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DOKTORANTÓW
Śląskiego Uniwersytetu
Medycznego w Katowicach

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INTERNATIONAL MEDICAL CONGRESS OF SILESIA



PROJECT: EXPERIENCE
APRIL 24 - 25th 2019 Katowice-Ligota



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

Katowice Ligota

April 24 – 25th 2019

ABSTRACT BOOK



Studenckie
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SUM



SAMORZĄD
DOKTORANTÓW
Śląskiego Uniwersytetu
Medycznego w Katowicach

STUDENTS' SCIENTIFIC ASSOCIATION
OF THE
MEDICAL UNIVERSITY OF SILESIA

DOCTORAL STUDENTS' GOVERNMENT
OF THE
MEDICAL UNIVERSITY OF SILESIA

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Dear Students,

The International Medical Congress of Silesia 2019-“SIMC 2019” organised at the Medical University of Silesia has become an annual event addressed to young scientists.

It has been a continuation of the International and Interfaculty Conference of Students of Medical Universities, organized by Student Scientific Society of our University since 2006.



The aim of the Conference is to promote the scientific development of students and to create a forum for scientific discussion.

For young scientists this is also an opportunity to present their achievements in front of multicultural audience. I am glad that Medical University of Silesia is a host of this amazing event.

I would like to express my appreciation to the Organizing Committee. It is thanks to your hard work that this event is held at a highest substantive standard when it comes to not only presented papers and discussions but also the professional organization. I am convinced that the scientific program and the accompanying events that are prepared by you will meet the expectations of attendees.

It is great pleasure to invite you to attend the SIMC 2019 which will take place in Katowice— our beautiful city.

Finally, I wish to all of the participants many scientific successes and persistence in pursuit of chosen life goals. I hope that this event will be an unforgettable experience for all of you.

**RECTOR
OF MEDICAL UNIVERSITY OF SILESIA
Przemysław JAŁOWIECKI, MD, PhD, Professor of Medicine**



Dear Colleagues,

It is a great honour to invite you to participate in a very special event— INTERNATIONAL MEDICAL CONGRESS of SILESIA (SIMC) organized by Students' Scientific Society of Medical University of Silesia in Katowice.

This is an unusual form of academic youth and a science holiday.

It is my greatest joy to see new forms of students activities every year — such as workshops, faculties organized by SIMC. Your energy, engagement and creativity seem to have no limits.

The true success of the conference is best reflected in the number of applicants registered. I must say that I was also impressed by the number of papers and sessions prepared for the conference. It does undoubtedly prove enormous potential and excellent abilities students of our Alma Mater possess. And so do our guest participants who come

ever in a greater number from many different medical universities both in Poland and abroad.

I encourage you to support this conference actively. It is an opportunity for regular participants of STN conference as well as for those who have decided to face that challenge for the first time.

Remember — medicine and science should be a passion. Science can become also your way to success and STN conference can be a great opportunity to exchange first and fresh scientific experience. Therefore it is of utmost importance that you keep on challenging yourself to prove your professional skills and abilities. It is crucial especially at the start of your career in this field, the moment you begin to shape your future and develop.

I truly believe that both the organizers and participants will spare no effort to make this special event enjoyable and fruitful.

See you on 24-th of April on the campus of Medical University of Silesia in Katowice

**The Head of
Students' Scientific Association
of Medical University of Silesia in Katowice
Prof. Katarzyna Mizia-Stec**

Dear Participants!

The First Conference organized by Students' Scientific Society of the Medical University of Silesia took place in December 1954 in Zabrze - Rokitnica. Throughout all these years our Conference grew up in numbers of presented papers and was moved permanently to the grounds of university campus in Katowice-Ligota. Nowadays it is one of the largest Students Conferences in Poland and Central Europe.

In 2019 the honor of organization of the INTERNATIONAL MEDICAL CONGRESS OF SILESIA (SIMC) 2019 fell to our Board. Over 500 papers were sent this year and divided between 35 scientific sessions. All participants have once again put their confidence in us and decided to share with others the results of their many months of research. Once again they will meet in the halls of the Medical University of Silesia in Katowice. We are extremely proud of the growing popularity of sessions aimed at doctoral students. This was possible thanks to the continuing friendship and cooperation with the Doctoral Students' Self-Government. We also do our best to extend the programme of workshops, which allow the participants to improve their practical skills.

The purpose of the Conference has remained unchanged throughout the years. Every year we make our best efforts to make this event not only an occasion for new scientific experiences, but also a fascinating adventure and preparation for future scientific challenges.

We would like to extend our sincere thanks to the Rector of the Medical University of Silesia in Katowice Prof. Przemysław Jałowiecki PhD, MD, Vice-Rector for Academic Affairs Prof. Joanna Lewin-Kowalik PhD, MD, Curator of the Students' Scientific Society Prof. Katarzyna Miza-Stec, PhD, MD, Chancellor of SUM, Bernadeta Kuraszewska, PhD, MD and the administrative staff, for all assistance and support in overcoming organizational difficulties.

We express our gratitude to Prof. Małgorza Muc-Wierzoń, MD, PhD for giving an honorary lecture for the participants of our Conference. We sincerely thank the Members of the Scientific Committees of individual sessions. Every year, they devote a lot of time to share their knowledge and experience.

We extend our gratitude to the Members of Doctoral Students' Self-Government who supported us and took responsibility for the organization of doctoral sessions. Our thanks are due also to all the volunteers who helped and supported us during organization of practical workshops.

Last but not least we would like to thank all of the participants of this year's edition for all your creative work, ambitions and ingenuity in the conducted research.

We wish you many successes!

**The Board of Students' Scientific Association
of Medical University of Silesia**

“The art and science of asking questions is the source of all knowledge”

(T.Berger)

Dear Participants and Colleagues

On behalf of the Doctoral Students' Self-Government we would like to express our thanks for once again giving us the possibility of participation and co-creation of the International Medical Congress of Silesia (SIMC) 2019, beside the Students' Scientific Association of the Medical University of Silesia. We believe profoundly that continuing agreement between students and PhD candidates paves the way for a beneficial cooperation, based on exchanging views and experiences in order to develop friendship and mutual respect .

We are convinced that the subjects and specific issues addressed during this Conference are found among issues currently facing us - young researchers. Sessions that have been prepared for you will not only be an opportunity to present your research results, but also to exchange opinions and provide inspirational experience for every participant. We hope that all workshops organized this year, will be a valuable opportunity to improve your practical skills.

We extend our sincere gratitude to the Rector of the Medical University of Silesia in Katowice Prof. Przemysław Jałowiecki, PhD, MD, Vice-Rector for Postgraduate Training Prof. Stanisław Boryczka, PhD, MD, Vice-Rector for Academic Affairs Prof. Joanna Lewin-Kowalik, PhD, MD, Chancellor of SUM, Bernadeta Kuraszewska, PhD, MD and all of the workshops organizers and administrative staff for their help and support. We sincerely thank Prof. Małgorzata Muc-Wierzgoń, MD, PhD for giving an honorary lecture and all of the Members of the Scientific Committees for the time they devoted, valuable comments and exchange of experiences.

In addition to the words of appreciation , we invite you to familiarize yourself with the subjects of papers presented at each session, in particular by the PhD students, who will always be willing to share the knowledge they gained through constantly drilling the ravine for the source of their scientific development.

**The Board of the Doctoral Students' Self-Government
of the Medical University of Silesia**

CONFERENCE'S PLAN

WEDNESDAY, APRIL 24TH 2019

7 ³⁰ – 8 ³⁰	Participant's registration
9 ⁰⁰ – 12 ⁰⁰	Plenary sessions — part I
9 ³⁰ – 18 ⁰⁰	Practical Workshops part I
12 ⁰⁰ – 12 ³⁰	Break time
12 ³⁰ – 14 ⁰⁰	Plenary sessions — part II

THURSDAY, APRIL 25TH 2019

7 ⁰⁰ – 8 ⁰⁰	Participant's registration
8 ³⁰ – 13 ⁰⁰	Plenary sessions
8 ³⁰ - 15 ⁰⁰	Practical Workshops part II
15 ³⁰	The Closing Ceremony: Prof. Małgorzata Muc-Wierzoń MD, PhD lecture Awards announcement
21 ⁰⁰	Party in “Królestwo” Club



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INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF DOCTORAL CLINICAL MEDICINE

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Overdiagnosis of drug hypersensitivity reactions to beta-lactams

Lesia Rozlucka, Olga Branicka

Department of Internal Disease, Allergology and Clinical
Immunology, Medical University of Silesia

Work's tutor: Dr hab.n.med. Joanna Glück

Beta-lactams are one of the most popular antibiotics related with drug hypersensitivity reactions (DHR). Diagnosis of DHR is often based only on medical history, which results in unjustified exclusion of safe medicine.

To assess frequency of hospitalizations because of DHR to beta-lactams and to estimate the number of confirmed reactions.

The study was carried out retrospectively by analyzing 620 histories of patients with DHR in medical history, hospitalized in 2017-2018 in the Allergology Department SUM.

300 patients were hospitalized due to NSAIDs allergy, 93 due to anaesthetics, 23 due to contrast agents and 40 due to other drugs. 140 patients were hospitalized with DHR after using beta-lactams in the past and 34 because of other antibiotics. Some of the patients reported allergy to more than one group of antibiotics, therefore they were qualified to both groups. After running drug-allergy tests 45 (32,1%) patients had negative results for beta-lactams DHR. 42 (30%) patients were allergic only to penicillins, 7(5%) patients to the whole beta-lactam ring. Hypersensitivity to group A was diagnosed in 5(3,6%) patients, group B in 2(1,5%), group C in 3(2,1%) patients, group A+C in 1(0,7%) and 7(5%) patients were allergic to single cephalosporin. In 28(20%) patients we selected alternative antibiotics and planned diagnostic to particular beta-lactams in the future.

Only a few patients that have history of drug-allergy are actually allergic. In cases with positive test results its important to select alternative antibiotics. Cross-reactivity among beta lacatms is mainly related with side chain structure.

Keywords: drug hypersensitivity reactions, beta-lactam, allergy, antibiotics

Postmortem computed tomography in the diagnosis of heart air embolism

Szymon Ciuk, Katarzyna Ciuk, Arkadiusz Kacała, Małgorzata Milnerowicz

Department of General Radiology, Interventional Radiology and Neuroradiology, Wrocław Medical University Work's tutor: Dr hab. Joanna Bładowska

Postmortem computed tomography is a procedure used in forensic medicine. It enables the detection of changes in anatomical structures which may be inaccessible in classic methods.

The aim of study was to assess the usage of CT in the diagnosis of air presence within the hearts of trauma victims.

A total number of 410 (310 trauma and 100 non-trauma) victims were included in this study. The prevalence of gas within heart was assessed by authors. The presence and type of skull fractures among cadavers was determined. The existence of intrahepatic gas was classified as grade 0 to 3 using semiquantitative system developed by Ito.

Gas was present in hearts of 64.8% trauma victims. The most common type of gas distribution was one, massive bubble of air (45.7 %), followed by many, small bubbles of air (43.0%). Skull fractures were observed in 52.3% of trauma victims. Fractures were found in more than one localization in 70.0 % of these cases. Intrahepatic gas was observed with prevalence of 64.0%, and if present, it was classified most common as grade 3 (48.1%) according to Ito classification. For 86.5% of cases when gas was present in heart, it was also found in liver. In 85.0 % of remaining cases, skull fractures were observed. The gas in the heart unassociated with the intrahepatic gas and skull fractures was noticed in 3.1 % of cadavers.

The presence of gas within heart is common finding in PMCT. The existence of the intrahepatic gas accompanying the gas in heart suggests that in these cases it originates from putrefaction.

Keywords: postmortem computed tomography, air heart embolism

Carotid and cerebral arteries variations - are they associated with aneurysm?

Szymon Ciuk, Katarzyna Ciuk, Arkadiusz Kacała, Małgorzata Milnerowicz

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Anatomic variants of vessels are very common but their significance is still to be analysed in terms of aneurysm.

The aim was to determine whether the presence of carotid and main cerebral arteries anatomic variants are connected with the occurrence of cerebral aneurysms.

Scans of 164 patients who had CT angiography of head and neck were analysed. The following parameters were evaluated: the variation of the origin of common carotid arteries, duplication, hypoplasia of main cerebral arteries, carotid artery kinking and the presence of cerebral aneurysms. Statistical significance was set at the level of $p < 0.05$.

Aneurysm was reported in 5.6 % of cases. Cerebral aneurysm was observed more often together with duplication ($p < 0.001$; OR=18.500) or hypoplasia ($p = 0.041$; OR=3.175) of at least one of cerebral arteries. Patients with variations of origins of common carotid arteries were more likely to have cerebral aneurysms ($p = 0.002$; OR=5.903). Kinking of internal carotid artery was observed in 27.3% of patients. It did not predispose to the formation of cerebral aneurysm ($p = 0.378$).

There is a connection between the presence of anatomic variants of major vessels (abnormal origin of the carotid arteries, hypoplasia or duplication of main cerebral artery) and the occurrence of cerebral aneurysms, whereas kinking of internal carotid artery is not correlated with higher probability of the occurrence of aneurysm.

Keywords: aneurysm, cerebral arteries, carotid arteries

Impact of other than *Clostridium difficile* toxins in antibiotic-associated diarrhoea

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Work's tutor: Dr n. med. Małgorzata Aptekorz

The aim of the study was to detect *Clostridium perfringens* strains in the stool samples of patients with Antibiotic-Associated Diarrhoea and to examine of their toxin profile.

Fecal samples of 119 patients with antibiotic-associated diarrhoea were tested for presence of *C. perfringens* and *C. difficile* by culturing on CLO and Columbia agar with 5% blood at 37°C for at least 48 hours in anaerobic conditions (Wihltley Anaerobic A35). The presence of *C. difficile* strains was confirmed based on colonies' type, p-cresol smell, the green-yellow fluorescence, and the biochemical features. *C. perfringens* was confirmed by double zone of hemolysis, morphological and biochemical features. The strains were frozen in -70°C until use.

119 *C. perfringens* strains were cultured and tested. Bacterial DNA was isolated (GeneMATRIX Kit) and amplified for the *cpb2* and *cpb* genes (*cpb2*-567 bp; *cpb*-196 bp). Electrophoresis was performed on 2% agarose gel stained with ethidium bromide (The Syngene G: BOX).

The presence of the *cpb2* gene was demonstrated in 63.9% (76/119) of *C. perfringens* strains, among which 69/76 *C. difficile* strains (A+ B+) were also cultured; the *cpb* gene was not detected. *C. difficile* was confirmed in 107/119 fecal samples. Out of 12 remaining samples negative for *C. difficile* toxins, *cpb2* was found in 7 *C. perfringens* strains. The mean age of these 7 patients was 60.4 years compared with the remaining 76.5.

Confirmation of the role of *cpb2* in the etiology of antibiotic-associated diarrhea requires further studies on a larger group of patients.

Keywords: *Clostridium perfringens*, antibiotic-associated diarrhoea, toxins

Rocuronium concentrations in the blood after administration of sugammadex at a dose of 1 mg/kg in pediatric patients

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Rocuronium is the neuromuscular blocking agent of the first choice. Although having fast onset as well as the intermediate duration of action and a lack of prolonged. Its neuromuscular blocking effect may also be influenced by the amount of muscle and sensitivity to neuromuscular receptors as well as its plasma concentration, which make it difficult to maintain an adequate level of neuromuscular blockade.

The study aimed to determine serum concentrations of rocuronium after administration of sugammadex at a dose of 1 mg/kg in pediatric patients.

Twelve patients undergoing elective surgery procedures with a standardized sevoflurane-fentanyl-rocuronium anesthetic technique received sugammadex at doses of 1 mg/kg for reversal of neuromuscular blockade. During the operation, blood samples (2 ml) were collected at the time-determined points after the rocuronium intubation dose - 2 and 15 minutes after rocuronium administration, just before sugammadex and 2, 5, 15, 60 minutes and 6 hours after sugammadex. The concentrations of drugs were determined by HPLC-MS/MS.

In every patient, an increase in rocuronium plasma concentrations was seen after administration of sugammadex. This is a result of redistribution of the NMBA due to complex formation with sugammadex. The increase in rocuronium occurred between 2 and 15 minutes after administration of sugammadex. However, this did not lead to recurarisation, which may be dangerous for the patient's health and life.

The findings indicate sugammadex at a dose of 1 mg/kg can be given effectively for the reversal of rocuronium-induced neuromuscular blockade in pediatric patients.

Keywords: rocuronium, pediatric patients, sugammadex, NMBA

Report on the case of myelodysplastic syndrome after 65 years old

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

Department of Geriatrics Nicolaus Copernicus University Ludwik Rydygier, Collegium Medicum in Bydgoszcz Work's tutor: Prof. dr hab. Kornelia Kędziora-Kornatowska

Myelodysplastic syndromes (MDS) arise as a result of mutation and clonal myeloid cell proliferation. The most frequently observed clinical consequences of cytopenias: increased symptoms of anemia, haemorrhagic diathesis, recurrent infections, acute myelogenous leukemia. Therapeutic options in MDS include treatment with high-dose chemotherapy with/without HSCT, treatment with low-dose chemotherapy, supportive care, and symptomatic treatment. Transfusion of KKCz and platelet concentrate is used in the majority of patients with MDS as the only form of therapy is recommended in patients with good prognosis and in patients with poor prognosis, disqualified for other forms of therapy.

A 77-year-old patient repeatedly hospitalized in the Department of Geriatrics for symptomatic anemia in myelodysplastic syndrome. The main ailments of the patient: weakness, depressed mood, reduced tolerance of physical exercise, dizziness, palpitations with little effort, symptoms of gastrointestinal bleeding, stenocardial ailments. Patient with multidisease. A bone marrow biopsy was performed - in the myelogram MDS was diagnosed with features of low-grade triplicate dysplasia. From 2012 to 2018, a total of 49 NUKKCz units were transfused, reducing only the symptoms of the disease. In laboratory tests, the patient had: significantly elevated glucose, RDW-CV, RDW-SD, creatinine, APTT, INR, PT. A significant decrease was observed in the following indicators: RBC, HGB, HCT, MCHC, LYMPH, glomerular filtration, prothrombin index.

A careful assessment of the functional status, ability to tolerate treatment, disease progression, and overall health can be helpful in determining treatment. Palliative care and environmental care are important aspects of improving the health and quality of life of MDS patients.

Keywords: myelodysplastic syndrome, geriatry

Physiotherapeutic treatment in Glénard's disease (visceroptosis) - case report

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Department of Internal Diseases, Medical University of Silesia

Work's tutor: Dr hab. n. med. Jacek Durmala

The Glomerulum Drop Syndrome - Glénard's disease is a rare enteroptosis in the pediatric population. The cause is the excessively low position of the viscera (stomach, intestines, liver, kidneys) within the abdominal cavity and the secondary increased laxity of the abdominal integuments. Chronic abdominal pain, neurasthenia can negatively affect the child's psycho-physical development and quality of life. In a 9-year-old girl, abdominal pain, weak muscle tone, convex abdomen and diarrhea were observed. After careful diagnosis including: basic laboratory tests, abdominal ultrasound, intestinal passage in a standing position, the diagnosis was established.

The aim of the therapy was to reduce pain in the abdominal region without using pharmacotherapy.

Physiotherapeutic procedures include: exercises to correct muscular tone of the abdominal wall, static disorders and reduce pain, as well as individual physical exercises and manual therapy. Exercises continued through 6 weeks. Before and after each therapy, the presence of pain was recorded using the VAS scale. A reduction in the severity of pain and a definite improvement in the quality of life was achieved. Properly used physiotherapeutic procedures can improve the comfort and quality of life of patients with Glénard's Disease.

Keywords: Glénard's disease, visceroptosis, physiotherapy



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF DOCTORAL SCIENCE MEDICINE

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Nutritional behavior in hemodialyzed patients.

Wioletta Marek, Andrzej Bartłomiej Zachwieja

Zakład Promocji Zdrowia i Pielęgniarstwa Środowiskowego,
Śląski Uniwersytet Medyczny w Katowicach
Wydział Rehabilitacji Ruchowej, Akademia Wychowania
Fizycznego im Bronisława Czecha w Krakowie

Work's tutor: dr Halina Romualda Zięba

Protein-caloric malnutrition is a frequent and important problem in patients with chronic kidney disease, for dialyzed patients. It is estimated that malnutrition occurs in more than 1/3 of the renal replacement patients. The consequences of malnutrition are an increase in the number of hospitalizations, ineffective rehabilitation and an increase in morbidity and mortality in dialysis patients.

Evaluation of nutritional status of patients with kidney disease and impact on the treatment in later life.

The research was conducted among 60 patients (28 men and 32 women) between the ages of 28 and 70 (average age 59.35 ± 11.57 years). The research was initiated by thorough interviews on nutrition during renal failure before dialysis and nutrition during dialysis, the impact of nutrition on health, food preferences.

While assessing the adaptation to dietary recommendations, it was found that 58.6% of men and 76.2% of women declared that the diet would be served in a daily menu, showing greater knowledge of the impact of nutrition on health, so much more than before nutrition education. Patients more often paid attention to the consumption of products that influence the change of blood biochemical indicators. There is also a significant disproportion in reducing the consumption of spices for culinary purposes such as vegeta, kucharek, or maggi.

The comparison of results showed beneficial change of behavior in nutrition of patients, declarations of possession greater knowledge and awareness and adherence to dietary recommendations.

Keywords: nutritional behavior, hemodialyzed patients, education

Functional status and the degree of acceptance of illness among geriatric patients staying in the rehabilitation center.

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Work's tutor: dr Halina Romualda Zięba

An older age is a difficult period in the life of every human being, in which on the one hand he goes to a well-deserved rest and on the other hand, many ailments and illnesses often occur.

The aim of the study was to analyze the correlation of the functional status and the degree of acceptance of the disease of elderly patients staying in a rehabilitation center.

The research was carried out in Szczawnica. The study group consisted of 100 people, the average age was 79.6 ± 7.8 years, including 62 women. Most people were hospitalized because of chronic diseases of the older age, and least because of stroke. During the first three days of stay in the facility, the Scale of Acceptance of Disease (AIS) and Skala Barthel (BI) were performed. These studies were repeated after 3 weeks of systematic physiotherapy.

After admission, the mean functional status of the subjects (BI1) was $71.48 (\pm 27.9)$, and the average level of disease acceptance (AIS1) was $21.70 (\pm 7.6)$. After 3 weeks of physiotherapy, there was a significant improvement in AIS and BI ($p = 0.0072$, $p = 0.0001$). The greatest improvement in the level of acceptance of the disease occurred in patients after fractures. Correlation analysis showed a significant relationship between AIS1 and BI1, as well as AIS1 and BI1 and their change over time (BI3-BI1; AIS3-AIS1).

In the examined group of older patients, a strong correlation between the level of acceptance of the disease and the functional state as well as better acceptance of own illness and improvement of the functional state after the performed physiotherapy was demonstrated.

Keywords: functional status, physiotherapy, geriatric patients, acceptance of illness,

Physical activity of primary school students accounting their family's lifestyle

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Lifestyle is a group of attitudes and life philosophy of a given unit or group. Leading a healthy lifestyle depends on behaviour patterns aimed at maintaining health and wellbeing. It is vital for this habit to be accustomed from earliest age and continued in adulthood. Family has significant impact on raising health-promoting behaviours among children nowadays and in future.

The aim of the study was primary school students' physical activity examination accounting their family's lifestyle.

255 parents(100%) of primary school students were examined including 133(52.2%) girls and 122(47.8%) boys aged 6-15 years. Examination tool used was a custom survey aimed at examined students' parents consisting of two parts: one applied to children, the latter to their parents and family.

Children practising in sports clubs exercise more on PE lessons in comparison to non-practising children, who spent their time for optional classes. Both groups spent the same time using computer(1-2 hours) daily. The higher education parents had the more time their children spent on sports. Children of mothers with sport past ten to exercise more. Housing conditions and wealthiness had influence on children practising in sports club.

Family lifestyle was influential on children in performing sport activities in organized clubs. Children practising sports exercised more on PE lessons, but spent less time on optional classes compared to non-practising. Both mentioned groups spent daily the same time on using a computer. Sports past of mothers, higher education of parents and high material status influenced on children physical activity.

Keywords: students' physical activity, their families

Free radical interactions of the ointments contain prednisolone, hydrocortisone and ascorbic acid - EPR and UV-Vis examination

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Prednisolone and hydrocortisone, the glucocorticoid drugs are used together with ascorbic acid in dermatological ointments. The antioxidative character of ascorbic acid is important to the anti-inflammatory action of these ointments. The antioxidative interactions of the ointments were studied by the use of the model DPPH (2,2-diphenyl-1-picrylhydrazyl) free radicals. The effect of UV irradiation on the antioxidative interactions of these ointments was unknown, and its analysis was the important task in this work.

The aim of this work was to determine the interactions with free radicals for the two ointments contain: prednisolone and ascorbic acid, and hydrocortisone and ascorbic acid. The effect of UV irradiation of the ointments on these interactions was tested.

The spectra of DPPH free radicals were measured by an X-band (9.3 GHz) EPR spectrometer, and the numerical data acquisition system - Rapid Scan Unit. UV-Vis measurements were performed by the use of Genesys 10S spectrophotometer.

EPR and UV-Vis spectra of DPPH added to the two tested ointments contain: prednisolone and ascorbic acid, and hydrocortisone and ascorbic acid, were lower than the spectra of DPPH in the reference solution. It pointed out the scavenging activity of these ointments against free radicals. The quenching of the EPR and UV-Vis spectra of DPPH in contact with the tested ointments changed after their UV irradiation.

UV irradiation changes the antioxidative interactions of the ointments contain prednisolone, hydrocortisone, and ascorbic acid, with free radicals. The tested ointments should not be exposed to UV electromagnetic waves.

Keywords: prednisolone, hydrocortisone, ascorbic acid, free radicals, EPR, UV-Vis

Risk of falls in patients with mild neurocognitive disorders.

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Neurocognitive disorders are an increasingly common problem due to the progressive aging of the population. The most common form of neurocognitive disorders are changes in the etiology of Alzheimer's. Falls are also a serious social and economic problem for people over 65 years of age.

The purpose of the following study was to assess the risk of falls in patients with mild neurocognitive disorders.

The research was carried out in the Department of Geriatrics, Collegium Medicum NCU in Bydgoszcz. The study involved 321 participants: 223 people with mild neurocognitive disorders [NCD] (study group) and 98 people without neurocognitive disorders (control group).

The average Tinetti score in the subscale: balance and gait was respectively 14.33 points in the control group, while in the group of patients with mild NCD 12.35 points. In the group without NCD-10.81 points, in the group with mild NCD-9.71 points. The difference was statistically significant ($p < 0.001$). The total mean Tinetti score in the group without NCD was 25.10 points, while in the group with mild NCD it was 22.05 points. The difference was statistically significant ($p < 0.001$). The average Dynamic Walk Indicator (DGI) score in the group without NCD was 19.53, while in the study group it was 16.95 points. The difference was statistically significant ($p = 0.013$).

The risk of falls in older people is correlated with the occurrence of neurocognitive disorders. To reduce the risk of falls, it is advisable to increase prevention, rehabilitation, general dexterity and the provision of orthopedic equipment of people with neurocognitive disorders.

Keywords: falls, geriatrics, neurocognitive disorders

Physical activity and exercises during physiological pregnancy – recommendations versus women's knowledge about the subject.

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Physical activity of pregnant women is still a contentious issue. Some doctors recommend physical activity, while others say that regular activity is not recommended. According to American College of Obstetricians and Gynecologists, moderate everyday physical training is safe and brings many benefits.

The aim of the study is to assess the knowledge of pregnant woman about the indications for regular physical activity.

The survey was conducted among 41 women in the course of physiological pregnancy. During the study, women were in the second or third trimester of pregnancy. The examined women reported their willingness to participate in the survey in 2017 and 2018. There were clients of one of the birth schools in Bydgoszcz or patients of one of the gynecologists from Bydgoszcz.

100% of the examined female respondents are aware that regular activity is appropriate for pregnant women and may improve their physical health. 70.73% of women think that physical activity is advised, while 29.27% think that it is recommended but only in moderate amounts. 75.61% of respondents engage in physical activity, however, in the majority of cases it is limited to just walks. Only 12.2% of women engages in yoga and only 14.63% in special exercises designed for pregnant women, in case of pilates – only 2.44% declare active participation.

Woman's knowledge about physical activity is at acceptable level although it does not translate to real world activities beyond walks in most cases.

Keywords: physical activity, pregnancy, woman's knowledge about physical activity

Lomefloxacin activated by UVA radiation induces melanogenesis and oxidative stress in normal human melanocytes

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The fluoroquinolones are widely used group of antibiotics. Characteristic side effect of these antibacterial drugs is photosensitivity. Fluoroquinolones, activated by UVA radiation, cause phototoxic and photoallergy reactions. Lomefloxacin, which belongs to fluoroquinolones, has the highest phototoxic activity in this drug class.

The aim of study was to examine the impact of lomefloxacin and UVA radiation on melanogenesis and antioxidant defense system in human normal melanocytes.

In the study, the normal human melanocytes HEMn-DP were used. The cells were exposed to UVA light and different concentration of lomefloxacin (0.005 mM, 0.05 mM, 0.5 mM). The impact of lomefloxacin and UVA radiation on melanogenesis was analyzed by measurement of melanin content and tyrosinase activity. The effect of analyzed agents on oxidative stress were examined by antioxidant enzymes (SOD, CAT, GPx) activity measurement.

The results indicate that activation lomefloxacin by UVA radiation causes significant difference in the effect of analyzed fluoroquinolone on melanogenesis and antioxidant enzymes activity. In cells exposed to lomefloxacin and UVA radiation was higher melanin content and tyrosinase activity than cells exposed to drug alone. Moreover, exposure to UVA radiation induces significant changes in activities of SOD, CAT, GPx in lomefloxacin - treated melanocytes.

The obtained results show that melanin and oxidative stress may play a role in mechanism of phototoxic reactions caused by lomefloxacin.

Keywords: lomefloxacin, melanin, antioxidant enzymes, tyrosinase

Expression of IL-18, IL-18BP, IL-18R and IFN- γ genes in active tuberculosis and latent infection among the Polish population

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One of the important challenges of the modern World is the improvement of knowledge about tuberculosis due to the fact that interactions between *Mycobacterium tuberculosis* (M.tb) and the host at the molecular and cellular levels remains poorly understood. The development of molecular biology methods that are becoming more and more popular may shed new light on this interdependence.

The aim of this work was to evaluate changes in the expression of IL-18, IL-18BP, IL-18R and IFN- γ genes in the group of patients with tuberculosis and latently infected in relation to healthy volunteers.

The study group comprised of 161 Polish BCG-vaccinated adults from whom were selected: patients with active pulmonary tuberculosis (TB), latently infected with M.tb (LTBI) and healthy volunteers (HC). All the patients underwent a standard clinical diagnosis. Gene expression was assessed using the Bio-Rad reagents and platform.

The experiment revealed increased expression of the IL-18, IL-18BP, and IFN- γ genes in both groups of individuals infected with M.tb in relation to healthy non-infected subjects. What is more, the study showed a significantly higher expression of IL-18R and IFN- γ genes in a group of TB patients in comparison to latently infected. Enhanced expression of studied genes corresponded with the increased serum concentration of IL-18, IL-18BP, and IFN- γ that have been tested in previous studies.

The results of gene expression confirmed the involvement of selected proteins in the development of immune reactions and allowed to shed new light on the interaction between mycobacteria and host. Supported: 2015/19/N/NZ6/01385

Keywords: tuberculosis, gene expression

Isolation, culture conditions and characterisation of cells isolated from abdominal aortic aneurysms

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Abdominal aortic aneurysm (AAA) is common and asymptomatic life - threatening illness. It comes into existence as a result of abdominal aortic wall dilation leading to blood vessel rupture and patient's death in great measure. Finding a specific prognostic marker, which is associated with the presence and progression of AAA is very crucial.

The aim of the study was to isolate and culture cells obtained from AAA specimens and determination of their phenotypes. The material to study were specimens of aortic walls obtained from patients with AAA subjected to surgical treatment. Each sample was divided into upper, central and lower segment. The cells were isolated from separated inner, median and external layer of each AAA fragment. Isolated cells were cultured in an appropriate standard culture media. Subsequently, the cell cultures were analyzed by flow cytometry, immunochemistry and macroscopic methods.

Majority of the cells from every layer were the cells positive for CD90 antigen considered as fibroblast marker. The cells from the layers did not show the expected morphology, such as for endothelium in the inner layer, smooth muscle in the middle and fibroblasts in the external layers. The studies here have confirmed that in the wall of the AAA there is a lack of specific cell type composition in comparison to the normal abdominal aorta wall.

Keywords: Abdominal aortic aneurysms (AAA), cell culture, layers of AAA

Cytotoxicity of ketoprofen induced by UV radiation - in vitro studies using melanoma cells

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Melanoma is the most aggressive skin cancer with a high mortality rate. Melanoma causes about 75% deaths of patients with malignant skin cancers. Therefore, new effective therapeutic methods are still sought.

Ketoprofen (KTP) is a non-steroidal anti-inflammatory drugs that has high efficacy in the treatment of pain. Moreover phototoxic activity of KTP can be used in inhibiting the growth of tumor cells of cutaneous melanoma.

The aim of this study was to evaluate the cytotoxic effect of ketoprofen induced by UV radiation on melanoma cells.

C32 amelanotic melanoma cells and COLO829 melanotic melanoma cells were cultured in culture medium (C32 in DMEM, COLO829 in RPMI) in a CO₂ incubator. Cells were treated with KTP at concentrations from 0.5 to 1 mM. After 24h, the drug was removed and the cells were irradiated with UVA and UVB radiation. Next, the cells were incubated in culture medium for 24, 48 and 72 hours. Cell proliferation and survival assay were performed using WST – 1 test. WST-1 is a water-soluble tetrazolium salt and the rate of WST-1 cleavage by mitochondrial dehydrogenases correlates with the number of viable cells.

Ketoprofen alone causes a 20% reduction in the viability of melanoma cells. UVB radiation does not increase the cytotoxic effect of ketoprofen. Ketoprofen in combination with UVA radiation significantly reduces the viability of melanoma cells C32 and COLO829.

Keywords: melanoma, ketoprofen, UV

Endocrine and behavioral alterations in stressed early adolescence and adult wistar rats

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Maternal separation in neonatal period of life (MS) has been demonstrated to trigger neuropsychiatric disorders in adulthood, particularly depression and anxiety. Stressed rats presents hyperactivity of the HPA axis and anxiety-like behavior in adulthood. Furthermore, adolescent rats exposed to stressors show anxiety-like behavior, when they are testing. Interestingly, a number of studies have shown that also repeated exposure to acute stress during adolescence may have long-term consequences.

The purpose of the study was the estimation of the behavioral and endocrine alterations in stressed and non-stressed Wistar rats.

We performed stress protocols: 1)MS in male and female Wistar rats; 2)in adolescence consists of 3 days of exposure to stressors. Consequences in adolescence and adulthood were measured in the OF and EPM. Moreover, we measured activity of the HPA axis in adulthood.

In adolescence, we noticed an increase of the anxiety-like behaviors in part of parameters of the OF in control group with acute stress. MS not elevated these behaviors. In adulthood, the alterations were similiary.

We observed an elevation of the ACTH level in MS male rats with acute stress, but not in control male rats. Nevertheless, in female control rats ACTH level was highly increased. Further, we observed an elevation tendency in CORT level in both control group (male) with acute stress and MS group (male) with acute stress.

The acute stress may causes alterations in female and male Wistar rats. The HPA axis hyperactivity is also observed.

Keywords: maternal separation; acute stress; HPA axis; behavioral tests

Healthy lifestyle in the opinion of primary care clinic patients

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A healthy lifestyle promoted by social media is very much desired by the society at the time. More and more people are aware of the benefits of using a healthy diet and physical activity. The advantages include better well-being, slowing down the aging process, preventing numerous civilization diseases and many more.

The aim of the study was to get to know the opinions of primary care clinic patients about healthy lifestyle.

The study group consisted of 31 patients of outpatient care centers with multi-organisms from Silesia. The work uses an original, anonymous questionnaire consisting of 5 parts and a IPAQ in a short version.

The subjects were aged 50 to 65 years. Half of the respondents had higher education. The respondents define a healthy lifestyle as performing physical activity (90.0%) and using the correct diet (93.3%). Only 36.7% of respondents classify souls and sleep as healthy lifestyle (6.7%). Respondents with higher and secondary education believed that a healthy lifestyle is first and foremost proper nutrition. Statistical analysis did not show the relationship between the BMI of respondents and the satisfaction of their appearance. Over 90% of respondents had problems with solving the short IPAQ.

1. In the opinion of the respondents, a healthy lifestyle is primarily a physical activity, a healthy diet. 2. The most frequently performed physical activity among the subjects was walking and swimming. 3. Along with the increase in the number of diseases in the subjects, physical activity decreases.

Keywords: Healthy lifestyle, primary care clinic



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

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Prevalence of knowledge about breastfeeding and diversity of lactational problems among mothers – questionnaire survey

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WHO, AAP, UNICEF and ESPGHAN have recognized the superiority of mother's milk over all infant formulas, based on modified cow's milk. Exclusive breastfeeding is recommended during the first 6 months of life. Breastfeeding should be proceeded after introduction of complementary food.

The aim of the study was to present women's knowledge about breastfeeding and distinguish the variability of lactational issues.

All data was collected from electronic questionnaire. 2695 responses were obtained. The study involved women who delivered a baby full- term and have ever breastfed a child. The following groups were identified: women after natural childbirth and caesarean section, women practising medical and non-medical professions, women feeding infants solely with their own milk and women feeding with a mixed way- with their own milk and formula. All statistical analysis were performed using Microsoft Excel and STATISTICA 13.3 software. A p value < 0.05 was considered statistically significant.

The first part of the study showed a variety of women's problems during lactation. In the second part of the survey, the majority of respondents answered correctly. The diversity of responses was shown depending on the group. The analysis was based on standards promoted by scientific societies and organizations supporting breastfeeding

Women's knowledge about lactation is insufficient. Many problems affect women during breastfeeding. It is particularly important to provide appropriate lactation counseling to breastfeeding mothers. Relevant public education is also necessary to provide optimal nutrition for infants and children.

Keywords: breastfeeding, lactation, human milk, newborn, infant

Prognosis of patients admitted to the intensive care unit

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Mortality prediction during hospitalization in the ICU became a very important element of intensive therapy. However, there is still no reliable tool that could predict chances and time of survival after discharge from the ICU.

The aim of the study was to establish the average length of life after an ICU discharge and to examine the connection between patient's state on admission and the survival time after the discharge.

Retrospective analysis of 985 hospitalizations in the university ICU between 2015-2017 was performed. Medical records were analyzed in order to obtain information necessary to calculate SAPS II, APACHE II and SOFA scores and in-hospital mortality was recorded. Data concerning long-term mortality of patients discharged from the ICU were verified with the use of the PESEL database.

Mean SAPS II, APACHE II and SOFA scores were 41 ± 20 , 14 ± 9 , 6 ± 4 respectively. In-hospital mortality was 37,46%. Long-term mortality was 18,12%. Predictive values of in-hospital mortality were as following: SAPS II: AUC=0.826, 95%CI 0.799-0.854; APACHE II: AUC=0.836, 95%CI 0.81-0.852; SOFA: AUC=0.788, 95%CI 0.759-0.818 with the corresponding cut-off points: 41, 14, 7. Predictive values of long-term mortality were as following: SAPS II: AUC=0.708, 95%CI 0.664-0.752; APACHE II: AUC=0.709, 95%CI 0.666-0.752; SOFA: AUC=0.661, 95%CI 0.615-0.706 with the corresponding cut-off points: 34, 10, 3.

APACHE II is the most beneficent tool in establishing in-hospital and long-term mortality. Each scale is better in predicting in-hospital mortality rather than the long-term one. The survival significantly decreases one year after the ICU discharge and it stabilizes in later period.

Keywords: ICU mortality, in-hospital mortality, SAPS II, APACHE II, SOFA

Assessment of nutritional status of hemodialysis patients

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Chronic kidney disease is a serious health problem. Most of patients have been in the last chronic kidney disease phase which demands renal replacement therapy. Undernourishment in that population is an important factor which increases the death rate and decreases effectiveness of treatment and the life quality of patient. The appropriate treatment and constant monitoring of the nutritional status are vital in the overall process.

The aim of study assumes to rate the dialysis patients condition of nutrition at the Wojewódzki Szpital Specjalistyczny nr 4 in Bytom.

The research had been performed amongst hemodialysis patients during the stay in the hospital. The original questionnaire based on single choice questions had been used as an instrument to carried out the examination, additionally the medical documentation of patients was analyzed and the results had been developed in MS Excel and then carried out under the analysis in program Statistica 13.1.

The patients were characterized by frequent occurrence of hypoalbuminemia, less than 40% of examined population of patients were reflected by more than 10% decrease of the body weight which is the result of malnutrition. The most common co-morbidities were hypertension (75%) and secondary anemia (62%). The vast majority of patients (96%) do not consume the special medical products, more than half of examined patients (79%) use supplements such as vitamins or minerals.

The analysis of the studies concludes that malnutrition amongst examined hemodialyzed patients is a common phenomenon, it was also noticed that the eating habits of patients require correction.

Keywords: chronic kidney disease, end-stage renal disease, hemodialysis, assessment of nutritional status, malnutrition, nutrition

Exposure assessment of the population living in the influence area of Grupa Azoty Zakłady Azotowe Kędzierzyn S.A. on heavy metals

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Common prevalence and high toxicity makes heavy metals a significant threat to health of the general population. The most important sources of emission of toxic elements to the environment is mining, chemical industry and burning of fossil fuels. The largest center of the chemical industry in the city is Grupa Azoty ZAK S.A..

The aim of the study was to assess the exposure of the people living in the impact area of Grupa Azoty ZAK S.A. to heavy metals contained in soil and root vegetables, grown locally.

The research material was collected in 2018, in 10 home gardens, in the city Kędzierzyn-Koźle and in the village Korzonek. 50 samples were analyzed for Cd, Pb, Ni, As, Cr, including: 30 samples of vegetables and 20 soil samples. The content of heavy metals in vegetables samples was determined using the atomic absorption spectrometry method. Risk assessment was based on the method recommended by the US EPA.

The concentrations of Pb, Cd, Cr and Ni detected in the samples didn't exceed the highest permissible concentrations. The highest concentration of As, exceeding the permissible concentrations (5.5%) was detected in the sample of cultivated soil. Concentrations of Pb, Cr and As in root vegetables were below LOQ. The average concentrations of Cd in the root of celery, parsley and carrot were 0,0067, 0,0061 and 0,0057 mgCd/kg ś.m.. HQ resulting from the consumption of cadmium with root vegetables for an adult is from 0,06% to 0,1% RfD.

Concentrations of heavy metals in locally cultivated root vegetables don't pose a threat to the health of residents.

Keywords: heavy metals, chemical industry, soil, root vegetables, population exposure

Sleep disorders and depressive states in pregnant women

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According to research conducted by the American National Sleep Foundation, nearly 75% of pregnant women experience a deterioration in the quality of sleep. It has been estimated that between 6 and 25% of women suffer from depression during pregnancy. Apart from sleep problems, the symptoms of depression included low mood, tiredness, lack of interest in themselves and the surroundings, increased fatigue, as well as lack of energy and appetite.

Evaluation of the relationship between the occurrence of sleep disorders and depressive states in pregnant women.

Pregnant women (n=175) were qualified for the study and divided into group depending on the quality of their sleep. The research tool was a questionnaire covering questions about the gestation, the quality of sleep and the occurrence of depressive states. Sleep was evaluated by the Athenian Scale. The Beck depression scale was used to identify degree of depression. Participation in the study was anonymous and voluntary.

On the basis of the results of the Athenian scale, the examined women were divided into 3 groups - group I: sleep in the norm (n=28); Gr. II: borderline of the norm (n=63); Gr. III: insomnia (n=84). Lack of depressive symptoms was found among 82.1% of women from I group and 57.1% and 26.2% of pregnant women in groups II and III, respectively. A mild degree of depression occurred in 17.9% of women from group I, 39.7% from group II and 51.2% from group III. Moderate depressive disorders were found only in pregnant women from II (3.2%) and III (22.6%).

The degree of sleep disturbance affects on the level of depression.

Keywords: pregnancy, sleep, sleep disorders, depression, depressive disorders

"What the doctor will not tell you" - analysis of Polish anti-vaccine websites

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Antivaccination movements exist only slightly shorter than the vaccinations themselves. Nevertheless, these organizations have been experiencing a renaissance in recent years. Revival of Andrew Wakefield's falsified work. Since then, the number of people who oppose vaccinations has been systematically growing.

The content's analysis of the websites spreading negative information about vaccinations.

In the Internet browser google.com, there were searched Polish-language websites containing anti-vaccine content. 10 of them were analyzed in terms of their content and graphics.

The 8 pages included scientific research concerning the harmfulness of vaccinations as well as discrediting and distorting the results of work on the effectiveness and safety of vaccinations. Accusations of doctors about financial ties with pharmaceutical companies are found on the majority of the analyzed websites. All websites referenced to the connection between vaccines and autism. On 7 pages you can find information how to avoid/postpone vaccination. The 8 websites referred to experts who in the world of science are not considered to be authorities. Emotional descriptions referring to cases of children who had severe complications after vaccination (6/10) often appeared. The 4 websites were provided with graphics showing suffering children to strengthen the negative message.

To counteract the anti-vaccine crusade you need to know the opponent's arguments. Monitoring of the anti-vaccine content published on Internet may be helpful in designing promotional campaigns and educating healthcare professionals to effectively fight disinformation.

Keywords: anti-vaccination movement, websites, vaccination

Breastfeeding mother's diet - facts or myths?

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Mother's milk provides optimal nutrition for infants. As breastfeeding contributes to numerous short- and long-term health benefits, the WHO recommends exclusive breastfeeding for the first 6 months of life. During lactation, mothers should be encouraged to follow a balanced diet. However, they are often urged to avoid certain foods, as issue of lactating women's nutrition is overgrown with myths. Diet restriction is an important factor disturbing successful breastfeeding and might be a reason for short lactation duration.

The aim of this study was to recognize the scale of common lactating mothers' diet misconceptions, to assess knowledge and compare answers of respondents practising medical and non-medical professions.

The study included 1159 respondents: mothers who had ever breastfed a child and health care professionals (both men and women). The study used the diagnostic poll method, based on a survey questionnaire previously developed by the authors. Analysis of the results was performed using Microsoft Excel and STATISTICA 13.3 software. The significance level was set at $p < 0.05$.

Incidence of correct answers were high in both groups. Several discrepancies in answers to certain questions were noted due to: profession, fertility, incident of diet restriction during lactation, and among medical staff – gender and incident of recommending prophylactic exclusion diet.

In general, respondents presented good knowledge about nutrition in lactation period. On the contrary, some of them revealed unscientific approaches to diet restriction. Education and support by healthcare providers could enhance breastfeeding.

Keywords: lactation; nutrition; survey

The occurrence of headaches in patients with thyroid diseases and temporomandibular joint disorders

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Tension type headaches may be one of the symptoms of temporomandibular joint dysfunctions (TMD) and lead to limitations in daily life activities. The International Classification of Headaches distinguishes headache associated with hypothyroidism (HAH) and estimates their prevalence at around 30%. Prevalence of both these phenomena may be a reason for interdependence in their occurrence.

Presentation of the frequency of headaches in patients with temporomandibular disorders and thyroid disorders.

44 patients with thyroid disease (40.2 ± 10.6 years) were examined for signs of TMD using the questionnaire, that included an interview, a linear measurement of TMJ's mobility and palpation of selected masticatory muscles with a VAS pain assessment. The questionnaire also assessed the incidence and severity of headache. Statistical processing of the data was done with STATISTICA 13 and was conducted considering significance at a p-value < 0.05.

The headaches affected more than half of patients (58.8%) with an average intensity of 6.9 points on the VAS scale. In the study group there was an increased pain for chewing muscles at an average of 7.6 points VAS scale and limitation of the mouth opening movement (62.5% of cases). In a detailed analysis, it was shown that headaches occurred in hypothyroidism with prevalence 61.5%.

Headaches occur in TMD and thyroid diseases and co-occurrence with increased pain for chewing muscles.

Keywords: temporomandibular joint disorders, tension type headache, thyroid disease

Psychosomatics of thyroid diseases and the occurrence of symptoms of bruxism in patients with temporomandibular joint disorders

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Thyroid diseases affect the functioning of the whole organism. Symptoms of their occurrence are also those in the field of psychosomatics, ie mood disorders, depression and neurosis. An important factor predisposing to parafunction and bruxism is stress and extreme emotional states that cause excessive tension in the masticatory muscles.

Presentation of the frequency of parafunction of the masticatory motor system and bruxism among patients with thyroid diseases and temporomandibular joint disorders (TMD).

44 patients with thyroid diseases (hypothyroidism, hyperthyroidism, Hashimoto's disease, thyroid nodules) and TMD were included. The patients underwent examination of temporomandibular joint's range of motion and palpation of masticatory muscles. The questionnaire of Manual Functional Analysis of masticatory motor system was used and extended it to an interview, including psychosomatic disorders and the occurrence of parafunctions.

Parafunctions, ie teeth clenching, nails biting, lips biting, additional jaw movements, grinding teeth, long-lasting chewing gum occurred in 59% of cases. Exposure to severe stress was declared by 30% of respondents, and depression related to 11.4% of patients with hypothyroidism. Bruxism was most common (71.4%) in patients with hypothyroidism. However, the dominance of the above symptoms in individual thyroid diseases was not observed ($p > 0.05$).

Conclusions: There was no statistically significant relationship between psychosomatic symptoms in thyroid diseases and the occurrence of symptoms from the bruxism spectrum.

Keywords: temporomandibular joint disorders, thyroid diseases, bruxism, stress, parafunctions

Publication and reporting of clinical trial results: cross sectional analysis across Polish university medical centres

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Publication and reporting of clinical trial results: cross sectional analysis across Polish university medical centres

The results of completed clinical trials are crucial for decision making in evidence-based medicine. However, the World Health Organization reports that currently, about 50% of completed clinical trials remain unreported.

The aim of this study was to determine rates of publication and reporting of results for completed clinical trials across all university medical centres (UMCs) in Poland.

We used the Aggregate Analysis of ClinicalTrials.gov and manual search to identify all interventional clinical trials registered on ClinicalTrials.gov with a completion date between 2009 and 2013. A trial was assigned to a UMC if the UMC was either mentioned as a “responsible party” or as a “facility”. For each of the included studies, a publication was searched independently by two researchers in a 4-step process on: ClinicalTrials.gov, PubMed, Google Scholar and Web of Science.

We identified 1267 interventional clinical trials registered on Clinicaltrials.gov across Polish cities with UMCs completed between 2009 and 2013. Of these, we excluded 967, leaving 300 trials across 13 UMCs. Overall, 126 of 300 trials (42%) had submitted or posted results on ClinicalTrials.gov and 215 (72%) had published their results via journal publication. Fifty-seven trials (19%) still had not disseminated their results.

More than six years after study completion, 19% of all clinical trials across 13 Polish UMCs had not disseminated their results, which wastes public resources and negatively affects decision making in medicine.

Keywords: clinical trials, results dissemination, Polish university medical centres

Social value in Phase 1 clinical trials in pediatric oncology. A systematic review

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To be considered ethically justifiable, clinical trials that enroll sick patients need to provide direct benefit for their health and/or minimal risk. Some studies, like pediatric, oncological Phase 1 trials cannot. Instead they must offer broader social value.

Our aim was to assess social value of Phase 1 clinical trials in pediatric oncology.

We systematically searched EMBASE and PubMed for Phase 1 pediatric oncological trials. We measured social value of each study by determining how many of those trials led to approval of tested treatment for pediatric oncologic indications within 5 years since publication of Phase 1 results. We determined impact on other publications by reviewing what types of publications cited each Phase 1 trial.

We found 139 studies that met eligibility criteria. The overall registration rate for a pediatric oncologic indication was 5% and 0% for a non oncologic indication. Most of citations types were reviews, commentaries, book chapters etc. (61%), preclinical studies (17%), Phase 2 or 3 trials in other areas (16%), other Phase 1 trials (3%) and Phase 2 or 3 trials of the same drugs, as well as clinical practice guidelines (3%).

Approval rate of interventions tested in pediatric Phase 1 clinical trials in oncology is very low. These trials have little impact on further development of the same interventions and on clinical practice guidelines. Instead, reviewed trials do inform development in other fields of biomedical research. There is a need to re evaluate current framework of value assessment of Phase 1 trials in oncology.

Keywords: social value, phase 1 trials, pediatric, oncology, response, toxicity, systematic review

The dependence of well-being on exposure to stress in the group of young people

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The World Health Organisation has recognised the stress as one of the factors involved in the formation of various somatic diseases, as well as threatening to our mental health. The prevalence of stress and its intensity will affect the quality of life and self-esteem.

The aim of the study was to find a relationship between the well-being of the IP in the WEMWBS scale and exposure to stress and to check how strong this dependency is.

The study was conducted using original questionnaire and the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) used to assess well-being. The study included 225 persons aged 16-34 years (mean = 23,67 \pm 2.79), 156 women and 76 men. The result has been correlated in the scale of WEMWBS of various factors.

Found an important relationship between well-being and subjective assessment of exposure to stress (evaluated on a scale ordinal: no stress, a small, moderate, large, stress all the time) $p = 0.0002$. People with little exposure to stress reported well-being, compared with the rest of the groups.

Large exposure to stress is associated with a lower well-being, so it is necessary to reduce stress for better well-being.

Keywords: stress, WEMWBS, well-being

Do plush vegetables and fruits help us to change our eating behaviors?

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Incorrect eating behaviors and increasing rate of childhood obesity are observed. Due to these negative changes, preventive efforts are taking. One of them was popular in recent years campaign promoting eating vegetables and fruits (VF). In this programme buying VF was rewarded and the main purpose was to make positive connotation through animalization of VF and present them as plush toys.

Investigation of the influence of collecting plush toys in the shape of VF on consumers' eating behaviors.

Study included 100 participants: 50% were adults who collected plush VF for themselves and 50% - parents engaged in collecting toys for their children. Subjects were asked about the frequency of buying and eating VF during the campaign and assessment of prevention strategy efficacy.

Subjects from both groups eat insufficient amounts of VF per day. 58% of adults admitted buying more VF due to the programme, but only 44% of them (30% of general group) increased consumption. Parents group declared that their children were eating VF systematically, though portions were insufficient compared to recommendations. 62% of parents admitted buying more VF during the programme but only 42% of children (30% of general group) were eating more VF. Most of the participants among both groups concluded programme did not influence their eating behaviors.

According to results, there is a probability that the programme did not have a significant impact on the subjects' eating behaviors and did not carry out its function. In addition disparity between frequency on buying VF and amount of consumption indicates wastage of food.

Keywords: eating behaviors, obesity, prevention programs, prevention strategy

Fat talk – cultural norm or predictor of eating and body image disorders?

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Fat talk (FT) is the psychosocial phenomenon of conversations in which a person devalues own appearance. In women using FT became a cultural norm. According to current data, there is a significant link between using FT and body dissatisfaction. Long-term effects include the greater risk for the development of eating, depressive or body dysmorphic disorders, not only among active “fat-talkers” but also others participating in such conversations, even passively.

Because of insufficient data, the aim of the study was to describe the scale of FT behaviors in polish young women and to explore the correlations with body satisfaction and motivation to change dietary habits.

In experiment participated 65 women, aged 18-30. FT behaviors were measured by FTQ, body dissatisfaction – by BISS. Anthropometric data and motivation to change diet was measured by the original questionnaire.

Average score of FTQ was 27,12 which is similar to the average score in the USA, where the problem of FT is visible and explored by scientists. The study revealed significant correlations between using FT and body satisfaction ($r=-0,576816$), and own eating habits satisfaction ($r=-0,436097$). Results revealed that there is no link between using FT and BMI of participants.

Results suggest that FT seems to be an important visible indicator of body dissatisfaction and related problems, i.e.: eating disorders, dysmorphic disorder. Lack of correlation between BMI and FT behaviour suggests that the problem is present even in a group of women with normal body weight or with underweight. Therefore, further studies prophylactic actions are required.

Keywords: fat talk, body image, eating disorders

Evaluation of factors affecting the decision to relinquish breast reconstruction in post-mastectomy women affiliated with Amazon Clubs

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Breast cancer is one of the malignancies characterized by increasingly improving prognosis. Despite the numerous diagnostic and therapeutic methods available, some patients require treatment that does not allow the breast being spared. Mastectomy may result in physical as well as emotional disturbances in the subjects. Despite this fact, the percentage of patients who decide to undergo a breast reconstruction procedure is low.

The aim of this study was to assess the factors responsible for resignation of breast reconstruction surgery in post-mastectomy patients 5 years after the curative procedure.

The study population consisted of 92 women who had undergone mastectomy and did not decide to undergo breast reconstruction surgery 5 years after the procedure. The study was performed by the survey method using a proprietary questionnaire. The first part of the questionnaire was designed to gather sociodemographic data of patients. The second part included 18 questions regarding the reasons for relinquishing the breast reconstruction procedure. The survey was conducted in women affiliated with selected Amazon Clubs in the Kuyavian-Pomeranian Voivodeship between March and June 2017.

As shown by the results, main reasons for resignation from breast reconstruction surgery included fear of another surgical procedure (63%) and no need for such a procedure (62%). As also shown by the study results, more than one half (66%) of women had full acceptance of their body image despite lacking their breast and did not contemplate undergoing reconstruction surgery in the future.

Keywords: breast cancer, mastectomy, breast reconstructive surgery

The acceptance of breast cancer in women undergoing BCT procedures – a preliminary study

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Diagnosis and treatment of a cancer is associated with chronic stress and necessity to change the previous functioning habits for both the patient and their family. A significant role in the recovery process is attributed to one's capability to accept their disease and emotional strategies used to adapt to their new health status.

The aim of this study was to evaluate the acceptance of the disease in breast cancer patients having undergone breast conserving therapy (BCT) 5 years after the procedure.

The study population consisted of 50 women who had been subjected to breast-sparing surgical treatment of breast cancer at the F. Łukaszczyk Oncology Centre in Bydgoszcz. Factors affecting the acceptance of breast cancer were determined using the standardized Acceptance of Illness Scale (AIS) by B.J. Felton, T.A. Revenson, and G.A. Hinrichsen, adapted into Polish by Zygmunt Juczyński as well as using a proprietary survey questionnaire regarding the impact of selected sociodemographic and clinical aspects on the study group. The survey variables were assessed by means of computer-assisted telephone interview (CATI) 5 years after the surgical procedure.

The acceptance of illness level in the group of women having undergone the BCT procedures was 33.7. Sentinel lymph node biopsy procedure was associated with better AIS scores compared to axillary lymph node dissection ($P=0.0036$). No impact of sociodemographic variables on the dependent variable was identified.

Five years after surgery for breast cancer women have high acceptance of the disease.

Keywords: breast cancer, disease acceptance, breast-conserving surgery

How to achieve success in the health care market - strategic challenges of medical entities and patient selection

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Private Medical entities search for new management solutions, due to phenomenon of competitiveness and pressure from competitors subjected. they have to set the determinants that will ensure the entity's advantage over the rival units. Private specialized treatment entities are increasingly using different competitive instruments in acquiring new patients.

The aim of the work was to determine the factors affecting the competitiveness of the healthcare entity in the opinion of the beneficiaries.

The study group consisted of 127 people aged 21 to 70 years. The study comprised with 61% of women and 39% of men. The study was conducted in April 2018.

In the opinion of 47% of respondents there is competition, such as the type of medical services chosen. The main determinants of competitiveness is high quality of services (74% of respondents), short waiting time for an appointment (70%), and according to 55% of respondents it is offering competitive prices. The factor determining the resignation from further treatment in a given entity selected according to 58% of the respondents is the physician's poor competence.

The quality of provided services and the short waiting time are the main determinants for the majority of respondents to guarantee the success of the healthcare entity. Beneficiaries expect a high standard from private healthcare entities as well as a high market position in comparison with competing entities. For the patients, the high qualifications of the doctor are the strengths of the medical entity's activity.

Keywords: Healthcare market, competitiveness of medical services, Private specialized treatment, competitiveness

The effect of Amazon Club membership on the quality of life of patients undergoing surgical treatment of breast cancer

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Breast cancer is one of the most common oncological disorders in the developed countries. One of the forms of support for women diagnosed with breast cancer is provided by Amazon Clubs which play a substantial role in the process of accepting ones new health status.

A cross-sectional study was performed in the population of 167 women affiliated with Amazon Clubs in the Kuyavian-Pomeranian Voivodeship; in all patients at least 5 years had elapsed since the completion of breast cancer treatment. The control group consisted of 117 women declaring no affiliation with any support groups. The study was conducted by the survey method with the use of QLQ C30 and QLQ BR23 questionnaires. An additional, proprietary questionnaire was developed to investigate demographical variables.

Women affiliated with Amazon clubs were found to score better in terms of the global quality of life, emotional function, future prospects and own body image. A higher intensity of breast-related complaints was also observed. Subjects in the control group were found to perform better in their social roles.

Affiliation with breast cancer support groups improves the quality of life in numerous functional aspects.

Keywords: Amazon Club, quality of life, mastectomy

Assessment of quality of life in patients treated for breast cancer

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Breast cancer is the most common cancer within the Polish population. Undesirable effects of surgical and systemic treatment may lead to the deterioration of patient's quality of life.

The objective of the study was to analyze the impact of the type of surgical procedure on the selected aspects of the quality of life in patients treated for breast cancer.

The aim of this study was to conduct a prospective analysis of life quality in women who receive surgical treatment due to breast cancer. A total of 51 patients admitted to the Department were qualified to the study: 27 were scheduled for breast-conserving surgery (BCT) and 24 for mastectomy. Standardized EORTC QLQ C30 and QLQ BR 23 questionnaires were used for this purpose. In order to become acquainted with selected clinical factors which may influence the investigated variable we analyzed patient's medical records. The measurement of life quality was performed twice.

