea about negative consequences of using this form of contraceptive. Oral contraceptive pills, as one of the most effective methods of preventing from unwanted pregnancy, require not only to use a strict scheme of taking them. There should be also conducted a family interview taking account of estrogens dependent cancer and thrombotic complications.

Aim: The aim of this study was to examine the level of knowledge among young women studying on the universities of Bydgoszcz (Poland) about the health effects of hormonal contraception.

Material and methods: The study included 172 women aged from 18 to over 25 years. The women were divided into 4 groups depending on the field of study (group I: n=90 women studying on medical subjects; group II: n=82 women studying on non-medical subjects) and the use of oral hormonal contraception (group III: n=72 women using hormonal contraception; group IV: n=100 women no using hormonal contraception). The study was carried out in second half of 2015 using survey method. Authorial questionnaire of 24 questions was delivered to several high schools and posted by internet.

Results: Medical students possess general better knowledge concerning hormonal contraception then students of other fields. However even for this group some properties of hormonal contraception remain uknown (for example influence on metabolism of vitamins) and majority of medical students describe their knowledge only as sufficient. Women using hormonal contraception in general possess beter knowledge than no using ones. It could be connected with phisician counsel and reading pills leaflets. Despite the majority of them named their knowledge of contraception as sufficient undertaken questionaire demonstreted their ignorance of important many aspects of using tablets. Whats essential women no using hormonal contraception were more awere of its contraindications and possible threads of this therapy than female using hormonal contraception.

Conclusion: The state of knowledge of young women concerning negative aspects of using contraception differs depending on field of study. The awareness of women using contraception was higher than women which didn't use hormonal contraception. General state of knowledge of studied women concerning using hormonal contraception was not satisfactory. Especially alarming is ignorance of health threads connected with using hormonal contraception among women using this method of contraception.

Title: Non-pharmacological methods to alleviate labor pain

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Introduction: By definition, pain is a phenomenon termed as a subjective unpleasant and negative sensory and emotional sensation related to existing or likely to be a tissue injury. Under physiological conditions, the natural termination of pregnancy is to have a baby born to a child through birth, which is associated with severe pain in a woman. There are many methods available today to ease the pain of labor, pharmacological and non-pharmacological pain, to facilitate birth and to remember this moment as an extraordinary event - a miracle of birth, not trauma.

Aim: The aim of the study was to present a possible non – pharmacological methods to allievate labor pain, ways of procceding them and benefits.

Materials and Methods: The method used in the study was the analysis of the available literature on the subject of the alternattive, non – pharmacological ways of allievating pain during labour, and foreign publications of studies confirming the beneficial effect of the procedures.

Results: Nowadays, non-pharmacological methods of labor pain relief are getting more and more popular. They can be used alone, in combination or in addition to pharmacological methods. These methods can be introduced through a midwife, a physiotherapist or a close relative present during childbirth (a partner for example). A possible alternative ways include include percutaneous TENS nerve stimulation, massage, warm baths, breathing exercises, relaxation exercises, ball exercises, analgesic positions, reflexology and acupuncture, as well as hypnosis, aromatherapy and music therapy.

Conclusions: Alleviation of labor pain is aimed at facilitating a co-operation with a women during labor, by eliminating fear and anxiety caused by pain, as well as preventing the reduction of uterine and placental blood flow and hyperventilation. Medical personel and future mothers should not be overly concerned with the use of pain relief methods, and in case of doubt about pharmacological methods, remember these alternatives. Thanks to their wide selection, medical staff is able to help every woman and make it easier for a baby to come into the world.

Title: The effect of a relaxation massage during pregnancy on the level of satisfaction of women's sexual life - presentation of preliminary results.

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Introduction: According to available studies, during pregnancy more than 70% of women decrease the frequency of sexual contact and satisfaction with this area of life. This is due to, among other things, psysiological pregnancy ailments, stress and fatigue. Massage, as a form of treatment of movement disorders and relaxation, performed regularly during pregnancy can bring many benefits, also affect on the level of sexual satisfaction.

Aim: The purpose of the study is to confirm the main thesis, which assumes that regular massage can positively affect on the level of satisfaction of the pregnant woman's sex life.