With regard to the physical functioning scale, scores in post-mastectomy patients were significantly lower than in the BCT group. Better quality of life was observed in the BCT group with regard to the performance of social roles, cognitive functions, fatigue, sexual function, adverse effects of the treatment and upper extremity-related complaints. Comparison of the results obtained in the first and the second stage of the study identified the presence of statistically significant differences in numerous functional and symptom scales. Deterioration in the quality of life after 3 months was more common in patients who had been subjected to a mastectomy procedure.

We found that both breast conserving therapy and mastectomy are associated with the occurrence of dysfunction in numerous dimensions of functioning.

Keywords: breast cancer, treatment, life quality



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Microcirculation abnormalities in patients with septic shock

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Septic shock is a frequent reason of intensive care unit (ICU) hospitalization and is responsible for high mortality.

We aimed to investigate the laboratory parameters of microcirculation in the early phase of septic shock and assess their association with ICU mortality.

Central venous and peripheral arterial blood samples were retrieved every 24h in four consecutive days after septic shock onset in 13 (8M/5F) ICU patients. Central venous oxygen saturation (ScvO₂), lactate concentration and central venous-to-arterial carbon dioxide difference (pCO₂ gap) were evaluated. Values were compared between survivors and the deceased.

On day '1', patients who died (53,85%) had significantly ($p=0,497$) higher pCO₂ gap (Median: 11.3; IQR: 7.8-13.2) than survivors (Median: 7.35; IQR: 4.0-10.4), with AUC=0.786 (95%CI 0.479-0.957). Lactates were also higher in the deceased (Median: 7.5; IQR: 5.4-14.2) compared to those who survived (Median: 2.2; IQR: 1.9-4.5) with $p=0.07$ and AUC=0,829 (95%CI 0,511-0,978). ScvO₂ was insignificantly ($p=0.8$) lower in patients who died (Median: 70,0; IQR: 63.3-82.3) compared to survivors (Median: 72.2; IQR: 67.4-74.7).

High lactates concentration and high pCO₂ gap in the early period are the best markers of outcome prediction in septic shock patients.

Keywords: septic shock, ICU, microcirculation parameters

Prevalence and risk factors of intraoperative hypotension in abdominal surgery

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Intraoperative hypotension (IOH) is a serious side effect of surgery, which may be associated with adverse perioperative outcomes. Despite several attempts, no universal definition of IOH has been established so far, mainly due to a variety of underlying causative mechanisms. Its prevalence and risk factors have not been elucidated as well.

We aimed to assess the prevalence of IOH and to determine preoperative factors associated with the IOH occurrence.

This observational study covered 150 patients who underwent abdominal surgery between 10.2018 and 12.2018. Blood pressure (BP) was recorded in 5-minute intervals from pre-induction period till the discharge from the operating theatre using non-invasive monitoring. IOH was defined as mean arterial pressure (MAP) ≤ 65 mm Hg or a need for norepinephrine (NE) treatment. Post-induction IOH (PIH) was defined as IOH occurring during the first 10 min post-induction. Early IOH (EIOH) was recognised if occurred between 10 min and before surgical incision. Late IOH (LIOH) was recognised if occurred when surgical intervention started. Age, sex, BMI, ASA class, CCI value, history of hypertension, premedication used and NE dosing were considered potential IOH risk factors.

Patients age was 56 ± 16 y. PIH, EIOH and LIOH concerned 11, 28 and 49% of subjects, respectively. EIOH was more common in females than in males (OR=3.15; 95%CI 1.3-7.7; $p=0.01$). Patients with PIH and EIOH had lower BMI (both $p<0.05$). Patients with PIH had higher CCI ($p=0.009$). The incidence of PIH was found to be related to the ASA class (ASA I=0%; ASA II=4.4%; ASA III=11.5%; ASA IV=14.3%, $p<0.05$ for trend).

Female sex, low BMI, comorbidity burden and patient's risk were identified as potential IOH risk factors.

Keywords: risk factors, intraoperative hypotension

Osmotic effects of mannitol and hypertonic saline in patients with brain oedema based on optic nerve sheath diameter measurements

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Important method of reducing brain oedema (BE) is osmotherapy. Ultrasound optic nerve sheath diameter (ONSD) measurement is non-invasive method to monitor intracranial pressure.

The aim of the study was to compare osmotic effects of mannitol (M) and hypertonic saline (HS) in patients with BE using ONSD.

The study group of this prospective study comprised of 18 patients (mean age 47 ± 13 , equal distribution of sexes), who were treated with 10% M or 10 % HS. On admission to ICU patients were treated with HS, then after 1-3 days it was switched to M. Measurement before M administration was used to analyse day-to-day changes. During the study period M was administered 62 times. Change in median ONSD before and 0.5 h following infusion of M was measured. We also collected selected laboratory parameters (Na, osmolarity).

The median drop in ONSD between 1. and 3. day of treatment was 0.2mm (IQR 0.0-0.4) in HS patients. There were no changes in ONSD value measured before M administration between subsequent days in M patients. The median drop in ONSD following M was 0.3 mm (IQR 0.2-0.5). The median increase in Na and osmolarity between 1. and 3. day in HS patients was 12.9 mmol L⁻¹ (IQR 4.6-14.9) and 21.3 mOsmL⁻¹ (IQR 13,8-29), respectively. Na and osmolarity stayed constant in M patients.

Hypertonic saline seems to be more effective than mannitol in the management of brain oedema based on ONSD measurements as effects are long-lasting. Drop in ONSD 0.5h following mannitol infusion is significant but short-lived. The rise in sodium and osmolarity with hypertonic saline was also significant compared to mannitol, however hyperchloraemia may have precluded its further administration.

Keywords: optic nerve sheath diameter, osmotherapy, brain oedema

Usefulness of optic nerve sheaths diameter in patients with acute brain injury, septic shock and hepatic encephalopathy- preliminary report

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Optic nerve sheath diameter (ONSD) might be used as a surrogate of intracranial pressure (ICP). This non-invasive method might be used to screening for and monitor treatment of intracranial hypertension (ICH).

Analyze ONSD in three cohorts of patients: acute brain injury (ABI), septic shock (SS), hepatic encephalopathy (HE) and analyze its usefulness as screening and monitoring tool for ICH.

We performed prospective analysis of consecutive patients admitted to the Department of Anaesthesiology and Intensive Care with admission diagnosis of ABI, SS and HE. Patients diagnosed with ICH were started on osmotherapy with 15% mannitol or 10% NaCl. ONSD measurements (Mindray M7) were performed once daily during observation (up to 10 days). We also analyzed pCO_2 , Na, osmolarity, CRP and temperature at the moment of ONSD measurement. We set upper limit (UL) for ONSD at 5.7 mm.

We analyzed 29 patients (mean age 54 ± 17 , 14M/15F): ABI(18), SS(10), HE(1). In ABI group median ONSD on admission was 6.5 (IQR 6.1-6.9) mm and in some patients stayed elevated during observation. Target values for sodium concentration and osmolarity in ABI group were reached in the 3. day and maintained at this level during observation. In SS group median ONSD at admission was 5.6 (IQR 5.4-6.2) mm and fluctuated around UL during observation. In HE patient average of ONSD on admission was 6.0 ± 0.02 mm.

On admission patients with ABI and HE had ONSD above upper limit. Persistence of elevated ONSD despite maximal conventional therapy in these patients indicates malignant ICH and should warrant consideration of decompressive craniectomy. Patients with septic shock had ONSD at the upper limit during whole observation period.

Keywords: optic nerve sheath diameter; intracranial pressure

Comparative assessment of the impact of classical and simulation methods of training on the decision-making strategies of the 5th year students of medicine in the case of hypotension after opioid drugs used in the treatment of acute post-traumatic pain in medical simulation

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As a consequence of injuries patients suffer from acute pain (AP). Moreover, opioid drugs (OD) intravenously are rarely used.

The analysis aimed to assess the decision-making strategies (DMS) in the case of hypotension (HT) following the use of ODs.

94 teams consisting of 5th year students of medicine were randomly assigned to two groups, differing with method of training: the classical method (CM-lecture: acute pain treatment algorithm) or a simulation method (SM-presentation of the OD titration technique using a simulator) and follow-up in case of complications. Students administered ODs to treat AP. Dose of OD relieving pain (NRS<5) was 200 mcg FNT or 12 mg MF. HT (MAP<65 mmHg) and its symptoms appeared when using $\frac{3}{4}$ of OD dose, absence of intravenous fluid therapy caused decrease of RR to 70/40mmHg when full dose of OD was given. The use of 125ml crystalloid (CR) increased the MAP value by 10 mmHg, the use of 125ml in advance prevented a RR decrease by 10 mmHg.

CM included 46 teams, SM 48 teams. In the SM group there was a statistically significant difference in the appearance of HT due to earlier monitoring of RR counted from the beginning of the simulation or the administration of a higher MF dose, as compared to CM. In SM a larger volume of CR was given, that led to statistically significant and more frequent RR normalization.

SM improves the training results of the 5th year students of medicine in the field of emergency management in comparison to CM in the cases presence of hypotension after ODs used in the treatment of AP in medical simulation.

Keywords: medical simulation, opioid drugs, acute pain, hypotension, emergency medicine

Simplified diagnostic algorithm for classification of anaemia based on complete blood count in gastrointestinal surgery

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Anaemia is associated with increased morbidity, mortality, requirement for transfusion and prolonged length of stay in surgical patients. Due to its high prevalence it is crucial to identify and manage anemia preoperatively.

To analyse the incidence of preoperative anaemia, create simplified diagnostic algorithm for classification of anaemia, check its applicability in elective gastrointestinal (GI) surgery population.

Selected parameters available in complete blood count test performed by Central Laboratory in Medical University of Silesia Medical Centre, Katowice were obtained retrospectively for the group of 442 consecutive patients (215 females; median age 64 years, IQR 56-70) scheduled for elective high-risk (ESC/ESA criteria) GI surgery between January 2016 to August 2018. Simplified diagnostic algorithm based on pathophysiologic features was applied.

Median haemoglobin (g L⁻¹) in men was 137 (IQR 125-148), in women 133 (IQR 121-139). Using the cut-off value of 130 g L⁻¹ in both sexes anaemia was diagnosed in 166 patients (37.5%). Working through the algorithm the majority of anaemic patients were diagnosed with normocytic anaemia (122 patients, 73.5%) 36 patients (21.7%) with microcytic and 8 patients (4.8%) with macrocytic.

Preoperative anaemia is common in elective gastrointestinal surgery population. Simplified diagnostic algorithm based solely on complete blood count parameters might be helpful in the preliminary identification of patients with iron, vitamin B12/folic acid deficiencies, however the majority of anaemic patients is normocytic and requires further testing.

Keywords: preoperative anemia; diagnostic algorithm; gastrointestinal surgery

Analysis of rapid response team interventions in a university tertiary care medical centre in Poland

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In 2018 selected hospitals in Poland introduced rapid response teams (RRT) as part of a European Union- sponsored project. RRT aim was to identify deteriorating patients, intensify treatment in order to avoid Intensive Care Unit (ICU) admission, identify patients benefiting from ICU treatment.

The aim of the study was to analyse RRT interventions and assess disease severity of patients to whom RRT was called based on objective laboratory parameters.

We performed a retrospective analysis of 71 RRT interventions carried out in University Medical Centre in Katowice between Oct 2018 and Jan 2019. Data was extracted from RRT intervention sheets and medical IT system.

The mean number of interventions was 0.58 per day. The mean age of deteriorating patients was 64 years. The most interventions were in stroke unit (20). RRT was called mostly for assessment of respiratory (52%) and circulatory (28%) function. Procedures undertaken during interventions: ABG (27%), intubation (21%). The main treatment during intervention was a change in antibiotics (28%). DNR status was decided on 3 occasions, 3 patients were transferred to ICU. Median values of laboratory parameters at the time of intervention: WBC 12.2 (IQR 9.2-16.7) $\times 10^9$ L⁻¹, CRP 130.6 (IQR 49.3-198.15) mg L⁻¹, lactate 2.3 (IQR 1.8-2.95) mmol L⁻¹, creatinine 1.1 (IQR 0.8-1.6) mg dL⁻¹, bilirubin 0.9 (IQR 0.5-1.9) mg dL⁻¹.

RRT was called mostly to assess respiratory function and laboratory results of deteriorating patients were suggestive of ongoing inflammation and microcirculation impairment with preserved renal and liver function.

Keywords: rapid response team, medical emergency team, critical care, rapid response system

Lotnicze Pogotowie Ratunkowe as an important element of the national rescue system. State of knowledge of the medical students

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The history of using aviation to save lives and to transport patients in Poland dates back to the interwar period. After World War II sanitary aviation was established while the end of the 20th century was the time of the establishment of the Lotnicze Pogotowie Ratunkowe. It is part of the national rescue system and enables optimal and quick transport of the injured, thus shortening the time from the occurrence of the injury to hospitalization and the implementation of the treatment.

Aim of the research: Examine the level of medical students' knowledge about the basic information regarding the Lotnicze Pogotowie Ratunkowe and procedures related to its functioning.

A single-choice test with one correct answer in the sample of 304 respondents – among population of medical students in Poland. The study was declarative and anonymous. The first part was questionnaire, about basic information of respondent, and the second part was a test of 17 questions.

Men achieved better results in the population (mean 6.41 points) in comparison to women (mean 5.64 p.). In the case of 9 questions, respondents have reached an effectiveness of <30%. Only in the case of 3 questions, representatives of the studied population provided correct answers with an effectiveness above 50%.

It is necessary to make a change to improve the knowledge of future doctors on the procedures and functioning of the Lotnicze Pogotowie Ratunkowe in order to improve the assistance in life and health threatening situations.

Keywords: emergency medicine, air rescue, EMS, medical students

Ultrasound examination of diaphragmatic function in Intensive Care Unit- preliminary report

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Diaphragmatic dysfunction leads to prolonged weaning from mechanical ventilation and ICU length of stay. Ultrasonography (US) is a non-invasive and widely available method that can be used for bedside evaluation of diaphragmatic function.

We analysed feasibility and usefulness of US in assessing diaphragm function. We measured excursion (DE) and thickness (DT) and identified interfering factors. Diaphragm thickness fraction (DTF) was calculated.

Before enrolment DE and DT measurements were performed on healthy volunteers (3) and ICU patients (13) in order to learn a new technique. Then 7 mechanically ventilated patients (5 women, 2 men) hospitalised in ICU between 02.2019 and 03.2019 were observed prospectively. Measurements were performed in B and M mode by two researchers in order to reduce inter-observer variation and improve objectivity.

The new US technique was judged to be difficult to learn. There were several factors interfering with measurements: obesity, presence of a drain in the area of interest, incidental diaphragm contractions in response of US probe application. Median age was 62 (IQR 54-67) y. Four patients had successful weaning and 3 patients died. Median DE and DTF on ICU admission was 0.88 (IQR 0.76-1.12) mm (N>10 mm) and 26 (IQR 14-33)%, and were below normal value. Median DE and DTF around the time of extubation were 1.11 (IQR 0.88-1.57) mm and 27.5 (IQR 28-34)%.

Assessment of diaphragm function with US is not easy to learn and visualisation is not always optimal. The method may potentially be useful for deciding when to stop mechanical ventilation however further research is needed.

Keywords: diaphragm function; ultrasonography, mechanical ventilation

No effect of pre-emptive analgesia on postoperative outcomes in patients undergoing vitreoretinal surgery under Surgical Pleth Index –guided general anaesthesia- preliminary report

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Vitreoretinal surgeries (PPV) often require performance of general anaesthesia (GA), despite the risk of presence of acute postoperative pain (APP) and postoperative nausea and vomiting (PONV) due to intraoperative use of opioid narcotics (IO), which consumption is reduced by pre-emptive analgesia (PA). The surgical pleth index (SPI) is used for intraoperative monitoring of the efficacy of analgesia using IO.

The current study aimed to investigate the impact of PA using peribulbar block (PBB) or intravenous paracetamol (ACT) on prevalence of oculo-cardiac reflex (OCR), PONV and APP in patients undergoing PPV.

105 patients undergoing PPV with SPI guided GA were randomly allocated according to the type of administered PA: GA- control group, PBB- peribulbar block group, P- intravenous paracetamol group.

PA using PBB or ACT resulted in reduction of demand for dose of fentanyl administered using SPI guidance in comparison to control group without impact on the rate of presence of complications intraoperatively. Intraoperative use of SPI monitoring resulted in occurrence of OCR in 11,4%, APP NRS>3 in 16,3% patients regardless of type of PA and PONV in 2,9% patients undergoing PA with use of PBB or ACT in comparison to 11,4% patients without PA.

PA using PBB or ACT in patients undergoing PPV with GA had no statistically significant effect on the rate of presence of OCR, PONV and APP. Monitoring of SPI is recommended during the GA to reduce the incidence of perioperative complications.

Keywords: vitreoretinal surgery (VRS), peribulbar block (PBB), acetaminophen, surgical pleth index (SPI) , postoperative pain, postoperative nausea and vomiting (PONV), oculocardiac reflex (OCR)

Morphological examination of peripheral blood: diagnostic validity of platelet parameters in identifying high-risk patients in neurosurgery

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Platelets (PLT) are key mediators in thrombotic and inflammatory processes. Their activity increases with size, so the mean platelet volume (MPV) can be a potential predictor of perioperative complications.

The aim of the study was to assess the suitability of platelet parameters in predicting the risk of hospital death in neurosurgery.

Retrospective observation covered 453 patients (224 male, median 60yrs, IQR 46-68) undergoing surgery in the period between March and August 2018. High-risk patients accounted for 44% (ASA3+) and 9.3% (≥ 1 Schoemaker criterion), respectively. The median risk for RCRI was 0.4%. 14% of procedures were performed in the urgent mode. Demographic and clinical data were collected. Preoperative platelet parameters were analysed: total platelet count (PLT), mean platelet volume (MPV), and platelet distribution width (PDW). The end point of the study was a hospital death.

13 patients died. Medians (IQR) PLT, MPV and PDW were respectively: 230 103/uL (182-279), 9.2 fL (8.3-10.1) and 14.3% (12.5-16.3). PLT, PDW were not useful in the risk assessment. MPV was lower in patients who died (9.3 vs. 8.3, $p < 0.01$) and predicted death in 76% (AUC=0.76, 95%CI 0.72-0.8, $p < 0.01$). Considering the influence of confounders, MPV was characterized by significant predictive accuracy in death prediction (logOR[MPV]=0.3, AUC=0.94, 95%CI 0.92-0.96, $p=0.02$).

The reduction in the average volume of platelets, while taking into account individual patient risk, is associated with a worse prognosis in neurosurgical patients.

Keywords: perioperative medicine, risk, full blood count, platelets

Does more always mean better? Intraoperative fluid therapy in patients undergoing gastrointestinal surgery

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Improper intraoperative fluid therapy increases the risk of peri-operative complications. This applies particularly to long-lasting high-risk procedures in high-risk patients.

The aim of the study was to evaluate fluid therapy in patients undergoing gastrointestinal surgery (GI).

A retrospective analysis included 204 patients (114 men, median: 62 years, IQR 49-70), subjected to surgery from 03.2018 to 06.2018. Demographic and clinical data were collected. The individual patient's risk (ASA-PS, Shoemaker criteria, RCRI index) and the risk of surgery (ESC/ESA) were assessed. The quantities of infused fluids, blood products and catecholamines were analyzed. The outcome was in-hospital death.

53% of patients were at high risk, according to ASA-PS, and 41% of subjects met ≥ 1 Shoemaker criterion. 60% of procedures were of high risk. The median time of the surgery was 225min (IQR 125-365). The total dose of transfused fluids (ml kg⁻¹ h⁻¹) was 7.4 (IQR 5.7-9.7), including: 6.4 (IQR 5.1-8.7) crystalloids and 1.5 (IQR 1.1-2.7) colloids. The transfusion of blood products was necessary in 11% cases. Norepinephrine was the most frequently used catecholamine (52%). The mortality rate was 1.5%. Taking into account procedures longer than 120 minutes (i.e. 77% of cases), patients who died received a higher dose of fluids compared to survivors (13 vs. 6.9 ml kg⁻¹ h⁻¹, $p=0.05$) and a dose >12.7 ml kg⁻¹ h⁻¹ accurately predicted the outcome (AUC=0.82, 95%CI 0.75-0.88, $p=0.03$). The norepinephrine dose did not differ between the groups ($p=0.5$).

Special peri-operative attention should be given to patients requiring liberal fluid therapy during long-lasting gastrointestinal procedures, as they are at higher risk of death.

Keywords: fluid therapy, perioperative medicine, risk, gastrointestinal surgery

Investigation on detrimental role of intraoperative hypotension – a pilot study

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Intraoperative hypotension (IOH) leads to inadequate organ perfusion and may account for post-operative morbidity and mortality.

We aimed to evaluate whether IOH may be associated with post-operative outcomes in patients undergoing abdominal surgery.

Observational study covered 150 patients operated between 10.2018 and 12.2018. Blood pressure (BP) was recorded in 5-minute intervals from pre-induction period till the discharge from the operating theatre. IOH was defined as mean arterial pressure (MAP) ≤ 65 mm Hg or a need for norepinephrine (NE) treatment. Post-induction IOH (PIH) was defined as IOH occurring during the first 10 min post-induction. Early IOH (EIOH) was recognised if occurred between 10 min and the surgical incision. Late IOH (LIOH) was recognised if occurred when surgical intervention started. The composite end-point was the prevalence of morbidity and mortality in the postoperative period. Morbidity was defined as the occurrence of acute kidney injury (AKI), acute coronary syndrome (ACS) or stroke.

Mortality reached 2%. There were 13 episodes of AKI and 1 of ACS. PIH, EIOH and LIOH concerned 11, 28 and 49% of patients, respectively. EIOH (OR=1.1; 95%CI 0.34-3.6), LIOH (OR=2.33; 95%CI 0.9-6.0 and PIH (OR=0.25; 95%CI 0.01-4.47) were unrelated with the end-point. A need for NE treatment was associated with the negative outcome [OR=6.24; 95%CI 2.0-19.7). Patients with the compromised outcome required comparable dose of NA (median 3.2 mcg/kg/h; IQR 0.4-4.1) compared to their counterparts (median 2.7; IQR 0.3-4.8) ($p=0.2$).

A requirement for NA (but not its dose) to maintain MAP > 65 mmHg during the surgery is a strong predictor of higher morbidity and mortality.

Keywords: MAP, intraoperative hypotension, post-operative outcomes



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF BASIC SCIENCE AND EXPERIMENTAL MEDICINE

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Antibiotics resistance mechanisms in *E. coli* cultured from fecal samples of patients with *Clostridium difficile*–associated diarrhoea (CDAD)

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Escherichia coli is a Gram-negative, rod-shape bacterium belonging to the *Enterobacteriaceae* family. It is commonly present in the lower intestine of human and animals mainly as a part of the physiological microbiota of the lower intestine. CDAD is a result of previous antibiotic treatment, which caused dysbiosis– qualitative and quantitative imbalance in the intestinal microbiota. Patients with CDAD are usually hospitalized for a long time, and therefore can be colonized with multidrug-resistant strains.

The purpose of our study was to determine occurrence of different mechanisms of antibiotic resistance in *E. coli* isolates during CDAD.

Stool samples collected from patients with CDAD were cultured for *Enterobacteriaceae* on CPS medium. On CPS burgundy colonies were detected, isolated and identified by appropriate biochemical tests. *E. coli* strains were frozen at -70°C in TSB medium with glycerol until use. *E. coli* were recultured twice on Columbia Agar. Mechanisms of drug resistance (ESBL, AmpC, MBL, KPC, OXA-48) were detected by disk-diffusion method on Mueller-Hinton agar according to EUCAST recommendations.

Out of 210 stool samples, *E. coli* was detected in 59 (28.1%). In 6/59 (11,8%) strains ESBL resistance was detected.

Antibiotic therapy causes CDAD, but also destroys intestinal microbiota. *E. coli* – the major component of intestinal microbiome was not detected in 151/210 fecal samples (71,9%). However, only 11,8% *E. coli* strains demonstrated ESBL, so *E. coli* does not acquire antibiotic resistance as easily as other representatives of *Enterobacteriaceae*.

Keywords: *E. coli*, *Clostridium difficile*, drug resistance

Selective serotonin reuptake inhibitor – escitalopram – prevents the desynchronization of the function of retinal interneurons in the model of ischemia in a rat – a pilot study

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The assessment of the impact of oral supplementation of escitalopram(EC) on the function of interneurons(IN) in the retina in the ischemic model in a rat.

6 Long Evans rats were treated orally with SSRI-escitalopram (n=3) or phosphate buffer-PB(n=3) for 6 weeks. After 4 weeks transient elevation of intraocular pressure(IOP) was induced in the right eye of every rat in order to induce ischemia(IC) within retina. Electroretinography (ERG) measurements (analysis of oscillatory potentials-OPs) were taken using Celeris device in 4 time points - before drug administration, before IC induction and 7 & 14 days after it. After 6 weeks rats were sacrificed, retinas were isolated to conduct the IF staining.

IOP in the treated group was 16mmHg in the right eye, 12 in the left eye, in the control group 15 in the right eye and 13 in the left eye. In both groups no loss of density of RGC was noted between the eye with induced IC and the healthy one(80 ± 31 vs 76 ± 20 cells for EC and 55 ± 10 vs 55 ± 11 for PB; $p > 0,05$). In the functional study of the retina in the treated group in scotopic conditions amplitudes of all OPs(OP1-5) were significantly higher 14 days after IC induction ($p < 0,05$), while in the control group deep disturbance of IN function was observed, specifically for OP2-4, expressed in significant reduction of OP amplitudes($p < 0,05$). Times of OPs culmination did not show significant differences. Similar dependence was not observed in photopic conditions.

Oral treatment with EC prevents desynchronization of retinal IN function during ischemic conditions in a rat. Observations presented above may become crucial for new therapeutic methods for vascular pathologies of the retina.

Keywords: escitalopram, SSRI, retina, ischemia, ERG

The influence of a long-term exposure to lead on the selected parameters associated with oxidative stress in skeletal muscle of rats

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Lead is a cumulative metal that causes negative health effects. Symptoms of plumbism are relatively well-known, while mechanisms responsible for their occurrence are poorly understood.

The aim of the study was to evaluate the influence of a long-term exposure to lead on the selected parameters associated with oxidative stress in the skeletal muscle of rats.

The research involved 30 male Wistar rats. First 10 (control group) were administered distilled water for 8 weeks. The next 10 (exposed group A) were administered solution of lead acetate for 8 weeks. The remaining 10 (exposed group B) were administered solution of lead acetate for 6 weeks and next distilled water for 2 weeks. On the 57th day, animals were decapitated for obtaining tissues. In homogenates of skeletal muscles, the following biochemical parameters were determined: the concentration of malondialdehyde (MDA) and the activities of catalase (CAT), glutathione reductase (GR), glutathione peroxidase (GPx), glutathione transferase (GST) and superoxide dismutase (SOD), including its isoenzymes (CuZn-SOD and Mn-SOD).

The concentrations of MDA in the group A and B were significantly higher than in the control group by 42% and 45%, respectively. The activities of Mn-SOD and GR were significantly lower in the group A than in the controls by 34% and 21%, respectively. Similarly, the activity of Mn-SOD was lower by 28% in the group B compared to the controls, while the activity of CAT was higher by 43%.

A long-term lead-exposure increases oxidative stress and modifies antioxidant enzyme activities in skeletal muscle of rats.

Keywords: lead, oxidative stress, skeletal muscle

Evaluation of water-electrolyte balance in the course of breast cancer treatment

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Breast cancer is the most commonly diagnosed malignant cancer in Europe and, in addition to lung cancer, the most common oncological disorder among women. According to statistics, it accounts for about 19% of cancer cases worldwide. Breast cancer is a resultant of interactions between hormonal, genetic and environmental factors. Effective breast cancer treatment must take the form of combined therapy. One of the methods is chemotherapy, which is a method of systemic and cytostatic treatment.

The aim of this study was to determine the influence of current breast cancer treatment methods on plasma and urine osmolality levels.

The study group consisted of 17 breast cancer patients. Patients were qualified for neo-adjuvant chemotherapy. Plasma and urine collected from patients of the Oncology Center in Bydgoszcz were used as the material for the study. Four plasma and four urine samples were taken from each patient at the appropriate stages of treatment. Before chemotherapy, after the end of cycles with doxorubicin and cyclophosphamide, after the end of cycles with taxanes and a sample of urine about a month after the operation.

The analysis confirmed that there were no statistically significant differences between the measurements of urinary and plasma osmolality.

Nephrotoxicity of the breast cancer treatment regimen in women is small and transient. Abnormal water-electrolyte balance, measured by plasma and urine osmolality level, are minor and reversible changes.

Keywords: breast cancer, anticancer treatment, urine osmolality, plasma osmolality

How protective is crocin against oxidative stress ?

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Crocin is a natural carotenoid chemical compound that is found in the flowers crocus and have many biological properties. Oxidative stress is thought to be involved in the development of cancer, Parkinson's disease, Alzheimer's disease, atherosclerosis, heart failure, myocardial infarction, infection, and chronic inflammation. The aim of this study was investigation how protective is crocin against oxidative stress.

Chemiluminescence is used in this study as an indicator for the productions of reactive oxygen (ROIs) and reactive oxynitrogen (RONIs) by murine macrophage (J774A.1 cell line from ATCC) with or without crocin, stimulated by PMA as stimulant for oxygen metabolism through the activation of protein kinase C. The cell viability was determined by the MTT reduction assay. The cytotoxicity of the crocin was determined by using LDH activity assay.

The crocin did not influence the J774A.1 cell viability and did not exert cytotoxic effect. The ROS and RNS release by activated J774A.1 cells was significantly inhibited by crocin. This compound presented significant antioxidant properties by slowing down chemiluminescence reactions and scavenging reactive oxygen species (ROS). Crocin at the concentrations of 0.01–50 μ M suppressed the chemiluminescence in PMA stimulated J774A.1 cells in dose-dependent manner.

The results of this investigation indicated anti-inflammatory activities for crocin, which exhibited significant antioxidant properties by scavenging ROS and inhibiting chemiluminescence reactions. This study provide new evidence-based proofs of anti-inflammatory properties of crocin.

Keywords: crocin, oxidative stress, inflammation

Evaluation of the urinary fibronectin excretion in patients with type 2 diabetes mellitus treated with metformin

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Type 2 diabetes mellitus (T2DM) is a chronic metabolic disease, leading to the development of many complications, either micro- and macroangiopathy. One of the most frequent complications due to the microangiopathic T2DM is the diabetic nephropathy, which leads to the extracellular matrix (ECM) (collagen, proteoglycans, laminin and fibronectin (FN)), metabolism disorders. FN is the multifunctional glycoprotein that can regulate cell adhesion, migration, differentiation and cytokine response. FN plays an important role in the progression of the diabetic nephropathy. Moreover, the influence of metformin therapy on FN's metabolism is still not entirely understood.

The aim of this study is to assess the influence of metformin therapy on the urinary excretion of FN in patients with T2DM.

Urine samples were collected from 17 patients with normoalbuminuria with T2DM at baseline and six months after treatment with metformin and 17 healthy subjects. The uFN was quantitated using immunoenzymatic method. The uFN results were expressed as a ratio to urinary creatinine (uCr) level with units ng/mg uCr.

Urinary FN levels were significantly higher in the untreated diabetic patients in comparison to the healthy subjects. Moreover, it was observed that uFN levels in the diabetic patients after six-month metformin therapy increased significantly as compared to the pre-treatment situation.

The urinary FN excretion in T2DM patients may be used as the potential marker in the detection of an early glomerular damage. Six months of the metformin therapy do not regulate the metabolism of FN, which occurs in the increased excretion of this glycoprotein in urine.

REST is master regulator of glioma-associated epilepsy

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Glioma is the most common primary brain tumour, conferring poor prognosis. Seizures impair life quality in glioma patient population and 50% of patients with glioma-associated epilepsy (GAE) remain pharmacoresistant. Interestingly, GAE prognosticates well and characterization of epileptogenesis in GAE could yield new biomarkers.

This study undertakes systems biology approach to explain positive prognostic value of seizures in glioma.

Whole-genome expression profiles of 475 low-grade gliomas were downloaded from The Cancer Genome Atlas and analysed in R. The differentially expressed genes were identified, characterized using gene set enrichment approach and their prognostic value was characterized in Cox model. Additionally, epigenetic features associated with GAE were explored and verified with ENCODE database experiments.

Among the upregulated genes, the majority prognosticated positively and some, like SEZ6, SLC6A11 and CRH, have established roles in epileptogenesis. GAE samples were enriched in gene expression signatures associated with neurotransmitter and neuropeptide signalling whereas those without seizure history displayed traits of higher aggressiveness and invasiveness. This was attributed to increased activity of the Neuron-Restrictive Silencer Factor (REST) in those samples. REST, a negative prognostic feature in glioma, may explain better prognosis in GAE.

REST is a master regulator of glioma biology with profound impact on seizures. The genes associated with epileptogenesis are also prognostic features. Therefore, deepening knowledge about GAE yielded insight into its symptomatic and causative treatment.

Keywords: REST, glioma, epilepsy, NGS

Multi-drug resistant bacterial colonization and infections in geriatric patients

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Patients of advanced age are significantly exposed to various types of infections due to frequent and long hospitalizations. With regard to scientific reports on the growing antibiotic resistance of microorganisms colonizing especially hospitalized patients, the problem of infections in geriatric patients become even more important.

The aim of our study was to summarize the data and to display the level of elderly patients' colonization by multi-drug resistant bacteria based on analysis of patients' infection control cards.

We analyzed and compared 100 alert pathogen infection control cards of patients hospitalized in the John Paul's II Geriatric Hospital in Katowice in 2017-2018. We concluded urine and stool culture results or/and nasal, anal and skin smears.

Morbidity was 1.5 per 100 patients in 2017 and 1.4 per 100 patients in 2018. The number of healthcare-associated infections was 48; 17/48 were caused by alert pathogens. Among studied infection control cards 40% revealed *E. coli* ESBL+, 33% *K. pneumoniae* ESBL+, 15% - *C. difficile* and others. The most frequent (79%) antibiotic resistance mechanism was ESBL. 53% of patients had urinary tract infections, 26% - gastrointestinal, 6% - skin infections, only 22% were colonized asymptotically.

Our study revealed that *E. coli* ESBL+ is the most frequent multi-drug resistance bacteria especially causing urinary tract infections in elderly people. These results demonstrated the need of increased infection control for these group of patients.

Keywords: multi-drug, resistance, colonization, geriatric, patients, escherichia, coli, klebsiella, pneumoniae, ESBL,

SCD1 desaturase inhibitor (MSF-438) inhibits the transformation of monocytes into macrophages associated with exposure to derivatives of saturated fatty acids contained in eye drops

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Evaluation of the effect of SCD1 inhibitor (MSF-438) on the differentiation of monocytes associated with exposure to saturated fatty acid derivatives from eye drops.

The culture of human monocytes has been exposed to eye drops containing the fatty acid derivatives as detergent: Monoprost (hydroxystearate macroglycerol – MGHS40), Taflotan (polysorbate 80- PS80), Monoprost+MSF-438, MGHS40, PS80. The concentration of drops was determined by assessing the cell viability for concentration range of 0,1-0,5% via LDH activity. Negative control C(-) was monocytes cultured in pure medium, positive controls - monocytes stimulated by LPS and IFN α (macrophages M1) and IL-4 (M2). The cells were cultured for 8 days, the medium was changed every 3 days. The concentration of desaturase was determined by ELISA using cell homogenate. The number of cells was counted from 5 fields of view in each well at magnification of 20x.

The optimal concentration of test substances was 0,3%. The concentration of SCD-1 was in ng/ml: 7,814 \pm 0,3 - Monoprost; 1,549 \pm 0,4 - Taflotan; 6,8435 \pm 0,7 - MGHS40; 0,3925 \pm 0,002 - PS80; 0,8835 \pm 0,02 - Monoprost+MSF-438; 5,4035 \pm 1,6 - C(-); 0,536 \pm 0,04 - M1; 2,2185 \pm 0,13 - M2. The % of macrophages after culture was respectively: 33,6%; 17,6%; 33%; 0%; 13,5%; 18,6%; 36,3%; 39,3% for Monoprost, Taflotan, MGHS40, PS80, Monoprost+MSF-438, C(-), M1, M2. There is correlation between SCD1 concentration and share of macrophages in culture: $r=0,9$, $p<0,05$.

Inhibition of SCD1 in monocytes prevents their transformation into macrophages under conditions of exposure to saturated fatty acids derivatives contained in the eye drops, which may contribute to the limitation of latent inflammation.

Keywords: SCD1 inhibitor, monocytes, saturated fats, eye drops

Preliminary analysis of genetic relatedness of *Clostridium difficile* ribotype 027 strains isolated from patients hospitalized in a Department of Internal Medicine

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Clostridium difficile is a cause of the most frequent nosocomial infection responsible for antibiotic-associated diarrhea. Hypervirulent *C. difficile* ribotype 027 is considered as a particularly dangerous, causes severe infections due by production of 16-23 times more toxins A/B.. Therefore, it is important to determine source of infections and pathomechanisms of their spread. To identify origins of bacteria the sequences VNTR (*variable number of tandem repeats*) have been amplified and compared.

The aim of this study was to determine of genetic (clonal) relatedness of *C. difficile* ribotype 027 isolates from patients with antibiotic-associated diarrhoea, hospitalized in the same Department.

Eleven *C. difficile* strains were isolated from stool samples and used in this study. *C. difficile* was grown in Brain Heart Infusion. Then DNA was isolated and PCR was performed using appropriate primers (A6, B7, C6, E7, F3, G6, H9) specific for *C. difficile* VNTR. Products were separated using electrophoresis in 50V for 2 hours.

The preliminary results indicate that strains are belonging to different groups. The diversity of strains suggests that infection among patients is not associated with clonal spread of *C. difficile* strains in the hospital environment.

Keywords: *Clostridium difficile*, VNTR, antibiotic-associated diarrhoea

I.V Eye - a prototype of i.v. injections aid device

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Giving an i.v. injection or blood sample collection is a demanding procedure and requires high skills. Furthermore veins are not easy to recognize and if the needle misses the vein, the patient must be punctured again at another point. The "I.V EYE " project is based on the idea to create helpful and handy device for blood vessels mapping in order to make the veins more visible, allowing easier access, less pain and more confidence for medical personnel and patients.

Knowing there are devices that already do the task, there were two goals. First to construct a portable device that allows user hands free operation and second to present affordable solution in DIY (do it yourself, open source) easy to build version.

In order to do so, the idea is to use a Raspberry PI platform, image processing algorithms and a micro LCD display mounted in front of user's eye. Set includes also an IR camera, IR light emitter, portable power source and head mount. The reason to use near IR illumination lies in the optical properties of human skin and in the absorbance spectrum of hemoglobin. IR light penetrates human skin and veins containing low-oxygen blood absorb IR light stronger. Veins looks like black lines because they absorb IR light stronger than surrounding tissues. This reflected light is recorded by the camera and is turned into pictures. Pictures are processed in several stages to get an improved distribution of light and dark parts of the image (multistage local adaptive histogram equalization). After that pictures are grouped together and presented as a live view on the micro LCD screen.

The percentage of CD3+CD28+ lymphocytes is decreased after examination session of medical students

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Stressful situations comprise a wide range of internal or environmental conditions or events and medical education is perceived as being stressful especially during intensive learning for exams. Effects of psychological stress on immune functions have been demonstrated in numerous studies and include reduction cellular and humoral components of immune response.

The aim of our study was to examine percentage of CD3+CD28+ lymphocytes in the peripheral blood of medical students before and after examination session.

The peripheral blood was collected from 16 medical students at the beginning of winter semester and after examination session. The percentage of CD3+CD28+ cells was evaluated by use of monoclonal antibodies and flow cytometry. The original questionnaire was to evaluate the parameters describing stress level and sleeping pattern.

The subjective level of stress and tiredness was significantly higher after examination session as well as the mean sleeping time was significantly shorter in the period of exams. We found that percentage of CD3+CD28+ cells positively correlated with subjective level of stress at the first measurement, but this correlations wasn't significant after examinations session. We also found that students, who sleep shorter presented significantly lower percentage of CD3+CD28+ cell during examination session.

Our results suggest that stress and sleep deprivation associated with medical education and especially examination session resulted decreased percentage of CD3+CD28+lymphocytes. This changes could induce decreased activation of naïve T lymphocytes and decrease cellular immune response.

Keywords: Stress Immunology lymphocytes

Characteristics of prooxidant processes and immunological state of patients with dilatative cardiomyopathy

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Cardiovascular diseases take first place among the causes of death all over the world. One of the varieties of cardiovascular diseases is cardiomyopathy (CMR). According to the European Society of Cardiology, CMP is a myocardial disease with a disorder of its structure and function in the absence of damage to coronary vessels, arterial hypertension, congenital and acquired heart defects. Dilated cardiomyopathy (DCM) is the most common CMP, a polyethiological disease whose pathogenesis is not well researched.

To characterize the level of prooxidant processes and immunological status of DCM patients.

As a research material, serum from 33 patients with DCM aged 40-50 years was used. The average age of patients is 46 years. A spectrophotometric method has been used to determine the level of malondialdehyde (MDA), oxidative modification proteins (OMP), lipid oxidation products (LOPs), circulating immune complexes (CICs). Statistical analysis of the results was performed according to the criteria of Student's t-test.

Compared to controls, the levels increased: OMP by 89.9%, LOPs by 612.8%, MDA by 31.7%, and decrease of CICs by 142%; $p < 0.05$.

The indicated results point out an increase in the intensity of the prooxidant processes and a decrease in the immunological reactivity of the organism in case of DCM.



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF BIOTECHNOLOGY AND GENETICS

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In vitro anticancer activity of polymeric micelles loaded with 17-AAG and docetaxel

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Well-designed nanocarriers not only improve the solubility of hydrophobic compounds in water, but also allow the drug to be delivered selectively to the area of the disease process and reduce side effects.

The aim of the study was encapsulation of 17-allylamino-17-demethoxygeldanamycin (17-AAG) and docetaxel (DTX) in polymeric micelles prepared from the diblock copolymer of L-lactide and ethylene glycol (PLA-PEG). Both parts had a molecular mass of 5 kDa.

Micelles were prepared by the co-solvent evaporation method. Their morphology was analyzed using transmission electron microscopy. The kinetics of drug release from micelles was examined by dialysis against water. The content of drugs in micelles and dialysis fluid was tested using HPLC. The biological activity of the produced form of the drug was tested in vitro, using two ovarian carcinoma cell lines OVCAR-3 and SKOV-3. Cell growth was investigated using sulforhodamine B assay. The biocompatibility of the copolymer was examined by adding to the medium "empty" micelles without any drugs.

The content of 17-AAG in single micelles was 3% of their mass, docetaxel 7% of micelle mass, and double drug micelles contained 6% of 17-AAG and 6% of DTX. The fastest release of the substance took place at the beginning of the incubation, the majority of the drug from each type of micelle was released during the first 4 hours. On the basis of the SRB test, the largest decrease of cell viability in SKOV-3 and OVCAR-3 cell lines was observed at drug concentrations of 1000 nM and 300 nM, both for the micellar formulation of tested substances and free drugs.

Keywords: polymeric micelles, 17-AAG, docetaxel, anticancer therapy, in vitro study, SKOV-3, OVCAR-3

The effect of PI3KCA gene silencing on the viability and proliferative potential of non-small cell lung cancer A549

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Lung cancer is the most frequent, too late diagnosed and malignant tumor, which causes more than 1.5 million deaths every year in the world, and ~ 22 thousand new illnesses in Poland. Of the non-small cell lung cancers, the most common is adenocarcinoma, which is the subject of this study. Due to its high resistance to conventional chemotherapy, it's necessary to look for a new, more effective methods of therapy. For non-small cell lung cancer PI3K/AKT path signaling disorders are observed, which may be one of the goals of therapy.

The aim of the conducted research was to determine the effect of PI3KCA gene silencing on the basic cellular processes: cell cycle, proliferation activity, apoptosis and autophagy in the case of non-small cell lung cancer A549 cell line.

Non-small cell lung cancer A549 cell line was transfected with siRNA specific for PI3KCA gene. For the assessment of cell cycle and cell death by apoptosis and autophagy, flow cytometry and RT-QPCR were used to assess the number of mRNA copies of selected genes associated with the above-mentioned types of cell death.

Significant changes in the percentage of cells in cell cycle phases were observed after PI3KCA gene silencing. The presence of significant changes in the number of copies of selected genes associated with the process of apoptosis and autophagy has also been demonstrated.

Silencing of the PI3KCA gene inhibits proliferation and induces autophagy and apoptosis (most likely via the intrinsic and extrinsic pathway) of non-small cell lung cancer A549 cell line.¹¹

Keywords: non-small cell lung cancer, siRNA, PI3KCA, cell viability, apoptosis

Evaluation of the effectiveness of adalimumab therapy based on the gene expression profile of BNIP3L and BCL2L1

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Apoptosis is programmed cell death without inducing inflammation. The key regulators of apoptosis consist of gene expression products from the BCL2 family, including the BNIP3L gene encoding the pro-apoptotic protein and the BCL2L1 gene encoding the anti-apoptotic Bcl-xL protein. An example of a disease associated with apoptosis disorder is psoriasis.

The aim of the study was to evaluate the effectiveness of anti-TNF therapy with the use of adalimumab in patients with psoriatic arthritis, based on the expression of the BNIP3L and BCL2L1 genes and the PASI dermatological index.

The examined material were peripheral blood mononuclear cells (PBMCs) obtained from 8 patients with psoriatic arthritis before introducing the adalimumab and after 18 and 36 months of therapy. The control group consisted of 8 people without dermatological disorders. Obtained by molecular methods, total RNA was used to analyze the expression profile of the examined genes by RT-qPCR in real time. The disease severity was assessed on the basis of the PASI index.

The study demonstrated a statistically significant decrease in the expression level of the BCL2L1 gene encoding the anti-apoptotic Bcl-xL protein and the increase in the expression of the gene encoding the pro-apoptotic BNIP3L protein. In addition, the analysis of changes in the PASI value confirmed the effectiveness of the therapy.

The applied anti-TNF therapy significantly changes the expression of genes controlling the process of apoptosis, striving for its normalization. The effectiveness of the adalimumab used is demonstrated by a decrease in the PASI value.¹

Keywords: apoptosis, psoriasis, BCL2 family

Harpagoside - a potential inducer of apoptosis and regulator of breast cancer HCC38 cell line viability

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The triple negative breast cancers (TNBCs) constitute 10%–20% of all breast cancers. Treatment of patients with TNBC, lacking estrogen receptor and progesterone receptor expression as well as human epidermal growth factor receptor 2 (HER2) amplification, has been challenging due to the heterogeneity of the disease and the absence of well-defined molecular targets. The harpagoside - a major iridoid glycoside presented in *Harpagophytum procumbens* (devil's claw) have potential anti-cancer activity.

The aim of the study was to evaluate the potential impact of harpagoside on the triple negative breast cancer HCC38 cell line viability and induction of apoptosis.

The HCC38 cells were grown in RPMI-1640 + 10% FBS (temp. 37°C, 5% CO₂ atmosphere), and were exposed to harpagoside. As a control, untreated cells were used. After 24 hours from the exposition of harpagoside, RNA was extracted from HCC38 cells and the copy numbers of mRNA of genes involved in cell viability and apoptosis were determined using the RT-QPCR. The expression profiles of the examined genes in the cells exposed to harpagoside and control cells were compared. The cell cycle and apoptosis were also determined using flow cytometry.

There were changes in the expression of the examined genes and cell cycle between HCC38 cells indicating the reduction of their viability and induction of apoptosis.

Exposure of the breast cancer HCC38 cell line to harpagoside may be a potential new strategy for the inhibition of their proliferation and induction of apoptosis.

Keywords: breast cancer, harpagoside, cell viability, apoptosis

Everything is poison and nothing is poison

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Paracelsus said: "Everything is poison and nothing is poison, because only the dose causes poison". Plants use potentially hazardous substances for their own benefit.

The aim of the research is to determine the impact of sewage rich in organic nitrogen compounds on the intensity of fennel growth, and to analyze the role of nitrogen compounds in the environment.

The research compared the stages of fennel growth grown in clean soil and soil contaminated with sewage from the PGKIM Krotoszyn sewage treatment plant.

Nitrogen is needed for plants as a building material for proteins and nucleic acids. It also belongs to the chlorophyll. It determines the proper development of plants, giving them an intense green color. It affects the size and quality of the crop. Sewage contains nitrogen compounds like nitrosamines, nitrates and nitrites. Although they accelerate the growth of plants, can have an adverse effect on the human and animal population. The introduction of large amounts of nitrogen in the form of fertilizers and sewage into the environment enriches the aquatic environment. The result of excessive nitrogen emission may be inability of water bodies and eutrophication of ecosystems.

Soil contaminated with sewage is rich in nitrogen, phosphorus, potassium and magnesium - plants are not threatened with their deficiency, so they grow more intensively. Nitrogen deficiency in fennel is manifested by the yellowing of stems and leaves, which was observed in control pots.

Fennel grows faster in soil contaminated with sewage from sewage treatment plants in Krotoszyn compared to cultivation in normal alkaline soil.

Keywords: Fennel Nitrogen Poison Sewage

Single nucleotide polymorphism Taq-I in the vitamin D receptor gene (VDR) in patients with diagnosed breast and colorectal cancers: preliminary study

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Dysregulation of the metabolic pathway of vitamin D is a characteristic feature of numerous cancerous cells, including colorectal as well as breast cancers. Converted 25(OH)D into calcitriol binds to its own specific receptor – VDR (present in vast majority of human cells). Liganded VDR acts as the transcriptional agent vital to the regulation of differentiation, proliferation, immune response or neoplasia.

The aim of this study was to determine an association between Taq-I (rs731236) polymorphism in VDR gene and an occurrence of breast and colorectal cancers.

The frequency of the T- and t-alleles at the rs731236 polymorphic site in VDR gene (Taq-I) was compared in 107 patients with diagnosed cancer (62 - colorectal, 45 - breast) and 152 healthy people. DNA was isolated from peripheral blood cells, then genotyped using PCR-RFLP method. Statistical analyses were performed using GraphPad Prism software with P-value $p \leq 0.01$ considered as significant.

The frequency of t-allele in Taq-I polymorphic site is: 0.44 - colorectal cancer, 0.37 - breast cancer, in control group - 0.32. In healthy patients T-allele (dominant) is almost two times more common than in patients with diagnosed colorectal cancer (OR=1,83, 95%CI 1,04-3,20, $p=0,03$), simultaneously TT-genotype occurs more frequently in control group (OR = 3.2, 95%CI 1.59-6.40, $p = 0.001$). No correlation between Taq-I genotypes and susceptibility of breast cancer has been found.

Taq-I polymorphism may be a moderate risk factor for incidence of colorectal cancer. The study also confirms that the genetic variations of VDR can modulate physiological role of vitamin D.

Keywords: Taq-I polymorphism, vitamin D receptor, colorectal cancer, breast cancer, single nucleotide polymorphism

Analysis of the influence of synthetic xanthone derivatives on selected malignant melanoma cell lines

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Malignant melanoma is one of the most invasive and difficult to treat neoplasm. Xanthone derivatives are considered to become the promising chemotherapeutic drugs, including in the treatment of melanoma.

The aim of the study was to evaluate the effect of synthetic xanthone derivatives on the proliferation, apoptosis, and invasiveness of melanoma cells *in vitro*.

The study involved three melanoma cell lines: G-361, SK-MEL-1, and SH-4. They were treated with the synthetic xanthone derivatives, designated as Compounds 1-5, which were designed and synthesized at the Dept. of Bioorganic Chemistry of the Jagiellonian University, Kraków. The IC₅₀ values were determined by MTS assay. Cell apoptosis was estimated by APOac test, and cell proliferation analysis was conducted by means of the EdU incorporation test. To determine cell invasiveness, Geltrex™-coated inserts invasion analysis was performed. Additionally, cell adhesion to Matrigel was analyzed. Intracellular reactive oxygen species (ROS) levels were measured by DCF assay.

Statistically significant influence of the tested compounds activity on the analyzed cell parameters was observed in each assay. All compounds significantly inhibited cell proliferation, stimulated apoptosis, strongly reduced cell adhesion and invasiveness. The tested compounds also significantly increased the ROS levels which may partly contribute to their mechanism of action.

All tested compounds strongly modulated the proliferation, apoptosis, and invasiveness of all the melanoma cell lines. Additionally, they induced oxidative stress. Analyzed xanthone derivatives appear to be promising anti-cancer agents, nevertheless further research is required.

Keywords: Melanoma, xanthenes, cancer

The involvement of humanin in development of Parkinson`s disease

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Humanin (HN) was identified in the brain of a patient diagnosed with Alzheimer's disease (AD). This 24-amino acids peptide was shown to suppress the neuronal cell loss caused by amyloid- β (A β) and by amyloid precursor protein (APP) mutations associated with early onset familial Alzheimer's disease (FAD). Recent studies revealed that HN activity is not confined only to neurons but it involves also other compartments of the brain as well as extraneural tissues. These results suggest that HNs may influence on other neurodegenerative disorders such as Parkinson's disease (PD).

We genotyped the not-known polymorphic variants of 13Thr- and 13Ile-HN10b (with threonine or isoleucine in amino acid position 13), encoded by HN gene in PD- diagnosed patients.

DNA was isolated from peripheral blood from 214 patients with diagnosed PD and 193 healthy adult individuals. Genotyping was performed on the 3130xl Genetic Analyzer (Applied Biosystems).

Genotyping results have not shown any significant association between identified 13Thr- and 13Ile-HN10b polymorphic variants (38C>T) in control as well in PD-diagnosed individuals. However we demonstrated higher frequency of C/T and C/C genotypes in comparison to T/T in patient with dementia (MMSE). Similar relation we observed in patients with severe symptoms of PD progression (basing on Hoehn and Yahr as well as UPDRS rating scale).

Our results suggested that 13Thr- and 13Ile-HN10b polymorphic variants (38C>T) is not associated in development of PD. However we can speculate that T/T genotype could be considered as protective factor during development of PD.

Keywords: Humanin, Parkinsons disease

Changes in the expression profile of selected genes associated with the JAK/STAT signaling pathway in psoriatic patients treated with ustekinumab and in the control group

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Ustekinumab is a human IgG class monoclonal antibody, which binds to the common subunit p40 of IL-12 and IL-23, inhibiting the JAK/STAT signal pathway.

The aim of this study was to determine the effect of ustekinumab therapy on changes in the expression pattern of STAT1, STAT3, SOCS2 and IL-17A in patients with psoriasis vulgaris and in the group of healthy volunteers.

The material was whole blood taken from 14 psoriatic patients in 0 and 40 weeks of ustekinumab therapy and from healthy individuals. The RT-qPCR reaction was used to amplify the analyzed genes. The Mann-Whitney U test was used to indicate statistically significant differences in the expression of selected genes between 0 and 40 weeks of therapy, meanwhile the ANOVA Kruskal-Wallis test was conducted to evaluate changes in the expression between healthy individuals and patients in 0 and 40 weeks of observation ($p < 0.05$).

The higher expression of all analyzed genes was observed in the group of psoriatic patients compared to the control group and at the beginning of therapy than after 40 weeks of ustekinumab treatment. The Mann-Whitney U test showed statistically significant differences between the evaluated group for STAT3 ($p = 0.006993$), SOCS2 ($p = 0.026224$) and the ANOVA test also indicated significant differences between STAT3 ($p = 0.015$) and SOCS2 ($p = 0.0015$).

The analysis of changes in transcriptional activity of STAT1, STAT3, SOCS2 and IL-17A during ustekinumab treatment of psoriatic patients and in the control group can be a useful molecular marker to assess the therapeutic potential of ustekinumab.

Keywords: psoriasis, ustekinumab, JAK/STAT pathway, personalized therapy



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF CARDIOLOGY

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The use of new technologies in medicine. Telemonitoring of cardiac patients - retrospective study

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Advancement in healthcare technologies provides easier and faster medical contact for cardiology patients. Tele-ECG followed by telephone consultation should identify first signs of heart diseases exacerbation, resulting in better clinical outcomes. However, there is lack of data comparing efficiency of telemonitoring in patients after percutaneous coronary procedures (PCI).

The aim of this study was to evaluate long term clinical outcomes between patients with or without telemonitoring support.

This is a multicentre, retrospective registry of 400 consecutive patients, who underwent PCI from 10.2016 to 06.2018. 202 of them were provided with tele-ECG device and telephone consultations, while 198 patients did not agree for telemonitoring. Patients with both acute coronary syndrome and stable angina were included. The average time of observation was 312 days.

At baseline, patients in monitored group were more often presented with myocardial infarction (MI) (50% vs. 35%; $p=0.01$), especially STEMI (18% vs. 9%; $p<0.01$). After one year, the incidence of hospitalization due to MI (3.8 vs. 4.7%; $p=0.16$) and all cause death were numerically lower in monitored group, however the difference was not statistically significant. The rate of hospitalizations with heart failure exacerbation were significantly lower in monitored group (2% vs. 4.10%; $p=0.04$). The incidence of arrhythmias and rePCI/CABG were significantly more common in monitored group (7.4% vs. 2%; $p<0.05$ and 9% vs. 5%; $p=0.04$ respectively).

Our study suggests, that exacerbation of heart disease in patients supported with telemonitoring were diagnosed earlier. It might result in lower incidence of more serious medical conditions.

Keywords: Telemedicine, tele-ECG

The MGI is not a risk factor of premature death in patients with TAPVC

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Total anomalous pulmonary venous connection (TAPVC) is a distinctly rare but highly fatal congenital malformation. Accurate and profound analysis of patient's radiological findings is required to make an appropriate diagnosis and prepare to the surgical repair.

In this study we investigated whether the McGoon Index (MGI) is a risk factor of premature death in patients with TAPVC.

A retrospective study including 14 patients aged from 1 day to 3,5 years (on the day of admission). Medical evaluation of patients with TAPVC includes gender, age, birth weight, mode of delivery, clinical manifestations and associated intra-cardiac lesion. Kaplan-Meier curve was used to estimate survival probability in this group. We assessed mortality risk associated with MGI using Cox regression. We also performed a logistic regression to investigate change in odds of patient's death corresponding to change in MGI value.

Average MGI in our group ($1,94 \pm 0,56$) was statistically consistent (T test, $p > 0,05$) with the value in Xiang et al. study, however in our patients lowest MGI values are not associated with higher mortality. Although Cox regression ($p > 0,05$) and logistic regression ($p < 0,03$) results confirm Xiang et al. study thesis, observed survival rates are contrary. Survival estimates of 3 weeks, 3 months, 6 months and 1 year were 100, 93, 93 and 93% respectively.

The MGI is not a risk factor of premature death in patients with TAPVC. In studies with small group size regression results are unreliable. In contrast, survival rates provide stable base for realistic assumptions.

Keywords: TAPVC, MGI, computed tomography (CT), congenital heart disease

An investigation of coronary artery trifurcation and coronary artery calcium score measured in multislice computed tomography coronary angiography

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Atherosclerosis is a major cause of coronary artery disease. The reason for using trifurcation angle is due to the fact that atherosclerosis tends to occur at specific risk points, including branching locations.

The evaluation of the correlation between coronary artery calcium (CAC) score and the angle formed by the left anterior descending (LAD) and left circumflex (LCX) coronary arteries in a group of patients with left main (LM) trifurcation.

Study group consisted of 50 patients with LM trifurcation. Angle between LAD and LCX, and CAC score were measured based on multislice computed tomography coronary angiography. Patients were divided into two groups with (CAC>0) and without (CAC=0) calcifications in the left coronary artery.

The mean angle was $108 \pm 33^\circ$ and $91 \pm 28^\circ$ in the CAC>0 and CAC=0 groups ($p<0.05$) respectively. The logistic regression result shows that each degree of a trifurcation angle increase comes with approximately 1% greater odds ratio of calcifications occurrence ($p<0.003$). Furthermore, we investigated the influence of the trifurcation angle degree on the age at which the calcifications originated. Assuming 25% annual progression of CAC score, Pearson's correlation coefficient revealed that the greater the trifurcation angle, the earlier an atherosclerotic lesion may be expected ($r=-0.43$, $p<0.01$).

Our study revealed that the LM trifurcation angle may be one of the important geometric risk factors of early atherosclerotic plaque formation.

Keywords: Coronary artery trifurcation, atherosclerosis, calcium score

Does knowledge of symptoms and risk factors of cardiovascular diseases differs between mental and physical workers?

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Proper knowledge about symptoms of myocardial infarction (MI) and stroke may lead to quicker hospitalization. Awareness about risk factors of cardiovascular diseases (CVD) is an important part of primary prevention.

To compare the knowledge of MI and stroke symptoms as well as risk factors of CVD between mental and physical workers before and after the course covering these topics.

The questionnaire regarding knowledge of risk factors and symptoms of CVD was carried out among randomly selected employees from Malopolska before and just after the course. Statistical analysis was conducted with Statistica 13.

The study involved 806 workers – 91 physical workers (mean age=45.2y±11.0), 715 mental workers (mean age=44.5±11y). In mental workers group, compared to physical, awareness of MI symptoms was significantly higher only for two symptoms: pain or discomfort in the chest (93,9% vs 79,8%, p=0,00) [after the course: 99,1% vs 98,8%] and pain or discomfort in shoulders (46,8% vs 30,1%, p=0,026) [after: 90,8% vs 84,2%]. Mental workers more often recognized several symptoms of stroke, e.g. partial lips drooping (82,7% vs 59,3%, p<0,0001) [after: 98,2% vs 97,7%], partial weakness of limbs (80,1% vs 61,5%, p=0,0003) [after: 97,9% vs 96,6%]. They also show greater knowledge of CVD risk factors, e.g. alcohol abuse (89.6% vs 75% , p=0,0017) [after: 98,5% vs 97,5%], sedentary lifestyle (95.2% vs 82.9%, p=0.0024) [after: 99,1% vs 100%].

Mental workers have higher awareness of symptoms of CVD and their risk factors. The intervention increased awareness in both groups. Thus, education in that field is useful and needed in population.

Keywords: cardiovascular disease, cardiovascular risk factors, physical work, office work, medical education

Is the choice of the first upper limb for blood pressure measurement important?

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To maintain the accuracy of the obtained blood pressure (BP), the conditions and the measurement method should comply with the guidelines. Although difference in BP on both upper limbs is not uncommon and may be used as a marker of atherosclerosis, its clinical significance is not fully understood.

We aimed to analyze the impact of the sequence of measurements (left-right or right-left) on obtained BP values in subsequent measurements.

The study was conducted in the group of 119 volunteers aged 18-86 years (men- 50). The participants were subjected to 4 BP measurements - the first on the randomly drawn upper limb, the second on the opposite limb and two additional on the limb with a higher BP.

In the right-handed group (n=115), the difference of systolic BP on both arms was not dependent on the choice of the limb to perform the first measurement (-7,7 vs -6,1 mmHg, $p=0.53$). However, the difference in BP values between measurements continued on the upper arm with higher BP values was greater for subsequent measurements on the left than on the right arm (-11.8 vs -6.6 mmHg, $p=0.004$). A decrease in systolic (141.9 vs 134.1 mmHg, $p=0.007$) and diastolic (81.59 vs 79.17 mmHg, $p=0.09$) BP was observed between the first and second measurement independently of the sequence of measurements. The decrease in systolic BP between these measurements was higher in the group of women than men (-9.3 vs -3.5 mmHg, $p=0.05$).

The decrease of BP in two measurements on both upper limbs is independent of the choice of the upper limb for the first measurement. Serial measurements are needed for the optimal assessment of BP values.

Keywords: hypertension, blood pressure, measurements

Anaemia in patients with heart failure with reduced ejection fraction treated with cardiac resynchronization therapy – clinical and prognostic significance

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Anaemia is a risk factor for the development of heart failure. Cardiac resynchronization therapy (CRT) is used to treat heart failure with reduced ejection fraction (HFrEF).

The aim of the study was to determine the incidence of anaemia, its significance for clinical characteristic and long-term prognosis in a population of patients with HFrEF undergoing CRT.

The study included 141 patients (mean age: 68 years, 83.7% male, NYHA class: II 57/40.4%, III 74/52.5%, IV 9/6.4%, LBBB: 87/61.7%) on optimal medical therapy (OMT) hospitalized at 1st Chair and Clinic of Cardiology, Medical University of Silesia in Katowice in 2012-2019 undergoing the CRT implantation. Anaemia was defined as Hb < 12 g/dL in women and < 13.5 g/dL in men. Clinical characteristic and death as an end point was taken into analysis.

Anaemia was found in 57 (40.4%) of the study group. Analysis of many factors allowed to indicate significant differences between the group with anaemia and without anaemia in: NYHA III (61.4%/45.2%), hyperlipidemia (28.1%/46.4%) and mitral valvuloplasty (0%/8.3%). The death was registered in 50 (35.5%) patients including both subjects with anaemia (22/38.6%) and without anaemia (28/41.4%; NS).

Regardless of OMT anaemia remains an important problem among patients with HFrEF undergoing CRT implantations. Degree of anaemia is not severe. Baseline anaemia did not affect for the occurrence of death in the population with CRT.

Keywords: anaemia, heart failure with reduced ejection fraction, cardiac resynchronization therapy

Echocardiography and 6-minute walk test markers of disease progression in systemic lupus erythematosus

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Systemic lupus erythematosus is a chronic autoimmune disease. Patients show an increased risk of developing cardiovascular diseases, which are one of the most common causes of death in this patient population. Transthoracic echocardiography and a 6-minute walk test may be important in screening patients.

The aim of the study was to show the relationship between the presence of SLE and changes in echocardiography.

The analysis included 45 patients with systemic lupus erythematosus at age 56.57 ± 11.25 years. Average time of disease was 12.58 ± 8.18 years. The control group consisted of 39 people aged 50.54 ± 11.97 years who were not burdened with cardiovascular diseases.

In the 6MWT study statistically significantly shorter distance had patients with SLE than Non-SLE (547.86 ± 87.59 vs. 595.37 ± 78.56 , $p = 0.0472$). Average left ventricular ejection fraction was statistically lower in the SLE group than in the control group (50.82 ± 7.01 vs. 57.68 ± 4.56 , $p = 0.0001$). A significant correlation was found between the distance traveled in 6MWT and LVEF ($r = 0.6585$, $p = 0.00001$). The duration of the disease was important in left ventricular systolic dysfunction ($r = 0.4516$, $p = 0.0001$) and the distance covered in 6MWT ($r = -0.22201$, $p = 0.0001$).

The use of easy and available methods such as TTE and 6MWT will allow early detection of CVD and the introduction of appropriate treatment. Interpretation 6MWT should not be limited to the assessment of the cardiopulmonary system, but can also be used as a parameter to assess the activity of the disease and its progress.

Keywords: Systemic lupus erythematosus, 6 minute walk test, echocardiography, complete blood count, autoimmune disease

The Apnea- Hypopnea Index and heart rate in patients after acute myocardial infarction at the beginning of rehabilitation in KOS program

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Sleep apnea (SA) is regarded as a cardiovascular risk factor for myocardial infarction (MI), first recurrent MI and death. Apnea/hypopnea index (AHI) is the number of apnea and hypopnea events per hour of sleep and can be determined using non-invasive Holter ECG monitor.

The purpose of our study was to analyze the AHI in acute MI patients qualified into the KOS- rehabilitation program, as well as, heart rate (HR) frequency in both Holter and Cardiac stress test compared to the control group.

The data of 45 patients (M- 82.2%, age 61 ± 11 years) of the Cardiac Rehabilitation Department qualified into the KOS-program after acute MI (STEMI-16(35.6%) and NSTEMI 29(64.4%)) were analyzed after successful vascular intervention (7-10 days). The control group consisted of 50 subjects (M-66%, F-34%, age: 55 ± 11 years) without arrhythmias and organic heart diseases. We analyzed: Holter recordings, AHI measure, echocardiographic data and the results of exercise tests.

KOS-program-patients had higher AHI ($19,4 \pm 14,8$) than control group AHI ($8,48 \pm 8,4$), $p < 0,001$. In addition, $AHI > 15$, which may indicate moderate or severe level of SA, was observed in 24 (58,3%) patients of study group and 7 (14%) of control group ($p < 0,01$). Study and control subjects did not differ in HRmax in Holter: 110 ± 15 vs 102 ± 22 ($p = 0,10$). Cardiac stress test-HRmax is significantly higher than Holter-HRmax in patients after MI: 122 ± 18 vs 110 ± 15 ($p < 0,001$).

Higher values of the AHI index are more common among patients during early recovery after MI. The predictive value for that observation need further research.

Keywords: Myocardial infarction, sleep apnea, AHI

Relations of body mass, central hemodynamics, arterial stiffness and left ventricle geometry in frail elderly patients

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Frailty is a biological syndrome that reflects a state of decreased physiological reserve and increased vulnerability to different stressors. Major feature of frailty is muscle loss. There are no data on myocardium mass in frail patients.

The aim of the study was to assess whether muscle loss in frailty is associated with left ventricle mass decline and changes in its structure.

We have enrolled 94 patients aged ≥ 65 years. Frailty was assessed according to Fried frailty scale. Carotid femoral pulse wave velocity (cfPWV) and central blood pressure were measured with peripheral applanation tonometry. Left ventricle mass and relative wall thickness (RWT) were assessed echocardiographically. We assigned patients to four groups: non-frail women (NFW), non-frail men (NFM), frail women (FW), and frail men (FM).

22 patients presented at least three out of five Fried traits and were considered as frail. Frail and non-frail patients did not differ in age, cfPWV, peripheral blood pressure, central blood pressure, central pulse pressure, and left ventricle mass index. While body mass was reduced in women and in frail patients ($P=0.004$), left ventricle mass was increased in men and in frail patients ($P=0.031$). FW had the highest RWT: FM - $0,41 \pm 0,05$; FW - $0,49 \pm 0,07$; NFM - $0,40 \pm 0,08$, and NFW - $0,45 \pm 0,06$ ($P=0.001$).

Frail elderly patients with symptomatic coronary heart disease, despite lower body weight have increased left ventricle mass and increased relative wall thickness. There is no relation of left ventricle geometry and arterial stiffness or central hemodynamics.

Keywords: Frailty, arterial stiffness, central blood pressure, left ventricle geometry, concentric hypertrophy, gender

The Apnea–Hypopnea Index in patients with acute ischemic stroke

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Obstructive sleep apnea (OSA) is one of breathing disorders during sleep regarded as cardiovascular risk factor associated with increased mortality. The Apnea–Hypopnea Index (AHI) is a measure of the number of apnea and hypopnea events per hour of sleep, may be calculated from Holter recordings as a practical, non-invasive tool for screening for sleep disordered breathing (SDB). OSA is one of the important, modifiable risk factors of acute ischemic stroke (AIS) in AHI>15 patients this risk is higher. The question is if an episode of AIS may affect AHI and cause higher values of this parameter?

The aim of our study was to analyze AHI obtained from Holter ECG in patients with cryptogenic AIS and in healthy subjects.

The study group consisted of 92 patients with the first symptomatic cryptogenic AIS (age: 60 ± 14 ; 51% males). Each patient had 7-days Holter recording 8-9 days after stroke episode. Patients were divided into two groups: TACI (anterior ischemia) and non-TACI (middle and posterior circulation). Control group contained 50 healthy people (age: 55 ± 9 , 66% males).

AHI is significantly increased in AIS group in comparison to control ($p=0.001$). AHI in non-TACI was higher than both TACI and controls: $14 \pm 5,3$; $10,5 \pm 4,8$; $8,5 \pm 8,4$ respectively ($p=0.0004$ for non-TACI vs control). 30% patients with AIS (23% in TACI and 35% in non-TACI) has AHI>15 in comparison to 16% from control group.

Patients after ischemic stroke episode are more likely to have higher AHI, especially with non-TACI (middle-posterior ischemia) location, what may be related to the damage of respiratory and autonomic nervous system centers.

Keywords: Apnea–Hypopnea Index, Acute Ischemic Stroke, Obstructive Sleep Apnea, Holter ECG

Valsartan reduces arterial stiffness along with level of soluble ST2 independently of blood pressure changes – results of single center, randomized study

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Arterial stiffness is one of end-organ damage signs in patients with arterial hypertension. Carotid femoral pulse wave velocity (cfPWV) is a clinical measure of arterial stiffness and its values above 10 m/sec are associated with increased cardiovascular risk. Soluble ST2 is a cytokine involved in fibrotic processes. There is paucity of data on the association between sST2, arterial stiffness, and effect of valsartan on these parameters.

The aim of the study was to assess the effect of valsartan on arterial stiffness and level of soluble ST2 over a 12-month long treatment.

This was a randomized, blinded, placebo controlled single center study. There was a 24-hour-long wash-out period from angiotensin converting enzyme inhibitors (ACEI) and other than valsartan, angiotensin receptor blockers ARB (previous use of valsartan was an exclusion criterion). Drugs other than ACEI and ARB were allowed in follow-up to control blood pressure. CfPWV was assessed at baseline and at 12 months using applanation tonometry. Soluble ST2 was measured with lateral flow cassette-based immunofluorescent assay. We present the data for 28 placebo patients (Plac) and 60 valsartan patients (Vals).

Patients from both groups have had comparable peripheral and central blood pressures. CfPWV has risen in Plac by 6,2% and has fallen by 6,2% in Vals ($P=0.01$) over 12 months. Soluble ST2 has risen in Plac by 9,4% and has fallen by 43,3% in Vals ($P=0.001$) over 12 months.

Valsartan has positive effect on improvement of arterial stiffness. Decrease in soluble ST2 concentration may help explain the alternative mechanism for protective role of valsartan.

Keywords: Arterial stiffness, soluble ST2, valsartan

The usefulness of the most often used electrocardiographic parameters differentiating wide QRS complex tachycardia in patients with ventricular tachycardia in 3 channel Holter recordings

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The assessment if wide QRS complex tachycardia (WCT) has ventricular or supraventricular origin remains a serious diagnostic problem. For this purpose, many algorithms such as Vereckeij, Brugada, Wellens or VT score are used in 12-lead ECG, but there is no algorithm for 3 channel Holter recording.

The analysis of the frequency of parameters confirming a ventricular origin of tachycardia in V5 and V2 leads (CM5 and CS2 channels in 3-lead Holter ECG) in patients with implanted cardioverter defibrillators (ICD).

A total of 55 ECGs with VT obtained from Holter recordings of 40 patients with implanted ICD/CRT were analysed. If the patient had >1 VT, each of them was assessed separately. Seven basic features were evaluated: initial R wave in V2; AV dissociation in V2 and V5; initial r >40ms in V2; S wave notch in V2; no RS complex in V5 and V2; Rpeak time in V5 >60 ms, 80 ms and 100ms; RS time >100ms in V5 and V2.

Frequency of assessed parameters are as follows: AV dissociation in V2 (40%), in V5 (41,8%); initial R in V2 (60%); RS complex >100ms in V2 (45,5%) and in V5 (43,6%); no RS complex in V5 (36,4%), in V2 (32,7%); initial r >40ms in V2 (18,2%); S wave notch in V2 (16,4%); Rpeak time in V5 >60ms (18,2%), >80ms (12,7%), >100ms (5,5%).

Confirmation of the ventricular origin of tachycardia with use of 2 leads used in 3-channel Holter may be difficult and searching of additional parameters is necessary.

Keywords: VT, Holter, ECG

When ECG lies: NSTEMI in ECG and total occlusion of infarct-related artery – how can we identify these patients?

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Some patients with non-ST-elevation myocardial infarction (NSTEMI) have a total occlusion (TO) of infarct-related artery (IRA). The prevalence and impact of TO of IRA on outcomes in patients with NSTEMI remain unclear.

To analyse the incidence of total occlusion of IRA and to assess the predictors of total occlusion of IRA in patients with NSTEMI.

The study was conducted as a retrospective cross-sectional analysis of 399 consecutive patients with NSTEMI (293M, mean age 70.3 ± 10.1) hospitalised in the academic centre in 2017. The study population was categorized into patients with TO of IRA and with hemodynamically significant culprit coronary lesion (non-TO) on coronary angiography. Demographic and clinical data were collected. TO of IRA and in-hospital mortality were the outcomes.

TO was found in 138(34.6%) patients with NSTEMI. Patients with TO had a greater incidence of diabetes mellitus ($p=0.003$) and atrial fibrillation ($p=0.02$). Serum triglycerides level ($p=0.001$), glucose level ($p=0.0005$) and baseline troponin level ($p=0.004$) positively influenced the incidence of TO. The left circumflex artery (LCx) was the major IRA in the TO group (39.1%), whereas the left anterior descending artery (LAD) was more commonly the IRA in the non-TO group (48.5%). In-hospital mortality was higher in the TO group than non-TO group (2.8% vs. 1.1%, $p=0.007$).

In the population of patients with NSTEMI, TO of IRA represents a considerably frequent phenomenon and corresponds with established clinical markers of impaired outcome. Therefore, the utmost caution should be paid to prevent delay of coronary angiography in NSTEMI patients who have increased risk of acute coronary occlusion.

Keywords: NSTEMI, occlusion, LCx, LAD, ECG, IRA

Effect of valsartan on level of soluble ST2 and left ventricle remodeling in patients with dual chamber pacemaker

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Permanent right ventricle pacing leads to left ventricle remodeling, its systolic dysfunction and symptomatic heart failure in the long run. Valsartan is well known for its preventive anti-remodeling function in the post infarction heart remodeling.

To assess the effect of valsartan on left ventricle remodeling in patients with second and third degree atrioventricular block with first-time implantation of dual chamber pacemaker.

This was a randomized, blinded, placebo controlled single center study. There was a 24-hour-long wash-out period from angiotensin converting enzyme inhibitors (ACEI) and angiotensin receptor blockers ARB. Left ventricle ejection fraction (LVEF), indices of diastolic function and left ventricle dimensions were measured in echocardiography at baseline and at 12 months. Soluble ST2 was measured with lateral flow cassette-based immunofluorescent assay. We present the data for 28 placebo patients (Plac) and 60 valsartan patients (Vals).

Soluble ST2 has risen in Plac by 9,4% and has fallen by 43,3% in Vals ($P=0.001$) over 12 months. LVEF has fallen in Plac and Vals groups by 8,3% and 4,3% respectively over 12 months ($P=0.01$). End systolic volume rose by 18,8% and 9,7% in Plac and Vals respectively ($P=0.01$). Diastolic function has improved in Vals.

Valsartan alleviates diastolic dysfunction, left ventricle dilation and protects from loss of systolic function. It may be useful in prevention of pacing induced heart failure. Decrease in soluble ST2 concentration may help explain the alternative mechanism for protective role of valsartan.

Keywords: Left ventricle remodeling, soluble ST2, valsartan, pacemaker

Frailty syndrome is associated with increased respiratory and renal dysfunction

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Frailty syndrome is a state of decreased physiological reserve and increased vulnerability to different stressors. Frail patients have worse prognosis. Comorbidities and dysfunction of other systems might worsen the prognosis further in this peculiar patient population. There is less evidence on function of respiratory and urinary systems in frail patients.

The aim of the study was to assess the prevalence of comorbidities and function of respiratory and urinary systems in frail patients with diagnosed coronary artery disease.

We have enrolled 173 patients aged ≥ 65 years, in whom coronary artery disease was confirmed angiographically. Frailty was assessed according to Fried frailty scale. Comorbidities were recorded from patients' medical charts. Peak expiratory flow (PEF) and forced expiratory volume in 1 second (FEV1) were measured with Asmaplan 1 peakflowmeter (Vitalograph, Ireland). Renal function was expressed as estimated glomerular filtration rate (eGFR) from Cockcroft-Gault formula. 43 patients presented at least three out of five Fried traits and were considered as frail.

Frail and non-frail patients have comparable prevalence of comorbidities like hypertension, atrial fibrillation, valvular heart disease, stroke/TIA, PAD, COPD, hyperlipidemia, diabetes, renal failure, and malignancy. Frail patients have however significantly reduced PEF (240 ± 114 vs. 337 ± 126 L, $P=0,000$), FEV1 ($1,61 \pm 0,6$ vs. $2,36 \pm 2,1$ L/sec, $P=0,04$) and eGFR ($49,1 \pm 11,7$ vs. $66,4 \pm 22,3$ ml/min, $P=0,01$).

Impaired function of respiratory and urinary systems in frail patients may be the reason for increased risk in these patients.

Keywords: Frailty, comorbidities, respiratory function, renal function

One disease and two diagnosis? takotsubo cardiomyopathy vs myocarditis

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Takotsubo cardiomyopathy (TTC) is a type of transient heart insufficiency which resembles an acute coronary syndrome (ACS) but without hemodynamically significant changes in coronary arteries. Usual symptoms are chest pain, dyspnea and palpitations. Myocarditis gives very similar signs and symptoms. The problem of differentiation TTC and myocarditis is still unsolved.

The aim of the research is to compare TTC and myocarditis and show differences between them.

25 (10 with TTC and 15 with myocarditis) patients of the Clinic of Cardiology in Pomeranian Medical University were retrospectively analysed at the base of their medical histories. Considered patients were hospitalised from 1.01.2018 to 15.03.2019.

10 patients were diagnosed with TTC, 90% of them were women. Median age for TTC patients was 80 years. Average value of TnT=0,501 $\mu\text{m/l}$, CK MB.=24,75 U/l. There were apical ballooning and no hemodynamically significant changes in coronary arteries in all patients. On the other hand, myocarditis was diagnosed in 15 patients (12 men and 3 women). Median age for TTC patients was 30 years. There were infection in the medical history in 8 patient and no significant changes in coronary arteries in all patients. Average value of TnT=0,671 $\mu\text{m/l}$, CK MB.=40,64 U/l.

Both diseases are very similar in term of clinical symptoms, laboratory tests and medical imaging. Common clinical differences in TTC and myocarditis are age, sex or stressor. Despite all above, one of the criterion determining TTC is to exclude myocarditis. So little differences and two separate diseases? Or maybe it should be one diagnosis?

Keywords: takotsubo cardiomyopathy, myocarditis

Can echocardiographic parameters predict mortality in patients with severe interstitial pulmonary fibrosis?

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Patients with severe interstitial pulmonary fibrosis (sIPF) have very bad prognosis. Transthoracic echocardiography (TTE) remains a part of sIPF patients evaluation for lung transplantation (LT).

The aim of the study was to assess whether left ventricle (LV) and right ventricle (RV) echocardiographic parameters influence mortality of patients with sIPF referred for LT.

37 consecutive patients were enrolled in the study (29 men and 8 women, mean age 52.9 \pm 10.9 years). Right heart catheterization (RHC) and TTE were a part of sIPF patients evaluation for LT, especially for the assessment of pulmonary hypertension (PH). The association between echocardiographic parameters and 12-month mortality were evaluated in adjusted model (age, gender, BMI, pulmonary diagnosis and pulmonary functional tests). ROC analysis was performed to assess the diagnostic accuracy and the cut-off value of the analysed echocardiographic parameters in predicting 12-month mortality.

The prevalence of PH was 67.6%. During the follow-up 15 (41%) patients died. The mortality rate was higher in patients with smaller dimensions of LV end systolic (LVESD) and end diastolic (LVEDD) diameter as well as LV end systolic volume (LVESV) (HR 15.0, 95% CI 2.87-89.72, $p=0.003$; HR 4.95, 95% CI 1.5-15.5, $p=0.006$; HR 4.03, 95% CI 1.37-11.61, $p=0.011$; respectively). There were no significant interactions between RV morphology or systolic function and mortality.

Left ventricular echocardiographic parameters are useful in predicting mortality in patients with sIPF referred for LT.

Inadequately low left ventricular mass – a hallmark of a different mode of cardiac adaptation to pressure overload in aortic stenosis?

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The absence of left ventricular hypertrophy (LVH), a feature of 10-30% of patients with severe aortic stenosis (AS), does not adversely affect outcome, which contradicts the classical notion of LVH as a beneficial compensatory response. Of note, only a few studies have attempted to characterize AS subjects with inadequately low LV mass (i-lowLVM) relative to LV afterload.

To compare relations between LV function and load by AS severity and LVM adequacy.

By a retrospective analysis of medical records of patients with moderate or severe AS, we calculated LV midwall fractional shortening (mwFS), an index of myocardial function, and circumferential end-systolic LV wall stress (cESS), an estimate of LV afterload. Characteristics were compared between subjects with i-lowLVM and those with adequate or excessive LVM (ae-LVM) relative to an individual hemodynamic load.

In subjects with i-lowLVM. LVM did not differ between moderate and severe AS ($p=0.2$), while in patients with ae-LVM, LVM was increased in severe versus moderate AS ($p<0.001$). Compared to ae-LVM, patients with i-lowLVM had higher mwFS (by about 20–30%, $p\leq 0.01$) and EF (by about 10%, $p\leq 0.01$) in both moderate and severe AS. In contrast, cESS was similar regardless of LVM adequacy and stenosis severity ($p>0.6$).

LVM inadequacy seems a different mode of cardiac adaptation to pressure overload which appears already in less-than-severe AS. During AS progression, subjects with i-lowLVM maintain constant cESS despite unchanged LVM, probably due to better LV myocardial function in comparison with the remaining AS subjects, exhibiting a gradual rise in LVM.

Keywords: left ventricle, hypertrophy, aortic stenosis, pressure overload, LV

Human Heart Fatty Binding Protein (sFABP) is an indicator of increased pulmonary resistance in patients with advanced heart failure

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sFABP plays an important role in maintaining lipid homeostasis and can be used as a specific marker of myocardial damage. The role of sFABP in patients with pulmonary hypertension and increased pulmonary vascular resistance (PVR) has not been specified.

The aim of the study was to determine the relationship between the sFABP serum level and the presence of increased PVR in patients with heart failure (HF) underwent heart transplantation (HT) evaluation.

We analyzed prospectively 199 consecutive patients underwent HT evaluation in our institution between 2017 and 2018. sFABP serum level was measured by a sandwich enzyme-linked immunosorbent assay (ELISA) method with the use of commercially available kit (SunRedBio Technology Co., Ltd, Shanghai, China).

Patients' age was 60 (53-64) and 88.4 % of them were males. The frequency of measured invasively elevated PVR in the analyzed population was 35.7%. The ROC curve analysis showed that the cut-off point value of 1ng/ml for sFABP yielded a sensitivity of 82% and specificity of 98% for association with increased PVR detection. The area under the ROC curve (AUC) for sFABP was 0.9373 [(95% CI: 0.9004-0.9742). sFABP was characterized by an excellent accuracy (0.9246 [95% CI: 0.8787-0.9572] and a very good positive and negative predictive value (97% and 91% respectively). The credibility quotient of the positive and negative result for sFABP was 52, 28 [95% CI: -20,34 - 124.9] and 0.186 (95% CI: 0.09 - 0.28].

Our study demonstrated that sFABP has excellent prognostic power, sensitivity and specificity to identify increased PVR in patients with advanced HF underwent HT evaluation.

Keywords: human heart fatty binding protein, pulmonary hypertension, heart failure

Arterial stiffening and primary myocardial dysfunction independently contribute to impaired left ventricular midwall performance in degenerative aortic stenosis with concomitant type 2 diabetes

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Degenerative aortic stenosis (AS), a disease of the elderly, frequently coexists with concomitant diseases, including type 2 diabetes (DM), an adverse cardiovascular (CV) outcome predictor. DM affects LV structure and function via both hemodynamic and metabolic factors.

To compare clinical and hemodynamic characteristics of patients with AS according to DM status.

Medical records of patients with moderate or severe AS were retrospectively analyzed. We calculated left ventricular (LV) midwall fractional shortening (mwFS), an index of LV myocardial function, and circumferential end-systolic LV wall stress (cESS) and valvulo-arterial impedance (Zva), estimates of LV afterload. Additionally, systemic arterial compliance (SAC) was derived from stroke volume index and pulse pressure.

Patients with DM (n=42) and without DM (n=80) did not differ in age, aortic valve area index, aortic pressure gradients, LV mass, LV diameter and ejection fraction. In comparison to non-diabetic subjects, DM patients had significantly higher body-mass index ($p=0.001$), cESS (255 ± 119 vs. 208 ± 86 hPa, $p=0.01$) and Zva (5.8 ± 2.2 vs. 5.1 ± 1.8 mmHg per mL/m², $p<0.04$), while SAC (0.5 ± 0.2 vs. 0.6 ± 0.2 mL/m² per mmHg, $p=0.02$) and mwFS (11.7 ± 4.0 vs. 14.1 ± 3.7 %, $p=0.001$) were decreased. By multiple regression, higher cESS ($p<0.001$) and DM ($p=0.03$) were independent predictors of depressed mwFS.

DM can contribute to LV dysfunction by arterial stiffening that increases LV afterload in AS. Additionally, DM appears associated with a load-independent impairment of LV function at the midwall level, corresponding to slightly depressed myocardial contractility.

Keywords: aortic stenosis, type 2 diabetes mellitus, arterial compliance

Utility of post-mortem interrogation of high-energy cardiac implantable electronic devices in clinical practice

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Although implantable cardioverter-defibrillator (ICD) and cardiac resynchronization therapy-defibrillator (CRT-D) implantation is a routine procedure, their post-mortem interrogation is not regularly practiced.

To determine the utility of post-mortem ICD and CRT-D interrogation in correlation with autopsy findings and clinical follow-up data.

Consecutive subjects with high-energy cardiac implantable electrical devices (CIED) underwent autopsy in the pathology department, during which the devices were removed and later interrogated. Characteristics from the implantation and the time of death were collected from the patients' records. The interrogation results were then correlated with the final autopsy report and the clinical characteristics.

48 subjects had their CIED removed after death. The devices consisted of 24 (50%) implantable cardioverter-defibrillators (ICD) and 24 (50%) cardiac resynchronisation therapy-defibrillators (CRT-D). Full autopsy was performed in 40 cases (83.3%). According to its results, acute coronary events caused death in 9 (22.5%) patients, and 13 (32.5%) died of other cardiovascular causes. Ventricular tachyarrhythmias during the final 48 hours occurred in 17 (42.5%) patients, however, the majority was successfully terminated. The average battery longevity was 4.8 years and in 3 devices an elective replacement indicator (ERI) was detected. Despite ERI, all those patients died of non-cardiac causes. Device concerns were presumed in 6 cases including 3 programming and 3 hardware issues.

Thanks to the addition of device interrogation we found six CIED malfunctions potentially associated with death, which would have not been discovered in the clinical practice.

Keywords: Cardiac implantable electronic devices, Implantable cardioverter defibrillator, Pacemaker, Cardiac Resynchronization Therapy, Post-mortem interrogation

Visfatin is associated with an occurrence of cardiac allograft vasculopathy in heart transplant recipients

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An accurate assessment of prognosis is an important element of the management of heart transplant recipients. Cardiac allograft vasculopathy (CAV) still remains to be one of the most important limiting factors for long-term survival in this group of patients.

The aim of the study was to look for factors associated with occurrence of CAV in patients who underwent heart transplantation (HT).

We analyzed data of consecutive HT patients who had a control visit in the Transplantation Clinic at the Silesian Centre for Heart Diseases between 2016 and 2017. Patients with kidney diseases, autoimmune diseases and infectious diseases were excluded from the study. The statistical analysis was performed by using SAS software (version 9.4).

We analysed 182 patients after HT. The median age was 61 years and 76.4% of them were males. The frequency of CAV in the analyzed population was 54.9%. Median time to CAV detection was 5.39 (1.91-8.75) years after HT. Patients were categorized into CAV(+) and CAV(-) groups (100 vs 82 patients, respectively). There were no significant differences between analyzed groups in the use of immunosuppressive agents, as well as in the terms of presence of diabetes mellitus type 2, lipid metabolism parameters and body mass index. In the multivariable proportional hazard regression analysis only visfatin was significantly associated with CAV (1.795 [1.539-2.094]; $p < 0.001$). The ROC curve analysis showed the cut-off point value of 5.42 for visfatin, yielded a sensitivity of 89% and specificity of 91% for association with CAV detection.

Our study demonstrated that visfatin serum level was associated with an occurrence of CAV in patients underwent HT.

Keywords: heart transplantation; cardiac allograft vasculopathy; visfatin

Systemic lupus erythematosus - its impact on selected cardiovascular risk factors and correlation of these factors with duration of illness

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Systemic lupus erythematosus (SLE) is a rare autoimmune disease. It leads to an increased production of proinflammatory molecules that accelerates. The heart is one of the most frequently attacked organs. Markers such as carotid intima-media complex thickness (IMTc) are recognized as a cardiovascular risk factors, whereas left ventricular ejection fraction (LVEF) is an independent marker of heart failure.

The aim of the study was to assess cardiovascular risk factors such as BMI and IMTc and a heart failure marker – LVEF among patients with SLE, and a correlation of these factors with duration of the disease.

The researched group consisted of patients with systemic lupus erythematosus. This group included 38 patients among whom 34 were women (56.17 ± 11.05 years) and 4 were men (65.5 ± 9.2 years). The control group consisted of 19 healthy women (53.31 ± 11.94 years) and 2 healthy man (38.5 ± 7.5 years).

LVEF values were lower in the researched group and this factor showed statistical significance ($p=0.0044$). Thickness of the IMTc was higher and statistically important among patients with SLE, both in left ($p=0.0001$) and right common carotid artery ($p=0.0001$), compared to the controls.

Patients with systemic lupus erythematosus are at greater risk of developing a cardiovascular diseases as the illness progresses. Those patients also have lower LVEF values, which can contribute to a heart failure in the future. The result showed no significant correlation of the above mentioned factors with the duration time of the disease, but there is a need for larger studies focused on this topic to confirm that statement.

Keywords: systemic lupus erythematosus, cardiovascular disease, heart failure



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF CLINICAL ONCOLOGY

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Adenosquamous carcinoma - a rare prostatic tumor

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Adenosquamous carcinoma (ASC) of the prostate gland is a very rare cancer with a high degree of malignancy and unfavorable prognosis. Only about 30 cases of this type of cancer in the world have been described so far. The process of ASC formation is not fully understood. ASC is most often formed as a result of cellular differentiation after hormonal treatment or radiotherapy of a conventional prostate adenocarcinoma.

We present a case of a 43-year-old male with primary prostate adenocarcinoma qualified for radical treatment: radiotherapy with hormonotherapy, in which the treatment resulted in the dedifferentiation of tumor cells to adenosquamous carcinoma. High dynamics of secondary tumor growth patient was disqualified from radiotherapy. Surgical treatment was introduced- cystoprostatectomy with rectal subtraction, extended lymphadenectomy and fecal and urinary stoma. Due to the postoperative stage of the disease, the patient underwent a systemic chemotherapy, despite which distant metastases developed. The patient died six months after the operation.

ASC is <1% of all prostate cancers. There are no guidelines for diagnosis and treatment. The case described is unique for two reasons. The treated patient was the youngest person diagnosed with ASC and the only one who underwent such a wide range of rescue surgery (pelvis exenteration).

Histopathological characteristics of gastrointestinal stromal tumors coexisting with other neoplasms

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Gastrointestinal stromal tumors (GIST) are heterogenous neoplasms in terms of their clinical and histopathological picture. GIST may coexist with other neoplasms, but data on biological profile of GIST accompanied by other tumors is limited.

To assess the prevalence of other neoplasms in patients with GIST and to compare histopathological profile of GIST with and without other concurrent neoplasms.

Cases of GIST diagnosed between 2006 and 2018 were re-evaluated. The analysis included 223 cases diagnosed in resection specimens (n=148), biopsies (n=56) and autopsies (n=19).

GIST were accompanied by other neoplasms in 40 (17.9%) patients. GIST coexisted with malignant and benign neoplasms in 32 and 8 patients, respectively. The most prevalent malignant neoplasms in patients with GIST were: (1-2) gastric and colorectal adenocarcinoma (n=5 each), (3-4) neuroendocrine tumor and myelogenous leukemia (n=4 each). GIST accompanied by other neoplasms were frequently accidentally found during autopsy (40% vs. 3.8% in standalone cases ($p<0.001$)). GIST which coexisted with other neoplasms were smaller than standalone cases (median diameter 1.9 vs. 5 cm respectively, $p<0.001$). GIST with other concurrent neoplasms were typically diagnosed at lower primary tumor stage ($p<0.001$). Risk of aggressive clinical behaviour was significantly higher in unaccompanied cases ($p=0.048$). Groups of patients with standalone and accompanied GIST did not differ in terms of their median age values, sex proportions, and tumor location within GI tract.

GIST with other concurrent tumors usually manifest less aggressive clinical behaviour than standalone cases.

Keywords: gastrointestinal stromal tumor, multiple neoplasms, adenocarcinoma, coexisting neoplasms

Non-medical needs of cancer patients in Silesian region

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Cancer patients are a special group due to variety of diagnosis and complexity of therapeutic process (medical needs). Care system should include also non-medical needs of patients (psychological, dietary, social and rehabilitation support) because it is significant part of therapy.

The purpose of this study was to evaluate the non-medical needs of cancer patients in Silesia and if they could get the professional support in this field.

The study was conducted on a group of 103 cancer patients in the University Clinical Center Hospital. The data was collected using a specifically prepared questionnaire and the patients had submitted a signed consent form.

There were 52 female and 51 male patients (average age=62). 79.6% of participants declared that they could have hoped for psychological support in comparison to 10.7% that could not and 9.7% that did not need it. In addition, 50.5% of patients reported possibility of assistance (diet, physiotherapy and social support), 36.9% could not use such help and 12.6% declared no need of assistance. Furthermore, 84.5% of patients presented need of a professionalist that would help them overcome non-medical difficulties. Moreover, statistical significance between the level of education as well as age and need of professional help considering non-medical needs was acknowledged.

Cancer patients present a range of non-medical needs that are influencing their everyday life and clinical condition. Providing optimal care for oncological patients, the health care system could develop a position of a trained professionalist helping meet patients' non-medical needs.

Keywords: oncology, cancer patients, non-medical needs, psychosocial care

Surgical treatment of oesophageal cancer – a retrospective analysis of short-term results

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The oesophagectomy is still considered a standard in the surgical management of esophageal cancer located in middle and distal part of the oesophagus. The most common esophagectomy methods are transhiatal and transthoracic approaches.

The aim of the study was the analysis of surgical treatment of esophageal cancer using transhiatal and transthoracic oesophagectomy.

Between 2014 and 2019, a total of 43 patients underwent oesophagectomy for oesophageal cancer in the Department of Gastrointestinal Surgery. The study group included 32 men (74,4%) and 11 (25,6%) women. The mean age was 61,67 years.

There were 38/43 (88,4%) tumors located within distal part of the oesophagus and 5/43 (11,6%) tumors located within middle oesophagus. 14 (32,6%) had squamous cell carcinoma, 28 (65,1%) adenocarcinoma, and 1 (2,3%) anaplastic carcinoma. The transhiatal approach was used in 35/43 (81,4%) patients, whereas transthoracic approach in 8/43 (18,6%) patients. The mean operative time was 5h 55min. The mean total duration of hospitalization was 20,83 days, and mean postoperative duration of hospitalization-18,55 days. Short-term complications occurred in 20/43 (46,5%) patients. Pulmonary complications were the most common 15 (34,9%). The early reoperations were performed in 6 (14,0%) patients.

Oesophageal cancer was the most frequently noted in men and located in the distal oesophagus. Adenocarcinoma was the most common histopathological type. Transhiatal approach was the most frequent. Surgical treatment of oesophageal cancer is a serious challenge associated with a long hospital stay and a high risk of postoperative complications.

Influence of different clinical and histopathological factors on prognosis in patients with gastrointestinal stromal tumors

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Gastrointestinal stromal tumors (GIST) arise in the smooth muscle pacemaker interstitial cell of Cajal, or similar cells. They are the most common mesenchymal tumors of the digestive tract and may occur in each portion of the gastrointestinal tract. The most useful prognostic factors are tumor size, mitotic index and location within the gastrointestinal tract.

The aim of the study was to assess the chosen prognostic factors (location in the gastrointestinal tract, tumor size and mitotic index) in patients with GIST.

Between 2009 and 2019, 98 patients (50 women and 48 men) with an average age of 63,8 years (range from 38 to 90 years) were operated for GIST in the Department of Gastrointestinal Surgery. Two- and five-year survival rates during observation were analyzed, as well as the location within the gastrointestinal tract, tumor size, mitotic index and BMI. Based on the intraoperative and postoperative investigations, the tumor size and mitotic index were specified in each patient. Correlation between location, mitotic index, tumor size, BMI and survival of patients was assessed. Results were subjected to statistics, where $p=0.05$ was considered to be significant.

Of the 98 patients included in the study, 70 patients had a primary tumor located in the stomach, 10 patients in the duodenum, 8 patients in other parts of small intestine, 6 patients in pancreas, 2 patients in oesophagus and in 2 cases tumor originated from large intestine. The most frequent (17,35%) mitotic index was 2.

The mitotic index and location in the gastrointestinal tract are essential prognostic factors in analyzed patients with GIST.

Keywords: GIST, prognosis, risk factors, mitotic index, tumor size



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF COSMETOLOGY

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Influence of microneedle mesotherapy on biomechanical parameters of aging skin

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Microneedle mesotherapy is a very simple and effective therapeutic technique used mainly for the purpose of skin rejuvenation, acne scars and post-burn scars. It is a good tool for promote hydrophilic active substances deep into the skin, because there are problems with their delivery.

The aim of study was the quantitative investigation of the firmness and elasticity of aging skin during microneedle procedure.

Cutometer MPA 580, Courage-Khazaka were used. 10 healthy female volunteers with aging skin were subjected to microneedling treatment on face. The procedures were carried out once per week, for eight weeks. The parameters of the skin were analyzed prior to the first procedure, four and eight weeks after first procedure. The study included detailed analysis of skin: thickness of dermis and echo-density of dermis using high-frequently ultrasonography.

Skin firmness was significantly improved as well as the elasticity. The high-frequently ultrasonography is a good tool to evaluate condition of the dermis.

The applied research methods allowed for quantitative measurements of skin parameters. Microneedling induces inflammation and activation of skin regeneration. Eight procedures performed once a week improve the skin parameters such as skin firmness and elasticity.

Keywords: skin aging, firmness, ultrasonography

A quantitative and qualitative analysis of the acne skin care

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Acne vulgaris is common dermatological diseases which affecting many adolescent. Sebum hyperproduction, skin hydration disorders, inflammations and hyperpigmentation often accompany acne. Proper skin care can help to improve the condition of the skin.

The aim of the study was to quantitatively and qualitatively compare the methods of assessing the effect of primers on the care of acne skin.

14 volunteers with acne problems were used for a 8 weeks a series of cosmetics that included cleansing gel, tonic, serum, day cream, night cream and scrub. Sebumeter® SM 815 was used to measure sebum level, Mexameter® MX 18 to measure skin tone. Skin tone and sebum secretion level were investigated. Measurements were made in the T zone - on the forehead, nose and chin. Parameters of the skin were analysed and the surveys were completed before cosmetics used and after an 8 weeks.

There were changes in the biomechanical parameters of the skin such as sebum secretion and the level of melanin content in the skin. The qualitative and quantitative analysis do not overlap.

Proper acne skin care is very important and helpful to maintain good skin conditions. The improvement of acne skin condition has a positive effect on the quality of life of patients.

Keywords: acne, skin care, sebum secretion, melanin content

Knowledge of the society about development of skin hyperpigmentations and ways how to treat them

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Although the society knows how to prevent the development of hyperpigmentations, treatment of this kind of skin disorders still is a huge problem.

The aim of the study was to assess the knowledge of society about the development of skin pigmentation disorders and the most common ways of treating them.

The acquired data was collected via anonymous survey conducted online. 231 subjects took part in the survey, including 204 women and 27 men. The questionnaire consisted of 21 questions, where 19 were closed ones. The remaining two required a short answer.

On the basis of the obtained results, it may be pointed out that a huge part of the society has a great amount of knowledge about the development of hyperpigmentations. As many as 88% of the subjects is aware of the fact that factors such as hormonal changes, various medical substances and improper skin care influence etiopathogenesis of pigmentation disorders. 96% of the subjects realise that applying of appropriate sunscreens might reduce the risk of developing new hyperpigmentations and may prevent prejaent hyperpigmentations from becoming bigger.

Nevertheless, despite the great knowledge of the society about the factors causing hyperpigmentation, only 29% of the respondents know the ways how to treat them, pointing the importance of society education in the field of cosmetic sciences.

Keywords: pigmentation disorders, hyperpigmentations, overcoming pigmentations

Knowledge about effectiveness of Asian cosmetics in reference to racial skin differences

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Racial differences in the skin anatomy and physiology determine necessity of individualization of the skin care. In recent years, promotion of Asian cosmetics influenced effectiveness of Korean, Japanese and Chinese products in a very significant way.

The aim of the study was to examine knowledge about racial differences in skin anatomy and physiology, in reference to Asian cosmetics effectiveness.

The study involved 338 respondents, including 285 women and 53 men, at the age from 18 to 64, with different degrees and profiles of education. Questionnaire included questions focused on Asian cosmetics used by respondents. Moreover, the knowledge about skin anatomy and physiology in relation to cosmetics effectiveness was also considered.

The obtained results show that 71% of respondents declare the knowledge about racial skin differences. 98% of the subjects agree with the statement that cosmetics should be individually to the skin type selected. However, 78% respondents confirm effectiveness of Asian cosmetics and 38% of them, even after first application.

In conclusion, the declared knowledge is not consistent with the answers in further part of the questionnaire, which pointed the necessity of wide education about racial skin differences.

Keywords: skin, ethnically differences, Asian cosmetics

Fotoprotection

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Sun protection is simply guarding a body from the adverse effects of sunlight. The sun poses the danger of sunburn, which can permanently damage the skin and cause skin cancer. Exposure to ultraviolet rays is a known risk factor for the development of both melanoma and nonmelanoma skin cancers. The Sun Protection Factor (SPF) is the most important data to quantify the effectiveness of a sunscreen. Unfortunately it is often not understood how sunscreens work and where the limitations of the SPF are.

The aim of this study was to test students' consciousness about sun protection.

A survey containing 33 questions conducted on a random group of 252 people. The survey included questions about performed dermatoscopy, past sun burns, occurrence of skin cancer and checked knowledge about sun protection.

Sun protection was rarely used every day, while 50% of students use sun protection during holidays. Students most often use SPF 15-30. 30% of respondents apply sunscreen during the day more than once. Over 70% experienced sun burns in childhood and almost 10% used a sunbed before the age of 18. 28% of respondents had dermatoscopy in the past.

Awareness and knowledge about anti-solar protection in students of medical and nonmedical courses are on various standard. An important problem is the fact that significant percentage of respondents in childhood suffer sunburns. Taking into consideration the fact that in this age exposure to solar radiation has a significant impact on the development of skin cancer in the future it is worth thinking about educating young adults as well as children and their parents.



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF DERMATOLOGY, ALLERGOLOGY AND INFECTIOUS DISEASES

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The assessment of the potential risk of exposure of pets for the tick-borne infection with *Borrelia burgdorferi sensu lato* and *Anaplasma phagocytophilum* on the selected areas of the Silesian voivodeship

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Ticks may be vectors and/or reservoirs of many pathogens, including *Borrelia burgdorferi sensu lato* and *Anaplasma phagocytophilum*. These microorganisms may cause dangerous diseases for people and animals i.a. Lyme borreliosis and anaplasmosis.

The aim of the study. To estimate the risk of exposure of pets for tick-borne infections with *B. burgdorferi s.l.* and *A. phagocytophilum* on the selected areas of the Silesian voivodeship.

DNA was isolated from 34 *Ixodes ricinus* ticks collected from dogs and cats. *Borrelia burgdorferi s.l.* was detected with the use of the pair of primers specific for flagelline gene fragment. Whereas to detect of *A. phagocytophilum* the pair of primers specific for 16S rRNA gene was used. The amplification products were separated electrophoretically in 2% agarose gel stained by ethidium bromide and then were visualized in ultra violet light. The presence of the reaction products of the size of 482 base pairs [bp] for *B. burgdorferi s.l.* and 274 bp for *A. phagocytophilum* were treated as positive probe. Moreover, the data about the place of tick infestation and using of repellents have been also noted.

In total *B. burgdorferi s. l.* was showed in 5,9% of the studied ticks. Whereas *A. phagocytophilum* was showed in 2,9% of the studied ticks. The spirochete was stated in 25% of ticks collected from cats and 3,3% ticks collected from dogs, whereas rickettsia was showed only in 1 female collected from a dog.

The conducted study showed the low exposure of domestic animals for tick-borne infections with *B.burgdorferi s.l.* and *A. phagocytophilum* on tested areas.

Keywords: *Borrelia burgdorferi sensu lato*, *Anaplasma phagocytophilum*, ticks, cats, dogs

The impact of diabetes mellitus type 2 on effectiveness of therapy of cyclosporine A in psoriatic patients

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In the patients with psoriasis the coexistence of diabetes mellitus type 2 (DM2) is observed, since optimizing the pharmacotherapy can be a challenge. The molecular mechanism cyclosporine A (CsA) treatment is associated with TGFβ1-3.

The aim of study was to evaluate the effectiveness of cyclosporine A treatment in patients with both psoriasis and DM2 in comparison to psoriatic patients without DM.

In 7 patients with DM and 25 w/o DM the therapeutic potential of CsA was evaluated three times: at the beginning of the therapy- day 0, in 42th and 84th days of treatment using the PASI, BSA and DLQI scales and also analysis changes in expression of TGFβ1-3 (RTqPCR reaction). U Mann Whitney test ($p < 0.05$) was used for a statistical analysis of data between patients with DM vs w/o DM).

In a group of psoriatic patients without DM in the 0, 42 th and 84th days of therapy following data were noted (Me): PASI 20.55>1.8>0.3; BSA 47.5>7>1; DLQI 16.5>2>1, and in the group patients with DM2 the results were as follows: PASI 16.75>0.6>0.6; BSA 38>4>1; DLQI 11.5>1>0.5. Statistically significant difference was observed only in TGFβB1 (Me mRNA copies/μg RNA) expression in the 84th days of CsA therapy in a group of patients with DM vs group of patients without DM (89320 vs 582057; $p=0.018$).

The coexistence of diabetes mellitus type 2 does not have influence on effectiveness of CsA psoriasis treatment. Moreover changes in expression of selected genes confirmed the molecular action of the CsA pharmacotherapy, indicating that TGFβB1 can be a new, supplementary molecular marker of evaluating cyclosporine A treatment efficacy.

Risk factors determination in patients with community-acquired bacterial meningitis

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Work's tutor: Prof. Usachova E.V., MD

Bacterial meningitis (BM) is a rare and dangerous form of acute meninges inflammation.

The aim of the study was to define morbidity risk factors and possible predictors of an unfavorable outcome in patients with BM.

We retrospectively assessed 73 cases from Regional Infectious Disease Hospital between Jan 1, 2015 and July 1, 2018. Statistica 13.5 tests were two-tailed and p values less than 0,05 were determined as significant.

Noticeable influence on BM initiation had acute respiratory infection (16.4%), chronic neurological (23.3%) and heart conditions (16.4%). Specifically, with *S. pneumoniae* BM were associated acute bronchitis, pneumonia (20.5%) and otitis media (9.6%). In order to evaluate unfavorable factors, all patients were divided in two study groups which stayed in ICU under (G1: n=34, 47%) and more (G2: n=39, 53%) than 5 days. Predictors of prolonged hospitalization (detected mainly among G2 patients) were advanced age, meningococcal meningitis, traumatic brain injury in anamnesis, chronic neurological and heart failures. Among clinical characteristics were altered mental status (GCS<13), higher pleocytosis and CSF protein rates and among complications – toxic encephalopathy development. Although all factors associated with prolonged hospitalization, majority of death cases were detected among G1 patients (G1: n=6/7, 85.71%) and associated with Waterhouse–Friderichsen syndrome.

This research data should be included into diagnostic algorithms and are useful in order to provide precise care strategy and minimize an unfavorable outcome.

Keywords: Bacterial meningitis, infectious disease, risk factors

Clinical evaluation of pruritus in patients with erythroderma

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Pruritus is defined as an unpleasant sensation of the skin, that elicits a desire to scratch. It is the most common skin-related symptom in dermatology and it may be difficult to control. Skin that is persistently rubbed becomes thickened with increased markings or may become hyperpigmented. It can have a profound negative impact on a patient's quality of life. Pruritus is considered to be one of the main complaints of patients with erythroderma.

This study was carried out to evaluate the frequency and characteristics of pruritus in patients with erythroderma.

29 patients (24 men, mean age 65.58 years, range 21-99 years; 5 women, mean age 66.2 years, range 48-84) with erythroderma, hospitalized in the Department of Dermatology, Venereology and Allergology in Wrocław between April 2018 and December 2018, were included in the study. The severity of pruritus was assessed using visual analog scale (VAS) and four-item questionnaire.

Pruritus was observed in 27 (93.1%) patients. The mean VAS score was 5,67 (range 0-10). Pruritus was generalized in 81% of patients. No cases of itchiness limited to only one location were noted. 56% of patients complained of constant pruritus. Most patients (62.5%) woke up more than 3 times during the night because of the itchiness.

Pruritus is commonly observed in patients with erythroderma. It is usually generalized and constant. The right diagnosis will help to treat pruritus with more efficiency and patients quality of life will improve more quickly so they can go back to their normal lives.

Keywords: Kliknij tutaj, aby wprowadzić tekst.

Psoriasis through the eyes of the patient

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From 2 to 4% of the human population suffers from psoriasis. It is a serious and chronic inflammatory skin disease that often requires intensive treatment. Unfortunately, therapeutic recommendations are not always implemented in everyday clinical practice.

The analysis was based on questionnaires collected from patients from the Podkarpackie Voivodeship sent to the "International survey on medical care for patients with psoriasis in Europe" conducted by the Institute of medical services in the field of dermatology and nursing from the Medical Center of Hamburg-Eppendorf in Germany.

In the study at Clinical Hospital No. 1 named after Fryderyk Chopin in Rzeszów was attended by 46 people with psoriasis, including 15 women and 31 men. The average age of women was 43 (the youngest is 20, the oldest is 66), and the male is 48.4 (the youngest is 28, the oldest is 80). Only 3 people were treated with biological drugs, 8 immunomodulators and 7 with phototherapy. The rest of the patients used cygnin ointments, salicylic ointments, urea ointments or other external treatment. 11 patients also had active psoriatic arthritis. Are our patients satisfied with the current treatment? Has psoriasis affected their professional or private life in some way? How high is the monthly cost of full-paid medicinal preparations? Do many patients give up the recommended treatment because of costs?

36 patients are "rather satisfied" with treatment, 14 people active form of psoriasis hindered further professional career, and for 31 people treatment was a problem.

A lot of other questions arise at the thought and we will try to answer them in the presentation.

Keywords: psoriasis, private life, professional life, satisfaction with treatment

Toxinotypes of *Clostridium perfringens* isolated from fecal samples of hospitalized patients with antibiotic associated diarrhea

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Clostridium perfringens is Gram positive, anaerobic, spore-forming bacillus. Although *Clostridium difficile* is the main cause of antibiotic associated diarrhea. *C. perfringens* is also considered as an etiological factor of AAD. *C. perfringens* produces various toxins: alpha-toxin, epsilon-toxin, iota-toxin. In pathogenesis of AAD is mostly involved CPE toxin. Its presence might impact on severity and duration of disease.

Aim of our study was the analysis of prevalence of *C. perfringens*' toxin profile. We focused on detection of toxin alpha, enterotoxin, iota-toxin, epsilon toxin.

119 strains of *C. perfringens* were obtained from stool samples from patients with CDI. Under anaerobic conditions defrosted samples were cultured on Colombia Agar with 5% blood at 37°C for 48 h. Afterwards DNA isolation was performed using GeneMATRIX Putification Kit. Then fragments of toxins' genes were amplified using Multiplex PCR with following starters: cpa-400 bp, cpe-233 bp, cpiA-446 bp, etx-655 bp. In the end amplicons were visualized on 2% agarose gel using electrophoresis (The Syngene G: BOX).

Each analyzed strain had gene of minimum one toxin. Following genes were detected: cpa: 118 strains (99,2%), cpe: 7 strains (5,9%), cpiA: 1 (0,8%). The presence of etx was not detected.

Our study showed that the cpa gene dominates among *C. perfringens* strains from CDI patients. There was one exceptional strain, which had only cpiA gene. Moreover in 7 strains were present cpe and cpa genes. It looks like diarrhea in 7 patients developed due to action of *C. difficile* and *C. perfringens* enterotoxins. Interactions of both clostridial enterotoxins are worth further research.

Keywords: *Clostridium perfringens*, toxins, antibiotic associated diarrhea

The importance of causative (trigger) factors in the development of chronic urticaria

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Dysfunction of the immune system plays an important role in the etiopathogenesis of chronic urticaria (CU). The dysregulation of the immune system can be influenced by many environmental, biological and psychological factors, the importance of which is poorly understood.

Analysis of the situation/circumstances (so-called trigger/causative factors), in which the symptoms of various types of chronic urticaria appear: chronic spontaneous urticaria (CSU), symptomatic dermographism/urticaria (SD), delayed pressure urticaria (DPU), cholinergic urticaria (ChU), cold urticaria (coldU).

A retrospective analysis of medical records of 180 patients with various types (CU) for trigger factors, such as: infections, drugs, important life events, stress/emotions, foods, insect stings / bites, systemic diseases, other, unknown.

In 43% CSU, 38% SD and 47% DPU, no causative agent was identified. In these patients, stress / emotions were the most common identifiable triggers (30%, 42%, 41%, respectively), infections were indicated in the second place (19%, 8%, 6%, respectively). All trigger factors remained unknown in ChU patients. In turn, in coldU the most common trigger was infection (29% of patients).

There are differences in the so-called trigger factors in the individual varieties of urticaria. In patients with the most common types of urticaria such as CSU, SD, DPU, psychological factors are significant. In turn, infections are indicated in second place and dominate in coldU. Understanding these factors may be important in better diagnosis and treatment of patients with CU.

Keywords: chronic urticaria, inducible urticaria, trigger factors, epidemiology

Analysis of resistance to tetracycline in *Streptococcus group B* strains isolated from patients over 65 – own research

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GBS causes severe disease in elderly people (in form of bacteremia and soft tissue infection) however studies on hospitalized and outpatients seniors infected with GBS are rare, especially in Poland. In Europe resistance of *Streptococcus group B* (GBS) strains to tetracycline antibiotics is very high.

The purpose of our study was to analyze the susceptibility to tetracycline of GBS isolates (blood, urine, vaginal, wound swabs and sputum) from patients over 65 years old.

Fifty six GBS strains were studied: 39 from ambulatory and 17 from hospitalized patients over 65 years old (mean age 74 years). The bacterial strains were identified as GBS based on positive CAMP-test, serological criteria and susceptibility testing, according to EUCAST recommendation (2019).

Our study showed 38/56 resistant GBS strains to tetracycline. However in Poland tetracycline resistance of GBS isolates was lower than in another European countries (67,8% and 86 % respectively). GBS tetracycline resistant isolates were more frequently recovered from men. GBS tetracycline resistant strains were isolated from different materials but without statistically significant difference and with similar frequency from hospitalized and outpatients (76,5% and 64,1% respectively).

We conclude, that tetracyclines could be an alternative options to glycopeptides in hospitalized elderly patients and outpatients with allergy to β -lactams infected with GBS with MLSB mechanism of resistance.

Keywords: Group B *Streptococcus*, Tetracyclines, Antibiotic resistance, Elderly patients

PrEP and PEP – do we know something about it?

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Almost 40 years have passed since the HIV pandemic began, affecting millions of people around the world. One of the methods of HIV prevention is pharmacological prophylaxis – pre-exposure (PrEP) and post-exposure (PEP).

The aim of the study was to evaluate the level of knowledge regarding pharmacological prophylaxis for HIV infection among three populations.

We conducted a Poland-wide survey and analysed 2205 anonymous answers. The research included 1356 women, 681 men, 46 trans men, 12 trans women and 110 non-binary people. 51% of the respondents described themselves as non-heterosexuals. 95% were aged 16-29. Almost half of the answers (49%) came from students, of which 60% were medical students. Three studied populations were identified: heterosexuals excluding medical students [HS], non-heterosexuals excluding medical students [non-HS] and medical students [MS].

Only 28% of all respondents declare that they have already heard about PrEP. The percentage of the "I did not know about it" answers referring to the questions concerning PrEP were 84% in HS, 68% in non-HS and 52% in MS. 34% of all participants maintain that they have already heard about PEP. 73% HS, 66% non-HS and 19% MS answered the questions about PEP with "I did not know about it". Among HS and non-HS, there is a significant percentage of people who do not know what is the time frame for starting PEP (55% and 49%, respectively).

Keywords: HIV prevention, pharmacological prophylaxis

"Fine feathers make fine birds" – the dermatologists' image among polish non-medical students – a nationwide survey

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Medical professions are full of patterns and personal exemplars which determine norms of behaviour. Research works focused on doctor's image not only include reality perception, but also patients' subconscious expectations.

The aim of this study was (1) to get to know the students' opinion on the image of the dermatologists, (2) to assess the public image of that profession and (3) what factors have the biggest impact on that issue.

The study was conducted in the group of 1000 polish, non-medical students (F=817, M=183) between 18 and 25 years old. The data was collected through anonymous, author-designed, online questionnaire. The questionnaire was sent via Internet social media to students from 12 various non-medical fields of study.

51.6% of interviewees considered this profession as moderately prestigious. Only 18.9% of the respondents saw the image of the dermatologists created by media as adequately presented. There is a statistically significant difference ($p=0.0006$) between the different age groups and the frequency of visits to the dermatologist. The median sum the respondents were able to pay for a specialist visit was 100 zloty (IQR 70-150). The studying field ($p=0.002$), social status ($p<0.001$) and place of residence ($p<0.001$) significantly influenced the amount they were able to spend.

In students' opinion, factors like knowledge, medical experience and communication with patient have the strongest influence on the image of this profession. Second strongest factor affecting the choice of a dermatologist is information acquired by word of mouth from other patients and family members, without any prior verification.

Keywords: dermatologist, image, non-medical, student, doctor

The incidence of atopic diseases in patients with chronic spontaneous urticaria and symptomatic dermographism - Polish data

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The etiopathogenesis of chronic urticaria (CU) is complex. The autoimmune phenomena in IgG and IgE-dependent mechanisms may be important in the development of symptoms. The importance of IgE-dependent processes, including atopy in CU is poorly understood.

Evaluation of the prevalence of atopic diseases in patients with chronic spontaneous urticaria (CSU) and symptomatic dermographism.

A retrospective analysis of medical records of 148 patients with chronic urticaria treated at the European Center for Diagnostics and Treatment of Urticaria (GA2LEN UCARE Network), including 99 patients with CSU and 49 SD patients at the incidence of atopic diseases: allergic rhinitis, asthma and atopic dermatitis. The results were compared with the prevalence of atopic diseases in the Polish population evaluated in the ECAP study (epidemiology of allergic diseases in Poland).

Allergic rhinitis occurred statistically significantly more frequently in both CSU and SD patients compared to the Polish population (53% and 60% versus 30%, $p = 0.0000$, respectively). However, no significant differences were found in the incidence of asthma and atopic dermatitis in CU patients compared to the Polish population (CSU: 10% and 6%, SD: 16% and 6% versus 9% and 4%, $p < 0.05$, respectively). There were no significant differences in the occurrence of atopic diseases between patients with CSU and SD.

Atopic diseases often coexist with chronic urticaria. In patients with CSU and SD, the incidence of allergic rhinitis is more common than in the general population. These results suggest the need to assess patients with CSU and SD for atopic diseases.