Material and methods: The study group consisted of women in the course of normal pregnancy, aged 26-33. The planned number of a study group is 30 women.Women taking part in the study are once a week subjected to a full body relaxation massage. Patients before and at the end of the study, anonymously (via the Internet) complete a questionairre based on Sexual Function Index Questionairre (FSFI) (I, II and V art)

Preliminary results: 10 pregnant women have completed the full cycle so far, accounting for 33% of the planned study group. In 90% of women, there was no change in the frequency and intensity of sexual desire and interest. In 30% of women, there was an increase in the intensity of sexual arousal during sexual activity, 70% did not change, and 100% of the pregnant women did not notice a change in satisfaction with this aspect. In 80% of women, the level of satisfaction with sex remained unchanged, only in 20% of the cases showed a slight decrease.

Conclusions: The effects of massage such as relaxation, pain reduction and movement improvement, or the reduction of swelling, cellulite or stretch marks, have a significant effect on the overall well-being and perception of the body by the pregnant. These are the aspects necessary for a healthy and satisfying sex life, which makes it possible to believe that the lack of decrease in sexual satisfaction observed in the first group is due to the beneficial effects of regular massage and hope for further positive results.

Title: The prevalence of diabetes mellitus in pregnancy and its influence on gestation period.

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Introduction: There are many pregnancies complicated by health problems. Diabetes mellitus (DM) is one of them, so it is vital to know what kind of an impact it has on pregnancy. It is a metabolic disorder affecting not only the mother-to-be, but also the growing fetus. Medical professionals should know how this disease affects the gestation period.

Aim: The research needs to study a link between diabetes mellitus and the length of the gestation period. It has to obtain data telling how strong a link exists among different groups of women. The study has to compare the length of pregnancy of women with diabetes mellitus diagnosed before pregnancy and those who have this disorder as a health problem induced by pregnancy.

Materials & Methods: The study summarizes work based on data acquired from medical documentation. It collects data about pregnancies of 320 women, who were divided into groups. It compares gestation periods of women with pre-existing and pregnancy induced diabetes mellitus treated by diet or diet with insulin therapy.

Results: 96 out of 320 (30%) women have had diabetes mellitus during pregnancy. There were only 3 patients with diabetes mellitus occurring before pregnancy. Women with diabetes mellitus have had gestation periods lasting 39.15 weeks on average. The gestation period was similar for women with gestational diabetes mellitus treated only by diet or by diet and insulin therapy (39.24 and 39.12 weeks on average, respectively). The patients with pre-existing diabetes mellitus have had pregnancies lasting 39 weeks, on average.

Conclusions: Gestation period of women with diabetes mellitus is still within normal length range. There were more women with G2 gestational diabetes. Gestation period was almost the same in group having G1 and G2 gestational diabetes mellitus, which proves that for some women adhering to special diet (without insulin therapy) is an adequate option. Concluding, early diagnosis and treatment provide good management of diabetes during pregnancy and satisfactory outcomes.

Title: Cat eye syndrome - trisomy of chromosome 22. A Case report.

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Introduction: Cat eye syndrome is a rare syndrome of congenital defects caused by trisomy of chromosome 22. There are several symptoms characteristic for this syndrome such as microcephaly, cleft iris, anal atresia with fistula, downward-slanting palpebral fissures, urinary tract and heart defects, preauricular pits and tags, low but normal intelligence or mild intellectual disability.

Aim: Our aim was to analize the course of preganacy and descriptions of USG examinations.

Material & Methods: Casebooks of two patients hospitalized in the University Hospital nr 2 in Bydgoszcz.

Conclusion:

1. Cat eye syndrom eis very rare genetic disease, characterizes by variety of symptoms.
2. USG images can suggest CES, but only based on karyotype we are able to diagnose disease.
3. Both patient's fetuses have intrauterine growth restriction and centralization of circulation.

Title: Urolithiasis or physiological hydronephrosis?

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Introduction: Urolithiasis is the most common cause of non-obstetrical abdominal pain that requires hospitalization among pregnant patients. Urolithiasis complicates up to one in every 200 pregnancies. Diagnosis of urolithiasis is clinical challenge, because in more than 80% of pregnancies hydronephrosis and hydroureters occur. It has been termed physiological, because during the second trimester develops dilatation, and becomes more prominent on the right side. Hydronephrosis appears most frequently in primigravida women.

Aim: To assess accuracy of diagnostic investigations in differentiating urolithiasis from physiological hydronephrosis as the cause of renal colic. Analyze efficacy of treatment and occured complication.