Keywords: atopic diseases, chronic spontaneous urticaria, symptomatic dermographism

The profile of Fas and FasL expression in patients with psoriatic arthritis during the adalimumab therapy

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One of the psoriasis' causes is an apoptosis pathology. The Fas/FasL complex is involved in this process. Fas is a transmembrane receptor of the TNF family and it is activated when Fas ligand combine to it - the extrinsic pathway of apoptosis. The one of the treatment of severe psoriatic arthritis is a biological therapy, i.e. anti-TNF therapy (ex. adalimumab).

The aim of the study: The assessment of Fas and FasL expression and inflammatory indicators during the adalimumab therapy (3 years) in patients with psoriatic arthritis.

The study material was samples of peripheral blood mononuclear cell from 8 patients with psoriatic arthritis treated with adalimumab every 2 weeks at a dose of 40mg. Every 3 months, patients had been taking part in routine monitoring. Molecular analysis consisted of total RNA extraction from patients' PBMCs and the assessment of the transcription activity of Fas and FasL by real time RT-qPCR method. Moreover, the inflammation indicators and PASI index changes were analyzed. The statistical analysis was performed using the Statistica 13.0 software.

Longtime applying of the adalimumab impacts the expression of Fas and FasL genes. The ratio of Fas to FasL gene expression decreases as a result of the treatment. Moreover, inflammatory markers and PASI index change in response to applied treatment.

Keywords: biological therapy, Fas/FasL complex, apoptosis, psoriatic arthritis

The way from acne to healthy skin-is dermatologist really able to help?

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Acne vulgaris is one of the most common skin diseases. It affects almost 85% of the population aged 12-25. The highest incidence is in the period of puberty, however, the disease may develop before that or has its beginning at the adult age.

The aim of our work was to evaluate the effectiveness of acne treatment by dermatologists in Poland. We also assessed whether dermatologists were treating acne in accordance with Guidelines of Polish Dermatological Society on the treatment of acne vulgaris.

We conducted a cross-sectional, online survey on a group of 1069 people aged 13-37. The questionnaire consisted of 26 questions and was divided into three parts, allowing division of patients in terms of treatment used by the dermatologist and its effect.

18.7% of respondents replied that the first dermatologist they made an appointment with applied the treatment which led to complete removal of skin lesions. 48.3% answered that they had to go to more than one dermatologist to cure acne. 33% answered that they completely resigned from getting help from dermatologist after the first visit.

63% of respondents answered that no dermatologist they went to applied the treatment that led to the complete cure of acne.

Keywords: acnevulgaris, dermatology, treatment

Knowledge of medical students and post-graduates about anaphylactic shock and procedures

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Anaphylactic shock is heavy, rapidly developing anaphylactic reaction associated with vasodilation which causes lower blood pressure. Low blood pressure is by definition 30% lower than the person's baseline or below standard values. It is severe life-threatening condition which needs to be quickly diagnosed and treated. We have decided that we will try to check what students and post-graduate students know about anaphylaxis and procedures related to it.

We have made an online test consisted of respondent's personal data and 10 questions – 8 one-choice and 2 multiple-choice. We divided the test into 2 parts – general and detailed knowledge where respondent could reach 16 points overall. We conducted test on the group of 157 people consisted of 139 students and 18 post-graduate students. The group consisted of 61,1% women and 38,9% men. The distribution of faculties, which respondents are/were studying picture as follows – medicine (67,7%), dentistry (9,5%), obstetrics (7%), paramedic science (5,7%), pharmaceutical science (3,8%), cosmetology (2,5%), medical analytics (1,9%), biotechnology (0,6%), electroradiology (0,6%), biomedical engineer (0,6%).

The average of results is 8,26 points. The hardest question was one of multiple-choice question and it concerns main symptoms of anaphylaxis. Only 40,5% of respondents knew correct answer for this question. The best average score achieve students and post-graduates who is/was studying paramedic science, medical analytics and medicine. According to collected data knowledge of medical students and post-graduates about anaphylaxis is importantly lower than expected and need to be improved, especially among medical students.

Keywords: anaphylactic shock, anaphylaxis, knowledge, medical students, post-graduate students

The role of SPT and sIgE tests in diagnostic process of food allergy

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Food allergy is common problem with prevalence of ~7%. Its symptoms vary from mild (i.e. itching, eczema) to severe (i.e. anaphylaxis). Proper diagnosis is essential for patients' quality of life. Nowadays, there are available following examinations: skin prick test (SPT), assessment of specific IgE (sIgE), and oral food challenge (OFC). Due to acceptable costs and simplicity, SPT and sIgE are commonly used by GPs and allergists.

Goal of the study was to compare SPT and sIgE examination in diagnostic process of food allergy.

We analyzed clinical data of 51 patients with both SPT and sIgE results for at least for one allergen. Among these patients we found 254 complete pairs of mentioned results. Correlation were tested using Spearman's Rank-Order Correlation. Moreover, we performed ROC analysis separately for SPT and sIgE results. Statistical analysis was performed using Statistica13.1.

We observed 59.26% (95% CI: 45.72%-72.79%) compatibility between sIgE and SPT examinations for symptomatic and 76.50% (95% CI: 70.57% - 82.43%) for asymptomatic patients. Spearman correlation for SPT and sIgE results of food allergens were characterized by $R=0.205$, $p=0.136$ and $R=-0.023$, $p=0.747$ for symptomatic and asymptomatic patients respectively. SPT with cut-off point at least 3 mm was characterized by specificity of 88.60%, sensitivity – 38.75%. For sIgE with 0.35 as cut-off point, we observed the specificity was 58.90%, sensitivity – 81.25%. AUC for lower for SPT (0.657 (95% CI: 0.585 – 0.728)) than sIgE (0.745 (95% CI: 0.677-0.814)).

sIgE and SPT examination have different predictive potential. Our results suggest that sIgE is better tests in diagnostic process of both food allergy.

Keywords: food allergy, SPT , sIgE test

Propranolol therapy for infantile hemangiomas

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Infantile hemangiomas are the most common vascular tumours in children. Although most hemangiomas have the ability to involute spontaneously without any need for therapy, in many cases propranolol has been safe and effective in treating hemangiomas that cause complications.

To evaluate the impact of propranolol treatment on the evolution of infantile hemangiomas.

We retrospectively reviewed 25 patients with infantile hemangiomas who were treated with propranolol between 2011 and 2018. The majority of patients were less than one year old when the therapy was implemented. The research was conducted using medical histories of the patients, the interviews with their parents and photos they provided. In some cases parents were unreachable because the contact details were outdated.

Propranolol treatment resulted in disappearance or reduction of hemangioma in vast majority of cases. In one case the treatment was discontinued due to the side effects and in another one due to the spontaneous disappearance of hemangioma. In three cases propranolol treatment was substituted for different methods.

Propranolol therapy had a beneficial effect among the majority of patients. The treatment has a low incidence of side effects. It suggests that propranolol is a safe, efficacious treatment for problematic infantile hemangiomas.

The impact of atopy on eye diseases

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Patients with symptoms of atopy have a significant tendency to irritate the eye, which may result in a higher incidence of other diseases of eye.

The aim of the study was to determine the relationship between atopy and the occurrence of eye diseases, and to assess the impact of time spent in front of the computer on eye diseases.

The study was performed in Outpatient Allergy Clinic in Zabrze. A group of 60 patients with confirmed allergic IgE dependent disease and a control group of 41 people participated in the study. All patients were subjected to a detailed medical assessment and completed original questionnaire. The statistical analysis used t-student tests and the Pearson chi square test. P values <0.05 were considered statistically significant.

There were 34 women and 26 men in the study. The mean value of total serum IgE was: 634.4 ± 214.5 IU/ml. Patients with atopy were significantly more likely to report eye diseases compared to the control group in 69% and 29% ($p = 0.002$) respectively. The presence of any atopic disease was often associated with the symptoms of dry eye syndrome and photophobia. Patients with IgE allergy significantly more often had diagnosed eye defects in relation to healthy people, 18% and 12%, respectively ($p = 0.03$). No relationship was observed between ocular exposure to time spent at the computer and the risk of eye disease.

Atopy predisposes to an increased incidence of eye diseases. Occurrence of eye defects in the population of people with atopic disease was significantly higher compared to healthy people, however, the type of eye defect did not correspond to atopy.

Keywords: atopy, eye diseases, xerophthalmia, vision defect



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF DIETETICS AND NUTRITION

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The relation between absence of breakfast and BMI.

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Nowadays, being overweight or obese become a global problem, which involves also children. It is estimated that in Europe every fifth child is overweight. In Poland the rate constitute 15-20% of students. Children weight depends on a plenty of factors for example regularity of meals consumption and a physical activity.

Assesment the influence of breakfast consumption on BMI among children from 6 to 12 years old. Reaserch involves also eating habits and parents' knowledge about healthy diet.

In reaserch the authorial questionnaire was used. 105 parents of children from 6-12 fulfilled the survey. The participation in the reaserch was voluntary and anonymous.

Among 105 children (51 boys, 54 girls) 12% of children were overweight, 8% were obese. Deficient physical activity involved every third student. 15% of children do not consume or consume breakfast over 2 hours after awakening. 40% of them eat the first meal outside home and 30% eat the last meal just before or shorter than 1 hour before sleeping. Almost every third child drinks less than 800 ml of liquids per day. Over 3/4 parents do not answer correctly about right composition of meals in healty diet.

Excessive body weight is a significant problem in pediatric population. Lack of breakfast influences the increase in BMI, however, other dietary negligence had bigger impact on examined children. A large group of children shows bad eating habits and low physical activity. Parents' knowledge about nutrition is insufficient, thereupon it is recommended to run information campaigns.

Keywords: BMI, lack of breakfast, overweight, obesity, nutrition

Biological active derivatives of polycyclic aromatic hydrocarbons (PAHs) in grilled marshmallows

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Marshmallows are a sugar confectionery modeled into small cylindrical pieces. An increase in consumption of grilled marshmallows is observed, especially among children, recently also in Poland. Grilling over an open fire permit the direct contact of food with organic material combustion products, including carcinogenic PAHs. Derivatives of PAHs are formed during the same thermal processes and they are also biological active.

Assessment if grilled marshmallow contain oxygen and nitrogen derivatives of PAHs.

The marshmallows grilled over a campfire has been extracted with cyclohexane. Fractions of PAHs and their derivatives have been isolated by solid phase extraction (SPE) on silica gel columns. Thin layer chromatography (TLC) has been applied for analysis. Silica gel plates and dichloromethane - n-hexane mixture (as the mobile phase) were used. The spots on plates were visualized under UV light at 254 and 366 nm. The results of grilled marshmallows extracts and standards mixture analyses were compared.

The study focused on the preliminary examination on PAHs derivatives in grilled marshmallows show that extracts isolated from these type of food contained many polar organic compounds. Using TLC technique some oxygen and nitrogen derivatives of anthracene, phenanthrene and fluorene could be identified.

Grilled marshmallows contain biological active derivatives of polycyclic aromatic hydrocarbons, therefore their consumption, especially by children or young adults, may pose a threat to their health.

Keywords: marshmallows, PAHs

Research of knowledge about eating disorders among students of dietetics

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Eating disorders are diseases characterized by the dysfunction of feeling of hunger and food intake. Now there is a significant increase in their occurrence. Therefore, nutritionists, who should belong to the therapeutic teams of these disease entities, must have extensive knowledge in the field of eating disorders.

The aim of the study was to determine the knowledge of dietetics students on eating disorders depending on the year of study and specialties.

In the study 340 students of dietetics of Medical University of Silesia in Katowice took part. The author's questionnaire was used for the study. Respondents' answers were evaluated, 1 point was awarded as correct answer, 0 as incorrectly answer.

The average score obtained by all respondents was 10.19 (± 3.41). Students of the 1st year of studies gained an average of 8.56 (± 3.02) points, while students of the 5th year - 13.46 (± 2.91) points. Psychodietetics students showed the highest knowledge among all specialties and obtained an average of 14.25 (± 2.13) points. The average number of points obtained by the respondents from the part of the survey referring to specific eating disorders was on average 7.65 (± 2.11) points, while from the knowledge about EDNOS, the respondents scored an average of 2.54 (± 1.99) points.

The highest level of knowledge was characteristic for students of the second year of second-cycle studies. Students of psychodietetics had higher knowledge than other specialties. Respondents had greater knowledge about specific eating disorders compared to non-specific eating disorders.

Keywords: Eating disorders, Dietetics, EDNOS

Nutrition scheme of nurses according to the work shift and chronotype (morning - evening)

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The circadian rhythm (CR) of the organism is an internal system designed to regulate feelings of sleepiness and wakefulness over a 24-hour period, associated with the rotation of the Earth around its own axis. Generation of CR is in the suprachiasmatic nucleus that responds to light. Due to night shifts human exposure to natural light is disrupted. As a consequence, the natural CR is impaired, which is manifested by depression, sleep disorders and metabolic diseases. Chronotype can also influence CR. Preferred time of sleeping and eating are different among morning and evening people.

The aim of the study was to determine the impact of shift work on the daily nutrition scheme and to test whether there are dependencies between the used scheme and chronotype.

144 women and 6 men, aged 20 to 65 years (45.6 ± 11.68) and employed as nurses in 4 hospitals in Silesian Voivodeship were taking part in the study. They all worked on night shifts. The survey consisted of two parts, the author's questionnaire concerning daily nutrition scheme and standardized Morningness-Eveningness Questionnaire to determine the chronotype of the respondent. The Chi-Square statistic was used for testing relationships.

The largest part of the population were people with middle chronotype (80%). Almost 60% of respondents have a different diet in the work day compared to the day off. Force between the number of years worked in the shift system among morning people and fixed-time-meal was moderate ($V_c=0,43$).

Nutrition scheme depends on the work shift and chronotype.

Keywords: chronotype, nutrition scheme, nurse, shift work

Activity of Bioactive Components of Propolis Against Human Breast Cancer Cells

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Breast cancer is a common cancer and is the leading cause of cancer-related deaths among women worldwide. Flavonoids, among many other compounds, are specific bioactive constituents of propolis. Recent studies indicate that caffeic acid (CA), and its phenethyl ester (CAPE) are compounds with potent chemopreventive effects, inter alia by cell cycle inhibition and proapoptotic action.

The aim of this study was to show a comparison of CA and CAPE activity on triple-negative human caucasian breast adenocarcinoma line cells.

Breast cancer lines: MDA-MB-231 (human breast adenocarcinoma, TNBC, no. 92020424 SIGMA from Sigma-Aldrich), which is a model of human triple-negative breast cancer and the MCF-7 line (human breast adenocarcinoma, No. 86012803 SIGMA from Sigma-Aldrich) were used for the research. All manufacturer's recommendations for preparing were carefully followed. CA, and CAPE were also purchased from Sigma-Aldrich. For the analysis the Muse® Annexin V and Dead Cell Assay and Muse® Cell Cycle Assay were used.

For CAPE a significant decrease in the number of live cells was observed. There was a visible dose dependent effect. The cytotoxic and proapoptotic effect of CA was not as significant as for CAPE.

Our results obtained from a flow cytometric assay clearly showed that CA and more notably CAPE induced apoptosis and growth inhibition in a time- and dose-dependent manner against breast cancer MDA-MB-231 and MCF-7 lines.

Keywords: chemoprevention, CA, CAPE, breast cancer

Nutritional status and biochemical parameters assessment in women with Polycystic Ovary Syndrome (PCOS)

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Polycystic ovary syndrome is one of the most common disorders found in patients of gynecological endocrinology, in which patients suffer from excessive secretion of androgens resulting in masculinization, defeminization, and metabolic disorders.

The study aimed to compare nutritional status and biochemical parameters in women with PCOS with nutritional status and biochemical parameters in healthy women.

The study included 56 women aged 18-40 years with polycystic ovary syndrome and 20 healthy controls. All participants had nutritional status, laboratory assessment, and hormone profile performed.

Study results indicate that patients with PCOS have a higher level of body mass index (BMI) than healthy women. It has also been assessed that patients with PCOS have a higher level of insulin and lower level of blood glucose in comparison to the control group.

Author found that nutritional status and biochemical parameters in patients with PCOS are highly correlated with the levels of specific androgens.

Keywords: Polycystic Ovary Syndrome (PCOS), BMI, nutritional status

Nutritional status and biochemical parameters assessment in women with Congenital Adrenal Hyperplasia (CAH).

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Congenital adrenal hyperplasia is one of the most common autosomal recessive hereditary disorders that features the lack of cortisol synthesis which leads to excessive stimulation of the adrenal glands by adrenocorticotrophic hormone (ACTH) and excessive androgen synthesis. The clinical manifestations of congenital adrenal hyperplasia in adults result from adrenocortical insufficiency, hyperandrogenism, and the adverse effects of glucocorticosteroids used to treat this disease. Patients with congenital adrenal hyperplasia experience a wide variety of symptoms including obesity, hyperinsulinemia, and insulin resistance which contributes to the development of metabolic syndrome.

The study aimed to compare nutritional status and biochemical parameters in women with CAH with nutritional status and biochemical parameters in healthy women.

The study included 20 women aged 18-40 years with congenital adrenal hyperplasia and 20 healthy controls. All participants had nutritional status and laboratory assessment, and hormonal panel performed.

Study results indicate that patients with CAH have a higher level of body mass index (BMI) than healthy women. Moreover, patients with CAH have a higher level of insulin and lower level of glucose in comparison to the control group.

Author found that nutritional status and biochemical parameters in patients with CAH are highly correlated with the levels of specific androgens.

Keywords: Congenital Adrenal Hyperplasia (CAH), nutritional status, BMI

Influence of different variants of adiponectin gene in rs6773957 on inappropriate body mass in group of diabetics

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Adiponectin, which is coded by ADIPOQ gene, is a cytokine that is synthesized and released mainly by mature adipocytes. It has a wide effect as anti-arteriosclerotic and anti-inflammatory substance and reduces the insulin resistance of tissues. Moreover, with the increase in body mass index (BMI), we can notice a decrease of adiponectin in serum concentration and with weight reduction we can observe that the concentration is increased.

The aim of the study was to indicate the dependence of different variants of adiponectin gene on improper body weight among the group of diabetics.

The Real Time PCR was conducted by using fluorescence-labelled probes. The usage of this method allowed to achieve the amplification of selected DNA fragments and markings. In the study group there are 199 diabetics (107 man and 92 women) from Southern Poland whose polymorphism of adiponectin gene in rs6773957 was examined.

In the research group there are 18 diabetics with normal BMI, 88 overweight and 93 with obesity. The most frequent genotype in all BMI and waist-hip ratio (WHR) groups was heterozygote AG (47%) and the second one was homozygote GG (42%).

Allele G frequencies were inversely correlated with BMI and WHR, while allele A frequencies were positively correlated with BMI and WHR and positive correlation between BMI and WHR were observed. The examined population was in a Hardy-Weinberg Equilibrium (HWE). Furthermore, genotype frequencies in BMI and WHR groups were not significantly different from what would be expected if the population was in HWE.

Keywords: adiponectin, ADIPOQ gene, BMI, WHR, diabetes mellitus

Dietary care for patients in the Pneumology department-nutrition charts for patients and recommendations

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Nutrition status assessment and adequate corrections should be considered as essential steps of modern holistic treatment. This is especially important in high risk patients, such as affected by severe diseases treated in intensive care units, or elderly population with presence of numerous chronic diseases especially respiratory failure.

The aim of the study is to assess the adequacy of nutritional status assessment and adequacy of additional nutrition of patients in the Pneumological Ward.

We analysed medical records of patients hospitalized in the Department of Pneumology from July-2018 to September-2018. 206 consecutive patients suffering from cancer, interstitial lung diseases, obstructive sleep apnea syndrome and or COPD and asthma were included in to the study. Based on the particular disease diagnosis, patients current BMI, body weight fluctuations we have evaluated the accuracy of nutrition cards completion.

We have revealed that in 17% of cases the doctor have not completed the survey at all, whereas 31.6% out of completed forms were filled incorrectly. Among 206 patients only 8 had nutritional recommendations in medical records, whereas according to nutrition assessment nutrition intervention should be been performed in 31 patients. Anthropometric measurements were available only in 57 % of patients.

The results of the survey show that the method of completing the survey was disappointing and should be improved. It is hard to predict whether neglecting nutritional assessment is similar in a larger number of medical departments. To reveal this, and to check whether poor nutrition patient's prognosis a multicenter study is needed.

Keywords: pneumonology, nutrition, nutrition charts, obesity, malnutrition,

Determination of residues of penicillin and tetracycline in selected molds of various fat content

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Antibiotics are substances used in medicine and veterinary mainly in bacterial infections. Remaining in animal tissues and their products, e.g. milk, they have a potentially dangerous impact on the health of consumers. Their chronic intake with food favors the occurrence of allergic reactions and leads to the development of drug resistant bacterial strains.

The aim of the study was to determine the residues of penicillins and tetracyclines in selected milk (fresh and UHT) with different fat content.

53 cartons of milk (33 UHT, 20 fresh) with different fat content were tested, purchased at retail outlets in the Silesia. The results obtained were referred to the current standards from the Commission Regulation (EU) No 37/2010 of 22 December 2009.

The largest amount of penicillin residues ($0.804 \mu\text{l} / \text{l}$) was recorded in fresh milk 3.2% fat by Milsani, and the lowest in milk: UHT 3.2% fat by Mlekovita Wypasione and fresh 2% fat from Classic ($0.096 \mu\text{l} / \text{l}$). The concentration of tetracycline residues ranged from $0.04 \mu\text{l} / \text{l}$ (fresh milk 2% fat, Łaciate) to $2.52 \mu\text{l} / \text{l}$ (UHT 2% fat milk, Łowickie), in up to 11 samples the residue level of these antibiotics did not exceed the limit of quantification.

The level of penicillin and tetracycline residues in all samples was within normal limits. The tetracycline residues were present in the analyzed milk at a higher concentration than the penicillin residues.

Keywords: antibiotics, penicillin, tetracycline, milk

The antioxidant properties and concentration of vitamin C in the different drugs and diet supplements

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In recent years there has been a large increase in consumer interest in the influence of nutrition on human health. There is increased demand for food and dietary supplements with beneficial effects on the body, especially antioxidant compounds, which are factors involved in inactivation of Reactive Oxygen Species (ROS) generating an oxidative stress. Oxidative stress is thought to be involved in the development of many diseases including cancers and neurodegenerative diseases. One of the most known antioxidants is vitamin C. This properties caused that it is commonly used in unconventional medicine, where it is treating as a wonderful medicine for many diseases.

The purpose of the study was to estimate the antioxidant properties and concentration of vitamin C in the different drugs and diet supplements.

The DPPH method was used to determine the free radical scavenging activity of each sample. The tablets containing vitamin C was crumb and dissolved in the water. The reaction mixture was shaken and incubated in the dark at room temperature for 30 min and the absorbance was detected at 517 nm (Shimadzu UV 1280). The vitamin C content in samples was determined by colorimetric analysis with the use of Folin–Ciocalteu reagent.

The results of this study demonstrated that vitamin C contained in the diet supplements exhibit significantly lower antioxidant properties than vitamin C enclosed in the medicinal preparations.

Hence, it can be suggested that antioxidant properties of vitamin C depends on many various factors including chemical purity and production conditions. Therefore, a poor-quality diet supplements does not it good form of vitamin supplementation.

Keywords: antioxidants, dietary supplement, vitamin c

Stress and binge eating disorder among patients of diet counseling centre

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Binge Eating Disorder (BED) is an eating disorder characterized by uncontrollable attacks of over-eating. BED episodes are a frequent reaction to stressful situations, and may also occur to drown out emotions. As a result of excessive stress, some individuals limit food intake, while others on the contrary - compulsively overeat.

The aim of this study was to analyse the level of stress among people using diet counseling due to binge eating disorder.

100 people (60 women and 40 men), the patients of diet counselling centre mostly willing to reduce the weight of the body (46%), were taking part in the study. The author's questionnaire and standardised test based on Perceived Stress Scale (PSS-10) were used in the study. The incidence of bouts of compulsive overeating was measured using a nutritional journal run by patients, in which everything they consume was recorded, along with the accompanying emotions and situations in which possible attacks occurred.

In the study group, 50% of people eat something under stress and usually they are sweets. Men more often relieve stress by snacking (42.5% men versus 25% women). Among people with 4-7 episodes of BED, 67.4% of respondents are characterised by high level of stress ($p=0,003$). According to the PSS-10 sheet 47% of patients in the centre are exposed to high stress. People characterized by high level of stress in 51% respond to it with snacking ($p = 0.005$).

People exposed to high stress are more likely to experience BED episodes. Stress affects the occurrence of compulsive overeating. One of the reactions to stress is snacking. Men more often react to stress with snacking than women.

Analysis of dietary patterns among young adults with metabolic syndrome

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Patients with metabolic syndrome (MS) are more likely to suffer from diabetes, coronary heart disease and stroke compared to their obese healthy peers. In many studies, central obesity is perceived as an inherent risk factor for MS. Since newest reports indicate the dubious diagnosis of MS based on obesity, we examined if, regardless of BMI, diet and eating pattern analysis of patients showing metabolic disorders may be used in evaluation of metabolic health risks.

The aim of this analysis was to establish the relationship between diet quality (measured by diet indicators and dietary patterns) and health (presence of MS) among slim, overweight and obese patients.

808 people have passed the criteria and were included in a study. Dietary patterns were rated using validated food frequency questionnaire (FFQ-6). Data on confounders were collected using validated questionnaire (KomPAN). Dietary patterns were established using principal component analysis (PCA).

27,3% of the participants were diagnosed with MS according to the definition of Buscemi et al. 566 were healthy, of which 418 were slim and 232 were unhealthy, with 71 slim ones. 3 dietary patterns were identified explaining 30% of consumption variance: 'prudent', 'westernized traditional' and 'dairy, breakfast cereals, and treats'. 'Prudent' was correlated with metabolic health and the latter two with MS.

Our research demonstrated that obesity (defined by BMI and WHR) may be erroneous premise for diagnosing patients, while dietary pattern of a westernized traditional diet is strictly correlated with development of metabolic syndrome regardless of BMI.

Keywords: metabolic syndrome, dietary patterns



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF GENERAL SURGERY

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Analysis of the thromboembolic incidents in a group of 12-18-year-olds

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In recent years, we have observed an increase of the frequency of thromboembolic diseases in children. Unfortunately, there are no epidemiological data on the occurrence of this phenomenon in our country, but statistical surveys from the US and Canada show an increase from 5.3 children per 10,000 hospitalizations in 1994, by 34 per 10,000 hospitalizations in 2001, up to 58 children per 10,000 hospitalization in 2007.

In our study we analyzed risk factors for thromboembolic diseases in older children. Based on the obtained data, we tried to choose the most sensitive tool to assess the risk of a thromboembolic episode in children.

The research group are patients of the pediatric surgery clinic in 2010-2018. The risk factors analysis was based on available medical data and through telephone contact with children's parents. The factors analyzed are those considered in the Wells scale, in the recommendations of the Cincinnati Children 'Hospital and in the scale according to Princess Margaret Hospital, Perth.

In our opinion, there is no ideal tool that would cover the most common causes of thromboembolic episode in older children.

Statistical work on risk factors is important and necessary. It is possible that a deeper analysis will allow to create an appropriate tool to assess the risk of a thromboembolic episode in older children.

Keywords: thrombosis

High heels - torture tool or medical godsend? The assessment of the impact of high heels on the skeletal-muscle pump

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High heels are a source of income for both fashion designers and orthopaedists. Their negative impact on the skeleton is widely known and discussed, however, consequences for the drainage of the lower extremity are often not taken into consideration. Improper venous outflow can be a cause of oedema, ulcers, and blood clots among others. Compression therapy is a recommended prophylaxis and treatment of venous conditions and ulcerations. It prevents the collecting of blood in the superficial veins, improving the flow of fluid from tissues back into the vessels.

The aim of this research is to assess whether high heels improve or worsen the skeletal-muscle pump efficiency and to evaluate the efficacy of compression therapy while wearing heels.

The study group consisted of 12 healthy women with no risk factors. Each of them was assessed in terms of muscle-pump efficiency in point A and point B in three different compression levels - regular tights, class one compression stockings, and class two compression stockings. The pressure created was measured with Kikuhime pressure sensor. Then, measurements were repeated in high heels. The results were compared and evaluated with the use of t-test.

There was no statistical difference in the intrasurface pressure between the flat shoes and high heel subjects in the cases of the patients wearing non medical garments or medical compression stocking class I or II.

It cannot be concluded that wearing high heels worsens the efficiency of skeletal muscle-pump or the efficacy of compression therapy. It is recommended to repeat the study with a larger group of subjects. Study in progress.

Keywords: skeletal-muscle pump, high heels, venous outflow

Iliac vein compression in the patients with Leriche Syndrome – the new link between the atherosclerosis and venous thromboembolism

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May-Thurner syndrome is a condition in which left common iliac vein is compressed by the right common iliac artery. This results in impaired venous outflow from lower extremity manifesting as swelling, discomfort or even formation of blood clots. Another syndrome involving common iliac artery is Leriche syndrome in which common iliac arteries are occluded by atherosclerotic plaque.

The aim of this study is to assess whether the extent of occlusion of the right common iliac artery impacts the degree of compression of left common iliac vein.

In this study, 10 CT scans of men and 10 CT scans of women were reviewed and considered for following measurements: diameter of left and right common iliac artery, the diameter of right common iliac vein and the diameter of the left iliac vein at the point of stenosis and behind it. Then the data was analyzed.

In the t-test, the result was significant for the whole study group and the p-value came up to 0,0489 for $p < 0.05$. However, it was not significant when dividing the group according to gender where the p-value for men came up to 0,18 and the p-value for women came up to 0,11.

Leriche syndrome can impact the degree of compression low the left common iliac vein in the whole population, however, this occurrence does not relate to any gender specifically. It is recommended to repeat the study on a higher number of subjects. A study in progress.

Keywords: Leriche Syndrome, May-Thurner Syndrome

CircAid's effectiveness in patient-oriented compression therapy

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CircAid device is an innovative example of inelastic compression garments. Advertised as a more comfortable alternative to popular compression bandages and stockings, it has been gaining trust in treatment of chronic venous diseases, deep venous thrombosis and lymphedema due to possibility of exerting higher pressures and lack of wear off over time.

The main goal of this study was to assess CircAid's short-term effectiveness in patient-oriented compression therapy by measuring pressure, which device exerts on lower limbs.

For a study we applied below the knee wrap system in volunteers without signs of chronic venous diseases. After short instruction patients used the device unassisted setting it at 20, 40, 50 mm Hg and maximum pressure. A precision of use was assessed using Kikuhime in two measuring points at the lower leg.

In the test group, the obtained pressure equivalent to the appointed pressure was confirmed in about 80% of the patients using CircAid with the compression of 20 mm Hg and in 20% only of using the device with the projected compression of 40 or 50 mmHg.

Despite the novelty as well as the simplicity of CircAid device, the proper application of the patient-oriented compression requires a learning curve and experience. It should be taken into consideration when prescribing this type of compression.

Keywords: CircAid, patient-oriented compression therapy, chronic venous diseases

Does BMI influence on olfaction of morbidly obese patients?

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Bariatric surgery is an effective and widely accepted method of treatment for morbidly obese patients. Understanding of patients' nutritional habits and the permanent change of it after surgical intervention has the key role in positive long-lasting outcomes. Few studies showed that higher BMI may have impact on olfaction in bariatric patients. Observation of BMI influence on olfaction may lead to improvement of postoperative care, long-term nutrition and number of treatment failures in group of morbidly obese patients with higher BMI.

The aim of our study was to investigate olfaction sense in group of patients with BMI<45 kg/m² compared to group with BMI>45 kg/m² qualified to bariatric surgery.

From April 2018 to February 2019 patients previously qualified to bariatric surgery were classified to two groups: BMI<45 kg/m² (group 1) or BMI>45 kg/m² (group 2). Patients' olfaction sense was tested qualitatively and quantitatively using Sniff Test day before surgery. Sniff Test contains 3 subtest.

Study enrolled 73 patients (group 1-42, group 2-31). Median score for test 1 in group 1 was 8,5 with IQR 6,5-13,0, in group 2 8,375 with IQR 6,75-11,5 ($p=0,921$). Mean result for test 2 was $9,659 \pm 3,063$, in group 2 $8,633 \pm 2,341$ ($p=0,132$). Median result for test 3 in group 1 was 14,0 with IQR 13,0-15,0, in group 2 14,0 with IQR 12,0-15,0 ($p=0,625$). Total score from all 3 test was $33,250 \pm 5,441$ in group 1 and $31,608 \pm 4,956$ in group 2 ($p=0,183$).

There were no statistically significant differences between groups in olfaction. Further research on greater number of participants is needed to determine the impact of BMI on olfaction in morbidly obese patients.

Keywords: Bariatric Surgery, olfactory sense,

NPWT in pediatric patients in years 2014-2018.

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Negative Pressure Wound Therapy (NPWT) is routinely used in the treatment of acute and chronic wounds. It is a valuable alternative to surgical and conservative methods. Although, the pediatric experience with NPWT has been limited.

The aim of the study was to evaluate the course of treatment and effectiveness of NPWT in pediatric patients.

We analysed the history of 14 patients (aged 7-17) treated with NPWT at the Department of Pediatric Surgery and Urology in years 2014-2018. After establishing patients' database, we assessed the type of wound, the type of treatment, the length of the therapy and hospitalization, the frequency of dressing changes and types of pathogenic bacteria strains in the wound.

In our patients the following types of wound were described: decubitus ulcer (35.7%), trauma (50.0%), electric burn (7.1%), postoperative wound (7.1%). In 13 cases (92.9%) a satisfactory treatment effect was achieved. In 1 case (7.1%) re-surgical revision was necessary due to incomplete wound closure. In 11 cases (78.6%) positive bacterial cultures were found in wound swabs, with dominant mixed infections. The main pathogens were: *Staphylococcus aureus*, *Escherichia coli* and *Pseudomonas Aeruginosa*. Infections resolved as a result of the therapy. A negative bacterial wound culture was associated with shorter time of NPWT and hospitalization. The average length of hospitalization was 30.5 days.

NPWT is a safe and effective treatment tool that allows to achieve full wound closure. It can be successfully used for difficult wounds of various etiologies, both infected and not. Therefore, its use should be considered more often in the pediatric population.

Keywords: Pediatric Surgery, Negative-pressure wound therapy, difficult wounds treatment

Clinical comparison of surgical techniques of ventral hernia repair: a retrospective analysis of short-term postoperative outcome.

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The surgical repair of ventral hernia involves different techniques including “onlay” mesh (OM), “sublay” mesh (SM), and Mayo (M) repairs.

Object of this study is to compare onlay, sublay, and Mayo techniques of ventral hernia repair in terms of surgery time, postoperative complications and drain removal time.

This retrospective study was based on 56 abdominal hernia patients (23 female and 33 male) who underwent the surgery in Department of Gastrointestinal Surgery from 2014 to 2018. There were 10 (17.86%) primary and 46 (82.14%) secondary postoperative hernias in the analyzed group. The patients were divided into three groups depending on ventral hernia operating methods: the onlay repair (prosthetic mesh is fixed on the external abdominal muscle slip) with 12 patients, sublay repair (prosthetic mesh is placed on the posterior abdominal muscle sheath) with 16 patients and Mayo technique (primary suture repair) with 25 patients. Three patients didn't meet the conditions.

Comparing all groups there was a significant difference between them in terms of surgery time (average time OM 3h; SM 3h11'; M 1h45') complications (OM-16,7%, SM6,25% and M- 12%) and drain removal time (OM-3.91days, SM-2.92 days and M 2.73 days). The mean duration of hospitalization was 8.8 days in OM group, 7.3 days in SM group, and 6.68 days in M group.

The “onlay” mesh repair was associated with the highest number of postoperative complications. The drain removal time was the longest in patients following “onlay” mesh hernia repair.

Keywords: hernia, surgery, sublay, onlay, Mayo

Assessment of knowledge among airlines passengers about risk of venous thrombosis during the flights

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Venous thrombosis is a disease caused by combination of three factors: venous stasis, hypercoagulability and endothelial dysfunction. These three elements comprise The Virchow's triad. One of the risk factors of venous thrombosis is long-hour flight which impose long-lasting sitting and dehydration of the body. The risk of venous thrombosis in the general population is 0,07-1,4/1000/year, whereas thrombosis after flights appears in 0,5-2,8% passengers.

The aim of our research is assessment of knowledge among airlines passengers about risk of venous thrombosis during the flights.

The Questionnaire was carried out at Pyrzowice Airport among 200 people awaiting for their flights, including 111 women and 89 men.

The result of the survey showed that 15% interviewees have never heard about venous thrombosis. The connection between the risk of occurrence of venous thrombosis and the flight has not been seen by 26% women and 34% men. Only 1 person is affected by this disease. 45% of respondents have never heard about any preventive actions during long distance travel. Economy class syndrome isn't known by 77% interviewees, 25 people of 46 who responded for that question connects it with low quality of travelling. In total it gives 90% of incognizant passengers. Hardly 10% of interviewed associate it with possibility of appearance of venous thrombosis.

The results of the survey shows that the passengers of the airlines aren't aware of connection between long time flights and venous thrombosis. Also, it demonstrate their low level of knowledge about this illness. Only 14 people know the disease, its risk factors and prevention.

Keywords: venous thrombosis, long-hour flight, dehydration, knowledge about risk of venous thrombosis

Impact of body mass index on complications after pancreaticoduodenectomy.

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Pancreaticoduodenectomy (PD) is associated with a significant percentage of complications and perioperative mortality. The impact of the body mass index (BMI) on postoperative complications after PD is not well understood.

The aim of this study was to analyze the effect of BMI on the frequency and type of post-PD complications.

We retrospectively evaluated the data of patients who underwent PD (n=57) in the period from January 2016 to December 2018 in our center. We collected data about patients: preoperative information, the course of surgery and the type of complications after surgery. We divided patients into two groups according to BMI: group X (<25 kg/m²) and group Y (≥25 kg/m²).

There were 30 (52.6%) patients in group X and 27 (47.4%) in group Y. The mean intraoperative blood loss was not significantly higher in group Y (630ml vs. 872,2ml) (P=0.09). The mean duration of hospitalization was comparable in both groups (18.2 vs. 15.3days) (P=0.24). The mean number of transfused red blood cell concentrates after operation was higher in group Y (6 vs. 10) (P=0.45). Bleeding into the abdominal cavity was more common in group Y (4 vs. 9) (P=0.44). The number of postoperative complications was comparable in both groups (11 vs. 12) (P=0.72). Pancreatic fistula was more common in patients with normal body weight (7 vs. 1) (P=0.54).

BMI does not seem to clearly affect the presence of serious postoperative complications in patients following PD. Overweight patients are at risk of increased blood loss during surgery, increased risk of abdominal bleeding and may require more blood to be transfused after surgery.

Keywords: Body mass index, Pancreaticoduodenectomy, Complications

Economy class syndrome—are we aware or do we ignore this?

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The immobilisation related to the long journey travel is considered to be one of the important factors related to the venous thrombo-embolism occurrence.

The aim of the study was to assess the knowledge of ECS (Economy Class Syndrome) among 4th, 5th and 6th year students at the Medical University of Silesia.

In the study, we used an original questionnaire consisting of 18 questions concerning knowledge of risk factors and ECS prophylaxis. The questionnaire also included 5 clinical cases and questions about how students assess their knowledge of CS and the implementation of the topic during classes / lectures.

104 students completed the survey. Until publication of the abstract, 4th, 5th and 6th year students were respectively: 55 (52.9%), 30 (28.8%) and 19 (18.3%). 42 (40.4%) of the respondents heard about ECS, of whom 6 (38.1%) during classes / lectures at university. 14 (13.5%) of all students think that the topic has been explained well. 25 (24%) of students feel well-informed about the principles of antithrombotic prophylaxis based on classes / lectures. 36 (34.6%) of the respondents assessed that they can apply appropriate prophylaxis. The percentage of correct answers in questions with clinical cases was on average 55%.

The survey shows that students are not sufficiently informed about prophylaxis, risk factors and ECS symptoms. Due to globalization and the development of passenger transport, ECS is becoming an increasingly common problem. In order to avoid serious health consequences and high costs of their treatment, knowledge of this syndrome should be disseminated.

Keywords: ECS, economy class syndrome, deep vein thrombosis

Surgical treatment of pancreatic cystic tumors.

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Pancreatic cystic tumors (PCTs) account for 10–15% of pancreatic cysts and 1% of all pancreatic neoplasms.

The aim of this study was to assess short-term outcomes of surgical treatment of pancreatic cystic tumors (PCTs) from 2014 to 2018.

We retrospectively reviewed medical records of 148 patients: 102 (69%) women and 46 (31%) men who had undergone surgery for pancreatic cysts in the Department of Gastrointestinal Surgery.

Among 148 pancreatic cysts, 24 (16%) were non-cancerous and 124 (84%) were cancerous tumors. We have conducted further analysis of the PCTs. They were located within the pancreatic: tail 41 (33%), head 40 (32%), body 22 (18%) and other mixed regions 21 (27%). Histopathological tumor types were as follows: IPMN 45 (36.2%), MCN 30 (24.2%), SCA 28 (22.6%), CPEN 8 (6.5%), SPN 8 (6.5%) and other-mixed types 5 (4%). The following surgical procedures were performed: distal pancreatectomy with splenectomy 52 (41.9%), pancreatoduodenectomy 31 (25%) with Traverso 28 (23%), Whipple 2 (1.6%), Clagett 1 (0.8%) reconstructions, and distal pancreatectomy without splenectomy 12 (9.7%), and other procedures 29 (23.4%). Early postoperative complications were observed among 27 (21.8%) patients. Reoperations were performed in 15 (12%) patients. 11 (8.9%) patients required rehospitalisation. The perioperative mortality rate was 2.42%.

PCTs comprised most of pancreatic cysts in the analysed group. The most frequent histopathological type was IPMN. Most of the tumors were located in pancreatic tail. Distal pancreatectomy with splenectomy was the most common surgical procedure.

Keywords: pancreatic cystic tumors, pancreas, pancreatodudodenectomy

Spider veins at the ankle level – cosmetic defect or significant clinical problem

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Corona phlebectatica (CP) is an underrated but early and significant sign of chronic venous disease (CVD). CP is a fan-shaped pattern of numerous bluish intradermal veins with a diameter <3mm on the medial and/or lateral aspects of ankle and foot in the inframalleolar area.

To evaluate how often CP occurs among the 19-26-year-old students and its correlation with the risk factors and other signs of CVD.

Carrying out a screening test - physical examination of medial and lateral inframalleolar area among ca. 500 volunteer students of SUM in search for the teleangiectasias and venous dilatations which, according to International Union of Phlebology Consensus from 2012, are defined as CP. The next step is to conduct a survey about the risk factors and signs of CVD in the group of people with CP.

After examining 517 students (198M, 319F) CP was identified in 25 cases (15M, 10F) (4,8%). 16 of them are incipient corona, 9 are definite corona. Following risk factors and signs are the most common: low physical activity (92%); exposure to standing >4h (40%) and sitting >4h (92%) during the day; crossed legs as position chosen most commonly (60%); venous diseases of lower limbs running in family (72%); oral contraceptive (50%F); heaviness (32%), muscle cramps (24%), pain (40%), edema (20%), pigmentation abnormalities (8%) of lower limbs; RLS (24%).

Corona phlebectatica occurs in 4,8% of the examined young volunteers. Presence of this vascular pathology is associated with the risk factors and other signs of CVD.

Keywords: corona phlebectatica, chronic venous disease, risk factors, students

How to see what is not visible? - an implementation of the transillumination and near infrared light in the diagnostics and cosmetic treatment of the chronic venous disease

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Chronic venous disease (CVD) is one of the most common pathologies of the venous system and many risk factors lie at its base. The early manifestation of this condition might be seen as telangiectasis (TA).

The aim of this study was to evaluate the possibility of visualization of C1 changes according to CEAP scale located in the lower limbs using eyesight, vascular transilluminator and VeinViewer device which uses near – infrared light.

Fifteen C1 changes were subjected to analysis occurring in female patients between 20 and 40 years of age using methods mentioned above. In these cases the feeding veins (FV) were not visible in clinical examination. The presence of FV was evaluated with a consideration of vessels carrying the blood towards the TA and those coming from other sources (veins). Moreover, photographic documentation was taken.

In venous changes subjected to the analysis, in 60% of the cases we managed to visualize the range of FV using vascular transilluminator. In cases of visualization by near-infrared light FV were visible in 80% of the changes. One of those vessels was stated in 60% of the changes and more than one FV was present in 40% and in both cases they were not visible using only eyesight.

The implementation of new visualization technologies of the superficial venous system significantly improves the quality of assessment of changes connected with occurrence of CVD and makes up a valuable supplementation of physical examination. It creates the possibilities of better imaging of studied vessels, resulting in more efficient treatment of TA.

Keywords: CVD, telangiectasis, VeinViewer device, vascular transilluminator

Surgical treatment of oesophageal cancer – a retrospective analysis of short-term results

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The oesophagectomy is still considered a standard in the surgical management of esophageal cancer located in middle and distal part of the oesophagus. The most common esophagectomy methods are transhiatal and transthoracic approaches.

The aim of the study was the analysis of surgical treatment of esophageal cancer using transhiatal and transthoracic oesophagectomy.

Between 2014 and 2019, a total of 43 patients underwent oesophagectomy for oesophageal cancer in the Department of Gastrointestinal Surgery. The study group included 32 men (74,4%) and 11 (25,6%) women. The mean age was 61,67 years.

There were 38/43 (88,4%) tumors located within distal part of the oesophagus and 5/43 (11,6%) tumors located within middle oesophagus. 14 (32,6%) had squamous cell carcinoma, 28 (65,1%) adenocarcinoma, and 1 (2,3%) anaplastic carcinoma. The transhiatal approach was used in 35/43 (81,4%) patients, whereas transthoracic approach in 8/43 (18,6%) patients. The mean operative time was 5h 55min. The mean total duration of hospitalization was 20,83 days, and mean postoperative duration of hospitalization-18,55 days. Short-term complications occurred in 20/43 (46,5%) patients. Pulmonary complications were the most common 15 (34,9%). The early reoperations were performed in 6 (14,0%) patients.

Oesophageal cancer was the most frequently noted in men and located in the distal oesophagus. Adenocarcinoma was the most common histopathological type. Transhiatal approach was the most frequent. Surgical treatment of oesophageal cancer is a serious challenge associated with a long hospital stay and a high risk of postoperative complications.

Keywords: Oesophageal cancer, Adenocarcinoma, tumors, surgical treatment

Laparoscopic cholecystectomy - easy and safe procedure?

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In spite of surgical procedures, such as laparoscopic cholecystectomy being performed often, they are inevitably related to risk. That risk is associated with the procedure itself as well as with an anaesthesia. Before any surgical procedure the patient should be informed about important matters regarding the procedure and an informed consent should be taken from him. However, details given to patients often lack in vital information concerning that procedure.

Analysis of information available to patients in terms of procedure's course, complications, repercussions, advantages and post-operative recommendations regarding laparoscopic cholecystectomy.

One hundred internet sites of medical centers performing laparoscopic cholecystectomy were reviewed. Advantages, procedure's course, complications, repercussions and post-operative recommendations were evaluated in the analysis.

29 out of 100 medical centers' internet sites contain information regarding advantages of laparoscopic cholecystectomy. 32 internet sites present any information about procedure's course. 15 internet sites have information concerning complications, among which 13 internet sites have information about serious complications. 7 internet sites contain information about repercussions. 14 internet sites contain information regarding post-operative recommendations. Full informed consent forms were placed only on 5 websites.

Despite rapid development in all branches of medicine, doctors often forget about basic matters such as informing patients about details regarding surgical procedures. Patients are often informed not well enough to be able to sign informed consent, which they usually sign without reading it. It can result in increased patients anxiety, claims, dissatisfaction and not obeying post-operative recommendations.

Keywords: cholecystectomy, laparoscopic cholecystectomy, informed consent, complications, risk, advantages,

Surgical treatment of Crohn's disease

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Pharmacotherapy is the treatment of choice for Crohn's disease (CD). However the occurrence of complications such as obstruction, fistulae and abscesses or lack of response to drugs are indications for surgery. 90% of people with CD will require at least one surgery for the disease during their life.

To present most common indications for surgery, methods and results of surgical treatment of CD and analyse the rate of postoperative complications.

In our retrospective study we analysed 60 patients at the average age of 38 (48,3% women, 51,7% men) who underwent surgery due to CD in the Department of Gastrointestinal Surgery in Katowice, in years 2015-2019. Data was obtained from medical records. Analysed parameters were: age, BMI, duration of the disease, time between diagnosis and first surgery, indications for the surgery, type and duration of the surgery and complications.

Most of procedures (90%) were elective. The indications for urgent surgery were: perforation (33,3% - 50% transverse colon, 50% ileum), abscess (33,3%) and bowel obstruction (33,3%). The most frequently performed procedure was right hemicolectomy (60%). Among partial resection of the small intestine 86,7% was ileum (average length 43cm). 26,7% of patients had postoperative complications (the most common was suppuration of the wound - 18,8%). 23% of patients underwent another surgery, 35,7% of them in order to restore bowel continuity.

Although surgery is not the first step in Crohn's disease therapy, the character of the illness makes it essential in significant number of cases. Almost one quarter of patients require more than one surgery.

Keywords: Crohn disease, surgery, postoperative complications, intestine, resection, laparoscopy

Laparoscopic treatment of Dunbar syndrome

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Dunbar syndrome is a rare disorder affected by the median arcuate ligament external compression of the celiac trunk. As a result of anatomic aberration it can restrict blood circulation if the median arcuate ligament is located too inferiorly in relation to the celiac axis. It is misdiagnosed because of poor and non-specific presentation. The abdominal pain may be related to meals or accompanied by weight loss but in the first instance those symptoms point more frequent condition.

The aim of the study is to present Dunbar syndrome condition and treatment by laparoscopic intervention.

We performed 3 laparoscopic release of celiac trunk in the Department of General, Minimally Invasive and Elderly Surgery in Olsztyn in 2018. All three patients suffered from severe pain of abdominal cavity before the surgery.

In two cases, there was a complete remission of the symptoms. In one case, there was an improvement. All patients reported relief of symptoms in the first days after the operation. There were no postoperative complications.

Dunbar syndrome has nonspecific symptoms, which makes it difficult to diagnose. The only way to complete the diagnosis is diagnostic imaging in correlation with clinical symptoms. The laparoscopic treatment of Dunbar syndrome seems to be safe and feasible procedure. It increases the comfort of the patient and brings the opportunity for normal functioning.

Keywords: celiac trunk, Dunbar syndrome, abdominal pain, laparoscopy,

Adrenal catecholamine-bomb - risk factors for hemodynamic instability during pheochromocytoma resection

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Adrenalectomy for pheochromocytoma, a rare catecholamine-secreting tumor, is a challenging procedure because of high risk of intraoperative hemodynamic instability (HI), which is still poorly defined and can cause life-threatening complications.

The aim of our study was to identify predictive factors for HI during pheochromocytoma resection.

Demographic data, tumor characteristics, perioperative fluid management and surgery details of 103 patients, who underwent laparoscopic adrenalectomy were analyzed retrospectively. HI was defined as an occurrence of both intraoperative episodes of SBP>160 mmHg and vasoactive (vasodilators or vasoconstrictors) drugs administration. Patients were divided into two groups: HI(+), which met both of above criteria, and HI(-) without HI – 44 (42,7%) and 59 (57,3%), respectively. Chi-squared test, Mann-Whitney U test and univariate logistic regression were performed.

HI(+) group more frequently suffered from diabetes ($p=0,003$) and hypertension ($p=0,03$). Tumors were bigger in HI(+) group ($p<0,001$). There was no significant difference in HI between the most experienced surgeon and others, type of blockade (none, non-selective or selective) or association with genetic disorders. HI(+) group received more colloids during 24h of perioperative time ($p=0,004$). Diabetes [odds ratio (OR) 3,54], hypertension (OR 2,47), colloids administration in 24h of perioperative time (OR 3,39) and tumor diameter >4 cm (OR 3,25) were associated with higher risk of HI.

Diabetes, hypertension, tumor size and perioperative administration of colloids were associated with HI during pheochromocytoma resection.

Keywords: pheochromocytoma, adrenalectomy, intraoperative hemodynamic instability

Progressive compression stockings as a new therapeutic method of chronic venous disease management.

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Graduated elastic compression stockings (GECS) is the well known method to manage venous and lymphatic disorders providing a decreasing pressure from distal to proximal part of the leg. New concept is a progressive elastic compression stockings (PECS) with higher compression pressure over the calf than the ankle. It may be a new effective method of thromboprophylaxis.

The aim of this study was to compare PECS to GECS and evaluate its effectiveness on venous blood flow parameters.

The study was performed on 10 volunteers both sexes aged 21-25. There was no evidence of lower ischemia limbs noticed. Blood flow parameters measured in popliteal artery and popliteal vein were flow volume (FV), maximal velocity (Vmax) and average flow rate (TAmn), all of them measured in lying and standing position with 3 types of compression: GECS, PECS and regular.

Both types of elastic stockings significantly improved flow parameters in examined vessels. PECS was not less effective than GECS, but in walking patients it may even give a better results.

Compression stockings have an important role in venous thrombosis therapy and prevention. This study denied generally accepted theory that compression stockings must only exert graduated pressure.

Keywords: Compression stockings, chronic venous disease, PECS, GECS

Functional lumbar overlordosis – the new element in the May-Thurner syndrome pathogenesis.

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May-Thurner Syndrome (MTS) is a condition in which the left common iliac vein is compressed by right common iliac artery. Some people having that condition may suffer from symptoms of venous hypertension, in some cases leading also to venous thrombosis. In most of the MTS cases the static and continuous compression is observed. Taking into account the anatomical variations, in some cases an increase of the lumbar lordosis can at least theoretically increase the iliac vein stenosis.

The aim of this study was to reveal a new way of MTS like iliac vein compression development, resulting from the functional hyperlordosis. We called it the functional May-Thurner Syndrome.

This study was performed on a group of 20 volunteers both sexes aged 21-27, using USG examination to measure diameter of right common iliac vein and left common iliac vein in free and in compressed area. All of the parameters were rated 3 times on every person: in normal lying position, in hyperlordosis and during Valsalva maneuver. Before every examination volunteers filled questionnaire about venous insufficiency symptoms.

Significant left iliac vein compression was noticed in almost half of the volunteers, mostly women. Also position of hyperlordosis promoted higher compression by right iliac artery, than normal lying position. However, during Valsalva maneuver diameter of both right and left iliac veins got significantly wider.

Left common iliac vein compression may be an anatomically conditioned, but this study proved, that also incorrect position like hyperlordosis promotes development of May-Thurner like iliac vein compression. This is a new element to the Theory of May-Thurner syndrome development.

Keywords: May-Thurner Syndrome, lumbar overlordosis, venous hypertension, venous thrombosis

The nutcracker syndrome - severe condition or just a fairy tale?

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Nutcracker syndrome is a vascular compression disorder and refers to the compression of the left renal vein between the superior mesenteric artery (SMA) and aorta. This can lead to renal venous hypertension. The most common clinical manifestations are hematuria, proteinuria, abdominal or flank pain, varicocele in men and pelvic congestion syndrome. There is higher female predilection.

The aim of the study was to assess the prevalence of the non-symptomatic nutcracker syndrome in population.

The study was performed on a group of 20 students from Medical University of Silesia. The presence of the left renal vein compression between SMA and aorta was validated with doppler ultrasound scan. There were also evaluated a flow rate in left renal vein and size of both kidneys.

A significant compression of the left renal vein with a simultaneous extension of the diameter of the pre-compressed vein was detected in 3 patients, but none of them claimed any symptoms connected with this affliction. Aortic-SMA angles were between 18° and 24°.

It requires more studies to reveal non-symptomatic nutcracker syndrome to prevent further manifestation of this medical condition.

Keywords: nutcracker syndrome, renal vein, compression, flow volume,

Clinical comparison of distal pancreatectomy with or without splenectomy: a retrospective analysis of short-term postoperative outcome.

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There are studies comparing distal pancreatectomy with splenectomy (DPS) with spleen-preserving distal pancreatectomy (SPDP), but the results remain inconsistent.

Comparison of SPDP with DPS by conducting a retrospective analysis.

Analyzed group included 52 patients (Female 38/ Male 14) , aged $56,1 \pm 14,5$ (25-81), hospitalized in Department of Gastrointestinal Surgery: 40 (77%) following distal pancreatectomy with splenectomy (DPS) and 12 (23%) undergoing spleen-preserving distal pancreatectomy (SPDP). Medical records were collected and reviewed.

Postoperative complications (PC) occurred in 15 (29%) patients: 11 (27.5%) following DPS and 4 (33%) following SPDP ($P=0.6973$). Pancreatic fistula was noted in 7 (13.46%) patients (46.66% of all PC) : 4 (10%) following DPS and 3 (25%) following SPDP ($P=0.1818$). Acute pancreatitis was noted in 2 (5%) patients following DPS (3.84% of all patients and 13.33% of all PC) ($P=0.4296$). Fluid collection was noted in 7 (13.46%) patients (46.66% of all PC): 6 (15%) following DPS and 1 (8.30%) following SPDP ($P=0.5580$). Wound infection was noted in 2 (5%) patients following DPS (3.84% of all patients and 13.33% of all PC) ($P=0.4296$). The other complications occurred in 3 (7.5%) patients following DPS (5.76% of all patients and 20% of all PC) ($P=0.3284$). Reoperations were performed in 8 (15.09%) patients: 6 (15%) following DPS and 2 (16.66%) following SPDP ($P=0.8888$). Mortality rate was 0%. A higher platelet count was recorded in 18 (34.6%) patients: 15 (37.5%) following DPS and 3 (25%) following SPDP ($P=0.4247$).

Postoperative short-term outcome was comparable in patients following DPS and SPDP.

Keywords: pancreatectomy, distal pancreatectomy with splenectomy, spleen-preserving distal pancreatectomy, splenectomy, postoperative complications, general surgery

Parenteral nutrition in gastrointestinal surgery

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Parenteral nutrition (PN) is very important issue in gastrointestinal surgery because a lot of patients are malnourished. PN may have impact on patients's general health, clinical postoperative outcome and time of recovery.

Analysis of indications for parenteral nutrition and its effect on selected laboratory parameters.

Analyzed group included 114 patients (Female 50 / Male 64) , aged 22-90, hospitalized from December 2016 to October 2018, given parenteral nutrition in Department of Gastrointestinal Surgery. The medical records of parenterally nutritiushed patients were collected and reviewed. Different clinical and laboratory parameters were analyzed.

One hundred two (102) patients, out of 114 (87.47%) were operated on. Postoperative complications were noted in 37% operated patients. Among analyzed group, 82% patients had parenteral nutrition after surgery, 5,2% before and 12,4% after and before the surgery . Pancreaticoduodenectomy (27) and gastric resection (14) were the most common surgical procedures after which parenteral nutrition was used. The other indications for PN were: pancreatic fistula (9), intestinal fistula (11), acute pancreatitis (10), ileus (14). The average time of using parenteral nutrition was 14,7 days and duration of hospitalization was 33 days. Thirty per cent (30%) of patients were admitted to intensive care unit due to acute respiratory failure.

Parenteral nutrition was most frequently used in patients after surgery. The most common indication for parenteral nutrition was pancreatic head tumor in postoperative course and gastrointestinal obstruction.

Keywords: general surgery, parenteral nutrition, gastrointestinal surgery



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF GYNAECOLOGY AND OBSTETRICS

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Up or down? Prolactin level after endometrial cancer surgery

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Prolactin (PRL) is a single-chain peptide hormone having a dual role in human body. A role of a hormone that is secreted into the blood and a role of a cytokine. It is mainly produced by cells of anterior pituitary, as well as by such organs as ovary, endometrium, placenta, breast glands and in some diseases – for example – cancers.

The aim of our study was to assess the prolactin level in patients with endometrial cancer before and after the surgery.

A total of 20 female patients hospitalized at Gynaecological Ward of UCK hospital in Katowice were involved. We assessed the levels of prolactin in these patients before and after the surgery.

The results of our study showed that the levels of prolactin had not decreased after the removal of the tumor.

The level of prolactin is said to be the appropriate indicator of the endometrial cancer. According to many articles, the level of prolactin should decrease after the surgery. Our results are adverse. That is why further research in this topic should be done.

Keywords: prolactin, endometrial cancer

Analysis of cardiotocographic traces and obstetric outcomes associated with the misoprostol vaginal insert during labor induction

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Misoprostol is a synthetic prostaglandin E₁ which allows controlled cervical ripening and it is used to induct labor. There are many indications to induct the labor such as postterm pregnancy, hypertension, oligohydramnios, gestational diabetes, obstetric cholestasis. Cardiotocography (CTG) enables to assess fetal wellbeing after misoprostol insertion.

The aim of this study was to evaluate the impact of misoprostol on cardiotocographic and obstetric outcomes.

The study group consisted of pregnant women aged 24 to 36, who qualified for labor induction with misoprostol. We analyzed CTG abnormalities, fetal heart rate, and obstetric outcomes before, during and after misoprostol insertion.

The most common indication for misoprostol insertion was postterm pregnancy (67%) and hypertension(17%). The average time to vaginal delivery and caesarean section was 18h 58m. CTG abnormalities after misoprostol involved decelerations and minimal variability of fetal heart rate. The pre-misoprostol LTV was 45,6ms on average while STV was 7,9ms on average. After the administration of misoprostol mean LTV changed to 38,9ms and mean STV changed to 5,6ms.

Misoprostol is a safe method of labor induction, however, it has an impact on cardiotocographic traces and obstetric outcomes. Study in progress.

Keywords: misoprostol, prostaglandins, cardiotocography, pregnancy, labor, induction

Non-contraceptive benefits and therapeutic uses of oral antiandrogenic contraceptive pill

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Using antiandrogenic contraception is one of the methods of birth control. It also has a significant, non-contraceptive impact on women's body. Those drugs can be used in various disease entities, especially in those with elevated level of androgens, because of its ability to reduce the level of male hormones.

The aim of our study is to establish correlation between taking different types of antiandrogenic drugs and intensity of hirsute, acnes and menstrual pain in women body.

570 women in childbearing age that had been using this type of contraception for at least three months took part in our research. An anonymous survey has been conducted. It consisted of questions about: quality of life, health and direct causes and effects of that treatment. In order to rate the intensity of hirsutism we used the Ferriman and Gallwey scale. Our research group has been divided into 4 groups depending on the type of active ingredient: dienogest, cyproteron, chlormadinon and drospirenon. The control group consist of women taking hormonal contraception excluding the antiandrogenic group.

Examined women are in the 17-35 age bracket, most of them in informal relationship. According to our study, all groups of drugs effectively reduced pain and acne severity. Cyproteron decreased hirsute intensity on chin, thigh and buttock, chlormadinon on underbelly and thigh, drospirenon on buttock and thigh.

The choice of a particular group of antiandrogen drugs is important for reducing hair in specific parts of the body. According to our research, all medicines reduce pain and acne severity.

Keywords: antiandrogenic contraception, hirsutism, acne, menstrual pain

Most wanted: the women's knowledge of the puerperium - has anyone heard, does anyone know?

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The puerperium is the period of 5-6 weeks which commences following completion of third stage of labour. According to the World Health Organization and many other sources of information – the puerperium is the most neglected and dangerous period in a woman's reproductive life. This paper reviews the women's knowledge of the puerperium.

The aim of our study was to examine basic and current information about the puerperium among women.

The applied method is the evaluation of answers received from the online questionnaire. Our questionnaire collected information on socio-demographic data and health-related issues concerning the puerperium from 3349 women. The data was analysed using the Excel and the Statistica.

The results of the questionnaire show a current women's knowledge of the puerperium. On the basis of the results analysis, it can be concluded that the factors such as the level of education, the source of information, the age and past childbirths are crucial in this research. Our results show that almost two fifth (39%) of answers were incorrect and still the dominant data source is the Internet.

The conclusion drawn is that the knowledge of the puerperium among women is still deficient despite the relatively easy access to various sources of information. The knowledge of the postpartum period depends on many factors such as the education, sources of knowledge, age and previous childbirths. The results also indicate that this topic needs to be exported by gynaecologists and midwives - as reliable sources of information.

Keywords: women's knowledge, puerperium, pregnancy, labour, motherhood, postpartum period, childbirth

Sleep quality and disorders in pregnant women

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Sleep is one of the basic biological functions necessary for the proper functioning of the body. Most pregnant women experience deterioration of sleep quality, and sleep deprivation is the most commonly reported disorder. Sleep disturbances may have a negative impact on pregnancy, delivery and may increase the risk of pregnancy and postnatal depression.

The aim of the study was to assess the quality of sleep in pregnant women and to determine the frequency and type of sleep disorders in individual trimesters of pregnancy.

The research group were 285 respondents (age 21 and 40) tested by CAWI technique. In method's was used questionnaire consisting of 30 questions addressed for pregnant women. For statistical analysis authors used IBM SPSS Statistics.

The avg age of pregnant women was 24 (SD \pm 4.6). The primagravida were 46.3% of the studied group. Sleep duration in the study group was 7.5 hours on avg (SD \pm 3.7). Sleep disorders, consisting of frequent waking at night, were found in 62.8% in the first trimester of pregnancy. Three-four-wake-up at night was experienced by 35.5% of respondents. In 83.6% the cause of insomnia was the need for nocturnal micturition. 42.3% of women reported irregular lifestyle and pain as the cause of insomnia. 60.3% of the surveyed women reported moderate levels of stress in pregnancy. >70% of pregnant women, sleep disorders affected the mental and physical condition.

Pregnancy affects the quality and occurrence of sleep disorders in women in every trimester of pregnancy. Frequent waking up at night was the most common cause of sleep disorders in pregnant women

Keywords: sleep, pregnant women, sleep quality, disorders

Diagnostic hysteroscopy - comparison of women with primary and secondary infertility

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A significant number of infertility cases is caused by uterine malformation or endometrial dysfunction.

The goal of this study was to check whether there are any differences in hysteroscopy findings between women with primary and secondary infertility.

The subjects of the retrospective study were 308 infertile patients treated in the Department of Gynecological Endocrinology CMUJ in years 2015 – 2017. Women with primary (Group1) and secondary infertility (Group2) as well as subgroups within secondary infertility (those who had delivered vs those who had only miscarried) were compared with each other based on the hysteroscopy findings.

Of 308 cases 155 (50,3%) had primary infertility and 153 (49,7%) secondary infertility. The average age in both groups was 33,3 and BMI 23. The most frequent lesions in both groups were endometrial polyps, however more common in Group1 ($P=0,001$). In Group2 more characteristic were intrauterine adhesions ($P=0,007$) and intrauterine septum ($P=0,03$). Within the Group2 59 patients (38,6%) had delivered (Subgroup1) and 94 (61,4%) had miscarried (Subgroup2). Women in Subgroup1 were older than in Subgroup2 ($P=0,007$), BMI was similar. The number of hysteroscopy findings per patient was higher in the Subgroup1 ($P<0,001$), Mullerian duct abnormalities ($P=0,03$) were more common in the Subgroup2.

Abnormal hysteroscopy findings concerned about 60% of the cases. There were significant differences in hysteroscopy findings in women with different kinds of infertility.

Keywords: hysteroscopy, infertility

Awareness of emergency contraception among Polish women

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EllaOne is an emergency contraceptive that works by preventing ovulation. Even though it does not terminate an existing pregnancy, it is widely believed to work as an abortion pill.

The aim of this investigation is to evaluate the awareness among Polish women about emergency contraception, as well as to compare the awareness of two groups of women: those who have used the pill (group 1) and those who have not (group 2).

A survey was conducted on 1151 women aged between 15 and 35 years old. They responded to 26 questions regarding emergency contraceptive: usage, effect on menstrual cycle and foetus and side effects. The responses were compared to official drug label of EllaOne, as the exclusive focus of this investigation was Ulipristal acetate contraception.

Findings show that 81% of women in group 1 and 57% in group 2 realise that EllaOne is not an abortive pill. Women who have taken the pill have a better understanding of its effect on their further fertility (64% of correct answers in group 1 vs. 49% in group 2), and about the fact that they should take another pill if vomiting occurs (61% in group 1, 34% in group 2). Moreover, 51% of women in group 1 knew that the pill does not affect the foetus once fertilisation occurs (compared to 36% in group 2). No other significant differences were noticed.

The awareness about emergency contraception among Polish women is quite satisfying. However, women who have used the pill in the past were not significantly more informed. As the effects of medication are largely impacted by the patients' education, there is room for improvement in terms of raising awareness.

Keywords: emergency contraception, day after pill, morning after pill, EllaOne

Behavior and nutrition knowledge analysis of women with abnormally high BMI before pregnancy

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Obesity is getting more widespread among general population – which means, pregnant women are also impacted. In Poland 46% of women has abnormally high body weight. The aim of study was to assess the impact of BMI before pregnancy on eating habits, the amount of kilograms gained during gestation, the way of getting back to the pre-pregnancy weight. Evaluation of test subjects' knowledge regarding eating and calorie requirement was also tested. The results were compared to the control group - women with normal BMI.

The data was collected through on-line questionnaire. 208 women in the age of 18 and 45 for which the last labor took place at most 2 years past were enrolled in this study. The forms from women suffering from chronic diseases were excluded.

Pregnant women with higher than standard BMI were 28% (BMI: 19% - 25-29,99; 9% - over 30) of all subjects. 57% of tested women with BMI over 30 and 45% with BMI 25-29,99 gained more body weight than recommended. 93% of women with abnormally high BMI gave a wrong answer when asked about increasing calories requirement during each trimester. At the same time, only 24% overweight and 21% obese women were informed by their doctors about proper nutrition.

14% of overweight and 36% of obese women knew how long it should take to recoup body weight from before pregnancy. 66% and 57% respectively didn't recover back to the weight before pregnancy in at most 6 months. 42% of women took no action to get to this state.

The study showed that insufficient knowledge and incorrect habits during and after pregnancy exacerbate the problem of high body weight for women with BMI above 25.

Keywords: BMI, pregnancy, overweight, obesity, weight loss

The knowledge of parents of children aged 11-15 years old about the HPV infection and a vaccination as a prevention

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Cervical carcinoma is the second of the most common malignant women's tumor in the world. Every year in Poland about 3000 new cases of cervical cancer are diagnosed, of which 50% die. The modern medicine offers an effective vaccine, recommended for children aged 9-18, but also for adults. It aims to prevent HPV infection, which can lead to i.a. condyloma acuminata or cervical cancer.

Obtaining information whether parents have sufficient knowledge about HPV infection and prophylaxis of infection in the form of vaccinations.

331 respondents took part in the survey. The research was carried out using an anonymous questionnaire, which was distributed during parents' meetings in schools.

Media are the main source of knowledge. 16% of respondents know that boys also should be vaccinated and know the vaccine's price. 55% of the respondents correctly indicated the proper age for vaccination. In 87,5% cases, doctors never initiated conversation with parents about vaccination against HPV. 92% of respondents don't know that HPV causes tumors others than cervical cancer. As the most effective method of protection against infection, the respondents indicated vaccination and barrier contraception.

- (1) Parents do not have sufficient knowledge about HPV vaccinations and the infection itself.
- (2) Inaccurate information and myths about vaccination are still a significant problem.
- (3) The information about the price of the vaccine as well as recommendations for the vaccination of boys and adult women should be disseminated.
- (4) Attention should be paid to the physicians' role in parents' education on vaccination.

Intrauterine myelomeningocele repair by open fetal surgery – comparison between automatic stapling devices and manual suture of myometrium

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Myelomeningocele (MMC) is a birth defect caused by incomplete neurulation, leading to hydrocephalus (HC) and flaccid paraparesis as the most serious. Intrauterine myelomeningocele repair (IUMR) is a procedure restoring circulation of cerebrospinal fluid. Myometrium closure is performed by stapling or hand suturing. It gives neonates a chance for disease negative effects reduction.

Comparison results of patients who underwent IUMR in Department of Gynecology, Obstetrics and Gynecologic Oncology in Bytom, Poland, using staples or traditional sutures.

We analyzed two groups of patients – first consisted of 21 patients underwent operations where sutures were used in 2017-2018; second involved 24 women operated with stapler in 2012-2016.

The most frequent localization of placenta was – anterior in first group 66.7% (n14); posterior in the second one 54.2% (n13). In all group's patients were operated after 24w0d. Only 19% (n4) patients from first group presented iatrogenic preterm premature rupture of membranes (iPPROM) in opposite to second group where iPPROM occurred more than half cases – 54.2% (n13). 61.9% (n13) vs. 16.6% (n4) of patients that underwent IUMR reached over 37w0d and were delivered by cesarean section. The first study group did not require prophylactic tocolysis. The average exact age of birth was 36w2d vs. 32w6d.

The fetal surgery team achieved longer average time of pregnancy almost by 4 weeks. The occurrence of iPPROM was reduced. Therefore, overall negative neonatal outcomes due to prematurity have been decreased. The study shows advantage surgical skills and experience.

Keywords: myelomeningocele, prenatal surgery, Auto Suture, hindbrain herniation

The assessment of various parameters of ovarian reserve

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Ovarian reserve describes the reproductive ability of the woman. This clinical phenomenon is influenced by many factors such as: age, genetics, environment, etc. There is currently no perfect ovarian reserve test. Both antral follicular count (AFC) and antimüllerian hormone (AMH) and their effectiveness are still discussed in many articles.

The aim of our study was to assess different end points of treatment according to ovarian reserve response and pregnancy rate.

In our paper we assess more than 38 female patients that were treated in infertility clinic in Katowice. We measured ovarian reserve by antral follicular count (AFC) and antimüllerian hormone (AMH) level. For the statistical analysis we used Statistica 12.0.

Draft findings showed many correlations between AMH, AFC level and pregnancy rate. 25 (65,8%) of the patients became pregnant and 4 (16%) of them gave birth until March 2019.

The results showed general impact of ovarian reserve on pregnancy rate. We noticed many correlations between ovarian response and pregnancy rate.

Keywords: fertility, amh, afc, ovarian reserve

Is anti-Müllerian hormone serum level associated with phenotype and BMI in women with PCOS?

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Anti-Müllerian hormone (AMH) is a marker of ovarian reserve. AMH serum level is higher in women with PCOS than in healthy women. However, the influence of phenotype and BMI on AMH level is still a subject of debate.

The aim of the study was to investigate the connections between AMH serum level and phenotype as well as BMI in reproductive-aged women with PCOS.

Retrospective research included 96 women with PCOS, age 18-34, with BMI 18,5-43, that were admitted to the Gynaecological-Endocrinology Unit between IX 2018 and I 2019. Patients were divided into 4 groups, depending on their PCOS phenotype. They were also divided into 2 groups, depending of their BMI. The results of physical, gynaecological examination, USG imaging and laboratory tests were analysed. Statistical analysis was performed using Statistica 13.3 - parametric and non-parametric tests, depending on the variables.

There is a statistically significant difference between PCOS phenotypes and AMH level in reproductive-aged women. Medians of AMH level in patients with phenotype A and D were equal - 7,1mmol/l. This value was two fold higher than in phenotype B (3,53mmol/l) and phenotype C (3,92mmol/l). There is also statistically significant negative correlation between BMI and AMH level in patients with PCOS.

AMH serum level depends on PCOS phenotype. The highest level of AMH appears in phenotype A and D. Lower level of AMH appears in phenotype B and C. Women suffering from PCOS with high BMI have statistically lower AMH level than PCOS patients with proper BMI.

Keywords: PCOS, polycystic ovary syndrome, AMH, anti-Müllerian hormone, PCOS phenotype, phenotype A, phenotype B, phenotype C, phenotype D, ovarian reserve, BMI, Body Mass Index, polycystic ovary, polycystic ovaries

Women's fears of natural childbirth- are they justified?

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Natural childbirth in full-time pregnancy, without any medical indications for the caesarean section- is a childbirth more beneficial both for the mother and fetus. In Poland number of natural childbirths is systematically decreasing and the amount of surgical deliveries is increasing (from 27% in 2006 to 43% in 2015).

The aim of this research was to analyze the state of women's knowledge about spontaneous labour and acquire knowledge about the most common fears associated with it.

77 pregnant women hospitalized at Department of Gynecology, Medical University of Silesia had participated in the survey. They had no medical indications for caesarean childbirth. The questionnaire contained 22 questions and was completely anonymous.

Among these women for 28 of them it was a first pregnancy and for the 49- the second one. 98 % of the participants answered that they accept natural childbirth. For 72 % of them natural childbirth was safer for both the mother and the newborn. Pain was the biggest concern for the pregnant women- for both primigravidas (89%) and multigravidas (77%). The second one was the perinatal asphyxia (78% vs 65%). On the basis of the conducted surveys it can be stated that 70% of women were aware that the natural childbirth strengthens the bond between a mother and child, half of them knew that it decreases the number of breastfeeding complications. However, only 35 % of the questioned women realised that natural childbirth decreases the number of cases of childhood illnesses.

The majority of women (72.7 %) think that natural childbirth is safer than caesarean section. However, there are still many concerns, that should be solved by educational activities.

Keywords: obstetrics, women's fear, caesarean section, natural childbirth

Factors influencing acceleration of labour

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For most women, labor begins spontaneously between the 37th and 42nd week of pregnancy. The methods of inducing the parturition have been known since ancient times and their effectiveness has made them applicable to this day.

The main aim was to assess the selected factors of inducing labor such as sexual activity, physical activity, nipples and abdomen stimulation, using primrose oil, raspberry leaves, dates and sage oil. The main question was if the given factor influenced the acceleration of childbirth and how it could affect its course.

The survey group consisted of 602 women who had been pregnant at least once. The research tool was a self-prepared questionnaire including 35 questions which was completed online.

Based on the conducted research, it was shown that 359 women, which is 61.5% of participants, declared that their labor began in a natural way. The analysis of surveys shows that the most popular way of causing childbirth is sexual activity, which was indicated by 91% of respondents. The stimulation of nipples (73.3%) and the use of raspberry leaves (65.1%) were also very popular.

From the research and the results obtained in this way, it may be concluded that the natural ways of causing birth are approved and used, which, when the gestation is properly performed, does not carry any risk of adverse outcome to the mother and fetus. The ways of inducing labour have a significant impact on the acceleration and course of parturition.

Keywords: labour, inducing the parturition, sexual activity, raspberry leaves, physical activity

Am I a woman?

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The case concerns a 25-year-old female patient presents with massive bleeding during sex. Upon further interrogation, she reveals that she has never seen her period. She is admitted to department of Gynaecological Endocrinology in University Clinical Center in Katowice.

Physical examination shows normal breast development, sparse pubic and axillary hair, gonads palpated in inguinal canals. Speculum examination revealed a blind, 8cm-long vagina with normal mucosa, but the uterus and its appendages were not palpable during the bimanual examination. Apart from bleeding, the patient is in good physical condition.

Laboratory tests revealed extremely high level of total testosterone – 8,410 ng/dl (normal range: 0,08-0,48 ng/dl), free testosterone – 50, 37 pg/ml (normal range: 0-2,85pg/dl), elevated DHEAS, LH and AMH (>46 ng/ml, in her age normal range is 0,890-9,85 ng/ml).

Further investigations including; pelvic MRI and ultrasound, confirmed the patient has no uterus and revealed no ovaries, hypoplastic vagina and distorted gonads (probably testicles) in both inguinal canals. The patient underwent genetic testing: she has 46 XY karyotype. Patient has never been diagnosed due to primary lack of menstruation, even though an ultrasound examination revealed lack of uterus few years ago.

Worrying aspect of this case is that nobody; paediatrician or general practitioner, has ever got interested with this problem. Even palpated testicles have never disturbed any doctor or patient's parents.

Effectiveness of McDonald's suture in the treatment of cervical insufficiency

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The paper concerns the treatment of cervical insufficiency and the risk of pre-term birth by using the McDonald's suture method.

The evaluation the effectiveness of cervical cerclage in the treatment of cervical insufficiency and factors affecting on this method.

A group of 87 patients analyzed retrospectively.

Group of 87 patients who were diagnosed with cervical insufficiency. Additional diseases were found in 64,4% of cases. Among them, 46% of patients were treated by McDonald's suture to prevent premature birth. The group of patients with suture was characterized by a higher average age at diagnosis (32.8 years), a higher proportion of women with previous miscarriages (62.5%) and a higher average pregnancy rate (3.0). The most frequent diagnosis was a shortened either closed or permeable at finger point cervix. There were weak correlations between the stage of pregnancy at the time of diagnosis and the number of previous miscarriages and the effectiveness of the suture. In 30% of patients who had suture applied, the duration of pregnancy was extended to min. 38th week. Based on data for 30 patients, the probability of prolonging pregnancy was estimated. Complications after cervical cerclage surgery have been rarely reported.

Considering the usage of the McDonald's suture to prevent miscarriages. Together with the number of pregnancies, the risk of necessity of using a seam increases. Among patients with the McDonald's suture other diseases co-exist more frequently. The usage of a McDonald's suture can affect carrying a child in full term.

Keywords: McDonald's suture, Cervical cerclage, cervical insufficiency, pre-term labour

Pregnancy and menstrual cycle-secret or common knowledge?

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Nowadays, information about women's health is easily accessible but still plenty of myths seem to be spread in polish society. We decided to check the general opinion about some important aspects of this topic.

The aim of the study was to assess the knowledge about pregnancy, menstrual cycle and HPV vaccination amongst polish people. Additionally, men's involvement in prenatal examinations and labor was evaluated.

595 responses were acquired through an Internet survey (496-women and 99-men). The respondents were asked to check all things that women shouldn't do during pregnancy and choose correct answers related to menstrual cycle and HPV vaccination.

The most popular things that shouldn't be allowed during pregnancy were: drinking alcohol and smoking. Surprisingly only 19% ticked sleeping on right side/back in 3 trimester. 42% think that it's impossible to get pregnant during menstrual bleeding. 95% know what is the purpose of cytology but 29% claim that there is no connection between HPV infection and cervical cancer. 38% wouldn't vaccinate their children-the main reason was the vaccination cost. 80% men don't go with their partners to gynecologist, mostly (44%) because women don't want them to. 77% men was or would like to be present during labor.

Most of the respondents know what can be done during pregnancy, however nearly 20% still believe that alcohol in small quantities is acceptable. Menstrual cycle is often confused with menstrual bleeding and one third of the respondents claim that there is no connection between HPV and cervical cancer. That is why the proper education is so essential. Special attention should be paid to the HPV vaccination topic.

Keywords: pregnancy, HPV vaccination, menstrual cycle, knowledge, stereotypes, male, female

Students' competences before and after OBGYN classes in center for medical simulation

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During an OBGYN course for undergraduate medical students different types of activities are performed – seminars, interviewing patients, participation in department duties, and classes in center for medical simulation.

The aim of the study was to analyze students' subjective assessment of their practical skills and anxiety associated with individual patient management – before and after the classes.

26 students answered anonymous questionnaires before and after the OBGYN classes, assessing their skills, confidence and anxiety of independent patient management using Likert scale. Simulations included physiological delivery trained with Victoria S2200 Birthing Delivery Simulator, 3rd trimester obstetric ultrasound performed on mannequin with ACUSON NX2 Ultrasound System, and perineal repair using silicone episiotomy and suturing simulators.

Competences associated with delivery were assessed as increased –delivery in a hospital ($p=0.001$) and outside the hospital ($p<0.001$). Obstetric ultrasound competences were assessed as increased regarding fetal presentation ($p<0.001$), estimation of fetal weight ($p<0.001$) and placental location ($p<0.001$). Suturing skills and perineal repair were also assessed as improved after the classes ($p<0.001$).

No change in anxiety levels associated with individual patients management in real life situations -delivery, ultrasound and perineal repair - were observed. Participation in classes in center for medial simulation is an effective way of teaching practical skills needed in OBGYN. However, it does not affect the way students perceive their readiness for management of real patients.

Keywords: medical simulation, OBGYN, patient management, delivery simulation

Determining sexual attitudes, behaviour, and knowledge of young people about sexual health and sexually transmitted infections

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Sexually transmitted infections (STIs) are among the main causes of unpleasant diseases in young adult males and females in developing countries. Adolescents and young adults (16-24 years old) make up only 25% of the sexually active population, but represent almost 50% of all newly acquired STIs.

A sample representing various social environment was studied. Between January and February 2019 anonymous participants were interviewed by means of partially structured questionnaire, in order to determine their level of awareness of STIs, HIV infection, AIDS and contraception with its relationship to their sexual behaviour and contraceptive practice. 2205 questionnaires were filled.

The mean age of the respondents (52.9% male) was 20.07 ± 1.75 years. The rate of students who had received sexual health education was 32.0%, and 15.3% had previously used a sexual health service. Of the students who had had sexual intercourse, 46.6% reported that they did not use any contraception method. The most preferred method was condoms (37.6%). The rate of contraceptive use was 58.7% in sexually educated students and 43.9% in those not educated ($p=0.004$). The most well-known STI was AIDS (96.5%), with sexually educated students giving higher rates of correct answers about STIs ($p<0.05$).

The students, who had received sexual health education, were more knowledgeable about vital consequences of STI's, than other sexually active students. Awareness of safe sexual practices and changes in behaviour, especially promoting condom use should be established in all youth. Deficiencies in knowledge could be addressed by adding a sexual health training component to the university and school curriculum.

Keywords: Sexual Education, Sexually Transmitted Infections



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF INTERNAL MEDICINE

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Mode of type 2 diagnosis among poorly controlled type 2 diabetes

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Type 2 diabetes mellitus (T2DM) concerns 425 million people all over the world and 1 in 2 cases remains undiagnosed. Screening should be performed annually regardless of age and risk factors occurrence. It is not known what is the main way diabetes is recognised (symptoms or screening) in the general population.

To assess the mode of T2DM diagnosis among patients with type 2 diabetes.

Patients with T2DM hospitalised in the Diabetology Ward were interviewed regarding the mode of T2DM diagnosis and presence of risk factors at the time of diagnosis as well as the time of diabetes duration, complication occurrence and actual HbA1c levels.

There were 100 patients with T2DM (57% women, 43% men) in the mean age 55.5 ± 16.11 , mean time of diabetes duration 8.9 ± 7.9 and mean HbA1c level 7.78 ± 1.75 . There were 85 patients with risk factors of T2DM and 48 (56.5%) of them was diagnosed thanks to a screening test. Among 15 patients without risk factors of diabetes 10 were above 45 (66.7%) and 7 of them were diagnosed based on symptoms. The statistical significance ($p=0.0486$) showed by Fisher's exact test is between the presence of T2DM risk factors and diagnosis by a screening mode.

Almost half of the cases had a diagnosis made due to symptoms occurrence and among patients with risk factors the number of patients with diabetes symptoms at diagnosis was as high as 43.5%. Over 46% of patients without risk factors and the age above 45 had diabetes diagnosed due to symptoms occurrence. The outcomes suggest that there is still a high number of people diagnosed at the time of advanced hyperglycemia what poses a risk of complication development.

Keywords: diabetes t2dm

Serum potassium levels among patients with nephrolithiasis and diabetes type 2

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The prevalence of nephrolithiasis is rising along with increasing rates of obesity, type 2 diabetes mellitus (T2DM), and metabolic syndrome. In 2016 the analyses of the MESA (Multi- Ethnic Study of Atherosclerosis) cohort identified significant although small inverse associations between serum K and fasting glucose.

Association of serum potassium level among T2DM patients with nephrolithiasis compared to the patients without kidney stones.

Consecutive patients hospitalised in Diabetology and Urology Ward were included into the observational study and serum potassium level as well as fasting plasma glucose (FPG) were analysed.

There were 268 patients, 45.52% women and 54.48% men, in mean age 54 ± 12.81 , mean K^+ level 4.43 ± 0.40 (mmol/l) and mean glucose level 132.41 ± 43.79 (mg/dl). Patients were divided into four groups. Group I (29.10%) of non-T2DM patients with a single nephrolithiasis episode, group II (48.88%) of T2DM patients with a single kidney stones episode, group III (17.91%) of non-T2DM patients with recurrent nephrolithiasis and IV (4.10%) of patients with T2DM with recurrent kidney stones. Spearman rank coefficient did not show statistically significant correlation between potassium and fasting glucose concentration in all but IV group ($p < 0.05$).

Both diabetes and recurrent nephrolithiasis may lead to chronic kidney failure. The fact that high FPG level is associated with low potassium only in the group with recurrent nephrolithiasis indicate that this ion may play a role in such process. Whether it is the cause or the effect of pathophysiological process needs to be elucidated.

Keywords: potassium nephrolithiasis diabetes t2dm

Vascularity within thyroid nodules on ultrasonography examination as a predictor of malignancy

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In recent years the significance of thyroid ultrasonography has been emphasised. US provides us with a wide variety of information about thyroid nodules, such as size, shape, vascularity etc.

The aim of this research is to ascertain the correlation between different vascularity types within thyroid nodules and its histopathological type.

Retrospective analysis of 73 patients, which underwent US examination of thyroid, was performed. The relationship between vascularity (based on US examination) and histopathological type (based on postoperative diagnosis) was calculated using percentage and chi-squared test. All of the patients underwent surgery of total or subtotal thyroidectomy in The Clinic of Surgery, Gastroenterology and Endocrinology in Wrocław.

Average age of patients was 49,9 years (range: 16-84; SD=17,84). Totally 94 of the thyroid nodules were investigated in terms of vascularity. Among 60 (62,5%) nodules signs of vascularity were absent. Due to the postoperative diagnosis 68 (70,8%) of nodules were malignant. In the group of benign nodules nodular goitre was the most frequent, while papillary cancer dominated among malignant lesions. 7 (25%) of benign nodules and 29 (43%) of malignant nodules had vascularity. Although malignant part of nodules made the greater percentage share of vascularity, no statistical significance was proved ($p=0,1$).

Even though vascularity is more frequent among malignant lesions, it is not a reasonable predictor of malignancy. We ought to consider using other markers.

Keywords: ultrasonography, thyroid nodules, vascularity, malignancy

Quality of sleep in patients suffering from diabetes

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Sleep is essential component in life of every human. Poor quality of sleep leads to series of consequences, which is felt mostly during the day. Current observations indicate that patients suffering from diabetes complain for worsened sleep quality.

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

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

Research in progress. So far 297 respondents took part in the study - 21% of them suffers from diabetes. The average time needed to fall asleep for respondents with diabetes was 47 minutes. The average sleep time was 6 hours 24 minutes. In Epworth Sleepiness Scale the respondents scored 8 points, which is within the normal range. Only 7% of respondents rate their sleep quality as very good and 44% rate it as bad.

Current results suggest that patients with diabetes often suffer from sleeping disorders and quality of their night rest is not adequate to their personal needs. Further observations are required.

Keywords: sleeping disorders, diabetes

Impact of different variants of visfatin's gene on late complications of diabetes

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Visfatin (nicotinamide phosphoribosyltransferase- NAMPT) is a multifunctional adipokine which can be expressed in different tissues such as kidneys, brain and visceral adipose tissue. NAMPT takes part in many molecular processes including inflammation, cell proliferation, apoptosis. Visfatin also affects the glucose metabolism and is involved in pathogenesis of insulin resistance, diabetes, obesity, atherosclerosis. Additionally, studies suggest that visfatin also may be associated with development of diabetic retino- and nephropathy.

The aim of the study is the assessment of dependents of different variants of visfatin's gene with occurrence of late complication of diabetes.

Data for the study were DNA samples from 209 patients with diabetes- 110 men and 99 women. Selected DNA fragments were amplified and marked. Visfatin's gene in rs4730153 was examined. The Real Time PCR was conducted with fluorescence-labelled probes.

The most common genotypes were heterozygote AG- 112 patients (53,59%) and homozygote GG- 66 patients (31,58%).

In the study group there are 67 diabetics with retinopathy, 20 with nephropathy, 56 with neuropathy and 74 with macroangiopathy.

It has been assessed using χ^2 test that there are no differences between variability of different variants of visfatin's gene in distribution of genotypes. Results of the test of Hardy-Weinberg show that the variety of population is maintained.

Basing of statistical test v Cramer there is a low level correlation between genotypes in research group and retinopathy (0,144), neuropathy (0,154).

Keywords: visfatin, gene polymorphism, diabetes mellitus

Evaluation of the influence of distance of cellular network relay stations (BTS) on the presence of adrenal tumor and on diurnal secretion of catecholamines

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Mobile phones are now an integral part of the everyday life. Numerous base stations relayed in large numbers and operating at high frequencies often raise public concern and controversy in the scientific world, an example of which may be signed by many scientific centers 5G-appeal in 2015.

The aim of the study was to evaluate the impact of the location of cellular network relay stations (BTS) on the place of residence of patients for the characteristics of adrenal tumors.

Data of 101 patients hospitalized due to adrenal tumor were obtained. Using the BTS internet map, the patient addresses were verified in terms of distance from BTS and in terms of the number of BTSs located within 1km from the place of residence of the patient.

The study so far looked that the tumors in 51.49% concerned the left adrenal gland. Adrenalectomy was diagnosed in 9.9% of patients. The average number of transmitters within a radius of 1000m from the place of residence was 4, while the median distance from the nearest LTE transmitter was 330m. There was no significant relationship between the distance from BTS and their number within a radius of up to 1 km and the location of tumors.

Based on the results it can be assumed that there is no relationship between the distance of the BTS relay station and adrenal tumor traits - they are deep structures, and the hormones secreted by them are not steroid-shaped, therefore they probably will not react effectively to radiation.

Keywords: BTS, electromagnetic field, adrenal gland

Effect of aspirin desensitization on clinical factors in Aspirin Exacerbated Respiratory Disease patients- a one-year follow-up study

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Aspirin Exacerbated Respiratory Disease (AERD) consists of the clinical triad included asthma, chronic rhinosinusitis with nasal polyposis and aspirin hypersensitivity. Aspirin desensitization (AD) is regarded as an effective and well-tolerated therapy for patients with AERD.

The aim of our study was to investigate the influence of AD on clinical factors such as asthma control, nasal symptoms and baseline FEV1 in patients with AERD.

This is a prospective study of thirty-four AERD individuals subjected to 52 weeks of AD. At baseline and in the 52nd week of AD the following evaluations were performed: Asthma Control Test (ACT), Visual Analogue Scale (VAS) for the assessment of nasal symptoms and spirometry. For statistical analysis, summary statistics and Student's t-test were used.

There was a statistically significant improvement in ACT score ($p=0.005$) and VAS score ($p<0.001$) in the 52nd week of AD. Long-term AD did not influence baseline FEV1 ($p=0.69$).

Outcomes of our study indicate that aspirin AD is effective. Patients report improvement of asthma control and nasal symptoms.

Keywords: asthma, AERD, aspirin desensitization

Comparison of quality of life in patients' with lung cancer and idiopathic pulmonary fibrosis during treatment

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Lung cancer (LC) and idiopathic pulmonary fibrosis (IPF) are chronic respiratory system diseases, which are characterized by progressivity, severity of symptoms, presence of multiple side effects connected with disease as well as with treatment. All these factors have important impact on decreasing quality of life, especially quality of health.

The aim of this study is to compare disease influence on quality of life in patients with LC and with IPF during treatment.

Surveys assessing quality of life were taken by patients with IPF (n51), who were qualified to pirfenidone treatment program in Department of Lung Diseases and Tuberculosis in Zabrze and patients with lung cancer (n72). They filled surveys medium after first 4 months of pirfenidone therapy or 5 months after lobectomy. The most burdensome symptom was dyspnea, assessed by Borg Scale, Medical Research Council dyspnea scale (MRC), Baseline Dyspnea Index (BDI). Demographic and clinical data were collected retrospectively (Body Mass Index (BMI), 6 minute walking test (MWT)).

Groups of patients were similar in age (64vs.68) and BMI (27.8vs.28.8). Non significant differences were noticed in most domains SF-36 between patients with IPF and LC. In BP domain results were statistically significant. It may be caused by undergoing surgery by LC patients. IPF group showed higher average in 6 MWT (428mvs.373m). They also assessed their mental health as worse comparing to the other group.

IPF and LC patients show impaired quality of life. Range and degree of decreasing quality is similar in both groups.

Keywords: idiopathic pulmonary fibrosis, lung cancer, quality of life, pirfenidone, lobectomy

Impact of endoscopic ultrasound-guided fine-needle aspiration for diagnosis and management of pancreatic neuroendocrine neoplasms

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Pancreatic neuroendocrine neoplasms (PNETs) account for approximately 5% of primary pancreatic tumors. Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) is recognized as a safe and accurate technique for diagnosing pancreatic lesions. However, its impact for management of PNETs patients is poorly investigated.

The aim of the study was to investigate the influence of Endoscopic Ultrasound-guided Fine-Needle Aspiration on diagnosis and management of patients with suspected pancreatic neuroendocrine neoplasms.

The study group included 39 patients with suspected PNETs who underwent EUS-FNA during hospitalization in Department of Gastroenterology and Hepatology in Katowice over one year (2018). We evaluated the number of cases with diagnosis provided by EUS-FNA and analyzed retrospectively its impact on clinical management according to different endpoints such as indication for pharmacological treatment, surgery or surveillance.

Among 39 patients with suspected PNET, pancreatic lesion was found in 27 (69,2%) cases. Biopsy with histological sample was performed in 26 cases. EUS-FNA identified a neoplastic lesion in 18 (69,2%) samples. PNET was identified in 15 (83,3%) of them. 2 (11.1%) of them were identified as IPMNs and 1 (5,6%) was identified as an Adenocarcinoma. Among 15 patients diagnosed with PNET, surgery was indicated in 6 cases, 4 received a pharmacological treatment and 2 was under surveillance. 3 patients still wait for management decision.

EUS-FNA seems to be a method of choice for diagnosis of PNETs. EUS-FNA influence in diagnostic process and clinical management is comparable with available data concerning other types of pancreatic neoplasms.

Keywords: pancreas, pancreatic neuroendocrine neoplasm, endoscopic ultrasound-guided fine-needle aspiration

Occupational swelling among medicine students

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Occupational swelling is defined as edema of lower limbs occurring after a long period of standing or sitting. Its presence is often independent of cardiovascular, renal, hepatic or other body fluid retention causing disorders. It was shown in a literature, that working time and severity of edema are highly correlated, however its incidence among medicine students has not been yet investigated.

Investigation of lifestyle influence on frequency and severity of lower limbs swelling formation among medicine students.

Analysis of survey conducted among students of Polish medicine universities. Questions present in a questionnaire encompass known and possible risk factors. Alongside the survey, we gathered the measurements of students calves circumferences at the beginning and the end of the day.

Survey shows that 31% out of 245 responders experience occupational swelling. 55% of students complaining about edema make the increased severity conditional upon classes attendance. The presence of the oedema diagnosed according to the survey results was confirmed in the objective evaluation by the means of the leg circumference measurement performed after waking up and in the evening hours.

Occupational swelling is common with medicine students not burdened with other risk factors. Edema severity is increased by the classes duration and timetable arrangement.

Keywords: occupational swelling, lower limbs swelling

Assessment of factors influencing duration of hospitalization of patients with diabetic ketoacidosis

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Diabetic ketoacidosis (DKA) is an acute complication of diabetes mellitus. Among diabetics, the prevalence of DKA is 46-80 people per 10,000 person-years, and the mortality rate ranges from 4 to 10%. Research in this field is highly needed, especially as there are no analyzes for circulating, seasonal and annual factors potentially influencing DKA occurrence.

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

The study was carried out in a retrospective form. The study group consisted of patients from our Clinic, hospitalized for DKA. Medical documentation was analyzed in terms of such factors as the date of occurrence of DKA, results of laboratory tests, chronic diseases etc. The obtained information was subjected to statistical analysis using the STATISTICA 13.0 and Microsoft Office Excel. The documentation of 99 patients has been analyzed so far.

Median time of hospitalization of a patient with DKA was 7.68 days - there was a difference in the duration of hospitalization depending on type of diabetes (DM1 vs DM2: 7.17 vs 7.94 days) and patients' awareness. There was a significant correlation between the time of hospitalization and glycemia at admission to the hospital ($R=0.28$; $p=0.005$).

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

Keywords: Diabetic ketoacidosis, DKA, diabetes

What patients suffering from idiopathic pulmonary fibrosis could observe during half a year of pirfenidone therapy?

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Idiopathic pulmonary fibrosis (IPF) is a progressive lung scarring of unknown etiology. Even the prognosis is poor, since 2017 among Polish patients an access to free medicine – pirfenidone – is possible. Unfortunately, there is little information about symptoms and quality of life during antifibrotic therapy.

This study aimed to evaluate how pirfenidone treatment influences patients' quality of life as well as general symptoms.

Between May 2017 and December 2018 proper data were collected. A total of 33 consecutive IPF patients (26 male and 7 female) with a median age of 67 were selected as a study group. We asked them to complete questionnaires assessing quality of life (SF-36, SGRQ), cough (LCQ), dyspnea (MRC, BDI) and fatigue (FAS). The surveys were performed before, after 3 and after 6 months of pirfenidone therapy. For statistical analysis ANOVA test was used. A p value of < 0.05 was considered statistically significant.

The present study highlighted the improvement of quality of life (SF-36, SGRQ) and cough perception after 3 and 6 months of pirfenidone treatment. Although the results are not statistically significant ($p > 0.05$), clinical changes in our patients' health are remarkably noticeable. After 6 months, 36 % of patients reported improvement and 21% deterioration in quality of life, 45% improvement and 21 % deterioration in decreasing cough intensity. Dyspnea and fatigue did not change.

Patients suffering from IPF and treated with pirfenidone, after 6 months of therapy, could expect positive effects which are better quality of life and less intense cough symptoms.

Keywords: idiopathic pulmonary fibrosis, quality of life, pirfenidone, cough

Significance of congestive heart failure as a cause of pleural effusion.

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Epidemiological data on the causes of pleural effusion (PE) are scarce. Data on the local prevalence of various causes of PE may play a crucial role in the management strategy of patients with PE.

The aim of the study was to investigate the causes of PE and to assess 30-day mortality rate in unselected adult patients treated in a large, multidisciplinary hospital.

Retrospective analysis of medical records, including chest radiographs, of 2835 consecutive patients admitted to the hospital was performed. Radiographic signs of PE were found in 195 of 1936 patients in whom chest radiographs were available. These patients formed the study group.

The leading causes of PE were as follows: congestive heart failure (CHF; 37.4%), pneumonia (19.5%), malignancy (15.4%), liver cirrhosis (4.2%) and pulmonary embolism. The cause of PE in 6.7% patients was not established. There was a significant predominance of small volume PE as compared to a moderate or large volume PEs (153, 28 and 14 patients, respectively). Almost 80% of patients with CHF presented with small volume PE, while almost 50% of patients with malignant PE demonstrated moderate or large volume PE. Thirty-day mortality rate ranged from 0% for tuberculous pleurisy to 40% for malignant PE (MPE).

Pleural effusion was found in 10.1% of patients treated in a large multidisciplinary hospital. CHF was the leading cause of PE. Although 30-day mortality in patients with CHF was relatively high, it was lower than that in parapneumonic PE and MPE.

Keywords: cancer; congestive heart failure; epidemiology; pleural effusion; pleuritic; pneumonia; tuberculosis

Influence of renal denervation on blood pressure and number of admissions to emergency units in patients with resistant arterial hypertension

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Renal denervation (RDN) was introduced several year ago for treatment of the resistant arterial hypertension. However the results of studies concerning clinical effectiveness of this method are inconsistent.

The aim of this retrospective, observational, clinical study was to investigate the influence of catheter-based renal denervation on blood pressure and number of admission to emergency units in patients with resistant arterial hypertension.

In 28 patients with resistant arterial hypertension renal denervation was performed using the RF ablation catheter. Results obtained before, 3 and 12 months after this procedure, such as blood pressure, number of admission to emergency units in relation the hypertension crisis as well as clinical data were based on patients' hospital records.

RDN was followed by the decrease of systolic ($p<0.001$) and diastolic ($p<0.001$) blood pressure. The mean blood pressure before RDN was 189.6/111.9 mmHg. 12 months after RDN mean blood pressure decreased to 160.0/92.5 mmHg. Positive correlations were found between initial systolic and diastolic blood pressure and the decrease of both systolic ($p<0.002$) and diastolic ($p<0.002$) blood pressure. Significant negative correlation was found between decrease of systolic blood pressure and BMI ($p<0.002$). Significant reduction of number of admission to hospital emergency units ($p<0.001$) after RDN was also noted.

Renal denervation leads to the significant reduction of blood pressure during 12 months observation, which subsequently reduces the number of admission to emergency units in patients with initially resistant arterial hypertension.

Keywords: Renal denervation resistant hypertension admissions to A&E BMI

Association between the level of calcium and the occurrence of metabolic syndrome

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Calcium plays an important role in several biochemical processes. Association between calcium and the biochemical changes leading to metabolic syndrome (MS) remains controversial.

The aim was to study correlations between the occurrence of the metabolic syndrome and level of calcium and phosphates.

The following analysis is a part of the MAGNETIC project. Individuals aged 18 – 35 were divided into 2 groups: P-CAD (myocardial infarction, percutaneous coronary intervention or coronary artery bypass grafting before the age of 55 in men, and 65 in women) in first-degree relatives (cases) or lack thereof (control group). The group of slim individuals (489) was divided into two subgroups: healthy slim patients (418) and slim patients with MS (71).

We have found higher level of calcium in the group of slim individuals with metabolic syndrome compared to healthy slim individuals (2,29 mmol/L vs. 2,26 mmol/L) along with higher levels of phosphate in the latter. Among slim patients the calcium level was higher and that of phosphate lower in MS group when compared to healthy individuals. Association between levels of calcium/phosphate and respective metabolic changes leading to metabolic syndrome in slim individuals are especially interesting as the outcome is unaffected by overweight or obesity. Such statistically correlations are not found among obese patients.

Summarizing, our results supports the presumption that calcium level may be a positive indicator for the metabolic syndrome in slim individuals.

Keywords: metabolic syndrome, calcium, phosphate

Improvement of liver function after successful antiviral treatment in cirrhotic patients infected with hepatitis C virus

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The new direct acting antivirals (DAA) have opened access to treatment also for patients with liver cirrhosis infected with hepatitis C virus (HCV). In this group of patients, the beneficial effect of viral eradication on the further clinical outcome is relatively assessed.

The aim of this clinical, retrospective study was to analyse the potential influence of HCV eradication with DAA on liver function in patients with decompensated liver cirrhosis

Twenty nine patients (16M/13F, mean age 59 ± 14 years) with liver cirrhosis (median liver stiffness 29,1kPa [21.30-4.30] evaluated with transient elastography) after successful therapy of HCV infection were analysed. Liver function tests, including alanine (ALT) and aspartate (AST) aminotransferase and gammaglutamyltranspeptidase (GGT) serum activities, serum albumin and bilirubin levels as well as prothrombin time, were estimated before and at the end of treatment (EOT), 24 and 48 weeks after EOT. Severity of liver cirrhosis was estimated using Child-Turcotte-Pugh (CTP) classification in the same control points.

During DAA therapy, serum activities of ALT, AST and GGT decreased significantly ($p < 0.001$, for each). Up to 48 weeks after EOT, albumin serum concentration increased significantly ($p < 0.001$) and bilirubin serum concentration decreased ($p < 0.05$) resulted in decreasing the CTP score ($p < 0.01$).

Resolution of HCV-induced inflammation as a result of effective antiviral therapy caused gradual improvement in liver function and severity of cirrhosis during the one year after EOT. Longer observation is needed in order to assess the sustainability of this recovery.

Keywords: liver function, hepatitis C, direct acting antivirals

Stress – many sights of an one medal

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During the stress, the body produces hormones that make the heartbeat and breathing increased in order to supply blood to organs quickly. The liver produces more glucose to give more energy. There is stimulation of the immune system and tension of muscles. All these things provide protection and reaction of the organism from stress. As chronic stress is an integral part of a modern person lifestyle. We need to know all effects on the human body.

I want to investigate the effect of stress on the nervous system.

The work is based on results of the questionnaire about feeling stress and academic success of 1st (35students) and 4th-year students(40). We chose 1st-year students as they are supposed to feel stress more than the 4th ones.

Our poll shows that academic success depends on the existence of stress. 28 students of the 1st year (from 35) have chronic stress and lower marks than others. 17 students of the 4th year have chronic stress and lower marks too.

Stress is not only a reason for different diseases, but it also can decrease the intelligence of students. There are a lot of conditions like changes of hormonal status - an increased level of cortisol and a decreased level of testosterone, insulin and serotonin. And, of course, people often have many bad habits as overeating, smoking, alcohol abuse.



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The impact of glucose metabolism disorders on changes in echocardiographic parameters six months after acute myocardial infarction treated invasively

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There are just a few studies concerning the echocardiographic outcomes of patients with acute myocardial infarction (AMI) treated with percutaneous coronary intervention (PCI), focusing on the influence of GA on those parameters.

The aim of the study was to evaluate echocardiographic parameters in patients with GA who had AMI and were treated with PCI.

Single-center, prospective study encompassed 525 patients with AMI treated invasively. Patients with GA (n=306, 58,3%) were compared to the control group without GA (n=219, 41,7%). GA were defined as impaired glucose tolerance (IGT) or diabetes mellitus (DM). Echocardiography was performed at discharge and after 6 months to evaluate left ventricle ejection fraction (LVEF), left ventricular end-systolic and end-diastolic dimensions (LVs, LVd), and the severity of mitral regurgitation (MR).

In the group of patients without GA the average LVEF at discharge was 45,8% and 47,8% after 6 months (p=ns). Among patients with GA, LVEF was 43,8% at discharge, and 45,9% after 6 months (p=ns). In subjects without GA the percentage of patients with LVEF $\leq 35\%$ was 11% at discharge, and 5,5% after 6 months (p < 0,05). In patients with GA - 18,3% and 13,4% respectively (p=ns). Amongst patients without GA, moderate to severe MR was observed in 10,5% at discharge, and in 3.2% after 6 months (p < 0,05). In patients with GA - 16,7% and 10,1% respectively (p < 0,05).

The prevalence of left ventricle ejection fraction $\leq 35\%$ was significantly reduced after six months in patients without GA, but was not in patients with GA.

Keywords: acute myocardial infarction, PCI, echocardiography, impaired glucose tolerance, diabetes mellitus

The comparison of postoperative complications between Sano modification of the Norwood procedure and modification of the Norwood I procedure with bilateral pulmonary artery bandings

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Hypoplastic left heart syndrome(HLHS) is a congenital condition of the heart in which the left side of the heart does not fully develop. Among others, the treatment options include Sano modification of the Norwood procedure and modification of the Norwood I procedure, in which the aortic arch was reconstructed with an extracellular matrix patch and bilateral pulmonary artery banding.

The aim of this study is to assess the relative risk and compare the complication of patients who undergo either of these procedures using propensity score matching (PSM).

The study group consisted of 38 pairs. People in each pair differed in the type of procedure they underwent(either of the above)while they were similar in terms of sex, age, body mass, the occurrence of preoperative sepsis and past procedures. The complications taken into consideration were: delayed sternal closure, the requirement of postoperative extracorporeal membrane oxygenation, reexploration due to bleeding, chest reexploration, peritoneal dialysis, abdominal drainage, circulatory and respiratory failure, mortality in the surgical ward, mortality up to 30 days.

The study showed that there were no differences in relative risk between the procedures in observed endpoints beyond chest reexploration-which was significantly higher in Sano modification group ($p = 0,0491$).

The comparison of these two procedures carried out on the diversified group of patients showed that besides higher occurrence of chest reexploration in Sano modification group there are no other differences in postoperative complications. Crucial for full assessment is similitude of the results after third- ending stage of palliative treatment in this patients.

Keywords: HLHS ; hypoplastic left heart syndrome , Norwood , Sano, Pulmonary Artery Banding

ICD lifetime with and without resynchronization function in comparison to the data given by manufacturer

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As technology advances, subcutaneous devices to maintain the homeostasis of certain organs are being used more and more frequently. One of such devices is cardioverter – defibrillator (ICD). In Poland, they are used both in primary and secondary prevention, to prevent sudden death from cardiological reasons.

One of the problems of ICD is the necessity for frequent replacements due to battery depletion. The type of implanted model, amplitude and amount of electrical discharges carried out by the machine during its lifetime affect the life expectancy of ICD. The subject of this article is to compare the viability of the ICD during the patient's everyday life with the device manuals provided by the manufacturer.

The analysis was carried out at the Górnośląskie Centrum Medyczne in Katowice on 50 patients (including 10 women and 40 men), who underwent ICD replacement in 2017-2018, in the 1st Chair and Clinic of Cardiology. The models on the basis of which the tests were carried out were the Maximo VR 7232 and the Maximo DR 7278 from Medtronic.

The obtained results showed that the lifetime of ICD in practice is significantly different from the data given by the manufacturer. 31 patients (62%) had to reimplant ICD before lifetime prediction given in the manual.

The presented results may suggest suspicion of additional factors affecting the ICD battery status. Finding these variables and their modification would certainly allow for less frequent device exchanges in the future, which would translate into lower costs and less frequent hospitalization of patients.

Keywords: ICD - Implantable Cardioverter Defibrillator; ERI - Elective Replacement Indicator ; Device lifetime; Charge time

Surgical management of carotid body paragangliomas

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Carotid Body Tumours (CBT) are a group of relatively uncommon, slow-growing, usually benign tumours. They are in the majority asymptomatic, although a presence of lump in the neck, pain, hoarseness, dysphagia, headache, syncope may also occur. Functional chemodectomas are exceptional. Surgical resection is a treatment of choice.

The aim of this study was to identify most common symptoms and complications after surgery in patients with CBTs.

We conducted a retrospective study under which we identified 17 patients with CBTs who were qualified to surgery at John Paul II Hospital in Krakow, Poland in the last 20 years. Information was collected through individual medical documents and analysed in terms of the presence of symptoms, preoperative imaging, course of surgery, histopathology, short and long-term outcome.

Because of the rarity of the disease, the study group is rather small. There were 10 (59%) females and 7 (41%) men, 12 (70%) of patients presented symptoms during qualification, 1 (5,8%) had a family history of the disease, 3 (17,6%) had bilateral lesions. 6 (31,5%) of PGLs were both visible and tender during palpation. An average duration of the procedure was 2h, embolization prior to surgery was performed in 3 patients. 1 (5,8%) had neoplastic changes in lymph nodes with Ki67>10. Postoperative complications experienced 6 (35,3%) patients, 4 (21,1%) of them were of long-term duration.

CBTs are slow-growing tumours in which an early detection leading to surgery may eliminate the risk of potential complications. Surgical resection with local lymph nodes removal is a procedure of choice.

Keywords: Vascular Surgery, Paragangliomas, Carotid Body Tumours

Assessment of the influence of anticoagulant therapy in patients after transcatheter aortic valve implantation (TAVI)

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Transcatheter aortic valve implantation (TAVI) is a method for the treatment of the aortic valve stenosis. In last years it became a preferable option among non-operative patients and an alternative to surgical aortic valve replacement (SAVR) in intermediate and high risk patients. In the post-operative period the key issue is the durability of the used valve.

The aim of this study was to assess whether the use of oral anticoagulants (OAT) affects structural dysfunction of the implemented valves.

151 patients with severe aortic stenosis, treated with TAVI in SCCS in Zabrze in years 2008-2018 were accepted to this study. The definition of the valve structural dysfunction was: trans-valvular mean pressure gradient ≥ 20 mmHg (mPG ≥ 20 mmHg), increase of the mPG ≥ 10 mmHg and moderate/severe paravalvular leakage. The analysis included echocardiography performed after the procedure and the last available in the control examination. Patients were divided into two groups: group I – treated with OAT and group II – without this treatment.

Group I consisted of 29 (19.20%) and group II was made by 122 (80.79%) subjects. Patients using oral anticoagulants didn't differ in basic clinical and echocardiographic data, except for more frequent atrial fibrillation (Gr. I- 28 (96.55%) vs Gr. II- 2 (1.63%) ($p = 0.01$)). Both groups didn't differ in terms of mPG after the procedure (Gr. I: 7.21 mmHg vs Gr. II: 8.07 mmHg, $p=0.28$), incidence of patients with the mPG ≥ 20 mmHg: Gr. I- 1 (3.44%) vs Gr. II-5 (4.09%) ($p = 0.86$) and the incidence of mPG increase ≥ 10 mmHg in Gr. I- 2 (6.69%) and Gr. II-7 (5.73%) ($p = 0.81$). The incidence of moderate/severe paravalvular leakage was Gr. I- 3 (10.34%) vs Gr. II- 9 (7.37%) ($p = 0.61$).

1. The main reason for the use of OAT in patients after TAVI is atrial fibrillation. 2. The use of OAT had no significant effect on the parameters indicative of structural valve dysfunction.

Keywords: TAVI, oral anticoagulant, valve, thrombosis

Results comparison of severe bicuspid aortic valve (BiAV) stenosis treatment with transcatheter aortic valve implantation (TAVI) using first and second generation of self-expanding prosthesis

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BiAV is diagnosed in approximately 2% of the population. This disease is associated with higher risk of aortic stenosis. There have been reports of comparable TAVI effectiveness in patients with BiAV and tricuspid aortic valves. During TAVI procedure we might expect for example an increase risk of: occurrence of paravalvular leaks (PVL) and a need of pacemaker implantation.

The aim of this study is to compare treatment results in patients with severe aortic stenosis using first generation of self-expanding prosthesis (CoreValve) with second generation (Evolut R).

Between November 2008 and December 2018 in SCCS in Zabrze 225 TAVI procedures were performed by Heart Team I. We selected 38 patients with BiAV, in which TAVI had been planned, and divided them in groups: I - CoreValve (n=19), II - EvolutR (n=19). Size of prosthesis was based on the multidetector computed tomography (MDCT).

Both groups weren't statistically differ based on basic clinical parameters except extracardiac arteriopathy (I-47,4%,II-15,8% $p=0,04$) and myocardial infarction in the past (I-47,4%,II-15,8% $p=0,04$). Transfemoral access was used more frequently in II (I-52,6%,II - 94,7% $p=0,003$). Device success due to VARC-2 was: I-68,4%,II-94,7% ($p=0,04$). PVL in TTE grade 0-1 was: I-83,3%, II-88,9% ($p=0,62$), grade 2 and more: I-16,7%, II-11,1% ($p=0,62$). Frequency of pacemaker implantation was: I-21,1%, II-10,6% ($p=0,38$). 30-day mortality was: I-5,3%, II-0% ($p=0,32$).

Patients in group I had more often extracardiac arteriopathy and myocardial infarction in the past. In group II transfemoral access was used more often. Summing up usage of Evolut R prosthesis determined better device success than CoreValve.

Keywords: TAVI, bicuspid aortic valve, aortic stenosis, PVL, VARC-2

Neonatal balloon aortic valvuloplasty-short and long term outcome

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Balloon aortic valvuloplasty (BAV) remains the first-line treatment in a neonatal critical aortic stenosis (AS), despite patients (pts) with highly dysplastic valves, in whom surgical approach (SAV) is recommended.

To present periprocedural, short- and long-term outcomes of BAV in neonates.

Between 1998 and 2018 overall 37 infants with AS had primary BAV performed in our centre (median 10 days old, 1-28; 6f). Medical history and out-patient clinic data were analysed. Median follow-up of 22 pts (64.7%) was 44 months (range 2-239). Successful BAV criteria were: 50% gradient relieve (and < 35 mmHg) and no more than trivial aortic regurgitation (AR).

Mean aortic valve (AV) diameter was 0.69 ± 0.11 cm, median balloon/AV diameter ratio was 0.9 (0.77-1.08). Gradient decreased from 67.3 ± 26 to 21.4 ± 12.8 mmHg ($p < 0.001$). Optimal results were observed in 20/37 pts (54.1%), in 3 pts significant AR was observed after BAV. Periprocedural mortality was 8.1% (3 pts). Overall 7/22 pts (31.8%) needed reintervention after median 14 months (0-159), including BAV in 1, SAV in 2, Ross surgery in 2, AV surgical replacement in 1 pt and Fontan pathway in 1 pt. Survival and freedom from reintervention was 88% and 80% at 3 months, 82.6% and 70.83% at 1 year of follow-up, respectively. Pts with suboptimal vs optimal outcome at 1 year follow-up (death or need for reintervention) had smaller AV diameter (6.4 ± 0.9 vs 7.6 ± 0.8 mm, $p < 0.05$) and higher occurrence of postprocedural non trivial AR (71.43% vs 11.76% $p < 0.05$).

BAV in critical AS in neonates gives acceptable early and long-term results, however, its palliative character should be underlined.

Keywords: Aortic stenosis, Balloon aortic valvuloplasty, Congenital heart defects

Wrapping of ascending aorta – total surgery or paliative procedure?

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The most dangerous complication of thoracic aorta aneurysm (TAA) is it's fracture. The most effective method of avoiding it, is classic cardiac surgery, which is based on replacement of dilated part of aorta. To preserve high risk patients, proposed solution is securing dilated part of aorta with wrapper made of dacron prosthesis (wrapping of aorta). This technique significantly reduces operation risk, and what more it enables to perform this surgery without using cardiopulmonary by-pass.

Evaluation of the results of ascending aorta wrapping with dacron graft.

In Cardiac Surgery department of GCM in Katowice, since 2007 to 2018 was performed 726 surgeries on aortic aneurysms, including 70 times that wrapping procedure with dacron graft was used. For evaluation of surgery results echocardiography was used 3 times: intraoperatively, 7 days post-op and at least 12 months after surgery. Diameter of aortic root, ascending aorta and aortic arch were measured.

All of patient who undergo wrap surgery have survived. During observation 3 of them has died from non-cardiac ground. There was no patient who required re-operation. Follow up showed that despite of the external wrap, diameter enlargement was observed

in: aortic root $3,5 \text{ mm} \pm 3\text{mm}$ and ascending aorta itself about $5,5 \text{ mm} \pm 5,4 \text{ mm}$. Size of aortic arch on average has reached 33,65 mm.

Wrapping of ascending aorta is safe technique of TAA surgery. It effectively prevents aneurysm from rupture, however it can't completely overcome process of broadening of the aorta.

Keywords: wrapping, ascending aorta, aneurysm, thoracic aorta



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF NEONATOLOGY

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Same Start, Different Paths - Twins, One Born With Down Syndrome

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Twin pregnancies are associated with higher incidences of birth defects, increased risk of premature birth and complications newborns may experience. A chance of trisomy 21 is greater in dizygotic twins than in singletons. Moreover, likeliness of giving birth to a child with Down Syndrome increases with maternal age, with a frequency of 1:100 at the age of 40.

41-year old woman in her first twin pregnancy with complications. Amniocentesis indicated: a female fetus with trisomy 21 and male with normal karyotype. At 31+6 hbd she underwent cesarean delivery (indications: twin pregnancy, PROM, persistent contractions despite tocolysis). The first twin was female, in good condition, Ap9/9, weighing 1750g and the second was in serious condition, Ap8/7/7, weighing 1610g.

The girl had a phenotype typical for DS including subclinical hypothyroidism, however tests did not show other abnormalities. On day 13 she deteriorated and apnea with significant desaturation occurred. Respiratory support was implemented, followed by non-invasive ventilation and passive oxygenation. From the 31st day of life she was cardiorespiratory stable and was discharged on 68th day of life, weighting 3400g.

Male twin after resuscitation needed ventilatory support and was moved to NICU to receive CPAP(30% oxygen). Based on risk factors and interstitial changes in the X-ray, pneumonia was diagnosed and 7-day antibiotic therapy (Ampicilin, Gentamicin) was administered. He was discharged on 25th day of life, weighing 2300g.

The above case proves that high-risk pregnancy can entail both pre and postnatal complications. Despite the birth defect, the girl suffered from fewer problems than her healthy twin.

Keywords: Down Syndrome, twin pregnancy, prematurity

Risk factors for necrotizing enterocolitis and analysis of management concerning newborns reported in 2010-2018 on the basis of medical documentation analysis of the hospital department

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Necrotizing enterocolitis is a severe multifactorial intestinal damage neonatal period. In 70 - 90% it concerns prematurely born children with mass body below 1500g. The etiopathogenesis of necrotizing enterocolitis is complex and has not remained fully explained.

The aim of our work was to try to select the risk factors for necrotizing inflammation intestines in full-term newborns as well as analysis of the treatment used within this group of patients.