Materials and methods: A retrospective analysis of 101 patient histories with suspected renal colic and diagnosis code O23 and O99.8 was gathered form Pauls Stradins Clinical University Hospital (PSCUH) during the period 2013-2016 year. Descriptive and correlational data on clinical presentation, diagnostic imaging, and interventions undertaken were analyzed in Microsoft Excel 2013 and IBM SPSS 22 programs. A total of 42 patients with confirmed urolithiasis and physiological hydronephrosis were included in the final analysis.

Results: Most clinical and laboratory features were unhelpful in predicting the presence of a stone or physiological hydronephrosis. Statistically significant difference between final diagnosis and localization of renal colic pain was not found (left-sided colic: n=8, 40% vs righ-sided colic: n=12, 60% P>0.05). The accuracy of ultrasound findings in predicting presence of stone was 55%, such features of obstruction like ureteric jet absence and an elevated resistive index (RI), were not included in the assessment. Conservative treatment was used in a smaller proportion of patients with stone (n=13, 65% vs n=21, 95.5%, P =0.018). The need for surgical intervention was more common in patients with stones (n=7, 35% vs n=1, 4.5%, P <0.018). Ureteroscopy was the most common intervention without pregnancy complications like preterm rupture of membrane and preterm birth arising.

Conclusion: In most cases it is unhelpful to determine cause of pain by clinical signs and symptoms. Ultrasound is good enought in 55% of cases and is safe in pregnancy, but there is need to improve it's accurancy by using such feature like ureteric jet and resistive index measuring. It is supposed to improve accurancy to 90%. The sugical intervantion is more likely to be used in patients with urolithisis . Ureteroscopy is safe and effective throughout pregnancy.

Title: Triple negative breast cancer with recurrent disease and palliative treatment due to multiple brain metastasis and metastatic disease in the right root of lungs

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Introduction: Triple-negative breast cancer (TNBC) prevalence ranges from 10% to 20%, this type of cancers are clinically negative for expression of estrogen (ER) and progesterone (PR) receptors and HER2 protein. Most of breast cancers associated with the gene BRCA1 are triple-negative. Studies show that patients with TNBC have a high incidence of visceral metastasis, including brain metastasis. TNBC has a characteristic recurrence pattern with the peak risk of recurrence and the majority of deaths in the first 5 years after the initial treatment.

Case report. NOV/2010 - 54-years-old female presented with left breast tumor with no signs of metastatic disease. Left breast mastectomy (Madden modification) was performed. Histology results - left breast invasive ductal carcinoma, Grade II, with chronic inflamation signs in lymph nodes. IHC results: ER – 0%; PR – 0%; HER 2 NEU – negative. Diagnosis – left breast triple-negative, HER2-negative carcinoma, stage 2A, T2, N0, M0. From DEC/2010 till MAR/2011 patient received 6 cycles of chemotheraphy with Cyclophosphane, Epirubicin and 5 FU (FEC scheme). Genetic testing for hereditary breast and ovarian cancer was made, mutation in BRCA1 gene was found. Patient was reccomended to make a profilactic adnexectomy due to risc of ovarian cancer, operation (laparascopic bilateral adnexectomy) was performed in JUN/2011. After surgery - follow-up in ambulatory practice by oncologist from 2011 till 2014. In 2015 patient began to have complains about headages, brain MR was performed, metastatic disease suspected. MR confirmed mts in both brain hemispheres, mts in basal part of the right brain hemisphere with wide area of perifocal edema. In MAR/2015 patient received WBRT with total dose of radiation of 50.4 GY. On control CT of chest 2 mts in right branch of lungs was found; CT of abdomen - no signs of oncopathology. From APR/2015 till OCT/2015 patient received 6 cycles of palliative chemotheraphy with PTX and Carboplatine. Disease stabilization was reached. Due to oncoprocess wide spread in brain stereotactic radiation therapy was not possible, patient again received WBRT in OCT/2016. Brain MR and CT of chest in FEB/2017 with positive dinamic; stabilization of disease was reached. Patient continues chemotherapy with Capecitabine with follow-up by chemotherapist.

Conclusion. Patients with non-metastic TNBC in the first five years after the initial treatment has poorer survival prognosis than endocrine sensitive non-metastic breast tumors due to high recurrence rate; 5 years beyond initial treatmet recurrence rate for TNBC decreases by 50% and is no longer higher than for other breast cancer types. Chemotherapy can be used as adjuvant systemic treatment for TNBC. Approximately 15% of TNBC patients have incidence of brain metastasis; despite available therapies for brain mts (WBRT; surgical resection; stereotactic radiation therapy), median survival following a diagnosis of brain mts is only 6 months.