The research group consists of 12 patients of the Newborn Intensive Care and Pathology Department, hospitalized in 2010-2018. The inclusion criteria were the criteria of occurrence of necrotizing enterocolitis in newborns born after 36 and 6/7 weeks of pregnancy. It is a retrospective study and the analysis was based on available medical data.

In the examined group of patients, the significant repetition of the factors occur, such as: birth weight less than 3000 g, birth via cesarean section, anemia and the occurrence of a heart defect. The degree was also analyzed disease advancement and treatment.

Due to the incidence and severity of necrotizing enterocolitis of newborns, further work on the full explanation of the aetiopathogenesis is extremely important and should be continued. A better understanding of the reasons for occurrence of NEC will allow precise identification of at-risk patients and more effective disease prevention.

Keywords: Necrotizing enterocolitis

Ultrasonography of the neonatal adrenal glands and adaptive period complications

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Ultrasonography (USG) of the adrenal glands (AG) is a standard protocol of neonatal ultrasound abdomen imaging. However, measurement of AG in neonatal period does not pose a routine procedure.

The aim of the study was to evaluate AG size and volume in neonates with selected complications in adaptation period.

The USG examinations with additional measurements of AG sizes and volumes were conducted in 42 neonates in the 3rd day of life. Investigated neonates were divided into 4 subgroups. For the 1st group we enrolled neonates with PIVH, as the only risk factor. For the 2nd group newborns with 2 risk factors such as PIVH and RDS were assigned, group 3 consisted of children with 3 risk factors- PROM, PIVH and RDS. Control group comprised of 13 healthy neonates. The influence of the foregoing factors on AG volume was compared in each group of the study.

The adjusted volume amounts: group 1- 0,246cm³/kg, group 2- 0,329cm³/kg, group 3- 0,331cm³/kg and control group - 0,195cm³/kg. There was no meaningful dependence between the increase of AG volume (corrected for body weight (AGCV)) in group 1 in relation to control group. A substantial growth of AGCV was found in group 2, with PIVH and RDS as risk factors, in relation to the group with PIVH (group 1) and control group. Between group 2 and group 3 additional presence of the third risk factor does not significantly affect AGCV growth.

Adaptive period complications affect the size of AG in neonates.

Keywords: adrenal gland, neonatal ultrasonography, measurement, adaptation period

Is it better to be pregnant late then never?

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Lately many women after age 35 decide to become a mother. There are a lot of gestational complication in this group for example Down's syndrome, IVH, RDS.

The aim of the paper was to assess the frequency of different complications during gestational and postnatal period.

We enrolled 500 women in the age ≥ 35 years old as a study group and 450 women younger than 35 years old as a control group. The database included selected clinical and demographic data as well as complications during pregnancy and neonatal period.

A total of 950 mothers was analysed. In the study group PROM occurred in 24,2%, 34,6% infants were born prematurely and 20,4% neonates suffered from RDS. In the control group PROM was observed among 15,5% pregnancies, 34,4% children were born prematurely and 18,4% were diagnosed with RDS. PROM appeared more frequently among study group than in the control group ($p=0,0009$). There were no differences between frequency of prematurity between study and control population.

We did not observe the influence of mother age on gestational and postnatal period complications.

Keywords: neonates, geriatric pregnancy, macrosomy, ICU, PROM

What runs in your veins – association between blood type and neonatal diseases

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The most common blood types among polish population are blood type A and O (accordingly 38% and 37%). However the least observed blood group is AB (8%). People with certain blood type are more prone to develop specific diseases.

The objective of this study was to determine the relationship between blood type and complications during neonatal period.

Medical records of 2401 neonates born between 2009 and 2018 in Neonatal Clinic in Katowice were collected. We enrolled to this retrospective study the group of 485 newborns reflecting the distribution of the blood types. Database including selected clinical and demographic datas as well as complications during neonatal period such as the occurrence of neutropenia, intraventricular haemorrhage (IVH), respiratory distress syndrome (RDS) and patent ductus arterious (PDA).

In the studied population the incidence of representing blood type was A in 40,4% newborns, B in 20,9% neonates, AB-7,87% infants and blood type O in 30,8% children. We noticed that neonates with A blood group were less likely to develop IVH compared to other groups ($p=0,027$).

Interestingly, neutropenia was the most frequent in neonates with blood type AB. There was an increased number of RDS (28%) in newborns with blood type AB and B. PDA occurred in 3% of all. Neonates with blood group A were the least likely to develop IVH, where as blood type B and AB increase the risk of neutropenia at birth.

Keywords: blood type, neonates, IVH, RDS, PDA, neutropenia

Lenticulostriate vasculopathy - a dangerous symptom or a small anomaly?

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Lenticulostriate vasculopathy (LSV) is a rare symptom observed during cerebral ultrasound (CU) examination associated with hyperechogenic, linear streaks around the thalamus and basal ganglia. Their presence is the evidence of pathological processes in the walls of thalamic-striate vessels and lenticular-striatal vessels, causing their remodeling.

The aim of the study was to evaluate the image of CU in neonates with LSV and the relationship with risk factors of pregnancy and delivery.

The study group consisted of 73 neonates born in Neonatology Clinic in Katowice between 2014 and 2019. Medical records have been analyzed retrospectively. Selected clinical and demographic datas as well as the progress of pregnancy and risk factors were evaluated.

LSV during the CU was observed mainly in full term neonates (57,6%) and slightly less in late preterm infants (34,2%). The most common complication during pregnancy was urinary tract infection noticed in 35,0% mothers. Due to respiratory insufficiency around 20% children required respiratory support using nCPAP. *Germinal matrix hemorrhage associated with LSV in 79,0% newborns.* In 51,4% of cases there were bilateral LSV, while in 25.7% it was LSV right-sided, and in 22.85% - left-sided.

In our study stridio-thalamus vasculopathy often coexisted with germinal matrix hemorrhages and was more common in neonates with respiratory insufficiency.

Keywords: Lenticulostriate vasculopathy LSV

One shot as last chance for survival – impact of dosing of antenatal corticosteroids exposure on neonatal outcomes

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Prematurity is a major clinical problem associated with a multitude of complications, including respiratory distress syndrome(RDS), peri-intraventricular hemorrhage (PIVH),sepsis and necrotizing enterocolitis. Antenatal corticosteroids (ACS) therapy is one of the most effective methods to improve outcome after preterm birth. Therefore, prenatal corticosteroid therapy should be used between 24⁺⁰ and 34⁺⁶ weeks of pregnancy.

The aim of the study was to assess neonatal complications between the incomplete corticosteroid therapy and the full antenatal corticosteroids dose regimen.

This retrospective analysis involved 231 premature infants hospitalized at the Department of Neonatology in Katowice between 2016 and 2018 whose mothers had received antenatal corticosteroids and delivered ≤ 34 weeks of gestation. Infants were divided into 2 groups: first were exposed to complete(control group) and second one toincomplete (study group)course of antenatal corticosteroids. For the analysis the following data were collected: maternal and obstetric characteristics, newborn's general condition, incidence of RDS, PIVH and acid-base disturbance, use and duration of respiratory support and surfactant therapy.

Neonates exposed to full dose of ACS had a significant reduction in the risk of developing respiratory acidosis (OR 2,13; 95%CI 1,23-3,70), respiratory alkalosis (OR 3,83; 95%CI 1,4-10,52) and delivery room resuscitation after birth (OR 5,73; 95%CI 3,1-10,61) and lower frequency of mechanical ventilation (OR 2,7; CI 1,02-4,21).

Significant differences among groups were found between the frequency of delivery room resuscitation, respiratory support and acid–base balance disturbances.

Keywords: antenatal corticosteroids, preterm birth, respiratory distress syndrome, peri-intraventricular hemorrhage

Correlation between content of vitamin D and proper development

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A Vitamin D deficiency is a global public health issue. More than half of newborn are affected by vitamin D insufficiency. Basic function of cholecalciferol is skeletal metabolism regulation and keeping correct calcium-phosphate balance. It provides to right mineralization of osseous tissues. It is also an essential in correct functions of whole organism.

The analysis of levels of cholecalciferol in neonates serum and examining the factors associated with vitamin D deficiency, such as: season, multiple pregnancy, way of delivery, birth weight and calcium-phosphate balance, Searching for sequelae of deficiency of vitamin D after 3 years in those children.

Population based on 74 neonates born in 2015-2018 in University Clinical Hospital from Wrocław, Poland. Measurements: weight, serum 25hydroxy vitamin D, calcium, phosphate and alkaline phosphate were measured in neonates. Interview with neonates' mothers after 3 years from delivery.

Vitamin D deficiency (<25 nmol/l) was found by more than half neonates. Median 25-OHD was 20,4nmol/l. More than half of newborn children have impaired calcium-phosphate balance and a group of them have complications of deficiency after 3 years.

Neonatal 25-OHD levels varied by season with lowest levels in winter/spring and highest in summer/autumn and the vitamin D deficiency is the reason of birth weight aberration. There is also a correlation between vitamin D level and calcium-phosphate balance.

Cutting the cord in infants requiring resuscitation - a feasibility study

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Currently, there are no clear recommendations about the timing of umbilical cord clamping in newborns requiring immediate resuscitation after birth. However, studies in this area conducted on animal models and singular clinical studies have produced very promising results.

The aim of this study was to determine whether the introduction of a standard of delayed cord clamping in the care of newborns requiring CPR was associated with improved treatment outcomes in these patients.

Medical records kept in 2017 and 2018 at a NICU were reviewed (n = 2401). The research group consisted of newborns who had undergone resuscitation before clamping the umbilical cord (n = 35). The control group was children who had the umbilical cord cut before resuscitation (n = 29).

Statistically significant differences were found: in the study group there was a higher score according to the APGAR scale in the 5th minute and a higher concentration of hemoglobin when admitted to the NICU. There were no statistically significant differences in the other respiratory support parameters tested.

The proven statistically significant differences coincide with the results of similar studies carried out to date. We assume that the lack of other differences is related to the fact, that probably UCM was used in some newborns in the control group, which was not indicated in the documentation. It is necessary to create a well-planned, multi-center prospective study to unify knowledge in the discussed area and enable the creation of global recommendations.

Keywords: delayed cord clamping, resuscitation, neonatal transition, preterm, LifeStart trolley

Lung ultrasound improves clinical management in newborns with tension pneumothorax

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Pneumothorax is one of the most common emergencies in the newborn period. Our study presents the changes that have occurred in diagnosis and monitoring neonatal pneumothorax over the several recent years.

The aim of this study was to define the impact of LUS on the use of imaging to diagnose and monitor newborns with symptomatic PTX.

A single-centre retrospective study enrolled patients born after 32 week of gestation, with pneumothorax diagnosis in the first week of life. The newborns were divided into two groups according to admission time. Group A contained patients from 2007 to 2010. Group B contained patients from 2013 to 2016. Children from group A were diagnosed and monitored with repeated chest X-ray. Children from group B were diagnosed with chest X-ray but monitored with repeated lung ultrasonography only supported by chest X-ray in uncertain situations. All patients were treated with needle aspiration, chest drain or both methods simultaneously. Both groups were compared in terms of risk factors and treatment history.

118 patients were included in the study, 51 in group A and 67 in group B. Demographic and clinical characteristics of patients revealed no significant differences between groups. A higher nCPAP usage ($p < 0.001$) and higher prevalence of perinatal asphyxia ($p = 0.036$) were observed in group B. Congenital pneumonia was diagnosed more often in group A ($p = 0.041$). As a result of different risk factors earlier detection of pneumothorax ($p = 0.001$) in group B and shorter hospitalization length ($p = 0.03$) were observed. Additionally reduction of chest X-ray performance was noted.

The study showed the change in risk factors occurrence, resulting in earlier pneumothorax detection and shortening of hospitalization length and usefulness of lung ultrasound among newborns with pneumothorax.

Keywords: Pneumothorax, newborns, lung ultrasound



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Variability of TSH and fT4 serum levels in the acute phase of stroke and their effect on outcomes

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Stroke is the third most common cause of death and the leading cause of permanent disability in adults. It is important to identify factors that affect the course of the disease and the outcomes in patients with stroke.

The aim of this study was to evaluate the influence of TSH and fT4 values on outcomes in patients with ischemic or hemorrhagic stroke.

The study included 200 patients hospitalized in the Department of Neurology in Zabrze between 2017-2018 diagnosed with ischemic or hemorrhagic stroke. Patient's condition was assessed with NIHSS scale and the modified Rankin scale at admission and at discharge. Thyroid hormone levels were tested on the first day of hospitalization. The correlations were calculated with Pearson's formula and Spearman's correlation.

In the study population, there was no significant relationship between TSH and fT4 values and neurological status at admission and at discharge, except for patients with type 2 diabetes, for whom this relationship was statistically significant ($r=0.48$, $n=38$, $p=0.0023$). The concentration of fT4 hormone was related to the time of hospitalization of patients with abnormalities in ECG on admission ($r=-0.43$, $n=35$, $p=0.0097$). A statistically significant relationship was also found between serum albumin concentration and TSH values in all patients with no thyroid disorders.

Evaluation of thyroid hormones level in the early phase of ischemic or hemorrhagic stroke may be a helpful parameter in assessing outcomes in patients with type 2 diabetes and in the prognosis of hospitalization time in patients with abnormal ECG on admission.

Keywords: stroke, thyroid hormones

Epilepsy in cerebral tumors

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Epilepsy is a common manifestation of brain tumors. Seizures may occur as an initial symptom or in the course of the disease. The frequency of epilepsy varies across different types of tumors.

The purpose of our study was to determine the frequency of epilepsy in patients with brain tumors and its relation to the type and location of the tumor. The relation between the occurrence of the seizures and different signs of the disease and their duration was also checked.

The observational, retrospective single-centred study involved 382 patients with the diagnosis of a brain tumor treated at the Department of Neurosurgery and Neurotraumatology of Krakow's University Hospital in years 2017-2018.

Overall 95 (24,87%) patients had at least one seizure. The statistically significant results showed the relation between the incidence of seizures and type of tumor and location. Regarding histopathology, 75% patients with dysembryoplastic neuroepithelial tumors and gangliogliomas suffered from epilepsy, 55,56% with low-grade gliomas, 30,27% with high-grade gliomas, 13,16% with meningiomas and 27,27% with brain metastases. When it comes to the location, seizures occur in 31,16% patients with tumor in frontal, 27,66% in temporal and 41,67% in parietal lobe. The cortical tumors were the most common cause of epilepsy (37,88%- % of all patients with seizures).

Results of this study suggest that major factors affecting the occurrence of seizures in patients with cerebral tumors are type and location of the tumor. The highest rates of epilepsy were observed in patients with dysembryoplastic neuroepithelial tumors and gangliogliomas.

Keywords: brain tumor, epilepsy, seizure

3D model of brain— usage in assessment the extent of intracerebral hemorrhage

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Intracerebral hemorrhage (ICH) is the second most common cause of stroke, accounting for 10% of hospital admissions for stroke. Risk factors for ICH include: hypertension, smoking and diabetes. People with intracerebral bleeding have symptoms that correspond to the functions controlled by the area of the brain that is damaged by the bleed. ICH can be recognized on CT scans because blood appears brighter than other tissue.

We decided to create a 3D model of brain to estimate the extension of bleeding in intracerebral hemorrhage, by using CT scans of patients with this diagnosis. Moreover we checked the accuracy of our models - by comparing corresponding CT scans with transection of our 3D project of brain.

Having 10 studies from 5 patients with intracerebral hemorrhage and after two weeks of treatment we have made a manual segmentation of: brain, ventricles and hemorrhage to create 3D brain models using 3D Slicer. The last step of our research was to develop an application using Windows Presentation Foundation framework and C# programming language. This application allows user to visualize and manipulate 3D models created in previous steps.

The goal of our research was to examine the possibility of using 3D modelling technology to visualize intracerebral hemorrhage. The models were created successfully for most cases and in the process of evaluating similarity they gave acceptable results.

The assessment of intracerebral hemorrhage by using 3D model of a brain can be a great assistant for neurologist and neurosurgeons. It will be helpful in accurate estimate of anatomical structure affected by ICH, extent of area with hemorrhage and to assess the results of treatment.

Keywords: intracerebral hemorrhage, 3D model, CT scan

Clinical characteristics of brain tumors in patients of the Department of Neurosurgery and Neurotraumatology of Krakow's University Hospital - a single center retrospective study

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Brain tumors (BTs) constitute approximately 2% of all neoplasms in Polish patients. Seizure is a common sign of BT and may occur in up to 60% of BT patients. The aim was to describe clinical features and methods of treatment of BTs and neuropathology.

The retrospective single-centre study was performed on medical documentation of 382 BT patients of The Department of Neurosurgery of Krakow's University.

The study group consisted of 382 patients (59,16% women), aged 19-86 years (median 61). In 190 patients (49,74%) BT was present in only one lobe. The most common localization of BT was frontal lobe - 91 patients (23,82%), then temporal lobe - 47 (12,3%), parietal lobe - 36 (9,42%) and occipital lobe - 16 (4,19%). In 76 patients (19,9%) two lobes were affected and in 14 (3,66%) more than two lobes were affected. The most common first symptom of BT was headache which occurred in 34,03% of patients, then seizure in 20,94%, paresis in 18,32%, speech disturbances in 14,4%, dizziness in 13,09%, memory and cognitive function impairment in 8,9%, visual impairment in 8,64%. 95 patients (24,87%) had epileptic seizures: 87 before admission and 22 after admission. 66,49% of patients underwent total resection of BT, 14,4% partial resection, 9,69% stereotactic brain biopsy and 6,02% were disqualified from surgery.

The most common localization of BT was frontal lobe, but many patients had more than one lobe affected. The most common first symptoms were: headache, seizures, paresis, speech disturbances and dizziness. These symptoms might coexist in one patient. New-onset seizure should be always considered as a sign of underlying BT. The most common method of treatment was total resection.

Keywords: brain tumor, seizure

How recent advancements in pineal region tumours surgery and pathology influence clinical practice?

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Tumours of the pineal region present a unique neurosurgical challenge due to deep location and relationship with vital neural and vascular structures. They constitute a heterogenous group that includes glial, germ cell, pineal parenchymal and papillary tumours. Interestingly, papillary tumours of pineal region (PTPR) are novel pineal region neoplasms, approximately 180 cases has been described. Paramedian supracerebellar infratentorial approach (SCIT) is a modern approach which allows for preservation of veins draining cerebellar vermis and provides gravity-assisted retraction.

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

Case histories of 12 consecutive patients with pineal region masses were reviewed. Clinical and histopathological data including immunohistochemistry profiles were collected. Chi-squared test was used to compare frequency of PTPR in this series with published data.

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

This work presents good clinical outcomes after treatment with paramedian SCIT and discusses treatment options in apatients with pineal region tumours.

Keywords: Pineal tumours, paramedian SCIT, PTPR

Can flow diverting stents be safely used in ruptured intracranial aneurysms?

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Ruptured intracranial aneurysms are the leading cause of subarachnoid hemorrhage (SAH), which requires urgent treatment. Blood blister-like aneurysms (BBAs) are a significant therapeutic challenge due to fragile wall, rapidly changing morphology. BBAs are associated with 20-25% morbidity and 5-15% mortality with traditional approaches. Implantation of flow diverting stent (FDS) causes immediate or delayed thrombosis of the aneurysm lumen and epithelialization of the stent surface, usually with preservation of perforating vessels. Although FDS implantation is feasible in bleeding aneurysms, risk of stent thrombosis, perforator infarct and rebleeding should be kept in mind.

The aim of this study is to characterize a patient population benefiting from FDS implantation in the setting of SAH.

Seventeen such patients with 19 aneurysms who underwent FDS implantation as treatment of bleeding aneurysm were identified. Data were analysed with R programming environment and Kaplan-Meier model of survival was used to assess clinical features influence on time to aneurysm occlusion.

Seven patients were females, age range was 27-70 (mean 57). Majority of aneurysms was located on the internal carotid artery, predominantly in cavernous and ophthalmic segments and displayed features of BBAs. Median time from bleeding to intervention was 2.5 days. Aneurysm neck size was best predictor of time to occlusion which was angiographically confirmed in 12 cases. At follow-up 13 patients had modified Rankin Score lower than 2.

Implantation of flow diverting stents is modern, safe and minimally invasive treatment approach in some aneurysmal SAH cases.

Keywords: flow-diverter, SAH, blood-blister aneurysm

Parallel frequency of higher visual functions disorders among boys with and without autism

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It is estimated that 1 in 160 children has an ASD (Autism spectrum disorders) worldwide. While some people with ASD can live independently, others have severe disabilities and require life-long care and support. Higher visual functions disorders have a huge impact on patients and their parents quality of life, therefore it is beneficial to know the statistical probability of higher visual disorders within children with ASD to better plan their healthcare.

The goal of the study is to determine the probability of autistic boys having or developing higher visual functions disorders. Secondary aim of the study is to analyze how autism impacts higher visual functions. The study compares the autistic group to a group of healthy boys from the same population.

A questionnaire was performed on a group of 100 parents of 7-11 years old boys. 45% of the children were diagnosed with autism and did not have any other health issues; 55% of the children did not have autism and did not have any known health issues.

Children with autism received 46% more summary points in questionnaire than children without this disease. Occurrence of autism had impact on 78% of researched characteristics.

Comparison of these two groups of patients shows that there is a significant link between occurrence of autism and higher visual function disorders.

Keywords: autism, higher function disorders

Assessment of risk factors in acute stroke with particular emphasis on carotid arteries stenosis

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Stroke is medical condition in which poor blood flow to the brain results in cell death. There are two main types of stroke: ischemic and hemorrhagic stroke. One of the main risk factor for stroke is arteries carotid stenosis.

The aim of our study was analysis stenosis of carotid arteries and other risk factors.

109 patients hospitalized in Department of Neurology in Zabrze (2017-2019) were analyzed. The main risks factors like hypertension, diabetes mellitus, dyslipidemia, hypercholesterolemia, atherosclerosis and atrial fibrillation were analyzed. Drugs and neurological condition (NIHSS scale) also were taken into account. Particular emphasis was placed on carotid stenosis.

In study 58,7% of women and 41,3% of men were analyzed. Among risks factors of stroke in group of patients there wasn't differences beetwen sex except hypertriglicerydemia (women 18,75% vs men 37,7%, $p < 0,05$). Taking medicines was similar in two gropus of sex. Important stenosis of carotid arteries (70% and over) was higher among men(12,8%) than women(4,6%). Important stenosis in RCCA was more often among men (women 0,9% vs men 6,4%), as well in LCCA (women 1,8% vs men 4,6%). In internal carotid artery was similar (women 1,8% vs men 3,7%).

There wasn't important differences in main stroke risk factors like hypertension, diabetes mellitus, hypercholesterolemia, atrial fibrillation except hipertriglicerydemia in both sex. Important carotid stenosis was found among men than women.

Keywords: stroke, carotid arteries, risk factors

Post lumbar puncture headache: features of clinics and diagnosis

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Cardiovascular diseases take first place among the causes of death all over the world. One of the varieties of cardiovascular diseases is cardiomyopathy (CMR). According to the European Society of Cardiology, CMP is a myocardial disease with a disorder of its structure and function in the absence of damage to coronary vessels, arterial hypertension, congenital and acquired heart defects. Dilated cardiomyopathy (DCM) is the most common CMP, a polyethiological disease whose pathogenesis is not well researched.

To characterize the level of prooxidant processes and immunological status of DCM patients.

As a research material, serum from 33 patients with DCM aged 40-50 years was used. The average age of patients is 46 years. A spectrophotometric method has been used to determine the level of malondialdehyde (MDA), oxidative modification proteins (OMP), lipid oxidation products (LOPs), circulating immune complexes (CICs). Statistical analysis of the results was performed according to the criteria of Student's t-test.

Compared to controls, the levels increased: OMP by 89.9%, LOPs by 612.8%, MDA by 31.7%, and decrease of CICs by 142%; $p < 0.05$.

The indicated results point out an increase in the intensity of the prooxidant processes and a decrease in the immunological reactivity of the organism in case of DCM.

Keywords: lumbar puncture, Headache.

Smoking among patients with ischemic stroke after intravenous thrombolytic therapy - a preliminary study

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Cigarette smoking is a well-established risk factor for ischemic stroke and cardiovascular diseases.

To assess clinical status in smokers and non-smokers in the course of stroke after intravenous thrombolytic therapy.

Based on patients' medical history from Departments of Neurology in Zabrze and Bytom, 170 individuals after intravenous thrombolytic therapy were enrolled in the retrospective study. They were divided into smokers (S) and non-smokers (NS) groups and clinical features were determined.

Among the patients 29 subjects were S and 141 NS (female 17.86% vs 43.97%, $p=0.029$ in S and NS, respectively). The median age was 57.0 [50.0-64.0] and 73.0 [64.0-79.0], $p=0.001$ in S and NS, respectively. Facial palsy was observed in 95.24% of S and in 67.39% of NS, $p=0.014$ but there were no differences in other neurological stroke symptoms ($p>0.05$). Hypertension and atrial fibrillation were found less often in S compared to NS (47.62% vs. 76.09%, $p=0.0228$ and 0 % vs 23.40%, respectively). Improvement in the results of National Institutes of Health Stroke Scale (NIHSS) (difference between the score at admission and at discharge) was greater in S compared to NS (6.00 [5.00-11.00] vs. 5.00 [2.00-7.00], $p=0.049$, respectively).

Stroke occurs in S significantly earlier than in NS. It is expected, many S had smoked since youth without cardiovascular risk factors. The younger age at the stroke onset is considered as a reason of a better recovery in S individuals.

Keywords: ischemic stroke, smoking, thrombolytic therapy

Assessment of clinical features in secondary progressive multiple sclerosis patients treated with mitoxantrone - a preliminary study

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Despite novel approaches in disease modifying therapy, use of mitoxantrone (MTX) for secondary-progressive multiple sclerosis (SPMS) patients is still well-founded.

To assess the clinical status of SPMS patients under MTX therapy.

26 SPMS individuals treated with MTX in Department of Neurology in Zabrze were enrolled in the prospective study. The recommended dose of MTX was administered during the single cycle of MTX every three months. Serum biochemical parameters and neurological status according to the Expanded Disability Status Scale (EDSS) were compared on the day before treatment (BT) and after 6 months MTX therapy (6M).

The results of EDSS did not differ BT and 6M (6.50 [6.0- 7.0] vs. 6.53 [6.0-7.1], $p=0.06$, respectively). There were noted increase of serum troponin T (0.007 [0.005-0.015] vs. 0.011 [0.006-0.019][ng/ml], $p=0.038$ and CK-MB (1.36 [1.15-2.88] vs. 1.52 [1.23-3.61][ng/ml], $p=0.0014$) with decrease of the ejection fraction (60.0 [55.0-60.0] vs. 55.0 [55.0-60.0][%], $p=0.005$) BT and 6M, respectively. There were no differences in red blood cells (4.60 [4.29-4.80] vs. 4.45 [4.28-4.73][$10^6/\mu\text{L}$], $p=0.67$), white blood cells (7.45 [6.20-9.20] vs. 7.8 [5.78-8.71][$10^3/\mu\text{L}$], $p=0.41$), platelets (239.50 [210,0-316,0] vs. 241.50 [211.0-321.0][$10^3/\mu\text{L}$], $p=0.83$); ALT (19.50 [16.10 - 25.0] vs. 23.30 [18.80 -32.40][U/L], $p=0.89$, AST (17.40 [15.50 - 21.60] vs. 19.45 [16.30 - 24.20][U/L], $p=0.57$; BT and 6M, respectively.

MTX therapy stabilizes SPMS during 6-months follow up. Because of the cardiotoxicity, lower cumulative doses of MTX in SPMS patients should be considered. Stem cells and liver functions seem to remain unchanged.

Keywords: multiple sclerosis, mitoxantrone, cardiotoxicity, Expanded Disability Status Scale

The influence of disease span, clinical advancement and other factors on sleep disorders in Parkinson's disease

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Apart from motor symptoms, patients suffering from Parkinson's disease (PD) may present different sleep disorders, influencing their quality of life.

The study aimed to analyze the effect of the following factors: disease span, dosage of levodopa, clinical symptoms advancement and frequency of depression on sleep deprivation in patients with PD.

In the years 2016-2018, 184 patients suffering from PD diagnosed at the Department of Neurology in Central University Hospital in Katowice were included in the study. Sleep disorders were assessed using patients' medical history. Evaluation of clinical advancement was conducted using UPDRS part III, modified Hoehn-Yahr (HY) scale, MMSE, CDT, BDI.

Out of 184 PD patients, 92 (50%) presented sleep disorders. Both groups (PD patients with and without sleep disorders) showed no statistically significant differences regarding age, sex, clinical advancement, dosage of dopamine agonists. The most common sleep disorders were: insomnia (41, 35.0%) and REM Sleep Behavior Disorder (RBD) (30, 25.6%). The mean disease duration for PD patients with sleep disorders (PD-SD) was higher than for PD patients without sleep disorders (10.4 to 8.35; $p=0.005$). According to UPDRS part III OFF, PD-SD patients had higher clinical advancement of the disease (35.9 vs. 31.18; $p=0.021$). PD-SD patients were also more likely to present with depression (mean BDI score= 11.1 vs. 9.08 pts; $p=0.031$). PD-SD patients were treated with higher dosage of L-dopa (av. at 857mg, vs. 698,82 mg, $p=0.037$).

Sleep disorders are more frequent in PD patients with longer disease duration, more advanced motor symptoms, often accompanied by depression, and requiring higher L-dopa dose.

Keywords: Parkinson's disease, sleep disorders

Analysis of the frequency and location of Simon's bleeding in cases of suicide by hanging

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Hanging is the most common type of suicide. It is associated with various marks on deceased person's body. Simon's bleeding is a vital sign of hanging and it is a type of hemorrhage localized on ventral surface of the intervertebral disks of the lumbar part of spine.

The objective of the study is to determine the frequency and location of Simon's bleeding and its association with age, gender and neck injuries.

There were 1373 cases of suicide by hanging in the archives of the Department of Forensic Medicine of Jagiellonian University Medical College in Cracow in years 2008-2018. 1294 (94,25%) of them had documented full forensic autopsy and were analyzed in terms of occurrence of Simon's bleeding, and other hanging related injuries.

We found 159 cases with the Simon's bleedings overall (12,34%), 114 (71,70%) with the Simon's bleeding in the lumbar spine. The cases with Simon's bleeding were strongly correlated with internal neck injuries (the absence of internal neck injuries plus Simon's bleeding 6,19% vs. the presence of internal neck injuries plus Simon's bleeding 13,57%, $p < 0,05$). Simon's bleeding was also correlated with younger age.

The intervertebral haemorrhages associated with hanging occur quite frequently and there is a correlation between them and several factors, such as age and internal neck injuries. According to literature Simon's bleeding occurs with traumatic elongation of spinal column which

Keywords: Simon's bleeding, lumbar spine, suicide

Subependymal nodules - the clinical meaning

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Hamartomas are overgrowth of mature tissues that occur in different areas of the body with disorganization and often with one element predominating. This is an intermediate condition between neurodevelopmental disorder and benign tumour, where typical morphological qualities and level of cells' growth are preserved. Hamartomas can grow in different tissues and organs. Frequently, they occur with phakomatoses. The most well-known central nervous system hamartomas are hypothalamic hamartoma, cortical/subcortical tubers and subependymal nodules.

The clinical meaning of subependymal nodules with diagnosed and undiagnosed tuberous sclerosis is the subject matter of this research.

In total, a database of 17 children was collected (8 boys and 9 girls) aged 9 weeks - 12 years, the average age 4,5 years. The most expressed symptoms were: epileptic seizures (n=14; 82%), retardation of psychomotor development (n=11; 65%), hypotonia (n=10; 59%), autistic features (n=6; 35%). The research was performed by MR scanner Optima 450 GE in MR Imaging Centre Scanix in Katowice.

MR examination proved that all children had subependymal nodules in lateral ventricles. However, only 7 of them (41%) were diagnosed with tuberous sclerosis basing on clinical and radiological symptoms.

Single MR finding, without clinical symptoms according to major and minor features of tuberous sclerosis diagnostic criteria, makes clinical and diagnostic difficulties, requires rigorous control and observation. The remaining cases, in which clinical and diagnostic criteria are fulfilled, are typical.

Keywords: Spina bifida , prenatal surgery, quality of life

Fetal surgery for myelomeningocele- preliminary results

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Spina bifida (myelomeningocele, MMC) is a congenital disorder of the central nervous system. The defect occurs during the early embryonic period. MMC is followed by hydrocephalus, often requiring ventriculoperitoneal (VP) shunt, neurological and urological disfunction. Surgical repair can be performed prenatally or postnatally. Comparative study shows decreased number of consequent complications in patients after fetal surgery.

Assesment of the distinctions between patients operated prenatally or postnatally due to spina bifida.

We used the data of 124 patients operated for MMC in years 2015-2018. We divided them into two groups: prenatal repair (group I) and postnatal repair (group II). Based on number of hospitalization days, weeks of gestation, requirement of VP shunt, results of voiding cystourethrogram and lower limbs mobility assessed by physiotherapists we compared the two groups.

After analyzing both groups we calculated that after prenatal repair hospitalization time is shorter (between 3 to 5 days) than in the postnatal group (averagely 40 days) whereas gestation time is statistically shorter for the in utero repair group. Between the two groups , the prenatal group demanded the use of ventriculoperitoneal shunt for hydrocephalus almost twice less frequently. Statistically, children after in utero surgery have better lower limbs mobility and present fewer urinary tract complications.

Prenatal myelomeningocele repair offers better opportunities to improve motor and urinary functions which may lead to higher quality of lives in the future for patients spina bifida.

Keywords: Spina bifida , prenatal surgery, quality of life



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF ORTHOPAEDICS

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Proximal humerus fracture - Determining factors in choice of treatment method

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The humerus bone is usually fractured in its proximal end. When choosing a method of treatment we take into account type of fracture, individual factors and comorbidities.

The aim of this study is to determine factors which have impact on choosing the method of treatment as well as subjective evaluation of post-treatment shoulder function.

The Department of Orthopaedic and Traumatology of SUM database was queried from December 2016 to December 2018 to identify patients diagnosed with ICD-10 S42.2. 62 patients (45 women and 17 men) admitted to Orthopaedic Ward have been qualified for the study. The average age of patients was 67 years. All patients were divided based on Neer classification and compared based on type of fracture, age, provided treatment, comorbidities and post-treatment follow up. The patients were observed based on recordings from follow-up visits.

There were 15 patients (24,19%) classified as Neer 2, Neer 3 - 25 (40,32%), and Neer 4 - 22 (35,48%). In 10 (16,13%) of Neer 2 cases nailing fixation was performed, 4 (6,45%) were treated nonoperatively, and 1(1,61%) using screw. 12 (19,35%) of Neer 3 cases were treated using plate, 6 (9,68%) cases - nailing, 4 (6,45%) - endoprosthesis, 2 (3,23%) - nonoperatively and 1 (1,61%) by mixed method. In 8 (12,9%) Neer 4 cases endoprosthesis was used, 6 (9,68%) were treated by mixed method, plate and nail was used in 3 (4,84%) cases each, and by nonoperative method - 2 (3,23%).

Operative treatment is chosen more often than nonoperative (87,1% vs 12,9%). Most frequently used method was nailing fixation (30,65%). The highest impact on choosing treatment method have such factors as type of fracture and patient's age.

Keywords: Proximal humerus fracture, treatment method, Neer

Negative pressure wound therapy in orthopaedic patients

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One of the biggest challenges of modern medicine is management of complicated wounds. Chronic and infected wounds are a direct threat to the patient and traditional treatment methods are not always successful. There are however modern solutions to this problem, such as NPWT (Negative Pressure Wound Therapy).

The aim of the study is to show the effectiveness of wound treatment with the use of negative pressure in Orthopaedic Clinical Ward in WSS5 in Sosnowiec.

Between 2016 and 2019 Orthopaedic Clinical Ward hospitalised 13 patient who were treated with NPWT. The study population included 8 men and 5 women. Average age of a patient at the time of hospital stay was 50 years ($\sigma=18.5$). Average treatment duration was 16 days ($\sigma=13.8$).

The use of NPWT dressings led to a significant decrease of CRP level and white blood cell count in patients' lab results. NPWT treatment involved substantial difference in the duration of a hospital stay and antibiotic treatment compared with conventional dressing methods. No complications have been reported.

NPWT treatment results in inflammation and infection reduction, allowing for the optimal healing conditions. The use of negative pressure is the golden remedy in the treatment of severe, infected and complicated wounds in orthopaedic patients.

Keywords: NPWT

Postsurgical complications after total hip arthroplasty and preoperative assessment of health

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Total hip replacement surgery is one of the most common orthopedic surgeries nowadays. As every surgery it comes with the possibility of postoperative complications.

The aim: To determine whether the ASA score as well as comorbidities, consumed medication and methods of arthroplasty are influencing the risk of postsurgical complications after hip arthroplasty.

The Department of Orthopaedics and Traumatology of SUM database was queried from March 2017 to February 2018 to identify patients diagnosed with ICD-10 M16. 95 patients (39 male and 56 female) who underwent total hip arthroplasty have been qualified for the study. The average age of patients was 62.87 years. All patients were compared based on their medical history, laboratory results and postoperative consultations during hospital stay.

Patients were divided according to ASA class. There were 10 patients with the ASA I (10.5%), ASA II - 50 (52.6%), ASA III - 28 (29.4%) and ASA IV - 3 (3.15%). Of those whose qualified for surgery complications occurred in 17 patients (17.89%): 2 patients with ASA I (20%), 5 patients ASA II (10%), 9 patients ASA III (32%) and 1 patient with ASA IV (33%). There was a significantly higher incidence of complications in patients with ASA III than ASA II ($p < 0.01$).

The risk of early postoperative complications after total hip arthroplasty is growing with the higher ASA assessment score. Increased precaution in case of patients with higher ASA scores could prevent the occurrence of complications. On the aforementioned basis, we can also introduce protective procedures against complications in relation to patients with 3 or 4 class in ASA.

Keywords: total hip arthroplasty, risk factors, ASA

Heterotopic Ossification after distal humerus fracture

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Heterotopic ossification (HO) is one of the possible problems occurring after orthopaedical trauma and operations. It can restrict range of motion and cause pain – from mild up to sever. In our research we decide to analyze patients after distal humerus fracture.

Aims: Analysis of elbow's joint heterotopic ossification occurring in patients after distal humerus fracture in a search for factors causing or increasing the risk of (HO).

We took into our consideration cases of 30 patients, at age between 20-86, both male and female, with distal humerus fracture. Firstly, determination of the number of patients with and without HO was performed. Secondly, we compared duration of the operations, severity of both, joint and general, trauma and time between injury and operation. Data was obtained from the Department of General and Polytraumatic Surgery of University Hospital, Kraków, from years 2013-2017.

A retrospective study showed us following results: out of 30 patients, 6 was diagnosed with HO of the elbow's joint. In this subgroup, all patients (100%) were diagnosed with the most sever type of the fracture – C in the AO classification, whereas in the group without HO this type of fracture had ca. 25% of the patients. Average time of operation was also a significant difference between the groups with HO and without it – respectively 228 mins vs. 149 mins.

During our study we came to a conclusion that duration of the operation might be a risk factor of HO. More than this, first results suggest that severity of the fracture is also a major cause of the HO, but due to small number of the patients included in our study group, it needs to be further explored.

Keywords: Heterotopic Ossification, fracture, humerus, distal humerus fracture, trauma, orthopaedics

The occurrence of spine discopathy depending on age and work

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Discopathy is widespread disease at any age, therefore is considered as a civilization disease. Spine pain syndromes, including discopathy, are the most common symptom reported by patients in physiotherapy clinics. The lifestyle and aging of the society is the reason of spine pain occurrence among more than 80% of the adult population.

The aim of the study was to estimate the relationship between professional work and the age of respondents, and the occurrence of dysfunction of the intervertebral disc (discopathy).

The study group consisted of 150 patients of XI and XII Rehabilitation Department in Kochcice, Independent Public Provincial Trauma Surgery Hospital in Piekary Śląskie and hospital rehabilitation clinic. The author's questionnaire was used in the work.

The majority of respondents (76%) in their work duties assumed a forced posture, of which 32% of the respondents took a seating position. Half of respondents are overweight (50%), 25% of respondents have normal body mass to height ratio, but 18% of respondents have 1st degree of obesity and less than 5% second degree of obesity.

The study did not show the relationship between performed work and increased incidence of bone, joint, muscular and connective tissue diseases. A high body mass index (BMI) increase the risk of degenerative diseases of the spine.

Keywords: degenerative diseases of the spine, discopathy, risk factors

Use of ultrasound in injuries and knee joint diseases

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Medical ultrasonography is a diagnostic imaging technique based on the use of ultrasounds. The use of ultrasound varies depending on the field of medicine, in orthopaedics it is used to observe the internal structures of the body, such as tendons, muscles, joints, blood vessels. Its purpose is often to find the source of the disease, to exclude pathology or to confirm the suspicion of the doctor. There are many methods of imaging the knee joint, such as magnetic resonance, but these are expensive and sometimes inaccessible methods in all hospitals. The rapid development of ultrasound technology and can more accurately diagnose the soft elements of the joint.

The aim of this study is to evaluate the usefulness of ultrasonography as a tool to observe changes in the knee joint compared to magnetic resonance and arthroscopy.

The examination is still ongoing from 11.2017, 39 patients have now been examined, and ultrasound results have been compared with magnetic resonance and arthroscopy. From our questionnaires we took the condition and health of the patients. We examined elements of the knee joint such as: quadriceps tendon, patella, lateral protection of the patella tendon (ligament), lateral protection of the ligament ligament and the condition of the surface of joints.

Ultrasonography is an effective and inexpensive method of diagnosing changes in the knee joint. It enables us to assess exudate in the joint, assess synovial hypertrophy and its blood supply, diagnose tendon rupture and damage to the meninges.

Ultrasonography is an easily accessible, well tolerated method of non-invasive evaluation of knee joint changes. Ultrasonography in trauma cases examined within a few days after the accident achieves similar efficacy as physical examination.

Keywords: USG, knee joint,



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SESSION OF OTHER SURGICAL SPECIALTIES

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Do the atmospheric pressure changes have an impact on abdominal aortic aneurysm rupture?

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Rupture of an abdominal aortic aneurysm is a serious life threatening event. The rate of rupture of the aortic aneurysm correlates with the aneurysm diameter. The bigger it is, the higher rate of the rupture is observed. According to the literature correlation between the atmospheric pressure and aneurysm size can be found.

In this study we assessed influence of the atmospheric pressure changes on the abdominal aortic aneurysm rupture and evaluated correlation to the aneurysm size.

The group of 402 rupture abdominal aortic aneurysm patient records were evaluated. The patients were admitted to the Department in the period from 1997 – 2012 from the Silesia region. Patients were divided into 3 groups according to the aneurysm size <5,5cm, 5,5 – 7 cm and >7 cm. The atmospheric pressures on the day of rupture, on the days before rupture as well as on the days between the rupture events were compared.

The highest mean values were observed in winter periods and it was from 990-1045kPa (mean 1019,1 kPa). In these seasons the most patients – 113 were reported to have rupture of abdominal aortic aneurysm. The most numerous group was patients with aneurysm size >7cm and it counted 179 patients. Although there were no statistically significant atmospheric pressure differences between the days of rupture and the rest of the days within the analyzed period.

The results of this study do not support the hypothesis that there is a direct link between atmospheric pressure values and abdominal aortic aneurysm ruptures, although it requires gathering more data.

Keywords: abdominal aortic aneurysm, aneurysm rupture, atmospheric pressure

Does the size of abdominal aorta aneurysm correlate with other arterial and organ alteration?

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Abdominal aorta aneurysm (AAA) causes up to 3% of deaths in developed countries among men aged 65-85. Screening of this phenomenon is very important due to fatal results of rupture. Patients with AAA may suffer from other arterial and organ abnormalities which can affect overall condition and cause additional complications.

To check if size of AAA relates to different frequency of other concomitant vascular and organ abnormalities.

The study group consisted of 896 patients (83% men) with AAA, which mean age was 72 ± 8 years old who have retrospective assessment of CTA of the aorta and its branches. We divided them into 4 groups depending on AAA size: Group 1 – small aneurysm ($<4.0\text{cm}$), 2 - medium aneurysms ($4.0\text{-}5.5\text{cm}$), 3 - large aneurysms ($>5.5\text{ cm}$), 4 - very large aneurysms ($\geq 6.0\text{cm}$). Then we check the incidence of other arterial and organ abnormalities.

AAA are much more often present in men and mostly they are very large; in women most frequently occur medium aneurysms ($p=,02679$). Groups were statistically different regarding occurrence of concomitant aneurysms of left femoral artery – they were most frequent in patients with small AAA in comparison to other groups (group 1: 9,4% vs 2% vs 5,2% vs 5%; $p=,02522$) Other vascular and organ abnormalities occurred with similar frequency in different groups, mean frequencies were following: AAA=5,5%; aneurysm of common inguinal artery - right =46,1% and left=39,6%; aneurysm of internal inguinal artery – right=14,5% and left=17,5%; aneurysm of right femoral artery=4,8%.

Patients with AAA should be screened in search of concomitant vascular abnormalities which can occur in 46% of patients and can exacerbate the overall condition.

Keywords: abdominal aorta aneurysm, vascular abnormalities, organ abnormalities

Do the new blood-based inflammatory markers predict death on renal cell carcinoma patients?

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The aim of the study was to analyze the relationship between pre-operative values of RDW (Red Cell Distribution Width), MPVLR (Mean Platelet Volume-to-Lymphocyte Ratio) and NMPVR (Neutrophil-to-Mean Platelet Volume Ratio), and survival of clear cell renal cell carcinoma (ccRCC) patients undergoing nephrectomy.

After applying the strict inclusion criteria, 396 ccRCC patients treated with radical or partial nephrectomy were included in the study. The median follow-up was 81 months. The study endpoints were overall- and cancer-specific survival. Statistical analysis was performed using Statistica 12.

Pre-operative values of RDW, MPVLR and NMPVR were significantly associated with one or both of established endpoints. Furthermore, the unfavourable histopathological results were more prevalent in the groups of patients with baseline higher marker values.

The simple blood-based indices may be useful tools for pre-operative risk assessment of post-operative mortality.

Keywords: RCC, markers, nephrectomy, survival, RDW, MPVLR, NMPVR

The prevalence of concomitant arterial aneurysms in patients with abdominal aortic aneurysm in different age groups

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Abdominal aorta aneurysm (AAA) is a factor that causes up to 3% of deaths in among men aged 65-85. Screening of this phenomenon is important due to fatal results of rupture. Patients with AAA may suffer from other arterial aneurysms which can affect overall condition.

To determine the prevalence of concomitant aneurysms in patients with AAA and to check whether patients age is related to these abnormalities.

The study group consisted of 896 patients (83%men) with AAA, which mean age was 72 ± 8 years. We divided them into 5 groups depending on age: Group I: ≤ 65 yrs, II: 66-70 yrs, III: 71-75 yrs, IV: 76-80 yrs and V: ≥ 81 yrs. We described the occurrence of other arterial aneurysms in the whole study population and in different age groups. Groups were similar in terms of some comorbidities.

Overall, we found that the prevalence of internal iliac artery aneurysm was 21,6% and common femoral artery aneurysm-3,8%. The proportion of women increased with age (group I vs V: 12 vs 25%; $p=,009$). We observed statistically significant difference in occurrence of aneurysms: left common iliac artery (group I to V: 35/31/43/43/51%; $p=,0027$), left internal iliac artery (group I to V: 10/13/ 20/17/24%; $p=,0048$) and common iliac artery (group I to V: 51/47/54/60/67%; $p=,0035$). There were no differences in the prevalence of other arterial aneurysms between groups.

Concomitant arterial aneurysms are common findings in patients with abdominal aortic aneurysm and the prevalence of some of them increased with age. This additional findings should be taken into consideration during screening and treatment of patients with abdominal aortic aneurysm.

Keywords: abdominal aorta aneurysm, concomitant aneurysms, age

Observation as an effective diagnostic tool for children in acute appendicitis

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Acute appendicitis is a frequent occurring surgical case, and laparoscopic appendectomy is the most often proceed emergency paediatric surgical procedure.

Evaluation of short-term observation as a safe and an effective course of treatment in clinically doubtful patients, in whom appendicitis has been suspected.

In retrospective analysis the files of 60 paediatric surgical patients: 27 females and 33 males at the age 1-18, with acute appendicitis, undergone laparoscopic appendectomy (1.01.2018 – 28.02.2019) at the Department of Paediatric Surgery of Malformations and Traumatology in Zabrze SK1 have been analysed. The cohort was divided into two groups: postponed surgery (at least 12h) and emergency surgery. Next, in both groups the stage of clinical advancement was assessed by using Alvarado Score and AIRS.

Postponed group consisted of 20 patients, there was 1 complication. In emergency surgery undergone group consisted of 40 patients - 4 complications occurred. In all of the children there were 23 highly clinically advanced patients in Alvarado Score and 8 patients in AIR Score. 4 out of 5 postoperative complications were assessed as clinically advanced during hospital admittance.

Postponed appendectomy doesn't correlate with appearance of complications or worse prognosis in a group of uncertain cases. Using this trial in diagnostics and treatment decreases amount of unnecessarily performed appendectomies, doesn't worsen the process itself and doesn't generate more complications. It is an effective method in diagnostically uncertain situations for paediatric surgeons everyday practice.

Keywords: appendicitis, paediatric surgery, laparoscopy, observation

Risk factors of abdominal aorta aneurysm post-repair endoleak occurrence – retrospective analysis

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One way of abdominal aorta aneurysm management is an endovascular repair (EVAR) with stent-grafts. Most common complication of that procedure is an endoleak, which occurs as persistent blood flow within the aneurysm sac. Identifying the risk factors of that process is important to improve treatment and optimize clinical outcome.

The aim of this study is to classify and measure risk factors of endoleaks, resulting from anatomical conditions, type of stent-graft, preoperative treatment and general health status of patient.

Clinical material includes data of patients who underwent the EVAR procedure in year 2017. This study is a retrospective assessment of clinical outcomes resulting in endoleaks. We compared postprocedural complications during 6 and 12 months after procedure and measured anatomical parameters of abdominal aorta branches analyzing computer tomography scans.

Basing on our data, to significant risk factors we can include aneurysm size, age, smoking, hypertension. Among anatomical features those who have important meaning are diameter and length of the aneurysm neck, parameters of iliac, renal and lumbar arteries. Percentage of endoleak incidents was comparable in all patients beside received stent-graft.

Identified risk factors are the key to planning EVAR procedures effectively and to minimize the risk of endoleak occurrence.

Keywords: abdominal aorta aneurysm, endoleak, EVAR, risk factors

Distinct histopathological features of intrapancreatic distal common bile duct carcinoma in comparison with pancreatic and ampullary carcinoma

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Intrapancreatic distal common bile duct carcinoma (IDCBDC), pancreatic carcinoma (PC), and ampullary carcinoma (AC) arise in similar location and therefore share many clinical features. However, they differ largely in terms of their biological profile and distant prognosis. Data on histopathological features of IDCBDC are scarce.

To compare histopathological characteristics of IDCBDC, PC, and AC.

Fifteen IDCBDC cases diagnosed in pancreatoduodenectomy specimens between 2014 and 2018 were retrieved and re-evaluated. For comparative purpose, consecutive pancreatoduodenectomy specimens with PC and AC (15 cases each) were selected.

IDCBDC group was significantly enriched in cases of adenosquamous carcinoma (27%), in comparison to PC and AC (not seen in study groups, $p=0.012$). Median tumor diameter in IDCBDC was smaller than in PC, but larger than in AC cases (25 mm, 35 mm, and 15 mm, respectively, $p<0.001$). Rate of peripancreatic fat invasion in IDCBDC was comparable to PC, but still larger than in AC (87%, 100%, and 60%, respectively, $p=0.014$). Similar trend was seen in rates of perineural invasion ($p=0.003$). Tumor involvement of surgical margins was frequent in PC, but rare in IDCBDC and AC (67%, 13%, and 7%, respectively, $p<0.001$). IDCBDC, PC and AC did not differ in terms of patients' age and sex proportions, tumour grades, rates of vascular invasion, and frequencies of metastases in lymph nodes.

Resected IDCBDC cases are relatively small, but locally invasive masses. They often show adenosquamous differentiation, what is a new observation. IDCBDC may be radically resected in large proportion of cases.

Keywords: intrapancreatic distal common bile duct carcinoma, pancreatic carcinoma, ampullary carcinoma

Chronic venous disease pharmacological management - the evidence based medicine or pharma companies dreams?

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In European countries venous diseases are a huge social issue. Chronic venous insufficiency (CVI) is the most common form of venous diseases, which includes a wide range of vessel pathologies starting from minor teleangiectasia to extensive venous ulcers. Telangiectasia are the most widespread disease changes of the venous system. It is estimated that they affect over half of men and nearly 65% of women. As a result, various phlebotropic drugs are widely available on the Polish market.

The main purpose of this study was to review the published literature on the use of phlebotropic drugs and to determine where there is reliable evidence justifying their effective impact.

The author analyzed Guidelines of the European Society for Vascular Surgery (2015), Management of Venous Leg Ulcers: Clinical Practice Guidelines of the Society for Vascular Surgery and the American Venous Forum (2014), International Angiology - Guidelines on the Management of Venous and Lymphatic Diseases (2018), which provided information from randomized clinical trials on the recommended pharmacological treatment. This has been compared with the indications contained in leaflets of available medicinal preparations containing diosmins, hesperidins, coumarin derivatives and troxerutin.

The overview showed a large discrepancy between the indications for use from medical companies and the scientifically proven effectiveness of those medicaments. The availability of many formulations with the same active substance under a different trade name, often offered by the same manufacturer, has been observed.

It follows that the use of phlebotropic drugs in CVI is effective in relieving some of its symptoms, but it does not cure and does not prevent the disease from worsening.

Keywords: venous disease, pharmacology, diosmin, coumarin, troxerutin, evidence

The congenital nasolacrimal duct obstruction and epiphora: What now?

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Congenital nasolacrimal duct obstruction (CNLDO) is the most common cause of persistent epiphora in children. Although nasolacrimal duct probing is a standard procedure for the treatment of CNLDO, controversy exists regarding the optimal timing. Some ophthalmologists prefer waiting, because spontaneous resolution occurs in the majority before 1 year of age. In contrast, some studies showed that late initial probing can increase the risk of inflammation and fibrosis.

To determine the optimal time frame for probing procedure in CNLDO.

Retrospectively, medical records of patients who underwent nasolacrimal duct probing in Department of Pediatric Ophthalmology Medical University of Silesia in Katowice, between 2012 and 2018, were retrieved. In total, 2543 eyes of 2075 children (52.6% boys) were evaluated: 821 right eyes, 786 left eyes and 468 individuals with bilateral CNLDO. Patients ranged in age from 2 weeks to 41 months (average age was 7.6 ± 5.4).

The success rate of the initial probing was 88,2% (2243 of 2543 eyes) and ranged from 94% (1374 of 1461 eyes) in the 2 weeks to 6 months age group to 69.8% (44 of 63 eyes) among children older than 24 months of age ($p < 0.001$). Repeat probing procedures ($n = 300$) were successful for another 261 eyes (87%). The success rate of the initial probing was 90.7% (1457 of 1607 unilaterally affected patients and 84% (393 of 468) in bilaterally cases ($p < 0.001$).

Success of initial probing declined after 13 months and surgical intervention between age 3 and 6 months appears to be a reasonable treatment strategy for children with CNLDO.

Keywords: congenital nasolacrimal duct obstruction, epiphora, probing, success rate

Association between anastomosis type and postoperative complications in patients following right hemicolectomy

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Right hemicolectomy (RH) is a common procedure for both benign and malignant colic disease. Different anastomotic types are performed during this procedure.

To assess association between anastomotic type and postoperative complications (PC) in patients undergoing RH.

Retrospective analysis of medical records of 63 patients (40 female and 23 male), aged 24-93, undergoing RH in Department of Gastrointestinal Surgery. Data regarding anastomotic type (end-to-end (EEA), side-to-side (SSA), end-to-side (ESA), and side-to-end (SEA)), and different clinical factors were collected.

There were 12(19%) EEA, 25(40%) SSA, 12(19%) ESA, and 14(22%) SEA in the analyzed group. Adenocarcinoma G2 was the most frequent indication for RH - 29(46%). Total duration of hospitalization (in days) was the longest (14,25) after ESA and the shortest (10,92) after SSA compared to 12 after SEA and 11,75 after EEA. PC were noted in 14(22%) patients. Wound infection was the most common complication noted in 4(6,3%) patients (29% of all PC). The overall anastomotic leak rate was 0% (0/63). PC were the most frequent after SEA 6/14(43%) including abdominal bleeding 2/6(33%) and bowel perforation 2/6(33%). The overall reoperations rate was 3%(2/63) and it was the highest in SEA 14%(2/14), and 0% in other groups. The overall mortality rate was 5% (3/63) and it was the highest in SEA 14%(2/14), and the lowest in both SSA and ESA group 0%, compared to 8%(1/12) in EEA group.

SSA was the most frequent. SEA was associated with the highest number of PC, mortality and reoperations rate after RH. There were no association between anastomosis type and anastomotic leak rate.

Keywords: right hemicolectomy, anastomosis, postoperative complications

The patient's struggle. Analysis of an average waiting time for vascular surgery services in Silesia

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Varicose veins of lower extremities are a manifestation of chronic venous disease with a prevalence rate of 46% in the general population. When untreated it may lead to severe complications. An abdominal aortic aneurysm is a local widening of over 50% of its normal width. The rate of its occurrence in Poland is between 4–7,6% in Men over the age of 65. It is crucial to identify patients with a higher risk and refer them to a vascular surgery clinic.

The aim of the study was to estimate an average waiting time of admission to a vascular surgery clinic in case of a patient with varicose veins of lower extremities and in case of a patient with an abdominal aortic aneurysm and compare this time with national data as well as to analyze further clinical management.

40 vascular surgery clinics in Silesia were contacted by phone. We assessed the earliest possible appointment for patients suffering from varicose veins of lower extremities and patients with an aortic abdominal aneurysm.

In case of a patient with varicose veins the average waiting time was 229 days (7,6 months). In case of a patient with an abdominal aortic aneurysm the time was 78 days (2,6 months). The analysis of further management process is in progress. Available data shows that the average waiting time for vascular surgery services in Poland is 5,7 months while in Silesia the waiting time for the first analyzed patient is 1,9 months longer and for the second patient 3,1 months shorter.

The results of the study point out a significantly limited access to specialized vascular care in the analyzed group. It seems particularly alarming, considering the serious complications of the presented diseases.

Keywords: average waiting time for medical service, varicose veins, aortic abdominal aneurysm, vascular surgery clinic

Echogenicity as the malignancy marker on ultrasonography examination and its correlation with histological type of thyroid cancer

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Ultrasound examination provides details as size, echogenicity, structure, composition of nodules. These informations are helpful in future diagnosis and treatment.

Aim of this research is to determine the connection of different echogenicity and histological types of thyroid nodules.

Echogenicity was investigated on ultrasonography among the group of 213 thyroid nodules that belong to patients treated in The Clinic of Surgery, Gastroenterology and Endocrinology in Wrocław. Echogenicity is divided into 4 classes based on the ability of the examined object to reflect sound waves. The relationship between echogenicity and histological structure was evaluated using percentage and chi-squared calculation.

Among 213 thyroid nodules 171 (80%) underwent fine needle aspiration biopsy (FNAB). Postoperative diagnosis based on FNAB revealed that 126(74%) nodules were malignant with the highest prevalence of papillary cancer (PC) - 98(78%). The rest of malignant nodules constituted 14 follicular, 6 medullary cancers, others were under 2% each. Among patients with PC dominated nodule hypoechogenicity with 75%. The echogenicity of malignant nodules presented as follows: 73% were hypo-, 8% iso- and hyper- and 11% heteroechoic. In the total of 45 (26%) benign nodules dominated nodular goiters 21(50%) then colloid goiters 13 (29%). Benign nodules were hypoechoic in 56% cases. In 42 nodules that didn't undergo FNAB, 24 were hypo-, 10 iso-, 5 hyper-, 3 heteroechoic.

In the research dominated hypoechoic nodules (69%). The chi-squared test proved that hypoechogenicity cannot be a helpful marker alone but it should be combined with other features in diagnosing malignancy of thyroid nodules.

Keywords: ultrasonography, thyroid nodules, echogenicity, thyroid cancer



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SESSION OF PAEDIATRICS

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Do we prevent sudden cardiac death in children with congenital deafness?

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Jervell and Lange-Nielsen syndrome (JLNS) is an autosomal recessive variant of long QT syndrome clinically manifested by congenital bilateral, sensory neural deafness and malignant cardiac arrhythmias, potentially leading to recurrent syncope and sudden death (SCD).

The study attempted to evaluate RR, QT and TpTe intervals in children with congenital deafness as well as to determine whether the values of these repolarization parameters may be used as a possible method of identifying affected asymptomatic children with JLNS.

The analysis was made in 44 children with congenital deafness (22 girls and 24 boys; mean age $7,5 \text{ years} \pm 2,9$) who attend the Regional School Centre for Deaf Children in Katowice and 85 health children (38 girls and 47 boys; mean age $6,1 \text{ years} \pm 2,0$). The medical examination included: personal and family history and standard 12-lead resting ECG. The RR, QT, and TpTe intervals were measured manually in the lead II and V5, and corrected using Bazett's formula.

The RR were significantly shorter and TpTe were significantly longer ($p < 0,001$) in the deaf children ($94 \pm 8 \text{ ms}$) comparing to the control group ($77 \pm 10 \text{ ms}$). QTc were no longer ($p = 0,125$) in the children with deafness ($421 \pm 20 \text{ ms}$) than in the health children ($412 \pm 27 \text{ ms}$). 13 (30 %) children with deafness were shown T wave bifid (V4-V6) and prolongation QTc (443-467ms) and TpTe (90-110ms).

The TpTe interval in addition the QT interval might be potentially useful for the early clinical identify affected asymptomatic children with Jervell and Lange-Nielsen syndrome, which may have implications for management and prevention, in order to prevent SCD, related to malignant ventricular arrhythmias. .

Keywords: LQTS syndrome, children, electrocardiographic T wave parameters, repolarization

Performed – as long as recommended: knowledge and attitude to voluntary vaccinations in Łubniany commune

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Voluntary vaccinations in Poland, protect against 7 infectious diseases. Though, in little countrysides they are still not very common.

Analysis of attitude and knowledge about voluntary vaccinations among parents of children attending schools and pre-schools in Łubniany commune, Opole county. Promotion of reliable information in the field of vaccination and disease prevention.

Paper questionnaires, examining the awareness and the attitude towards voluntary vaccinations were given to the parents. The study was complemented by an original educational program, based on the parent-child-teacher relationship, consisted of 3 components: lessons with students, meeting with parents and booklets for the teachers.

The study embraced a total of 484 parents. 46.3% (N=224) of the parents vaccinated their children with recommended vaccinations. Among them, the most frequent was the vaccination against meningococcus, chosen by 61,6% (N=138) parents, followed by rotaviruses 44,2% (N=99) and chickenpox 38,8% (N=87). 22.3% (N=108) of all the parents were not informed by the doctor about the opportunity of using the recommended vaccinations. The most frequent answer to the question about reasons for not being vaccinated was the parent's opinion that it is redundant 40,3% (N=97). The second reason was the high price of the vaccine 29,5% (N=71).

Not enough doctors inform parents about vaccinations recommended for children, despite the legal obligation to inform each patient about them. We should aim at refund of recommended vaccinations.

Keywords: vaccinate, voluntary vaccinations, recommended vaccinations, education

Constipation in children - simple or not?

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Functional disorders of the gastrointestinal tract are a serious medical problem in the pediatric population. An important example of such disorders is constipation, as it is observed in approximately 10% of children. The disorder may contribute to the development of other diseases and its symptoms are not always apparent, which contributes to them being a diagnostic problem in pediatric practice.

To pay attention to constipation problem in children and its extent. To demonstrate symptom diversity on the example of selected clinical cases.

The main part of the study includes a brief anonymous survey, based on the Rome criteria version IV and self-created questions. 216 participants have completed the survey. Remaining part of the study is a brief description of four patients hospitalized at the Department of Paediatric Surgery and Traumatology in Zabrze. A boy with typical constipation symptoms, a boy with epididymitis, a girl with bowel obstruction and a girl suffering from nycturia and vesicoureteral reflux. In all cases, a closer investigation revealed their medical issues to be secondary to constipation.

Based on the results of the study, constipation has been observed in 15% of children. Questions about nutrition were also included in the survey, and showed a positive correlation between dietary habits and constipation occurrence.

A holistic approach to the problem is necessary to establish a correct diagnosis. It is important to raise the awareness of parents about possible consequences of constipation, as well as stress the importance of proper nutrition and adequate hydration of their children.

Keywords: constipation, children, problem, complexity

What do the children eat? Eating habits of Polish children.

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It is widely known that balanced diet is a key to children's healthy development. In 2019 an updated food pyramid has been published. According to its guidelines the basics of healthy lifestyle are physical activity and appropriate water consumption.

The purpose of this study is to assess children's diet and evaluate how many of them fulfils the nutrition guidelines.

A cross-sectional observational study was conducted via internet in 204 parents (90% were mothers). The mean children's age was 6,8, SD - 4,5 (range 2-18 years). The study was based on questionnaire consisted of 50 questions regarding the frequency of consuming groups of products given in the pyramid. There were 6 possible answers to each question applying to the frequency of products' consumption.

None of the children met the nutritional criteria. However, 1/3 of the children met the criteria for the consumption of grain and dairy products recommended in the pyramid. More than a half of children eats vegetables and fruits in accordance with the guidelines. 54% of children do not eat fish even once a week, only 41% admitted eating fish 1-3 times a week. 31% of respondents declare that their children do not eat sweets.

The analysis shows that none of the children fulfils the guidelines of food pyramid and the most difficult parts to follow are healthy dairy and grains.

Keywords: Nutrition, diet, food pyramid, eating habits, healthy

The results of growth hormone (GH) treatment in growth hormone deficiency (GHD) among boys with hypothyroidism

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Growth hormone deficiency (GHD) is a medical condition with unclear etiopathogenesis resulting with growth deficiency among children. The frequency of this disorder is estimated between 1:4000 to 1:10000 of births.

Investigating the results of growth hormone therapy, regarding male patients suffering from GHD with coexisting hypothyroidism.

The study group included 22 boys with GHD (treated with GH) and hypothyroidism of various aetiology (treated with levothyroxine), which 19.1% of them were treated with GH in 2018. Three groups were distinguished depending on age: I - 6 children (in 3-9 years of age), II - 9 (9-14) and III – 7 (>14 years). The control group included 30 boys with only GHD.

There were 22 (100%) boys with GHD of the pituitary gland and hypothyroidism, 9 (40.9%) reached the average percentile canal of their parents, 13 (59.1%) remained below. Among 30 (100%) patients without hypothyroidism there were 8 (26.7%) who obtained average percentile canal of the parents and 14 (73.3%) who did not reach the goal. Chi-square test did not reveal statistical significance in GH treatment between male patients with hypothyroidism and not ($p=0.279$).

Growth hormone and thyroid hormones affect the hypothalamus, pituitary gland and body tissues, cooperating on them in complicated mechanisms. This study showed no difference in the results of growth hormone treatment with coexisting hypothyroidism. Due to the minor study group, the issue requires further attention.

Keywords: growth hormone deficiency, hypothyroidism, growth hormone treatment, hypothalamus, pituitary gland, thyroid

Seek and you shall... not always find – diagnostic process of kidney agenesis.

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Renal agenesis is defined as a complete absence of one kidney. This condition may remain harmless but in some patients it can lead to progressive renal insufficiency. For that reason early diagnosis and continuous nephrological care are fundamental.

Analysis of the circumstances in which kidney agenesis is diagnosed.

The data from medical records of 42 patients (19 girls, 23 boys) hospitalized at the Department of Pediatric Nephrology in Wrocław from 2014 to 2019 were analyzed in terms of indications for the diagnostic process and age at diagnosis.

The study group comprised 42 patients with renal agenesis. Mean age at diagnosis was 2 years 3 months. The diagnosis was established in: newborns (38%), infants – except newborns (33%), patients between 1 and 5 years (12%) and children ≥ 5 years (17%). The main indications for the diagnosis among newborns and infants were: prenatal or neonatal ultrasound screening (73%), US performed due to other anomalies (10%) and urinary tract infections (6%). The diagnostic process among children older than 1 year was triggered by abdominal pain (42%), urinary tract infections (17%) and other diseases (25%). In the whole group of patients, prenatal US revealed the anomaly in 36% of cases. US examination verifying abnormalities of prenatal and neonatal period was the main cause of diagnosis in children younger than 1 year.

In children older than 1 year anomalies were revealed due to US performed in diagnostics of abdominal pain and urinary tract infections. Despite the vast availability of US examination, the diagnosis of kidney agenesis is frequently established accidentally or during investigation of other anomalies.

Keywords: renal agenesis, prenatal diagnostic, ultrasound screening

Diagnostic and therapeutic aspects in children with dyslipidemia based on outpatient clinic management

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Lipid disorders (dyslipidemia), including familial hypercholesterolemia (FH) are the main risk factors of cardiovascular complications. Current data suggest a high prevalence of heterozygous FH. Pharmacotherapy is still controversial in this group of children.

The aim of this study was to evaluate the compliance and safety of therapy in children with dyslipidemia, based on outpatient clinic management.

A total of 37 children (13 boys) in age of 8.99 ± 4.03 years with lipid disorder were recruited. We analysed their medical history records, mode of therapy and lipid profile (total cholesterol (TCh), LDL, HDL and triglycerides (TG)). Study group was divided into: Group 1 treated with diet or supplements (w-3 fatty acids, stanols and monacolin K) and Group 2 treated with statins, ezetimibe or fibrates. Qualification to the specific treatment and evaluation of its effectiveness was based on Polish Lipid Association guidelines from 2016.

Initial TCh and LDL levels were significantly higher ($p < 0.001$) in Group 2. However, in both groups TCh, LDL and TG levels reached the normal values at the final visit and the difference between Groups was no longer significant. The effectiveness in Group 2 was strongly related with BMI. Based on clinical and biochemical evaluation there were no significant side effects of pharmacological treatment observed.

The effectiveness of therapy in children with lipid disorders is highly related to the proper qualification for each mode of therapy and must be individualized. Use of statins in children with FH seems to be safe and effective - we should not avoid or delay this kind of therapy.

Keywords: Familial hypercholesterolemia, dyslipidemia, statin treatment

Ingestion of corrosive substances as a reason of hospitalization in Gastroenterology Department of Upper Silesian Child Health Centre in Katowice in years 2014–2018.

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Ingestion of corrosive may lead to burns of the gastrointestinal system. Clinical course varies due to different chemical and physical characteristics of digested substance, its amount and total time of exposure.

Aim of the study was to analyze clinical picture, symptoms, endoscopic picture and complications depending on the type of ingested corrosive among children admitted to Gastroenterology Department in years 2014–2018.

The analysis included 50 patients, aged 2,5 months to 18 years (average age was 3 years). 25 of them were girls (50%) and 25 were boys (50%). Analysis includes: patient's age, type of ingested corrosive, clinical symptoms, endoscopic picture and complications.

Ingestion of corrosives most frequently occurred in patients under 3 years old (31/50–62%) most of them were between 24 and 30 months old. Cleaning agents were most frequently ingested corrosives – 42 patients (84%), out of which 26 were alkaline (61,9%). Performing endoscopic examination was necessary in 34 cases (68%). Most common pathologies in endoscopy were effusions (8 cases – 24%), ulcerations (6 cases – 18%) and mucosal inflammation (4 cases – 12%).

Ingestion of corrosives occurs mainly in patients aged 24 to 30 months. In most cases endoscopic examination is necessary for assessment of pathological changes. Ingestion of corrosives is related to risk of early and late complications, including inflammation of gastrointestinal tract mucosal membrane.

Keywords: children, corrosives, endoscopy, chemical , burns

Analysis of the clinical picture of patients diagnosed with primary sclerosing cholangitis hospitalized in the Department of Gastroenterology of the John Paul II Upper Silesian

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Primary sclerosing cholangitis (PSC) is a rare cholestatic disease of the liver with unknown aetiology, severe course and poor prognosis. PSC most often co-occurs with inflammatory bowel diseases, especially colitis ulcerosa (CU).

The aim of the study was to analyse the clinical picture of patients diagnosed with PSC hospitalized in the Department of Gastroenterology of John Paul II Upper Silesian Child Health Centre in Katowice.

The analysis included 30 patients, aged from 7 to 18 years (mean age 13.5 years), 21 boys (70%) and 9 girls (30%), who were diagnosed with PSC. The analysis includes age of diagnosis, clinical symptoms, course of the disease and complications, laboratory and imaging results.

The average age of patients at the moment of diagnosis was 13 years, mostly boys (70%). 70% (21/30) suffered from CU causing inflammation mostly in sigmoid colon and rectum. 16% (5/30) were diagnosed with Crohn's disease (chiefly in the colon area). Until now, 7% (2/30) of patients remain IBD-free. In addition 23% (7/30) had an overlap syndrome consisting of PSC-AIH. At the moment of diagnosis 17% of patients presented abdominal pain, which was the most common first symptom, while 70% of them were asymptomatic but had abnormal laboratory test results. Complications: biliary stricture occurred in 13% (4/30) of cases and required introducing a biliary prosthesis and 1 patient was qualified for a liver transplant with a suspected bile duct cancer.

PSC affects mostly boys in the second decade of life. In most cases ulcerative colitis was diagnosed before the diagnosis of PSC. The lack of pathological changes in MRC at the beginning of illness does not exclude PSC.

Keywords: primary sclerosing cholangitis, children, colitis ulcerosa

The foreign bodies in the digestive tract of children hospitalized in the Górnośląskie Centrum Zdrowia Dziecka w Katowicach in 2014-2018

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There are two types of swallowed foreign bodies: food bites and real foreign bodies.

The aim of the study was a retrospective analysis of the clinical cases among patients hospitalized for foreign bodies at the Gastroenterology Department of GCZD, Clinic of Paediatrics in Katowice in 2014-2018.

It analyzes 120 children aged 4 months - 17 years (mean age 4,4), 61 boys (51%) and 59 girls (49%) admitted to the Department of Gastroenterology due to swallowing of a foreign body. The analysis takes into account the age, sex, type of foreign bodies, clinical symptoms, complications and way of evacuation.

Results: The most frequent bodies were consumed by children aged 0-3 years (60%), rarely between 4-7 years (24%)

Among the swallowed foreign bodies, batteries (60) and coins (22) dominated. Among patient over 14 years psychiatric disorders were frequently observed. Swallowed objects usually are symptomless however, 5 of the patients were vomiting, 7 patients have stomachache and tenderness in that area. During the gastroscopy in 11% changes in the upper gastrointestinal tract were observed, in 13% erosions/ulcerations. The most common ways of objects evacuation were spontaneous excretion (53%) and required extractions of endoscopic methods(44%).Long-term complications were observed in 3 patients: 2 in the form of extensive scars which disrupt intestinal passage, in 1 patient with mediastinum perforation.

Frequently foreign bodies aspiration was in patients under 3 years, that's why that age bracket requires particular attention.

Keywords: foreign bodies, paediatrics, gastroenterology, digestive tract

Genotyping of celiac disease specific HLA among patients with type 1 diabetes - is it time for changing recommendation?

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Reports from the diabetes research community in recent years critically assess the practical importance of HLA genotyping as an element in the diagnosis of celiac disease.

The aim of study was to determine the usefulness of HLA DQ2/DQ8 genotyping in children with T1D in various clinical situations.

The study group included: children with newly diagnosed diabetes (group I, n=92), children with classical CD (group II, n=30) and children with potential CD (group III, n=23). Genetic tests were performed and clinical data were collected in all patients.

The results of genetic tests confirmed the presence of typical haplotypes DQ2/DQ8 in 94% children with diabetes (group I) and in 100% of children with diabetes and CD (group II and III). Allele DRB1*04 (linked with HLA DQ8) was significantly less common in children with diabetes and CD ($p=0.001$). The probability of developing CD in DRB1*04-positive patients was 4-times lower ($p=0.001$). DRB1*04 was also significantly less frequent in children with classical CD compared to potential CD ($p=0.03$). The age of diabetes onset in children who developed CD was significantly lower ($p<0,05$) and the probability of developing CD below 3.5 years was 2,8- times higher (OR 2.868; 95%CI:1.304-6.309; $p=0.008$).

Genotyping HLA DQ2/DQ8 as a negative screening has limited use in assessing the risk of CD at diabetes onset, and does not allow to verify the diagnosis of CD in doubtful situations. The presence of the DRB1*04 haplotype modulates the risk of CD - significantly reduces it and can predict a potential form.

Keywords: HLA genotyping, diabetes type 1, celiac disease

The use of herbal preparations and medicines in pediatrics.

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Modern phytotherapy is a part of pharmacology and it is more and more willingly prescribed by physicians. Some health care providers recommend them as mild and safe medications.

The aim of our study was to evaluate the effectiveness and the frequency of the herbal preparations' use in common paediatric diseases.

The study was conducted by performing an anonymous, online questionnaire. The survey was divided into three categories: a demographic data, a review of herbs, their applications and satisfaction.

The survey was nationwide, 344 people took part in it – 335 women and 9 men. Phytotherapy is the most often option chosen by parents in case of strengthening immunity - 83,2% as well as rhinitis and sinusitis -78,8%. The most commonly used method to strengthen immunity was a domestic onion syrup 17,5% and an elderberry syrup 17,3%. Rinsing with chamomile and sage is used by 23.9% of parents in the case of a sore throat, Natur-Sept Gardło Lollypops are used by 16,3% of parents. For alimentary problems the brew of peppermint 23,9% and chamomile 17,7% is the most common home method and mint drops 10,8% are the most common used medicinal product. In order to calm the child down, a melissa tea -81,8% and Neospasmina -5,4% are the most commonly chosen. In case of aphthae and thrush, the first choice of the majority of parents -71,89% is Dentosept. To the question of who recommended the parent a herb administration, the most common answer was a physician 47,97%, a family 46,80%, a pharmacist 31,10% and the Internet 30,23%. 16% of the respondents' children were not vaccinated.

Parents willingly use herbal medicinal preparations and are satisfied with the effects of the action.

Keywords: herbs, children, immunity, common paediatric diseases

Clustering of newly diagnosed cases of type 1 diabetes in children up to 15 years old in Silesia region: temporal and geographical analysis

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Type 1 diabetes (T1D) prevalence increases globally and regionally, also in Poland. Detection of clusters of T1D diabetes enables the analysis of factors that may influence the emergence of new cases of T1D.

The aim of the study was to determine the spatio-temporal effect in the incidence of T1D since 2016 to 2018 in the silesian children less than 15-year-old.

Database of new cases of T1D of silesian, regional, scientific register and the data from the Central Statistical Office since 2016 to 2018 were used. Residence codes for newly diagnosed T1D children were related to the relevant populations of children below 15years old in the regions concerned.

In 2016 T1D in the Silesian region was diagnosed in 134 children (41,79% girls, 58,21% boys), the incidence rate (IR) was 20,8/100k; in 2017 in 124 children (48,39% girls, 51,61% boys), the IR was 19/100k; in 2018 in 144 children (54,17% girls, 45,83% boys), the IR was 22,1/100k. The highest IR was recorded in 2016 in Świętochłowice (69.7 /100k), in 2017 in Mysłowice (44.3 /100k), and in 2018 in the bieruńsko-lędziński district (50,7/100k). There was no newly diagnosed T1D in children under 15 years old in the raciborski district (2016), in Świętochłowice (2017) and in the wodzisławski district (2018).

The detection of clusters of T1D was noticeable.

Keywords: type 1 diabetes, space–time clustering, geographical variation

Age related presentation of onset of type 1 diabetes in children

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In genetically predisposed individuals, environmental factor triggers the onset of disorders in the immune system leading to the destruction of β -cells and in the result Type 1 diabetes. Several studies concentrated on the causes of severe toxicity of β -cells in younger patients, others emphasized the role of insulin resistance in adolescents.

The aim of the study was to show the difference between onset of T1D in children under the age of 5 and children in adolescent based on clinical and biochemical parameters.

The study group included 164 patient with diagnosed T1D from Department of Children's Diabetology in 2017-2018. The group of younger children were patients under 5 years of age at the onset. The group of children entering adolescent consisted of patients over 10 years of age. Clinical data and biochemical parameters were evaluated in all patients.

In the study group at onset was observed significantly lower concentration of C-peptide in the younger children in comparison with children in adolescent age ($p=0.001$). In the group of younger patients lower values of HCO_3^- ($p=0.005$) and higher base deficit ($p=0.001$) were observed. At the onset the tendency to higher BMI z-score was observed in patients at adolescent ($p=0.070$). Higher insulin intake per kilogram was observed in older patients ($p=0.008$).

The diagnosis of T1D at a younger age seems to be associated with a more severe destruction of β -cells. Acid-base imbalance was also more frequently observed in younger patients at the onset. In adolescents, higher insulin intake per kilogram and higher body weight may suggest the presence of insulin resistance.

Keywords: type 1 diabetes

Is it necessary to monitor the concentration of azathioprine metabolites to determine a proper therapy in paediatric patients with inflammatory bowel disease and autoimmune hepatitis?

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Azathioprine (AZA) is an immunosuppressive drug, which is metabolised in the liver and kidneys into 6-thioguanine- the form responsible for the therapeutic effect. Despite its anti-inflammatory, antibacterial and immunomodulating properties, azathioprine has also dose-related side effects, such as bone marrow suppression, liver damage and pancreatitis.

The purpose of this study was to assess the usefulness of monitoring the concentration of azathioprine metabolites: 6-thioguanine (6-TG) and 6-methylmercaptopurine (6-MMP) in the group of paediatric patients with inflammatory bowel disease (IBD) and autoimmune hepatitis (AIH).

The clinical data of 46 paediatric patients with IBD and AIH, aged 8-17 years, hospitalised between 2017 and 2019 in the Department of Gastroenterology and Hepatology of the Public Clinical Hospital No.1 in Zabrze, who had undergone a blood examination for AZA metabolites concentration, were analysed.

48% of patients required a dose reduction due to elevated 6-TG concentration. In 11% of patients metabolites were undetectable. In 30%, the concentrations of 6-TG and 6-MMP were within the normal range. The concentrations of 6-TG and 6-MMP were below the proper range in 11% of patients.

In significant number of cases monitoring the concentration of AZA metabolites indicated the necessity to reduce the dose of AZA allowing to achieve the therapeutic optimum and prevent serious side effects. Receiving undetectable concentration of metabolites is a sign of non-compliance. The final doses of AZA were found to be lower than those recommended for the treatment of inflammatory diseases.

Keywords: azathioprine, thiopurine therapy, metabolites concentration monitoring, inflammatory bowel disease, autoimmune hepatitis

Analysis of the Congenital Heart Defects in children with Turner Syndrome.

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Turner Syndrome(TS) is a genetic disorder caused by partial or complete loss of chromosome X.The risk of left-sided congenital heart lesions are 30-50 times more frequent in TS than in general population.Furthermore congenital heart defects are a major cause of mortality in TS.

The aim of the study was to establish the frequency and type of congenital heart defects (CHD) in children with TS,evaluate its impact on the growth rate.

The study included 141 girls with TS treated in the Department of Pediatric Endocrinology GCZD in Katowice.Referring to the most common cardiac defects our patients were divided into 3 groups:patients with Bicuspid Aortic Valve (BAV),patients with Coarctation with the Aorta(CoA) and patients with other congenital heart defects.The analysis was stratified by karyotypes grouped in 45,X and non-45,X.It was investigated using HSDS index,whether the heart defect affects the growth of patients with TS and if the occurrence of congenital cardiac defects speeds up the diagnosis of this genetic syndrome.

In our study group 25,5% patients had heart defect.The most common CHD was CoA which was found in 36,1%.BAV was found in 27,8% and other congenital heart defects were found in 36,1%.In our group of patients there were 22,2% patients with multiple heart defects.In patients with CHD 63,9% had 45,X and 36,1% had non-45,X.Furthermore, the presence of CHD didn't correlate with earlier diagnosis of TS.No statistically significant correlation between CHD and growth dynamics was found.

Congenital heart defects are a relevant problem in patients with TS.There is a need of further research in this topic.

Keywords: Congenital Heart Defects, Turner Syndrome

Evaluation of the respiratory system function in inflammatory bowel diseases

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Inflammatory bowel diseases (IBD) include ulcerative colitis (UC) and Crohn's disease (CD). The main manifestations are local gastrointestinal symptoms: abdominal pain, diarrhea with blood and general symptoms (fever, weakness, weight loss). In the IBD about 30% of patients may present parenteral symptoms involve skeletal system, liver and biliary system, skin, eyes, kidneys and respiratory systems. The lung manifestations, despite their rare occurrence, constitute an important element of the clinical picture of patients with the IBD. The respiratory system disorders are dominated by subclinical signs. Significant signs are very rare.

Assesment of the frequency of the respiratory system disorders using simple non-invasive diagnostic tests (spirometry and measurement of nitric oxide in exhaled air).

40 patients (19 with UC, 21 with CD) at the age between 9-16 years ($14,5 \pm 2,6$ years) with excluded respiratory diseases. Spirometry and measurement of nitric oxide (FeNO) in exhaled breath was performed in the patients.

An obstructive dysfunction (z-score FEV1/FVC<2, z-score FEV1%<2) was recognized in only one case. Any restrictive dysfunctions was not detected. 6 patients (15%) had increased nitric oxide level in exhaled breath above 25 ppb.

The frequency of respiratory dysfunctions in spirometry test is low. Increased nitric oxide in exhaled breath can be an inflammatory marker of the bronchial tree. These researches should be continue with larger group with extended diagnostic procedures: impulse oscillometry and plethysmography.

Keywords: inflammatory bowel diseases, IBD, respiratory system function

Breathing medication use among asthmatic children in Katowice

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Asthma is one of the most common pediatric chronic conditions.

The aim of this study was to assess the respiratory and allergy medication use in pediatric patients diagnosed with asthma.

A cross-sectional survey was performed in 2018 in Katowice, Poland. The questionnaire included 68 questions on allergic diseases. Questionnaires, via schools, were addressed to all children aged 6-9 years old living in Katowice.

Data were obtained from 922 (response rate: 82.1%) children, 48.9% were boys (B) and 51.1% girls (G). Of these, 7.3% reported the presence of asthma (B: 8.9%, G: 5.7%, $p=0.1$), while prevalence of asthma diagnosed by physician was 6.6% (B: 8.0%, G: 5.3%; $p=0.3$). In children with an asthma diagnosis, 62.3% (B: 63.9%, G: 60.0%, $p=0.8$) were currently treated by inhaled drugs and 57.4% using oral drugs (B: 58.3%, G: 56.0%, $p=0.9$). Among asthmatic children, 61.7% used inhaled corticosteroids (ICS) (B: 62.8%, G: 60%, $p=0.9$), wherein daily ICS use was declared by 21.7% of participants (B: 20%, G: 24%, $p=0.9$). Short-acting β_2 -agonist therapy as needed was used by 39.3% of participants (B: 38.9%, G: 40%, $p=0.5$). Only 5% of children with asthma were treated by single-inhaler combination therapy.

Conclusions inhaled corticosteroids and short-acting β_2 -agonist. There was no significant difference in the breathing medication use between boys and girls.

Keywords: asthma, children, pharmacotherapy

Assesment of the level of psychological care in the Polish medical facilities when taking into account the perspectives of the paediatric patient, parent and the medical

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The doctor's approach to the young patient and transparent passage of the information about the disease are both extremely important aspects.

The care provided by the medical entity in the matter of psychological assistance should also include parents of the hospitalized children who are exposed to the high amount of stress.

Comparison and rating of the viewpoints – between medical personnel, parents and children in the context of hospitalization of paediatric patients, in terms of level of awareness of the disease and assessment of conditions benefitting therapy during the hospital stay.

The single-use questionnaires were prepared containing 13 questions addressing three study groups: the medical personnel of the paediatric wards, the parents of the patients and the paediatric patients aged 8-18.

408 respondents from the dozens of treatment centres in Poland took part in the study.

The Kruskal-Wallis test was used for analysis.

The analysis has shown significant shortages in psychological care of the paediatric patient in Poland. Despite the existing differences in the perception of the studied subject between the groups the basic aspects in each of the groups were assessed as insufficient.

Children, parents and medical personnel often have different opinions on the topic of hospital stay and care in the paediatric wards, although in case of the psychiatric care, the feelings in each group had shown the shortage of supply to the real problem. In the study the significant issue was presented that should be a subject of the further analysis.

Keywords: psychological care, paediatric psychology, paediatrics

Can chronic disease as diabetes type 1 negatively affect on children's and adolescent's self-esteem?

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Self-esteem might have strong influence on behavior, what may be important in the context of treating DT1.

Our aim was to answer the question - whether chronic disease such as DT1 can negatively affect on self-esteem of children and adolescents and which factors determine teen's self-esteem nowadays.

The study included 124 patients with DT1 from GCZD (girls 49%, boys 51%) and 387 healthy pupils from Silesian area (girls 69%, boys 31%) in age 14-19. SES scale by M. Rosenberg in polish adaptation was used to measure the self-esteem level. To identify the potential factors affecting on self-esteem the original questionnaire was created (26 questions).

Patients with DT1 have significantly higher self-esteem compared to healthy children (295,96 vs. 243,19, $p < 0.01$). In both of groups there was a positive correlation between self-esteem and: willingness to go to school ($R = 0.22$, $p < 0.01$), good relations with their mates ($R = 0.34$, $p < 0.01$) parents ($R = 0.23$, $p < 0.01$), regular exercising ($R = 0.16$, $p < 0.01$). For the first three factors there was stronger impact on self-esteem in children with DT1. In the group of patients with DT1 more frequent episodes of hyperglycaemia ($R = -0.21$, $p < 0.05$) and hypoglycaemia ($R = -0.19$, $p < 0.05$) had a negative impact on self-esteem, however knowledge their peers about the illness had a positive influence. There was no correlation between duration of DT1 or HbA1c and self-esteem.

Our study showed that DT1 doesn't have a negative influence on self-esteem. Good self-esteem of children with DT1 is associated with stable glycemia, social relationships and ability to cope with everyday life problems.

Keywords: diabetes type1, DT1, self-esteem

What's the most frequent indication to perform voiding cystography in children? - One year single center experience.

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Voiding cystography (VCUG) is a procedure that is used to assess the functional efficiency of the valvular mechanisms between ureter and the bladder.

The aim of this study was to demonstrate the incidence of performing voiding cystography among children with suspicion of urinary tract defect and to find the most frequent diagnosis made using VCUG.

A retrospective study, including 175 children, was conducted from January 2018 to December 2018 in Pediatric Nephrology Clinic. The study group consisted of 110 girls and 65 boys aged from 2 months to 18 years, in whom VCUG was carried out in this period. Medical evaluation of patients included: gender, birth weight and height, age at the VCUG examination, the number of urinary tract infections (UTI) before voiding cystography, occurrence or nonoccurrence of urinary system defects in family and pregnancy complication by mother's UTI. Imaging examinations of urinary tract such as VCUG and USG were assessed and gathered in our database.

Three main reasons to carry out voiding cystography in this group were: recurrent urinary tract infections, suspicion of a defect in urinary system and incontinence. Only 51 (31%) among 165 conducted USG showed abnormalities in urinary system. Fifty two (30%) among conducted 175 VCUG were incorrect and revealed the occurrence of vesicoureteral reflux (VUR). Almost half (46%) out abnormal results show bilateral VUR; 19 (37%) out of them were IVth or Vth grade.

The qualification to VCUG should be carefully performed to minimize the number of unnecessary procedures. Diagnosis of VUR by VCUG enabled proper qualification to surgical treatment.

Keywords: Urinary tract, Voiding cystography, vesicoureteral reflux, GFR

The appropriability of the standard 2-h oral glucose tolerance test in the diagnosis of glucose metabolism disorders in children with simple obesity

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

We aimed to determine the prevalence of DM2 and impaired glucose regulation in a group of obese children at the Clinic of Pediatric and Adolescent Endocrinology in Krakow. The study population consisted of 46 boys and 52 girls diagnosed with obesity (BMI SDS>2). All children underwent a standard OGTT. Additionally, fasting insulin concentration and 120 min after OGTT insulin concentration were measured. Patients were evaluated in terms of impaired fasting glucose (IFG), impaired glucose tolerance (IGT) and diabetic status. Insulin resistance was evaluated with HOMA-IR.

The mean BMI SDS was 4.06 ± 1.76 . There were neither cases of DM2 nor IFG. IGT was detected in 4.08% (n=4) of patients. The mean value of fasting insulin concentration was lower in boys ($p=0.02$), and mean insulin concentration after the OGTT was also lower in males ($p=0.002$). There were no significant differences between males and females as regards to BMI SDS, height and weight. BMI was correlated with fasting insulin concentration ($R=0.4$, $p=0.0001$), and there was also correlation between HOMA-IR and BMI SD ($R=0.4$, $p=0.0002$).

Both DM2 and IGT are rare in obese children. Female patients, who overall have significantly higher fasting insulin concentration values, as well as higher insulin values after the OGTT, are more likely to be prone to have these disorders. This gender difference may be useful for further exploration.

Keywords: type II diabetes, impaired glucose regulation, obesity in children

Thrombophilia as a serious problem in pediatric population – role of age, symptoms and laboratory testing in diagnostic process.

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Thrombophilia is an abnormality of blood clotting, which may lead to thrombosis in blood vessels. Among children the most common cause of thrombophilia is overactivity of coagulation factor due to mutation in gene of factor V Leiden, MTHFR enzyme, prothrombin and deficiency of natural anticoagulants.

We decided to find correlations between age, symptoms, results of blood tests, molecular mutation among children who suffer from thrombophilia.

We selected group of 41 patients (18♀, age $9 \pm 6,62$ yrs) hospitalized in Department of Pediatric Haematology and Oncology in Zabrze between 2012 and 2018, due to suspicion of thrombophilia.

Mutation of MTHFR genes alleles were the most frequent: C677T (51,2%) and A1298C (34,2%). Thrombophilia suggesting episodes were: thrombosis of lower limbs (24,39%), upper limbs (7,32%), CNS (central nervous system) (9,76%). Also in our cases CNS haemorrhage (14,63%) occurred. Significant positive correlations were found between age and thrombosis of lower limbs ($r = 0,42$, $p < 0,05$), also between age and thrombosis of upper limbs ($r = 0,33$, $p < 0,05$). A negative correlation between age and bleeding into CNS was significant ($r = -0,33$, $p < 0,05$).

The older the child, the greater possibility of thrombophilia revealing in the form of lower or upper limb thrombosis. However, CNS haemorrhage suggests the presence of thrombophilia in younger patients. The genetic testing for thrombophilia are necessary part of a diagnosis and the blood tests are of auxiliary importance. Symptoms of thrombophilia may be non-specific and usually only serious episode of clotting disorder leads to diagnosis.

Keywords: thrombophilia; thrombosis; haemorrhage

Evaluation of communication quality between a pediatrician and patient in primary care

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Relation which is built between a patient and the doctor is important, as it implies an effective diagnostic process, based on a paradigm of holistic therapy.

The aim of this study was an evaluation of communication between a pediatrician, child and his parents during a visit in primary care – what are their expectations of the visit, doctor's behaviour and appearance. We analysed which features were more important when parents were or were not stressed.

The study was carried out using an anonymous questionnaire from February till May 2018 in 6 outpatient clinics in Silesian Voivodeship, which was filled in by parents of children in age to 12 years old after the visit. The questionnaire consisted of 32 questions about visit's details.

We got 190 responses. 24,2% of parents said that they were stressed before visiting the physician. In 37,4% of the visits the doctors did not explain possible side effects; in 68,4% of the visits they were filling medical records. However, most of the respondents were satisfied with the way of examining the child and the whole visit. 26,3% of parents admitted verifying the treatment after the visit, mostly in Internet.

According to the respondents, the most important thing is non-verbal behaviour as it mostly attenuates their stress. Appearance is not as important – this is relevant for clinical training and practice – we need to put an emphasis on non-verbal way of communication. Verifying the diagnosis may indicate that doctors do not explain all things about the disease comprehensively – doctors should have some reliable sources to recommend to more inquisitive parents.

Keywords: Communication, Patient-doctor relationship, Pediatric primary care, Non-verbal behaviour, Patient satisfaction



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF PHARMACY AND CLINICAL PHARMACOLOGY

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Memory-improving properties of a novel carbamate inhibitor of butyrylcholinesterase in a mouse model of scopolamine-induced amnesia

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Alzheimer's disease(AD) is a neurodegenerative disorder manifested by progressive loss of memory and impaired cognitive functions. Recent studies show that BuChE could be an important modulator of cholinergic neurotransmission in the central nervous system. Therefore, its inhibitors which increase acetylcholine concentration in the brain seem to have strong potential as drug candidates for future treatment of AD.

Investigate procognitive properties of a compound A242 in mouse model of amnesia induced by scopolamine.This compound was previously tested in vitro.These experiments showed that it selectively inhibits human BuChE with $IC_{50}=22.4nM$

To induce memory deficits we used scopolamine at the dose of 1mg/kg.Procognitive properties of A242 used at doses 10,20 and 30mg/kg were investigated in CD-1 or C57BL/6 mice using passive avoidance test(PA),Morris water maze(MWM) and Barnes Maze(BM).

In PA task an overall effect was observed($F[4,37]=3.11;p<0.05$).In retention trial,A242 at the dose 30mg/kg prolonged step-through latency as compared to scopolamine-treated control mice($p<0.01$).Lower doses weren't active.In acquisition phase of MWM a statistically significant($p<0.05$) reduction of latency time to reach the target platform was shown for A242-treated mice as compared to scopolamine-treated control.In BM the compound reduced number of errors made($p<0.05$ vs.scopolamine-treated control).A242 didn't impair motor coordination in rotarod test and it didn't reduce animals' locomotor activity.

Our study shows that A242 has anti-amnesic properties in mouse mode,so it can be an interesting lead structure in search for new drugs for AD.

Keywords: Alzheimer's disease, butyrylcholinesterase inhibitors, fear-motivated task, mice, scopolamine, spatial memory, water and land mazes

The in-vitro study of anti-melanoma effect of doxycycline

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Malignant melanoma is considered to be one of the most aggressive human cancers. Poor prognosis and high mortality cause the melanoma to be one of a major worldwide public health problem. Developed mechanisms of resistance to conventional therapies create a challenge for medicine and make it necessary to search for new methods of treatment. Doxycycline belongs to the second generation of tetracyclines. In addition to its antibiotic activity, the drug exhibits many other pharmacological properties, e.g. anti-inflammatory, immune-modulating, neuroprotective, anti-cancer and anti-metastatic.

The aim of the study was to examine the influence of doxycycline on the melanoma cells viability, vitality, cell cycle as well as the DNA fragmentation.

A COLO 829 cell line of human melanoma was used in the study. The viability of the cells was analysed spectrophotometrically using WST-1 assay. The cytotoxic effect of doxycycline was examined after 24, 48 and 72 h of incubation for the concentrations ranging from: 0.1 to 250 μ M. The analysis of the vitality, cell cycle and DNA fragmentation of the melanoma cells were made using the fluorescence image cytometer NucleoCounter® NC-3000.

The obtained results show that the melanoma cells viability decreases along with an increase of the tested drug concentration and the time of cells incubation with doxycycline. It was found that the drug exerts an influence on the distribution of cells in individual cell cycle phases, causes DNA fragmentation and decreases the vitality (the intracellular level of reduced thiols).

The conducted preliminary research suggests the potential possibility to use doxycycline in the treatment of malignant melanoma.

Keywords: melanoma, doxycycline, viability, DNA fragmentation, cell cycle, vitality

Potential anticancer activity of Sitagliptin - dipeptidyl peptidase-IV inhibitor

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Dipeptidyl-peptidase IV (DPP IV) is a cell-surface serine protease, which is expressed in a variety of tissues, primarily in endothelial and epithelial cells. The physiological function of DPP-IV is activation or inactivation many types of chemokines, neuromodulators and hormones. DPP-IV affects on cell proliferation and differentiation, so can play an important role in the formation of some cancers. Interestingly, most recent *in vitro/ in vivo* studies indicate that DPP-IV inhibitors can have potential anticancer activity. One of the few discovered DPP IV inhibitors is sitagliptin, which is approved for diabetes therapy.

The aim of the study was to examine the anticancer activity of sitagliptin on three cancer cell lines: glioblastoma (U87MG), melanoma (COLO829) and estrogen-independent breast cancer (MDA-MB-231).

All three cell lines were used as an *in vitro* model system. The cells were treated with various sitagliptin concentrations (0.001 – 1 mmol/l) for 24, 48 and 72 hours. The effect of sitagliptin on cells viability was determined by Cell Proliferation Reagent-1 (WST-1) assay.

The obtained results have shown that sitagliptin in concentrations used in the study doesn't significantly reduce viability of U87MG, COLO829 and MDA-MB-231 cells.

Sitagliptin hasn't anticancer activity against the tumor cells used in the study. This may be caused by different level of DPP-IV expression in various cell types, so a careful assessment of the antitumor effect of sitagliptin requires further studies on other *in vitro* models.

Keywords: sitagliptin, anticancer activity, dipeptidyl-peptidase IV

The selected ADMET parameters comparison studies on racemate and enantiomer R of new promising hybrid anticonvulsant KA-104

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Initial assessment of new promising compounds' ADMET properties is a significant parameter, which must be determined at the very beginning part of the drug development process. According to the standard of research in medicinal chemistry, the preliminary ADMET tests are performed not on animals, but with the use of an alternative *in vitro* methods.

KA-104 is a hybrid molecule that joins the chemical fragments of well-known antiepileptic drugs (AEDs) and displayed higher or/and wider activity in comparison to the model AEDs. In our previous research the initial toxicity *in vitro* tests of a KA-104 (racemate) were successfully performed. The aim of the present studies was to continue the determination of KA-104 ADMET parameters, and compare the metabolic stability and influence on CYP3A4 activity of KA-104 racemate and its enantiomer R.

The metabolic stability and number of metabolites were determined with the use of mouse liver microsomes and LC-MS spectrometry. The influence on CYP3A4 activity was performed using CYP3A4 P450-Glo™ kit provided by Promega®.

During the investigation, 3 metabolites of enantiomer R were found, while in case of the racemate, 2 more metabolites were determined. In presence of racemate (10 µM), the activity of CYP3A4 was 92%, whereas in presence enantiomer R at the same concentration was slightly lower – 85%.

Additional metabolites of racemate most probably derive from enantiomer S. Both racemate and enantiomer S have not shown statistically significant inhibition of cytochrome CYP3A4 at 10 µM.

Keywords: racemate, enantiomer, ADMET, antiepileptic drugs

Pregnant woman's knowledge about vitamin D

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Vitamin D which basic function is skeletal metabolism regulation and keeping correct calcium-phosphate balance. It provides to right mineralization of osseous tissues. Cholecalciferol is also an essential in non-skeletal health and organ functions. Dermal synthesis through exposure to sun light is the foremost source of vitamin D. A part of daily requirement can be acquired with diet.

We investigated the knowledge of pregnant women and women after childbirth about the influence of diet, sun exposure and supplementation on vitamin D level. We also analyzed the impact of social factors, environmental factors on women's awareness.

Face to face and electronic interviews were based on a questionnaire that included socio-demographic information, assessment of dietary and non-dietary factors and questions about supplementation. The population was based on 100 pregnant women and women after childbirth from southern part of Poland.

Women who took supplements before planning to become pregnant have more knowledge about the effects of vitamin D deficiency. Over 80% of the respondents did not have the level of cholecalciferol tested. In more than 50% of women, the knowledge of the importance of vitamin D deficiency, especially in newborns and small children, is unsatisfactory.

The analysis of the data showed that the knowledge about vitamin D supplementation needs to be increased, and the medical staff should conduct activities that increase public awareness in this area.

Effects of caffeine on selected blood serum biochemical parameters in rats with experimentally induced type 1 diabetes

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It is believed that coffee drinking may have health-promoting effects, including a reduction of type 2 diabetes risk. The best-known active compound of coffee is caffeine.

The aim of the study was to investigate the effects of caffeine, used in a dose corresponding to the moderate coffee consumption, on selected biochemical parameters in the serum of rats with experimental type 1 diabetes.

The experiments were carried out in the serum obtained from adult female Wistar rats divided into the following groups: I – healthy control rats, II – diabetic control rats, III-diabetic rats receiving caffeine.

Type 1 diabetes was induced by an injection of streptozotocin (60 mg/kg *i.p.*). Administration of caffeine (20 mg/kg *p.o.*) started 2 weeks after the streptozotocin administration. The blood serum obtained at the end of the experiment was stored at -18°C, and then concentrations of total protein, total bilirubin, creatinine, urea, uric acid and the activity of alanine aminotransferase (ALT), aspartate aminotransferase (AST), lactate dehydrogenase (LDH) and alkaline phosphatase (ALP) were measured, using a Mindray clinical analyzer and Pointe Scientific reagents.

Type 1 diabetes induced severe disorders in the following parameters: increases in the glucose, AST, ALAT, ALP and urea levels and a decrease in the total protein concentration. Caffeine generally did not affect the concentrations of the investigated biochemical parameters in the serum of diabetic rats.

All investigated parameters in the rats after caffeine administration remained statistically significant in comparison with the healthy control rats.

Keywords: caffeine, diabetes, rats

Genetic factors influencing on β -blockers therapy

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β -blockers are metabolized by the polymorphic enzyme cytochrome P450 2D6 and CYP2D6*4 is the main polymorphism leading to decreased enzyme activity. Ser49Gly is one of the most important polymorphism in β 1 adrenergic receptor gene which have influence on the pharmacological response during beta-1 antagonist therapy.

Purpose of the study was to assess the selected polymorphisms in β -1 adrenergic receptors (Ser49Gly) and in cytochrome CYP2D6*4 among 30 patients with ventricular and supraventricular tachycardia and 20 persons in control group.

The whole blood of patients was delivered from Department of Pediatric Cardiology and GeneMatrix Quick Blood Purification kit (EURx) was used to extract genomic DNA. The concentration and the integrity of obtained extracts was evaluated by spectrophotometric and electrophoretic analysis. Biorad CFX Connect system and KAPA HRM FAST kit was used to perform genotyping of selected polymorphisms.

Carriers of homozygote and heterozygote of examined alleles were found with the help of normalized and difference curves which allow to establish the genotype of patients. The difference of incidence alleles Ser49Gly and CYP2D6*4 between the patients and control group was calculated.

Pharmacogenetics polymorphisms should be an important component of personalized medicine in which specific therapies of β -blockers could be prescribed based on a patient's genotype.

Keywords: beta blockers, pharmacogenetics, personalized medicine

Detection of the genetic polymorphisms in beta-1 adrenergic receptor gene and in G protein receptor kinase in clinical pharmacogenetics

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Beta 1 adrenergic receptors (β 1-AR) are G-protein-coupled receptors located on the surface of effector cells which are important drug targets. Binding of agonist to the receptor leads to a guanine nucleotide binding protein (G_s protein) coupled response and conversion of ATP to cAMP by adenylate cyclase. Increased cAMP stimulates removal of calcium from contractile protein and increased activation of contraction through greater calcium cycling. Pharmacogenomics factors may have influence on the on the antiarrhythmic effects of β 1-AR antagonist.

Aim of the study was to evaluate the selected polymorphisms in beta 1 adrenergic receptors (Arg389Gly) and in G protein receptor kinase GRK5 (Gln41Leu) among 30 patients with ventricular and supraventricular tachycardia.

Genomic DNA was extracted from the whole blood sample with the use of GeneMatrix Quick Blood Purification kit (EURx). Quantitative and qualitative analysis of genomic DNA extracts was assessed with the use of Shimadzu UV 1800 spectrophotometer and the electrophoresis in 0.3% agarose gel. Genotyping of selected polymorphism was performed by PCR and High Resolution Melting Analysis with the use KAPA HRM FAST kit and Biorad CFX Connect system.

Based on the obtained normalized and difference curves the genotype for each analysed polymorphism was evaluated and the carriers of homozygote and heterozygote alleles were found.

Analysed pharmacogenetics polymorphisms possess an impact on the therapy with the use of β 1-AR antagonist and should be an important component of clinical diagnosis.

Keywords: beta blockers, pharmacogenetics, personalized medicine

Application of fluorescent techniques to evaluate cellular responses to derivatives of betulin

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Betulin and betulinic acid induce apoptosis of many types of cancer cells by activating the intrinsic mitochondrial apoptotic pathway. A disorder of mitochondrial function manifested by the permeabilization of mitochondrial membrane is an essential stage of this process.

Assessment of an electric potential of the mitochondrial membrane in human cancer cell lines incubated with acetylenic derivatives of betulin phosphate and betulin phosphonate. Estimation of morphological changes of cell nuclei, analyzed using DNA intercalating fluorochrome.

Betulin derivatives were studied on breast (MCF-7, SK-BR-3) and ovarian cancer (SK-OV-3) cell lines. Both substances were used at concentrations of 10 μ M and 30 μ M. Activity of mitochondria was evaluated using tetramethylrhodamine methyl ester (TMRM) and cells were observed under a fluorescence microscope. Moreover, the cells with red fluorescence were quantitated by flow cytometry. To visualize morphological changes of cell nuclei, cells were stained with acridine orange and observed under the fluorescence microscope.

Both derivatives of betulin caused a rapid depolarization of the mitochondrial membrane, that indicates dysfunction of these organelles. Reduction in the number of cells with red fluorescence was seen as early as 2h since compounds addition, especially for 30 μ M concentration. Treated cells detached from substrate and rounded up but condensation of chromatin and nuclear fragmentation (apoptosis indicators) were not seen.

Disturbance of mitochondrial function seems to be an important mechanism of action of betulin derivatives in breast and ovarian cancer cells.

Keywords: Betulin derivatives, ovarian cancer, breast cancer, mitochondrial membrane potential

EPR and UV-Vis examination of free radical interactions of water extracts obtained from the mixture of antioxidant herbs

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Free radicals cause toxic effects in organism. The antioxidant extracts protect against free radicals by quenching them in cells and tissues. In this study the two different water extracts from the mixture of the antioxidant herbs: curcuma, camomile flowers, liquorice, a root of the common dandelion, lemon grass, cardamom, cinnamon, and black pepper, were used to examine their interactions with the model free radicals. The infusion and the decoction from the tested medicinal plants were spectroscopically studied.

The aim of this work was to determine the interactions of the water extracts from the tested mixture of herbs with free radicals. The paramagnetic DPPH (2,2-diphenyl-1-picrylhydrazyl) molecules were used as the model free radicals.

The measurements were performed by the use of an X-band (9.3 GHz) EPR spectrometer, Rapid Scan Unit, and UV-Vis Genesys 10S spectrophotometer. The EPR and UV-Vis spectra were recorded for DPPH in the reference solution in methyl alcohol and for DPPH in contact with the tested extracts.

The examined water extracts quenched both the first-derivative EPR spectrum of DPPH free radicals and the UV-Vis spectrum. The amplitude of the EPR line of DPPH decreased after addition of the extracts to the reference solution. Decrease of the absorbance UV-Vis spectrum of DPPH in contact with the extracts was observed. This result pointed out that the extracts interact with free radicals as antioxidants.

The water extracts, as the infusion and the decoction from the tested plant material, revealed the scavenging activity against free radicals. The UV-Vis results confirmed the results obtained by EPR spectroscopy.

Keywords: herbs, antioxidants, free radicals, EPR spectroscopy, UV-Vis spectrophotometry

EPR studies of free radical formation during UV irradiation of atropine sulfate, metamizole sodium, and papaverine hydrochloride

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Atropine sulfate, metamizole sodium, and papaverine hydrochloride, are the components of the analgetic and diastolic drugs. Free radical formation in the individual active components and in the whole multi-component drug during UV irradiation was examined by the electron paramagnetic resonance (EPR) spectroscopy.

The aim of this work was to compare free radical formation under UV irradiation of both the individual components: atropine sulfate, metamizole sodium, and papaverine hydrochloride, and the multi-component drug contains these substances. Free radical concentrations and their properties were tested to obtain information about the optimal storage conditions of the examined drug.

The samples were irradiated by UVA with wavelengths in the range of 315-400 nm. The spectra were measured by EPR spectrometer and Rapid Scan Unit. Ultramarine was used as the paramagnetic reference. The analysis by the colorimeter NH 310 of 3nh Firm was done.

As was expected EPR spectra were not measured for the free of unpaired electrons nonirradiated atropine sulfate, metamizole sodium, and papaverine hydrochloride. Free radicals were formed in the tested substances as the result of UV irradiation.

EPR spectroscopy is the useful method to examine free radicals in the multi-component drugs. The superposition of the EPR lines of the individual component substances is responsible for the resultant spectrum of the whole complex drug. UV irradiation causes free radical formation in the tested drugs.

Keywords: atropine sulfate, metamizole sodium, papaverine hydrochloride, UV-irradiation, free radicals, EPR spectroscopy

Free radical formation in gentamicin and clotrimazole as the result of UV irradiation – EPR examination

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Gentamicin – the aminoglycoside antibiotic and clotrimazole, the two drugs which reveals antibacterial and antifungal interactions, were used in this study. Free radicals may be formed under UV irradiation of the substance in the photolysis process. In this work the conditions of storage of the tested drugs under which free radicals do not appear, were searched.

The aim of this work was to examine free radical formation in gentamicin and clotrimazole during exposition to UV electromagnetic waves, and to determine properties and concentrations of free radicals in these drugs.

Free radicals in UVA (λ : 315-400 nm) irradiated gentamicin and clotrimazole were examined by the use of electron paramagnetic resonance (EPR) spectroscopy. The spectra as the first derivative of the absorption of microwaves in magnetic field were measured with magnetic modulation of 100 kHz by an X-band (9.3 GHz) EPR spectrometer of Radiopan Firm (Poznań, Poland). The numerical acquisition of the spectra were performed by the Rapid Scan Unit of Jagmar Firm (Kraków, Poland), which was connected to the spectrometer. Additionally the colorimetric analysis of the tested substances were done by the colorimeter NH 310 of 3nh Firm (China).

Before exposition to UV, EPR spectra were not obtain for the gentamicin and clotrimazole. Unpaired electrons do not exist in the original samples. EPR spectra were measured for gentamicin and clotrimazole after UV irradiation of the samples. Differences between the EPR parameters for these two drugs were presented.

Conclusions: EPR examination indicated that UV irradiation produce free radicals in the tested drugs. Gentamicin and clotrimazole should be storage in the absence of ultraviolet waves.

Keywords: Gentamicin, clotrimazole, UV-irradiation, free radicals, EPR spectroscopy

Interactions of ascorbic acid of different origin with free radicals – Comparative EPR and UV-Vis examination

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Ascorbic acid reveals the strong antioxidative properties. Ascorbic acid is the active substance, which is used in a lot of pharmaceutical products.

The antioxidative character of ascorbic acid may be tested by the physical method as the electron paramagnetic resonance spectroscopy (EPR) and by UV-Vis method. Ascorbic acid influences the EPR and UV-Vis spectra.

The aim of this study was to compare the interactions of ascorbic acid of different origin with free radicals. The model free radicals - DPPH (2,2-diphenyl-1-picrylhydrazyl) were used in these tests. The changes of the EPR spectrum of DPPH free radicals interact with the tested products were analysed.

The EPR spectra of the paramagnetic DPPH molecules were measured by an X-band (9.3 GHz) EPR spectrometer with magnetic modulation of 100 kHz of Radiopan Firm (Poznań) and the numerical data acquisition system Rapid Scan Unit. UV-Vis spectra were measured by the UV-Vis Genesys 10S spectrophotometer. The EPR and UV-Vis spectra for DPPH in the reference solution in methyl alcohol and for DPPH free radicals in contact with the tested samples, were compared.

The scavenging activity of the products contain ascorbic acid was confirmed. The EPR spectra of DPPH free radicals were quenched by these products. Amplitudes of the EPR lines decreased after location of the samples with ascorbic acid in the solution of DPPH in methyl alcohol. The decrease of the UV-Vis spectra was also observed.

EPR and UV-Vis examinations indicated that the scavenging activity of ascorbic acid depends on the type of products. The best antioxidative products with ascorbic acid were shown.

Keywords: Ascorbic acid, antioxidant, free radicals, DPPH, EPR spectroscopy, UV-Vis spectrophotometry



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF PHYSIOTHERAPY AND PHYSICAL ACTIVITY

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High-heeled shoes and locomotor system pain

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Frequent ambulation in the high heels may be a reason of locomotor system pain. Amongst the causes of that pain there can be an incorrect choice of shoes and time which women spend walking in them.

The aim of the research has been to check out if walking in high heels may have an impact on pain of the locomotor system. It was checked whether there is a connection between the type of physical activity, career and the level of pain in groups with different height of the heel.

The authorial survey was carried out on 433 women at the age from 18 to 50 years ($\bar{x}=23,56 \pm 7,10$), divided into two groups (A-young women, B-mature women) and height of heel. It contained 50 questions including a frequency of walking in high heels and a pain. VAS scale was used to measure pain intensity.

In the group A 91,36% claimed to walk in the high heels, as in the group B (85,14%). In both groups the most of women were wearing high heels from 6 to 10 cm. Pain symptoms occur in 68,36% of cases, the most often within the feet (68,58%). Women walking in shoes up to 3 cm complain of pain in 47,62% and it depends on the height of the heel ($p<0,05$).

Pain of the locomotor system occurs among the women walking in high heels and depends on its height.

Keywords: high-heeled shoes, pain, physical activity

Cadaver preparations, 3D atlases or maybe lectures? Opinions of physiotherapy students on the anatomy teaching methods in the aspect of their

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The multidimensionality of anatomy may make it difficult to get to know the subject of its research. Therefore, the way of effective teaching this branch of science is very important, which significantly translates into the future work of a physiotherapist.

The aim of the study was to collect opinions on methods of teaching anatomy in terms of their usefulness in future clinical practice.

The survey was conducted among physiotherapy students of the Medical University of Silesia in Katowice, above the second year of study. The questionnaire concerned the evaluation of ten methods of anatomy teaching using the 5-point Likert scale defining the ability to master ten educational goals.

68 students took part in this study (20.6% men, 79.4% women). Studies have shown that the highest-evaluated methods were: palpation anatomy and radiological anatomy. For the palpation anatomy there were five goals: the assessment of links between structure and function, the distinction between physiology and pathology, anatomy as a base for clinical work, connections between structures/their mutual relations/interaction, background for physical examination. In contrast, for radiological anatomy - one goal: interpretation of basic imaging tests - 60% of respondents. Over 20% of respondents believe that the use of posters as a form of anatomy science is not effective and does not give the desired educational effects.

Palpation anatomy and radiological anatomy are the methods of anatomy teaching that are particularly useful in the future physiotherapist practice and should have a special place in the development of teaching programs.

Keywords: anatomy, student, teaching, physiotherapy

Motives for activity and kinesiophobia in people training at the gym

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Exercising at the gym has gained popularity in the last few years. In this context all the motives as well as the barriers seems to be interesting while undertaking this form of activity.

It was decided to determine motives and barriers in the people training regularly at the gym.

100 people aged 16 to 36 years old were examined. 27 women $21,4 \pm 1,8$ yeras and 73 men $21,7 \pm 3,0$ years. Qualification for research includement was at least 6 months of training experience and active participation in trainings. The research tool was a questionnaire containing metric part and questionnaires: The Motives for Physical Activity Measure – Revised (MPAM-R) and Modified Kinesiophobia Scale.

Regardless of gender the main motive for starting exercising at the gym was fitness. Social motives were least motivating for activity. Comparison of genders showed the appearance aspect of training motivates women more than men. Training experience, number and time of workouts didn't correlate with women's motives, while in men's group they correlate with pleasure and competence motives. The level of kinesiophobia didn't vary between women and men and in both genders is low. Negative correlation was found among women between fitness and appearance variables and biological and psychological domain of kinesiophobia scale, in men variable competences negatively correlated with biological and psychological domain of kinesiophobia scale.

For people training at the gym is autotelic. People training at the gym tend to have low level of kinesiophobia. For women an appearance motive is important, for man the competences one.

Keywords: physical activity, motivations, kinesiophobia

I wanna be the very best - influence of Pokémon GO on players' levels of physical activity.

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Regular physical activity is one of the most important things people can do to improve their health. More moving and less sitting have an enormous benefits for everyone, regardless of their age, gender, race or current fitness level. Pokémon GO(PG) is a location-based augmented reality game(ARG) in which players are required to use GPS and travel in a real world to capture Pokémon.

This study was aimed to determine levels of physical activity in which PG players are engaged and to compare them with WHO recommendations and with the level of activity of the Polish population.

PG players filled in an online questionnaire. The IPAQ-long form was incorporated to measure intensivity of their fitness activities.

The research sample consisted of 111 PG players, aged 15–45.41,4% of players meet WHO standards for the spare-time levels of physical activity. The percentage of players who regularly translocate in an active way is equal to 85.6%-6.3% rides a bike and 79.3% travels on foot. 50.5% of players also walk regularly in their free time, but 14.4% don't. Players are more regular in walking in their free time than in other activities. In comparison to the results of research by Ministry of Sport and Tourism, PG players participate in more physical activity during free time, which is also more often vigorous or moderate in intensity than in general population.

PG makes players willing to be physically active for regular and long periods of time. PG demonstrates that cleverly implemented ARGs can trigger substantial behavioral changes. ARGs can help increase physical activities and exercise, provided incorporating people's interests.

Keywords: physical activity levels, Pokemon GO, AR games, active lifestyle

Does poor posture influence on thermal equilibrium?

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Constantly growing popularity and universal access are consequences of mobile phones development. Inappropriate body position while using mobile phones leads to various musculoskeletal disorders, in particular of cervical spine and shoulder girdle. Analysis of body temperature changes provides information about physiological processes due to electromagnetic radiation registration. Thermal analysis is non-invasive, repeatable, and objective method providing real-time measurement that is why may be effectively used in assessment of musculoskeletal system.

The aim of the study was assessment of cervical and shoulder region temperature changes during usage of mobile phones.

Study included 20 people (15 females and 5 males) with age range: 22-25 years (mean age: 22.67 ± 1 years). Body composition analysis was performed with usage of electrical bio-impedance analyser Tanita BC-420 MA. Pre- and post-observation temperature measurements were performed with pyrometer. Study protocol included 15 minutes usage of mobile phones in sitting position. Prior to the observation points of measurements were marked on subjects' bodies: C7 spinal process, scapulae superior angles and mid-length of scapulae medial borders. Statistical analysis was performed with Excel 2013 software.

Pre-observation mean temperature of C7 spinal process was $32.3^{\circ}\text{C} \pm 0.97^{\circ}\text{C}$, while post-observation was $31.65^{\circ}\text{C} \pm 0.76^{\circ}\text{C}$ ($p < 0.05$). Mobile phone usage led to decrease of mean temperature of right scapula angle ($32.42^{\circ}\text{C} \pm 0.74^{\circ}\text{C}$ vs $31.65^{\circ}\text{C} \pm 0.76^{\circ}\text{C}$, $p < 0.05$). Temperature changes of mid-length of right scapula medial border were also statistically significant ($32.18^{\circ}\text{C} \pm 0.79^{\circ}\text{C}$ vs $31.74^{\circ}\text{C} \pm 0.66^{\circ}\text{C}$, $p < 0.05$). In the left scapula no statistically significant changes were observed.

Posture-mediated soft tissues temperature decrease during usage of mobile phone reveals lateralization dependency. Thermal equilibrium alterations may also indicate regions of increased risk of pain.

Keywords: poor posture, thermal equilibrium

Proper knowledge about physical effort - the best personal trainer

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Currently, practicing sports in the gym is becoming more and more popular, however, many people do it without the necessary knowledge and preparation, which adversely affects their health. A healthy physical effort should be performed without exceeding the submaximal heart rate, which is 85% of the maximum heart rate.

The aim of the study was to assess what percentage of people training in the gym in an aware way performs the effort in accordance with the recommendations and in which group of subjects the submaximal heart rate is exceeded.

The study was conducted on a group of people exercising in fitness clubs. These people were measured by arterial pressure and heart rate before and after exercise on the treadmill, normally performed by them. Then, the heart rate was compared after 10 minutes of exercise with a submaximal pulse calculated using the formula suitable for age.

In 50% of people, the submaximal heart rate after exercise was detected, and in 1/3 the systolic blood pressure exceeded 200 mmHg.

A significant percentage of people unwittingly exceed their abilities during gym training, which has negative health effects. Action should be taken to increase awareness in terms of safe physical exercise.

Keywords: submaximal heart rate, physical exercise, awareness



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF PSYCHIATRY

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The effect of a stroke patient' sex on the outcome of the speech disorders rehabilitation using the EEG-Neurofeedback.

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EEG-Neurofeedback training (EEG-NFT) is a form of speech disorders rehabilitation therapy following stroke. Despite therapeutic successes the variability in the efficacy of the treatment is high.

The study goal was to determine whether the patients' sex is associated with the outcome of the speech functions rehabilitation using EEG-NFT.

Study population included 30 ischemic stroke patients (13 female and 17 male). All patients received the EEG-NFT conducted in a cycle of 15 sessions, 20 min. in each session, employing a standard C3 θ/β : C4 θ /SMR protocol. The therapy outcome was defined as the dVFT rate which was a difference between the Verbal Fluency Test "F" (VFT) score after and before the therapy. The influence of patients' sex on the effectiveness of the EEG-NFB rehabilitation was evaluated by comparing the dVFT index values between the male and female patient groups using The Mann–Whitney U-test. The value of $p < 0.05$ was accepted as the level of statistical significance. Effect size was calculated by employing the Cohen's d statistics between groups from the baseline to the post-assessment of the treatment outcome.

The dVFT index did not vary in a statistically significant way between the male and female patient groups ($U=163$; $p=0,330$). Cohen's d effect size was found to be small (0,370).

Patient's gender does not seem to be influencing therapy results, and therefore the method may be applied with the same expectations of effectiveness to both women and men.

Keywords: Stroke, Neurofeedback, Cognitive functions

Analysis of the depression, bipolar disorder and schizophrenia occurrence at the Department of Psychiatry at the Zagłębie Center of Onkology in Dąbrowa Górnicza

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Mental disorders are abnormalities in psychological activities that cause difficulties in social functioning, being a source of mental and physical suffering for patients. According to the WHO data, the most common mental disorders are depression, bipolar disorder, schizophrenia and other psychoses, dementia, developmental disorders (with autism) and others.

The aim of the study was quantitative analysis of the occurrence of three disease entities (according to ICD classification): depression, bipolar affective disorder and schizophrenia among all patients hospitalized at the Department of Psychiatry of the ZCO in Dąbrowa Górnicza in 2017.

The authors analyzed data obtained after prior approval of the ZCO directorate. The data came from the official statistics kept by the hospital statistics office. The number of patients with diagnosed mental disorders was 311, representing 38.4% of all patients hospitalized in 2017. Women accounted for 57%, and men accounted for 43% of all hospitalized patients, respectively.

Hospitalized group were patients with schizophrenia 71%, followed by depression 15% and bipolar disorder 14%. In the studied population, the majority of women suffered from schizophrenia of 40%, while among the men, bipolar disorder was 17%. In the study group aged range 56-70 years presented the highest percentage of all patients was 35%.

Mental disorder more often occurs and is predisposed to women. With the increase in the number of elder people and in the elderly, the percentage of patients presenting mental disorders in their age ranges increases. The conclusions of our analysis correlate with global tendencies in the incidence of mental disorders.

Keywords: psychiatry, depression, bipolar disorder, schizophrenia

The prevalence of seasonal affective disorder among the bling patients with serious visual impairment- a preliminary study.

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Prevalence of SAD among generally healthy individuals is well known, while establishing the prevalence of SAD among the blind and visually impaired patients is a big problem.

The aim of the study was to investigate the prevalence of Seasonal Affective Disorders among the blind and people with serious visual impairment in polish population.

250 blind or seriously visually impaired individuals and 250 healthy controls were assessed with the usage of SPAQ questionnaire. In research group survey was conducted with the CATI technique. In control group the questionnaire was distributed via online forums.

There is statistically significant difference in occurrence of SAD between people with correct vision and people with visual impairment ($p < 0.001$). Among individuals with correct vision age is negatively correlated with score in SPAQ questionnaire ($p < 0.049$) Among individuals with visual impairment correlation between age and score in SPAQ is positive ($p < 0.016$). Among people with visual impairment there is statistically significant difference in occurrence of SAD between men and women ($p < 0.002$).

Blind show lesser tendency of developing SAD than the control, however there is almost no difference in prevalence of SAD between the blind and persons with serious visual impairment, but with sense of light. What is more the study showed major difference in the occurrence of SAD between men and women in study group. The results seem to be puzzling, taking into consideration the fact that this is the second analysis of this type in Europe and there is almost no literature to compare them to.

Keywords: seasonal affective disorder blind preliminary study

Analysis of cases of admissions without consent and application of physical coercion in 2010-2018 in Ward of Psychiatry and Psychotherapy in GCM in Katowice

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Admission without consent to psychiatric ward is applied to a mentally ill person, who threatens his/her life or other people(art.23,24,29). In special cases it's necessary to act according to art.22.2.2a.In the case of admission of person to psychiatric ward with his/her consent,which then was withdrawn, provisions of art.23 are applied respectively(art. 28).Treatment of mentally ill causes sometimes application of physical coercion to them(art.18),which includes holding, immobilizing, isolation or application of medicaments.

Our aim was general analysis admissions without consent and application of physical coercion and their variability over the years 2010-2018.

For research we used archival data from Ward of Psychiatry in GCM in Katowice.In admissions without consent we analyzed sex, age,article of legal provisions and mental illnesses of patients.In interpretation of using physical coercion we took into account age, sex, the amount and the cause of application.

In result 149 admissions without consent and 188 cases of physical coercion application were noted.12 admissions without consent were registered in 2010 and 35 in 2017,what means threefold increase.14 cases of using physical coercion was noted in 2010 and 44 in 2017,what gives threefold increase too.The most frequent cause of admissions of patients without consent are acute episodes of paranoid schizophrenia,which takes 25% cases.The most commonly cause of physical coercion was active and passive aggression of patients.Other data are under analysis.

During the years 2010-2018 increase of number of admissions without consent and application of physical coercion in Ward of Psychiatry of GCM in Katowice is observed.

Keywords: physical coercion, admissions without consent, psychiatry, paranoid schizophrenia

Correlation between Internet Addiction and emotional intelligence

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Emotional intelligence (EI) is described as the capacity to be aware of, control, and express one's emotions, and to handle interpersonal relationships judiciously and empathetically. It is considered as one of the most important predictors of success, quality of relationships, and overall happiness. Dynamically changing environment of the youth and young adults in recent years may influence their EI development, affecting their lives significantly.

The purpose of this study was to analyze the way the Internet is used by high school students, determine the amount of time they spend on the Internet, identify the level of EI and to explore if there is any correlation between those factors.

1450 high school students from Katowice, at the aged from 18 to 21 years old took part in an anonymous survey consisting of three parts: The Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF), Internet Addiction Test and authorial test giving information about the way of spending time online.

1,03% of the respondents fulfilled the Internet addiction criteria. Students at risk of addiction were a larger group- 33,5%. There is statistically significant correlation between TEIQue-SF and Internet Addiction Test score ($P < 0.0001$, $r = -0,3308$) and between TEIQue-SF score and time spend on the Internet ($p < 0,0001$, $r = -0,162$).

Significant part of high school students used Internet excessively. Such behaviours were positively correlated with lower EI test results.

Keywords: emotional intelligence, internet addiction, adolescence

Facial emotion recognition in psychiatric patients.

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Facial emotion perception (FER) plays important role in mental health and social communication. The ability to recognize mimic expression is considered to be one of main components of emotional intelligence. Assessment of emotional recognition can be useful tool for diagnostic and therapeutic procedures.

The aim of our study was to measure the emotional intelligence of patients, based on the ability to recognize emotion by a mimic expression. We wanted to assess the differences in FER between psychiatric patients and normal population. We also compared the perception of basic emotions in different mental disorders.

Our study group consisted of 47 patients from Psychiatric Ward, hospital in Katowice-Ochojec. We included all patients hospitalized 22.03-24.11.2018 in Psychiatric Department (open and locked units) who gave informed consent. We used Emotional Intelligence Scale-Faces (SIE-T) test, which consists of 18 face photos expressing different emotions. Overall score was counted by a competent psychologist. We examined psychiatric patients and compared their results with normal healthy population.

The results of study show lower emotional intelligence of psychiatric patients in comparison to normal population. The results from SIE-T tests comparison of both groups had significant statistical difference.

Patients from psychiatric ward have lower emotional intelligence compared to healthy population. The abnormalities of FER could be used during examination to detect higher risk of mental disorders or as a screening test to detect disease on early stage. However, the thorough studies should be carried out.

Keywords: Facial emotion recognition, emotional intelligence, mental disorders

Influence of age on ECT efficacy and safety – retrospective study

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Electroconvulsive therapy (ECT) is one of the most effective methods of treatment used in psychiatry. Indications for use of ECT are: major depressive episode, mania, catatonia and schizophrenia. For elderly people ECT is recommended as a 2nd-line therapy in chronic depression.

In this study we evaluated the indications, effectiveness and safety of ECT in patients below and above 60 years old.

Retrospective analysis of medical records (2013-2017) was performed. The study group consisted of 62 patients (38 women, 24 men) who were subjected to ECT in Department of Psychiatry and Psychotherapy in Katowice. Mean age was 55 ± 15.5 . There were 35(56%) people below 60 years old and 27(44%) people above 60 years old.

In the group of patients below 60 years old the most frequent indication to ECT was schizophrenia (50%) and depressive disorders. The dominating condition in patients above 60 years old turned out to be recurrent depressive disorders. Notable improvement of clinical condition was achieved in 72.4% patients, partial in 6.9%, whereas 20.7% showed no signs of improvement. There was no statistically significant difference in the improvement of clinical condition between patients. The most frequent adverse side effects were: headache, impaired concentration and memory. They were observed in 29.03% of younger patients and in 24.2% of older, the difference was not statistically significant.

ECT is an effective and safe therapeutic method. There were not significant correlations in the effectiveness and adverse effects of ECT between patients below and above 60 years old.

Keywords: ECT

Mental assessment towards sexual orientation in women with Congenital Adrenal Hyperplasia (CAH).

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Congenital adrenal hyperplasia (CAH) is one of the most common autosomal recessive hereditary disorders which features the lack of cortisol synthesis leads to excessive stimulation of the adrenal glands by adrenocorticotrophic hormone (ACTH). Moreover, the impairment of cortisol synthesis results in adrenal hyperplasia and excessive androgen synthesis. The clinical manifestations of congenital adrenal hyperplasia in adults result from adrenocortical insufficiency, hyperandrogenism, and the adverse effects of glucocorticosteroids used for treatment. What is more, initial observations indicate that mental health in women with congenital adrenal hyperplasia seems to be different from healthy women, but until today there has been not any thorough research which would confirm it.

The study aimed to compare sexual orientation in women with congenital adrenal hyperplasia with the sexual orientation of healthy group.

The study included 20 women aged 18-40 years with congenital adrenal hyperplasia and 20 healthy controls. All participants declared sexual orientation. Moreover, all participants had clinical laboratory assessment performed.

Study results indicate that patients with congenital adrenal hyperplasia present more often homosexual and bisexual orientation in comparison to control group.

Author found that sexual orientation is correlated with the levels of specific androgens.

Keywords: congenital adrenal hyperplasia (CAH), mental health, sexual orientation

Compatibility of glycemic control with psychosocial functioning of diabetic patients.

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Despite access to glycemic monitoring, nearly half of people with diabetes still do not achieve adequate glycemic control. The occurrence of a chronic disease is a factor limiting the quality of life of patients, but the potential relationship between psychosocial functioning and glycemic control has not been determined yet.

To evaluate the relation of glycemic control expressed by the HbA1c value and the psychosocial functioning of patients with type 1 diabetes (DM1) and type 2 diabetes (DM2).

Four standardized forms were used in the study: SF-36, acceptance of disease AIS, anxiety and depression HADS and self-esteem Rosenberg. The study included 104 patients (50% of patients with DM1 and 50% of patients with DM2). Among patients with DM1, the average age was 39.5 ± 16.4 , men accounted for 52%. Among patients with DM2, the average age was 52.75 ± 16.29 , men accounted for 54%.

A positive association of the duration of diabetes with HbA1c ($p=0.04$) was demonstrated in both groups. In patients with DM1, a positive association of anxiety level with HbA1c ($p=0.021$) was found. Among men with DM1, negative correlation between acceptance of the disease and HbA1c value ($p=0.047$) has been shown. Among women with DM1 positive relationship of good mental health with the HbA1c value ($p=0.013$) has been demonstrated.

There is a significant relationship between the duration of diabetes and glycemic control in patients with DM1 and DM2. The association of lack acceptance of the disease in men with DM1 with poor glycemic control has been shown. Among women with DM1, the relationship between good mental health and poor glycemic control was found.

Keywords: HbA1c, glycemic control, diabetes

Mental assessment towards sexual orientation in women with Polycystic Ovary Syndrome (PCOS)

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Polycystic ovary syndrome is one of the most common disorders found in patients of gynecological endocrinology, in which patients suffer from excessive secretion of androgens resulting in masculinization, defeminization, and metabolic disorders. Moreover, it includes disorders of mental health and sexual function, but so far there has been no thorough research about its correlation to the clinical picture and laboratory findings.

The study aimed to compare sexual function using female sexual function index (FSFI) questionnaire in women with polycystic ovary syndrome with consideration of clinical laboratory findings versus their sexual function in comparison to a control group of healthy.

The study included 56 women aged 18-40 years with polycystic ovary syndrome and 20 healthy controls. All participants completed Female Sexual Function Index (FSFI) questionnaire assessing sexual function in the domains of desire, arousal, lubrication, orgasm, satisfaction, and pain. All participants had additionally clinical laboratory assessment performed.

Study results indicate that patients with PCOS show to have a higher quality of sexual functions in comparison to control group.

Author found that sexual function quality index is highly correlated with the levels of specific androgens.

Keywords: sexual function, mental health, Polycystic Ovary Syndrome (PCOS)

Evaluation of emotional disturbances in patients with type 1 diabetes and type 2 diabetes.

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Due to many limitations and possible complications of diabetes, more attention should be paid to the quality of life aspect. The continuous increase in disease inclines not only to the search for more forms of treatment, but also to research on the mental condition of patients with type 1 (dm1) and 2 (dm2) diabetes.

Demonstration of emotional disorders and their differences between patients dm1 and dm2.

The study included 103 patients (49.5% of patients with dm1 and 50.5% of patients with dm2), each of whom completed 4 standardized forms: quality of life SF-36, acceptance of disease AIS, anxiety and depression HADS and SWLS scale.

Patients with dm2 achieved worse results than patients with dm1 only in terms of physical function of the SF-36 scale ($p=0.001$). The duration of the disease affects the worse assessment of the general health of patients with t1dm ($p=0.036$). Greater acceptance of the disease in patients with dm1 resulted in a better perception of physical functioning ($p=0.007$). In the group of patients with dm1, the level of depression correlates negatively with the level of acceptance of the disease ($p=0.0009$) and life satisfaction ($p=0.006$), while the level of anxiety only with the level of acceptance of the disease ($p=0.0004$). In the group of patients with dm2, only the level of anxiety correlated negatively with the level of disease acceptance ($p=0.003$).

Emotional disorders and the perception of quality of life differ between patients with type 1 and type 2 diabetes. The results indicate the inclusion of the aspect of emotional disorders in the therapeutic process even from early diagnosis.

Keywords: emotional disturbances, dm1, dm2, diabetes

Phenomenology of psychosis. Delusional content in schizophrenia from a historical perspective.

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Strange realm of psychosis is chaotic, inhospitable and seems to be impervious to scientific method. Insight into subjectivity of patients from historical perspective could shed light on this no man's land.

Aim of the study was to quantify subjective reports of patients with schizophrenia and reveal tendencies basing on previous studies representing together 80 years of history.

Authors conducted a retrospective, systematic analysis of medical histories of patients diagnosed with schizophrenia, who were hospitalized in Neuropsychiatric Hospital in Lubliniec in 2012. The delusional content was searched in the material. 100 patients (50 men and 50 woman) were included. Medical histories were randomly selected. Data collected from patients were compared with earlier studies on the topic, as a part of Students' Scientific Society's project. Incidence is counted as a percentage of all quantified delusional content.

The most frequent type of delusions among patients in 2012 were persecutions by undefined other people (14%) Second result were persecutions by family (9%). Both delusion of being poisoned and contact with divine entity represented 7% of delusions. Global categories showed no significant quantitative alteration in comparison with previous studies. Only scientific elements were more rare than expected – only several novelties were included to psychotic imaginarium. Negotiating sexual identity and orientation was new topic in 2012.

Psychotic themes in general categories showed a stability over 80 years. This might suggest underlying mechanism, which is, however, shaped by external reality of the epoch.

Keywords: psychosis, schizophrenia, phenomenology, delusional content, historical



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF PUBLIC HEALTH AND HEALTHCARE I

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Evaluation of mercury concentration in toadstools from different regions of Poland comparing to edible mushrooms.

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Mercury released to environment has a capacity to cumulate in different elements. One of those are mushrooms. The toadstools are non – edible mushrooms that cumulate more toxic elements. The thesis was made that toadstools as non-edible mushrooms stay in the environment longer, therefore the mercury's accumulation time is extended, and this results in higher metal concentration compared to edible mushrooms.

The aim of this study was to evaluate the quantity of mercury in toadstools and compare them with edible ones.

The study involved samples of non-edible mushrooms from different parts of Poland and corresponding samples from edible mushrooms that were collected in the same places. Samples were dried, crushed into powder and examined. To analyse samples we used mercury analyser AMA-254. 13 toadstools were used for the study. Mushrooms' legs and hats were divided at the crushing and grinding stage, which allowed us to proceed with a more detailed analysis of concentration differences.

1. Mercury has been shown in each sample 2. In each mushroom the hat distinguished a higher mercury concentration compared to the leg 3. It has been shown that in non-edible mushrooms the concentration of mercury was higher as against to edible mushrooms, both in the hat and in the leg

Keywords: mushrooms, mercury, toadstools, mercury analyzer

Identifying risk factors of medical error - part I - nonmedical factors

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Every medical procedure is burdened with a risk of committing a mistake. In EU 8-12% of hospitalizations each year result in a medical error.

The aim of this work is identification of risk factors of medical error based on cases evaluated in the Chair of Forensic Medicine SUM (CFM) and assessment of eliminating those factors in medical students.

Authors evaluated 8323 cases from CFM including years 2008-2016 and selected 2056 opinions in subject of medical error. Furthermore evaluation included a questionnaire conducted on a group of 276 V year medical students. The survey consisted of 10 questions about physician-patient privilege (PPP), 9 of them multiple choice and 1 open-ended. 4 of them concerned theory and 6 practical usage of PPP. Evaluation was carried out in 2 phases, firstly students solved the survey without discussing the topic (A I) afterwards they received a short tutorial about PPP and made second attempt (A II).

There was a significant ($r>0,9$; $p<0,05$) upward tendency in number of cases coming to CFM over the assessed years. Considering the survey, in A I the mode (102 persons) was 3 points. If we assumed the survey was an exam with a minimal score to pass of 56% only 12,4% would have passed. In A II the mode (89 persons) was 6 points and 91% of students would have passed.

Students don't know the legal regulations which is one of the nonmedical risk factors of formal medical error. Tutorial significantly increased the results which mean that even simplified legal education leads to notable reduction in probability of committing a medical error.

Keywords: medico-legal education, medical error, physician-patient privilege

Effect of mouthwashes on oral hygiene of the children

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Oral health is an integral part of the overall health of children. Daily oral hygiene is accurate brushing twice a day after meal with appropriate toothpaste and to use liquid mouthwash. Usually mouthwashes are an antiseptic solution intended to reduce the microbial load in the oral cavity.

The purpose of this study was to evaluate the effect of mouthwashes on oral hygiene of the children, for improve their oral hygiene during the time in kindergarten.

The study was conducted among children , who are under the care of kindergarten in Katowice. Study included 12 children on age 5-6 years old, who were separated in two groups of 6 children. Children in the first group rinsed their mouth with the mineral water (control group). In the study group children were rinsed their mouth with the liquid Elgydium for children (Pierre Fabre Sante). The effects were assessed after 3 hours since mouthwash. Samples for microbiological investigation were collected from the tongue surface using sterile swabs. Isolation and species identification of microorganisms were performed using classical microbiological laboratory tests.

Microbiological status was similar in both groups of children at the first stage of the study. The children using mouthwash Elgydium after 3 hours have lower number of microorganisms in studied tongue swabs compared with control group. We observed the differences in the type of the microorganisms species isolated from swabs of children from control group (who used mineral water) and study group (who used mouthwash Elgydium).

After experiment we can say that rinsing the oral cavity with the mouthwash can improve oral health of the children.

Keywords: oral health, mouthwash, children

The women`s knowledge of the postpartum period in Poland

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The postpartum period is defined as approximately 6 weeks period after third stage of labour. It is the period when woman`s organism recovers to the non pregnant state. According to the WHO recommendations on postnatal care of the mother and newborn - the puerperium is the most neglected and critical period in a woman's reproductive life.

The aim was to research basic knowledge and the level of medical education of female patients about the postpartum period in Poland.

Our online questionnaire collected information on socio-demographic data and health-related issues concerning the postpartum period (26 questions). After 2 weeks we received answers from 3349 women. Data were analysed using the Statistica.

It can be concluded that the factors such as the level of education, the source of information, the age and previous childbirths have an impact on state of women`s knowledge about the puerperium. The Internet is the most popular source (45%). The results show also that almost 40% of received answers were incorrect.

The knowledge of the puerperium among women is still deficient. Major factors such as the education, past births, the age and source of information determine of women`s awarness about the puerperium. The education of women about the postpartum should be a priority for gynaecologist and midwives - basic prevention. One of the soultions could be an introduction of recommended visit to the gynecologist during the postpartum to reduce puerperial complications (control over the course of the puerperium).

Keywords: postpartum period, puerperium, pregnancy

What high school students and university students of Rzeszow think about vaccinations - differences and similarities

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The discussion about the validity of vaccinations is getting louder and louder. Once, vaccinations saved lives, and today they have become the subject of much controversy. Therefore, it is necessary to analyze the causes of social phenomena that have occurred recently.

The aim of the study was to check if they exist and what the differences in the opinions and attitudes of high school students and university students about vaccination result from.

Cross-sectional research was carried out among 2343 high school students and university students of Rzeszów. The research tool was a voluntary and anonymous proprietary questionnaire containing 21 single-choice questions. The questionnaire checked knowledge and attitudes related to vaccinations.

Results from 1973 respondents were received, which accounts for 84.12% of the total number of questionnaires distributed. Among the respondents, 46.59% were high school students, and 53.41% were university students. 71.80% of high school students are considered to be proponents of vaccination, compared to university students, of which 58.46% support vaccination. 8.07% more high school students than university students think that they should undergo obligatory and recommended vaccinations. In the last year, 70,91% of high school students and 47,99% of university students have been vaccinated. University Students significantly more often do not cling to the flu (77.38%), compared to high school students (68.43%). 18.10% of university students think that extra tack is unnecessary, while high school students have the same sentence of 7.35%. The rest of results are under development.

Differences in opinions and knowledge about vaccination between high school students and university students are noticeable. They can result from the influence of parents, the media and information acquired during the course of teaching. This may be reflected in decisions made in the future.

Keywords: vaccinations, students, Rzeszów, immunisation

Studying medicine – difficult only or perhaps also potentially unhealthy?

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Progress of cardiovascular diseases can be attributed to risk factors that show early in life. Medical education is known as stressful, which is proven by studies finding that the leading cause of death amongst physicians are cerebrovascular diseases.

The aim of the study was to assess risk factors for medical students and their progression during education.

A survey was conducted among 100 students from Medical University of Silesia. The assessment included: number of sleep hours, smoking, water and alcohol intake, stress level using Perceived Stress Scale (PSS), eating habits, BMI and exercise. The norms were taken from WHO recommendations, the evaluation was conducted using percentage calculation and chi-squared formula.

The mean age was 21.4. Mean number of sleep hours was 6.6 (85% in the norm: 6-8h). 67% students answered to never had been smoking, 16% were active smokers. 68% ate 4-5 meals a day, 25% less than 3 (norm: 4-5). 48% drank less than 1.5L of water per day (norm: >1.5L). Average BMI was 22.2 with 60% within the norm (20-25), 14% overweight or obese. 42.9% drank alcohol once a week and 10.1% more often. 68% answered 3-4 points (0-4 available) in a question considering self-perceived stress in the PSS scale. The most prominent risk factors were considering alcohol intake, improper diet, body weight and stress levels.

Despite the general knowledge concerning the cardiovascular risk factors, the significant percentage of the medical student population does not respect the so called health promoting behaviors. The proper education as well as prophylactic efforts should be proposed and included into the medical study program.

Keywords: cardiovascular risk factors, cardiology, prevention, medical students, stress

Nutritional status and biochemical parameters assessment in women with Congenital Adrenal Hyperplasia (CAH)

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Introduction: Congenital adrenal hyperplasia is one of the most common autosomal recessive hereditary disorders that features the lack of cortisol synthesis which leads to excessive stimulation of the adrenal glands by adrenocorticotrophic hormone (ACTH) and excessive androgen synthesis. The clinical manifestations of congenital adrenal hyperplasia in adults result from adrenocortical insufficiency, hyperandrogenism, and the adverse effects of glucocorticosteroids used to treat this disease. Patients with congenital adrenal hyperplasia experience a wide variety of symptoms including obesity, hyperinsulinemia, and insulin resistance which contributes to the development of metabolic syndrome.

The study aimed to compare nutritional status and biochemical parameters in women with CAH with nutritional status and biochemical parameters in healthy women.

The study included 20 women aged 18-40 years with congenital adrenal hyperplasia and 20 healthy controls. All participants had nutritional status and laboratory assessment, and hormonal panel performed.

Study results indicate that patients with CAH have a higher level of body mass index (BMI) than healthy women. Moreover, patients with CAH have a higher level of insulin and lower level of glucose in comparison to the control group.

Author found that nutritional status and biochemical parameters in patients with CAH are highly correlated with the levels of specific androgens

Keywords: congenital Adrenal Hyperplasia (CAH), nutritional status, BMI

Nutritional status and biochemical parameters assessment in women with Polycystic Ovary Syndrome (PCOS)

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Polycystic ovary syndrome is one of the most common disorders found in patients of gynecological endocrinology, in which patients suffer from excessive secretion of androgens resulting in masculinization, defeminization, and metabolic disorders.

The study aimed to compare nutritional status and biochemical parameters in women with PCOS with nutritional status and biochemical parameters in healthy women.

The study included 56 women aged 18-40 years with polycystic ovary syndrome and 20 healthy controls. All participants had nutritional status, laboratory assessment, and hormone profile performed.

Study results indicate that patients with PCOS have a higher level of body mass index (BMI) than healthy women. It has also been assessed that patients with PCOS have a higher level of insulin and lower level of blood glucose in comparison to the control group.

Author found that nutritional status and biochemical parameters in patients with PCOS are highly correlated with the levels of specific androgens.

Keywords: Polycystic Ovary Syndrome (PCOS), BMI, nutritional status

Trust in influenza vaccination in Poland

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Vaccinations against influenza successfully prevent complications of influenza, reduce number of hospitalizations and scale of indirect costs. Unfortunately, for several years interest of vaccinating against influenza has been falling in Poland, which is now placed on one of the last places in Europe.

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

Research in progress. In the study we used a questionnaire method with the use of an original survey containing 30 questions. The obtained data was subjected to statistical analysis using the STATISTICA 13.0 and Microsoft Office Excel 2013.

Research in progress. So far, 180 respondents took part in the study. 66.7% of the respondents answered that they do not intend to vaccinate against influenza in the next infectious season. Respondents which don't want to vaccinate do so mainly due to lack of faith in the effectiveness of vaccination (39%). 65% of respondents think vaccine is safe. The average degree of confidence in influenza vaccination in the study population was assessed at 3.43 points (on a scale 1-5) with SD=1.36. The full results will be presented during the Conference.

A significant part of the surveyed Poles are not vaccinated against influenza - only 4.4% regularly vaccinates each or every season, despite a high degree of trust in vaccination (close to 3.5 on a scale of 1 to 5), which is a disturbing phenomenon. Full conclusions will be presented during the Conference.

Keywords: trust influenza, vaccination, poland

Are the mobile telephones of hospitalized patients the microbial transmission vector ?

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In order to answer the question whether the patients' mobile telephone can be a vector of transmission of potentially pathogenic microorganisms to/from the hospital environment, a study of microflora from telephones of patients from a selected hospital in Silesia (20 patients of the cardiology department and 23 patients of the dermatology department) was carried out.

Material for the study were swabs from the surface of the examined telephones taken on the day of patient's admission to the hospital and 2-3 days later. Isolation and species identification of microorganisms were performed using classical microbiological laboratory tests.

On the day of admission to the cardiology department 42 microbial strains from 14 species were isolated from the patients' telephones, and 33 strains belonging to 15 species were isolated 2-3 days later. On the day of admission to the dermatology department 42 strains from 13 species were isolated from the patients' telephones, and 58 strains from 14 species were isolated after 2-3 days.

The species differentiation of microflora from patients' telephones in both departments was observed. The methicillin-resistant strains (*Staphylococcus epidermidis* MRCNS and *Staphylococcus haemolyticus* MRCNS) presence in the microflora of studied telephones on the day of admission and/or after 2-3 days of hospitalization was also observed.

This observations show that mobile telephones of hospitalized patients can be a vector for transmission of potentially pathogenic microorganisms both to and from the hospital environment. This phenomenon indicates the absolute necessity of systematic disinfection of patients' mobile telephones during hospitalization.

Keywords: mobile telephones, microflora, patients in hospital

Significant choices in antibiotic therapy in Primary Health Care

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Monitoring the consumption of antibiotics indicates an increase in frequency of antibiotics use between 2012-2016. Consumption was significantly higher in outpatient dept. comparing to hospitals. WHO indicates an increase in bacterial resistance to extremely dangerous levels and the emergence of new drug resistance mechanisms.

The aim: to check what factors influence antibiotic therapy in the Primary Health Care

100 doctors (48% general practitioners, 16% pediatricians and 24% internists) filled in an anonymous survey. The questionnaire consisted of 22 questions (doctor information, antibiotic therapy, patients information). 56 surveys have been filled out in paper version and 44 in online version from November 2018 to February 2019r.

More than 96% of the doctors confirmed that patients take antibiotics without consultation with the doctor and they usually use antibiotics too short. 56% doctors prescribed antibiotics due to unclear symptoms, more often by doctors with work experience above 10 years comparing to young doctors (68% vs. 44% $p = 0.015$). Younger doctors have significantly more problems with the choice of antibiotic therapy in children, the elderly and the chronically ill.

There is a need to educate the public that the antibiotic is not "the cure for all" and should be used only due to medical indications. 2. Improvement the doctors' training system in the field of proper antibiotic therapy, especially in children and the elderly.

Keywords: antibiotic, antibiotic therapy, antibiotic resistance, bacterial resistance, primary care health, general practitioner, antibiotic consumption

Labour - male point of view

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Childbirth is a responsible life decision. Pregnancy is a big change in the woman's body, it is also a unknown emotional experience. In this moment of life, woman has got a couple of aims: accepting her new health condition and preparing to be a mother. However, pregnancy is not important event only for woman, we should remember about man position. Holistic approach to future parents is extremely important, especially in modern trend of family births. Additionally inappropriate preparation for own childbirth can contribute to unexpected and adverse consequences in parents relation.

The aim of the research was to recognize the men's opinion about family births, and analyze the correlation between men's expectations and the real labour procedure.

126 men aged 18 to 56 participated in the study. Criterium for inclusion in the research was to have at least one child. Method used form the research was the author's questionnaire.

The research shows that less than 78% of the respondents participated in a family birth, more than half of whom admitted that if they could choice again, they would take a different decision. Approximately 62% of men also admit that they were not aware of what a delivery would look like.

1. Family birth is an extremely important event for both parents. 2. Inviting a man to participate in the birth of a child affects the deterioration of the relationship with the partner. 3. Men who consciously accompany their partners during childbirth have positive attitude to future descendant

Keywords: male, labour,

ERASMUS+ Programme through the eyes of first-year students of Medical University of Silesia, Katowice

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Erasmus+ Programme is a European Union student exchange programme supporting international cooperation between European universities. It was established in 1987, Poland participates in the Programme since 1998, and the Medical University of Silesia since 2005.

The aim of the study was to assess the level of knowledge about the Erasmus+ Programme and to analyze expectations and limitations for first-year students in the participation in the Programme.

The studies were carried out in 252 medical students who completed the questionnaire containing 17 questions.

The results show that the majority of students (84.2%) have a high (70-89% of correct answers) or a very high (90-100% of correct answers) level of knowledge concerning the Erasmus+ Programme. 63.5% of students would like to participate in the Programme, and the most frequently indicated destinations are Norway, Italy and Spain. According to the survey, the reasons that may raise concerns of mobility are inability to meet the qualification requirements (34.5%) and insufficient language skills (28.3%). We showed also a positive correlation between the declared willingness to participate in the Erasmus+ Programme and plans to emigrate abroad after the studies.

In conclusion, first-year medical students of our University are characterized by a high level of knowledge about the Erasmus+ Programme, however, their concerns of studying in foreign universities may be an important factor limiting the mobility. Students who plan to participate in the Programme more often declare their intention to work abroad after graduation.

Keywords: Erasmus+ Programme, students, mobility

Difficult relationship between touch and medicine - students' point of view

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Reason is the link between the soul and the body, while the hand is a mediator between body and surrounding world. Modern medicine world all the time use touch to perform medical procedures. Therapeutic touch is well – balance, conscious and planned technique which is use towards to patients. It is important to remember about mental or psychical behavior in relation to patient, because it is compatible with work hygiene and ethics.

The aim of the study was to recognize the last years students' opinion about the role of touch in physiotherapy, obstetric, nursing profession and analyze the correlation between this opinion and their self-assessment.

The study involved 254 last year students (average age: $24,77 \pm 4.85$). All students were from Medical University of Silesia. Method used from the research was anonymous questionnaire and Rosenberg Self – Esteem Scale.

The study shows that the 75% respondents know how much work is done by the touching in their chosen profession. Most of them believe that the touch is relates with physical and psychical human area (proxemics) – 90%. While 65% of students declare that they know proxemics definition.

There isn't a relationship between self – assessment and building relation with patients by touch. Student from Faculty of Health Science Medical University of Silesia know that the touch is very important during healthcare procedures. Students should be educated about the psychological aspect of touch in the health and the medicine area.

Keywords: touch, pproxemics, medical profession

Skin lesions among women who suffer from the hypothyroidism

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Hypothyroidism is a disease caused by deficiency of T4 and T3.

It occurs in 1-6% people to 60 year of age (mostly women). The main causes are autoimmune disorders such as Hashimoto Disease.

The aim of this study was to investigate the prevalence of the skin lesions among the women who suffer from the hypothyroidism and the quality of life before and after treatment.

A total of 404 polish women (aged 18-64), were examined. A questionnaire, distributed via the Internet, considered: the time the hypothyroidism was diagnosed, the reason of the disease, intake of medications, the presence of the symptoms. The questionnaire included questions about the quality of life before and after treatment. The obtained results were typed into an Excel spreadsheet and analysed statistically using Statistica 12 software. P values of <0,05 were considered statistically significant.

The main reason of the hypothyroidism among the respondents was Hashimoto Disease (64%). The following symptoms occurred among the women before the treatment: tiredness, constipation, headache and myalgia (86%), cold, pale, exfoliated skin (70%), brittle nails (65%), dry, brittle hair (76%), hair loss (70%), hair thinning (39%). After the treatment the respondents suffer from: cold, pale, exfoliated skin (66%), brittle nails (64%), dry, brittle hair (65%), hair loss (59%) and hair thinning (41%). The symptom usually reported to the doctor was hair loss (33%) and hair thinning (23%).

Treatment improved the quality of patients' life, but it does not significantly reduce skin symptoms. The symptom that most worries patients is hair loss.

Keywords: hypothyroidism, skin

The prevalence of asthma and allergic diseases in children in Katowice (Poland): a cross-sectional survey

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The prevalence of childhood asthma and allergic diseases change over time and up to date information within regions are required to understand public health impact and potential gaps in care.

We sought to evaluate the prevalence of asthma, respiratory symptoms, and allergic diseases in children aged 6-9 years.

A cross-sectional survey was performed in all primary schools in Katowice (Poland). Questionnaires, via schools, were addressed to all children aged 6-9 years old living in Katowice (Poland). The questionnaire included 68 questions on allergic diseases.

Data were obtained from 922 (response rate: 82.1%) children. Of these, 48.9% were boys (B) and 51.1% girls (G). The mean age was 7.5 ± 0.7 years old. Self-reported asthma prevalence was 7.3% (B: 8.9%, G: 5.7%, $p=0.1$) while prevalence of asthma diagnosed by physician was 6.6% (B: 8.0%, G: 5.3%; $p=0.3$). Allergic rhinitis prevalence was 25.8% (B: 29.7%, G: 22.1%, $p=0.03$), with 22.1% reported confirmed by a physician (B: 25.5%, G: 18.9%, $p=0.04$). Atopic eczema ever was present in 23.9% of children (B: 25.1%, G: 22.7%; $p=0.6$), with 20.5% confirmed by a physician (B: 21.3%, G: 19.8%, $p=0.8$). Chest wheeze ever was present in 20.8% of children (B: 23.7%, G: 18.1%, $p=0.1$). Wheeze during last 12 months was present in 7.2% of children (B: 8.7%, G: 5.7%; $p=0.06$). Among those with wheeze in the past 12 months, frequency was reported as 1-3 attacks in 77.2%, 4-12 in 16.7%, over 12 in 6.1%.

Allergic diseases affect almost one third of the children population. There was no significant difference in the prevalence of asthma between boys and girls.

Keywords: asthma, epidemiology, children, public health

Depressive symptoms among university students from Poland and Portugal

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Depression is one of the most common mental disorder. This condition affects family, health, career and other aspects of life. University students with heavy burdens are a group especially prone for depression.

The aim of study was to evaluate and compare intensity of depressive symptoms, prevalence of self-aggression as well as need of psychological support at the university among Polish and Portuguese students.

Students from Poland (n=241) and Portugal (n=127) were asked to fill in an electronic form containing the *Beck Depression Inventory*. The form was created separately for each country, using official translation of the BDI-II, approved by the competent psychiatric association. Google Forms software was used for the electronic form and Statistica v13.3 software for statistical analysis.

There were statistically significant differences ($p<0.01$) in terms of average score of the BDI. The average score of the BDI for Polish students was 11 points and for Portuguese 8 points. The prevalence of self-harm among students from Poland and Portugal was 24.1% vs. 7.1%, respectively. The percentage of students who attempted suicide was 9.5% for Polish respondents and 3.1% for Portuguese ($p<0.05$). Most of students claimed qualified psychological support is needed at the university (Poland: 82.6%; Portugal: 92.1%).

Polish students were characterized by significantly higher percentage of average score of the BDI and self-destructive behaviors in comparison to students from Portugal. A proper monitoring of depressive symptoms is required, as well as qualified help for those who suffer from them.

Keywords: depressive symptoms, self-harm, psychological support, Beck Depression Inventory

What do people from non medical field think about vaccinations?

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Due to misinformation associated with vaccinations and a growing trend to avoid vaccinations we wanted to get to know people's opinions on vaccinations

Aim of study: Finding out what is the level of knowledge about vaccinations and their side effects among people from non-medical field. Investigating the correlation between education, having children and opinion on vaccinations and their side effects.

Survey was carried out on a group of 527 respondents from Rzeszów -men and women not employed in the medical field .All respondents were above 18 years of age. The research tool was a questionnaire in paper.

Almost 63% of respondents were in favor of vaccinations . Approximately 55% of respondents found that sentence „vaccinations cause autism” is not true, 36% answered that They don't know whether this sentence is true or false. Almost 40% of respondents stated that vaccinations can cause diseases (9.4% chose allergies). When asked „Can heavy metals contained in vaccinations cumulate in human body and cause serious side effects? „ 54% respondents said that They don't know. Only 35% respondents knew which disease was eradicated due to widespread vaccinations use, and among Them 64% had higher education level. 45% of parents think that vaccinations can be the cause of autism.

A survey has shown that society's level of knowledge about vaccinations is very low. We found that the level of education is positively correlated with the level of knowledge about vaccinations. We also found that many parents think that vaccinations can cause autism and that high percentage of people think that vaccinations can cause diseases.

Keywords: Immunization, Prophylaxis, anti-vaccination movements,

Knowledge levels of parents of school-aged children on the subject of visual hygiene

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Parents play a significant role in actions that aim to prevent the creation of visual system disorders. The abundance of the rules of visual hygiene comes to avoiding of inappropriate conditions that impair the proper functioning of the eye.

The aim of the study was to assess the knowledge of parents of school-aged children on the subject of visual hygiene.

The study encompassed parents of 1089 children attending the first six grades of primary school in the area of 3 voivodeships. The results were analyzed using the chi-square test, assuming the significance level $\alpha=0.05$.

The defect of sight was confirmed by parents of 158 children (15%). Parents of 301 children (28%) of all children showed no knowledge of the definition of myopia (no disadvantages: 235 (25%), with defects: 65 (41%). Test χ^2 showed statistically significant intergroup differentiation ($p < 0.05$). On the basis of the answers, it was stated that the correct distance from the readable text has been known by parents of 767 (70%) of all children (70%) without defects: 743 (74%), with 74% (47%) ($p = < 0.05$). Parents of 157 (17%) children without confirmed sight defects were not able to indicate the correct answer regarding the minimum viewing distance from the TV screen. Parents of 58 (37%) children with confirmed sight defects were not able to answer the same question ($p < 0.05$).

Parents of children with confirmed sight defects show a significantly lower knowledge of the principles of abundance with visual hygiene in comparison to parents of children without a confirmed sight defects, which in the end could have affected the occurrence of irregularities.

Keywords: visual hygiene, defect of sight, sight defects

Impact of smog exposure on spirometry results in young males

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Smog is a phenomenon that negatively impacts the respiratory system.

The aim of the study was to determine whether exposure to smog, physical activity and lifestyle affects spirometry results and nitric oxide levels in exhaled air (FeNO).

A questionnaire was distributed to 42 males aged 18-27 years (22.9 ± 2.1). They were asked about how often they do sport, their preferred means of transport, time spent outside buildings, place of residence (distance to busy roads) and symptoms related to air pollution. After completion of the survey the same group was subjected to spirometry and FeNO tests.

Smog was reported by all participants as an ongoing problem in their place of residence. However, the analysis has shown that while neither place of residence nor time spent inside/outside buildings were related to worsened spirometry results in the studied group, there was a link between living within a 100m radius of a busy road and increased FeNO values ($p=.04$). No correlation was found between doing sport and symptoms caused by smog. People exercising regularly declared to have better stamina ($p=.002$) and displayed higher values of certain spirometry results in comparison to people not doing sport (FEV1 104.5% vs 98.3%, $p=.02$, PEF 10.3l/s vs 9.3l/s, $p=.02$). The analysis of preferred means of transport has revealed that those commuting by bike had increased FeNO values in comparison to those choosing other means (36.7 vs 29.4 ppb, $p=.04$).

Lifestyle-related smog exposure probably does not significantly impact spirometry results or FeNO values in young males. However, certain differences were found between people using different means of transport and living closer to busy roads.

Keywords: smog, air pollution, physical activity, spirometry, nitric oxide

Current trends in the selection of contraception by women

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The development of modern methods of contraception and increasing access to them enabled women to plan their fertility. It is important to choose the right method for yourself, to take care of its positive effect on physical and mental health.

The purpose of the study is to determine current trends in the choice of methods of contraception among women.

Research in progress. In the study were used an author's questionnaire about opinions and preferences regarding individual methods of contraception). The obtained data was subjected to statistical analysis.

So far, 208 respondents took part in the survey. The most frequently chosen method of contraception was a two-pack contraceptive pill (30.3%), which at the same time was characterized by the highest degree of confidence. The most frequent side effect that respondents reported in connection with the use of contraception (especially hormonal) were lower libido (47.1%). The vast majority of women who consulted a gynecologist before using contraception (90%) declared that they had a gynecological (70.7%) and cytological examinations (54.3 %). The full results will be presented during the Conference.

Currently, the most popular method of preventing pregnancy among women is hormonal contraception in the form of a one-component or two-component contraceptive tablet - it is chosen despite the frequent occurrence of side effects, which probably is associated with the highest confidence of women in this method of contraception.

Keywords: fertility, contraception

The comparison of the risk of human exposure to tick borne infection with *Borrelia burgdorferi sensu lato* on the two selected recreational areas in Poland

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In Poland the main vector of *Borrelia burgdorferi sensu lato* is *Ixodes ricinus*. This pathogen is an etiological agent of Lyme borreliosis. Inside the genus *Borrelia* exist about 21 genospecies, three of them may cause the various forms of this disease in humans: *B. burgdorferi sensu stricto* (bone form of borreliosis), *B. afzelii* (chronic atrophic dermatitis) and *B. garinii* (neuroborreliosis).

The aim of the study: The comparison of the risk of exposure of human to tick borne infection with *B. burgdorferi s. l.* on two selected recreational areas in Poland.

The DNA was isolated from 60 ticks (including 31 individuals from the Wielkopolska Province and 29 ones from the Silesian Province) by the ammonia method. To detect of *B. burgdorferi s. l.* the primers specific to the flagelline gene fragment were used. Next, the reaction products were separated in ethidium bromide stained agarose gels and then they were visualized in the ultra violet light, photographed and analysed in a program TotalLab.

In total, *B. burgdorferi s. l.* in 4/60 (6,7%) of studied ticks was found. This pathogen was only shown in ticks came from the area of Silesian Province. This spirochete in 4/29 of ticks was detected (13,7% of the studied ticks from this area). The presence of *B. burgdorferi s. l.* was not stated in the ticks from the Wielkopolska Province.

The obtained results showed that the risk of human exposure to tick borne infection with *B. burgdorferi s. l.* is higher in the studied areas of the Silesian Province than in the Wielkopolska Province.

Keywords: *Borrelia burgdorferi sensu lato*, ticks, *Ixodes ricinus*, tick borne pathogens, Lyme borreliosis.

Asthma and pregnancy – women's awareness

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Women's awareness concerning asthma during pregnancy is important for good disease management resulting in good asthma control, safe delivery and good newborn health.

We wanted to assess the state of knowledge of women of reproductive age from different environments regarding pregnancy asthma

A survey containing 36 questions assessing asthma knowledge prepared on the basis of current Polish Respiratory and Gynecological Societies guidelines was distributed popular internet forums, such as: forum for women interested in motherhood, the asthma forum, the medical student's forum, the non-medical student's forum. Out of 115 responses: 42% were collected given by non-medical students or graduates, 31.9% of respondents were asthmatics and 33.6% were ever pregnant.

Although 92 % of survey respondents were aware that there is an indication for pulmonological or gynecological consultation, the general knowledge concerning asthma management was poor. 34% respondents gave correct answers concerning asthma control during pregnancy. 38% respondents were aware about indication for seasonal flu vaccination recommendations. Generally medical or non-medical education, asthma presence or materiality status did not influence respondent's knowledge ($p>0.05$). However non-medical asthmatics had better knowledge about steroid therapy in pregnancy than non-asthmatic with medical education or asthmatics with medical education.

This study shows that women's knowledge of the prevalence and complications of asthma during pregnancy is poor.

Keywords: asthma, pregnancy, treatment, knowlegne

Comparison of the state of knowledge about STDs between medical students and general population

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Although our society is highly aware of STDs, it is our impression that people only consider HIV as a real problem. At the same time knowledge about hepatitis virus infections, chlamydia, syphilis and many others is very limited. As long as a disease is curable, it does not pose a problem. As medical students we live among people who are educated in this field and it is our belief that the same holds true for society as a whole, but surprisingly there are people who still believe that rinsing the mouth cavity with alcohol after oral sex is able to prevent infections.

We have prepared a questionnaire addressed to the general population, but because of the online format of the survey we mostly reached young people aged between 15-30 yo. 2205 individuals participated in the survey with responders being divided into two groups: medical and non-medical professionals.

What the authors found surprising after selecting a group of students from medical universities around Poland, who were supposed to be well-versed in the topic, it was found that a significant part of them had little idea about STDs. 60% of survey participants were of the opinion that it was possible to contract HIV from a mosquito. Among this group 16% were medical students. 33% of our responders claimed that vaccines against HCV existed.

In our opinion, STDs are still a taboo in our society; even the well-educated people do not get themselves tested. Only 20% of medical students have ever had themselves tested for HIV or HCV at least once. It is important to spread STD awareness because the earlier the disease is detected, the more effective the treatment will be, resulting in fewer side effects at the same time.

Keywords: STD



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF PUBLIC HEALTH AND HEALTHCARE II

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Evaluation of the effectiveness of various washing and disinfecting forms of agents in the elimination of flora that colonizes the skin of the hands

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The most common method of hand skin disinfection is hygienic washing technique. We have the large number of various forms of washing and disinfecting agents, which are used to reduce the microbes present on the hand surface.

The aim of the work was to compare the effectiveness of various forms of common antibacterial preparations of one producer in a form of antibacterial soap in a bar, liquid antibacterial soap and antibacterial hand gel (to be used by the rubbing technique).

The research group consisted of 66 students divided into 3 subgroups, depending on the type of preparation used. The methodology was based on the determination of microbial purity of the hands before and after the application of the antibacterial agent by making a fingerprint of the inner surface of the hands, using RODAC type plates. The number of colony forming units (CFU), cultured bacteria and fungi was compared according to the manufacturer's recommendation.

The result of the use of liquid antibacterial soap was a CFU reduction by 42.08% in the case of the total number of microorganisms. Similar results were obtained after using bar antibacterial soap and antibacterial hand gel, used by means of rubbing technique. In both cases, the reduction in the total number of microorganisms was 38.34% and 37.88%, respectively.

The tests showed high effectiveness of all types of antibacterial preparations used. The most effective washing and disinfecting preparation was liquid antibacterial soap. The use of preparations containing disinfectants should not be overused in everyday hygiene to interference in natural skin microbiome.

Keywords: skin, washing, flora

Effect of Diatec's & Hygiene on Oral Health.

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A well-balanced, nutritious diet is important for good oral health and general health. The food we eat supplies the nutrients that the body, bones, teeth and gums need to renew tissues and help fight infection and disease. A hectic lifestyle where the source of nutrition is fast food, fat diets, excess sugar, and trendy supplements can have health consequences. Poor diet can contribute to gum disease, periodontal disease, and tooth decay. However, Diatec's alone doesn't define a good oral health, for oral hygiene has been considered among the best in preventing dental caries, gingivitis, periodontitis, and other dental disorders. Oral Hygiene and good nutrition have a synergistic bidirectional relationship; they are both essential in prevention, and maintaining a healthy oral cavity.

The aim of this study is to determine the the relationship between eating habits, hygiene, and oral health.

A self prepared questioner was rotated at dental clinics targeting patients of different age, eating, and hygiene habits. Survey was dissected into three sections with particular questions targeting the above topics respectively. The study was conducted in Poland (Silesian Region) and Lebanon (Middle East).

Results convene with aim of study. Patients that practiced a bad eating diet were associated with increased decay, dental restorations, and in several cases edentulousness. In contrast patients with a healthy Diatec; specifically sugar restriction, presented less decay, restorations, and very few cases of missing teeth. Oral Hygiene results where similar to Diatec's, however the effect of a good hygiene regime on oral health was not as discrete and potent compared to nutrition.

In conclusion, the food people choose, how often they eat it, and hygiene habits can affect their oral health; encouraging decay and associated dental diseases.

Keywords: Diatec's, Oral Hygiene, Oral Health, Decay, Dental Diseases.

Practical aspects of using contact lenses - questionnaire

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Contact lenses are more and more often chosen as a way to correct the refractive errors, and they are an alternative for glasses. Inappropriate use and failure to comply with hygiene recommendations can lead to numerous complications, thus education in this area is important.

Assessment of hygiene compliance among wearers of contact lenses in Poland and a comparison of the results of the survey with the care recommendations.

Informations were gathered by internet questionnaire, with questions about various aspects of the care and hygiene of contact lenses. The study group comprised 693 participants, among whom a group of contact lens users was represented by 620 persons.

The majority of respondents (69%) used lenses longer than it was recommended by the manufacturer. 49,6% of respondents touched the lens during the day with the unwashed hands. 15,4% did not know the correct way to clean the contact lenses. 40,9% claimed that they sleep in the contact lenses occasionally. 50,4% applied contact lens care solution that was used before. 56,7 % of respondents cleaned their lens case with tap water. 59.5% bathed in contact lenses in the open water reservoirs.

Contact lens users evince many risky behaviors, which can lead to many serious complications. Therefore, it is necessary to pay attention to the education of patients in the field of the hygiene and care of contact lenses.

Keywords: contact lens hygiene, contact lens wear, questionnaire, non-compliant behavior

Are medical students becoming more aware about Hepatitis B and C along with their studies?

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Currently in Poland, there are over 200,000 people infected with the HCV and 500,000 infected with the HBV, which is indicative of a major epidemiological issue. In particular, most prone to exposure are medical personnel, who are exposed to human blood regularly. Medical professionals are expected to be proficient in prophylaxis awareness and post-exposure protocols.

Evaluation of the state of awareness of medical students about HBV and HCV.

A survey was conducted amongst 243 medical students at various universities in Poland, 41.2% of which were from the Medical University of Silesia. The survey consisted of questions involving basic knowledge of epidemiology and the diagnostics of HBV and HCV.

The study reveals that medical students are unaware of the intensity of the HBV and HCV problem in Poland. The majority of students, about 73%, inaccurately responded to the frequency of HBV and HCV occurrence. More than half of the participants are aware of the basic diagnostics and symptoms. During the studies 16% of respondents were in a situation in which an infection could have occurred, but 40% of them did not inform the appropriate person about it. Knowledge of HBV post-exposure protocols is satisfactory. The most accurate responses were yielded by II year medical students and the least accurate were by I year. The remaining students responded at a similar level.

The survey results support heightened HBV and HCV awareness amongst medical students, but nonetheless, they require additional knowledge about the virus. There is no correlation between the amount of knowledge on the matter and the student's year at the university.

Keywords: Hepatitis B, Hepatitis C, Awareness, medical students, hepatitis B virus, hepatitis C virus, post-exposure protocols

The frequency of the diseases and their significance on spirometry results in children aged 7-13 years

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Spirometry is a respiratory function test.

The aim of the study was to determine whether children with a positive history of numerous conditions have abnormal results of spirometry.

A questionnaire was distributed among parents of 109 children (7-13yo). Parents were asked about a confirmed medical history of their children. Then, spirometry was performed on 33 children from this group. The study included 109 children aged 7-13 years ($9,1 \pm 1,4$): 46 (44%) boys and 61 (56%) girls. 7 (6,48%) children had asthma, 1 (14,29%) of which was undergoing treatment.

Among other declared conditions, cystic fibrosis occurred in 1 (0,97%) child, airway defects in 3 (2,97%), immunodeficiency in 11 (10,78%) and hypertension in 2 (1,94%). Heart defects or bronchiectasis were not diagnosed in any child. A medical history of bronchitis was noted in 20 (19,23%), bronchiolitis in 6 (5,94%) and sinusitis in 22 (21,15%) children. As for allergic conditions, 24 (23,53%) children had allergic rhinitis, allergic conditions of the eye and conjunctiva 13 (12,62%), eczema 3 (11,9%), allergy to: pollen 13 (12,62%), dust 15 (14,56%), food 20 (19,23%), animals 9 (8,57%).

Children suffering from at least three of the conditions listed above were suspected to be at risk of abnormal spirometry results, 28 (25,69%) children fulfilled the criterion. Among them, 5 had allergic diseases only. Spirometry was performed in 33 of the surveyed children, with 1 (3,03%) result suggesting airway restriction, however the child did not have a positive medical history. In the studied group, a positive medical history did not affect spirometry results.

Keywords: spirometry, epidemiology, paediatrics, school-age children

Day before or day after? Which contraceptives do polish people use and how do they feel about it?

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It is said that polish society is very conservative and people are likely to use less effective contraception. That is why we decided to check whether this statement is true.

The study was created to assess the knowledge about contraception amongst polish people-both men and women and to check which methods are the most frequently chosen in Poland.

We had designed an Internet survey dedicated for people of different age, religion and marital status. We managed to reach 204 people-166 women and 38 men. The questionnaire contained 44 questions and respondents were asked to check all the contraception methods they had tried. Special attention was paid to knowledge and believes about the most popular ones.

79% of the studied group used condoms, 58%-oral contraception, 30%-coitus interruptus, 23%-day after pill and 15%-other natural methods. 60% believed that contraception is necessary during breastfeeding. The most common complaints about pills were decreased libido and mood disorders, although 35% women didn't report any. 53% claimed that using condom limits sexual pleasure. To 25% happened condom rupture. 46% chose natural methods because they feared possible side effects of pills and only 20% because of religion influence. Usage of day after pills depended on age and there was a significant connection between marital status and their usage. 98% agreed that contraception should be mutual responsibility.

Condoms seem to be absolutely the most popular method of contraception in Poland. Many people don't regard natural methods as contraception which they identify with pills. There are still plenty of contraceptive means that stay unrecognized by polish society.

Keywords: contraception, condoms, pills, emergency contraception, coitus interruptus, natural birth control, menstrual cycle, knowledge

Patients knowledge about nasal drops containing xylometazoline or oxymetazoline use and awareness of potential dependence on these preparations

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Nasal drops that contain xylometazoline or oxymetazoline are often use in the treatment of rhinorrhea. However the prolonged therapy with the use of this kind of nasal drops may lead to the development of addictions. People consider that untreated rhinorrhea lasts 7 days and treated for a week. That's why they don't see the need to use Pharmaceutical Care. Moreover, not seeking for professional knowledge of pharmacist results in side effects development and dangerous drug interactions.

The aim of the study was to verify the knowledge of people about the possibility of nasal drops containing xylometazoline or oxymetazoline overdose.

The data was collected with an anonymous online survey filled the Internet. Questionnaire indicate patients awarness in basic recommendations for the use of preparations containing xylometazoline or oxymetazoline and alternative treatment of cold.

More than half of the respondents don't ask pharmacist for advice in the case of rhinorrhea. It translates into results that ignorance about drug interactions, contraindications and side effects of xylometazoline and oxymetazoline such as disorders of the circulatory system may cause some serious health effects.

All collected data show how important is the advancement of Pharmaceutical Care in health care system.

Keywords: nasal drops, rhinorrhea, drug addiction, Pharmaceutical Care

Approach to health by medical students

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Although everybody intuitively knows what health is, its definition is not an easy matter at all. The way it is perceived by medical students may have fundamental impact on their future.

The target of the research was to find the attitude of medical and dental students of the SMU to broadly understood health subject and its aspects.

Research was done in the form of anonymous questionnaire. It checked if the students agree to the definition of health introduced by WHO and their approach to it. In addition to that, the knowledge of future doctors was checked and their attitude to the psychological aspect of health.

The results have shown that the majority of the questioned (94.3 %) agree to the definition of health introduced by WHO.

From among all components of health, the questioned accepted the physical and mental aspect of health the most (99.4 %), followed by social health (63.1 %), economic health (20 %) and intrapersonal health (36.3%). The last aspect of health is more often presented in psychological books.

The comparative analysis of the data shows univocally that the medical students acknowledge healthy lifestyle, physical activity and diet as the main components of health. Psychological aspect seems to be less meaningful. Taking into account the possibility of psychosomatic grounds of many illnesses, it seems to be essential to educate future doctors about psychological and social aspects of health. Extending, among the medical students, the knowledge of different reasons of these disorders may fructify with more efficient, interdisciplinary therapy in the future.

Keywords: medical students, health

Pharmaceutical drugs and dietary supplements in the aspect of activated carbon - are patients aware of the differences?

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Nowadays many people use different kinds of drugs and supplements. Not all of them are aware of the differences or resembles between them, because one substance might be both, drug and a supplement.

One of those binary substances is active carbon, used in the therapy of gastric disorders. The aim of the study was to examine the patients awareness about the differences between a drug and food supplement.

The data was collected with anonymous online survey filled *via* Internet. The questionnaire was filled out by 319 people, 208 women and 110 men.

The obtained results revealed that 60% of the interviewee don't know that the same substance that they're buying can be registered as a drug and supplement at the same time. 87% declare the awareness of the differences between them. 81% of the responders pay attention to what they're purchasing. Moreover 53% is not knowledgeable about the fact that active carbon is a drug as well as supplement. 41% don't know if people should take active carbon with everyday diet and 9.5% are sure it's necessary on daily basis.

Additionally 69.5% declares consulting their doubts about supplements with help of pharmaceutical care. In conclusion many people have heard about the differences between drugs and supplements, but they don't have enough knowledge about it, pointing the importance of Pharmaceutical care development.

Keywords: food supplements, Pharmaceutical Care, active carbon

Knowledge and Attitudes about Antibiotic Use and Resistance: A Cross-Sectional Study among Primary Healthcare Center Attendees in an Urban Area, Alexandria, Egypt

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Antibiotic misuse and bacterial resistance is a public health concern worldwide.

The study explores the knowledge and attitudes of antibiotic use and resistance in adults attending a primary healthcare center in an urban area of Alexandria.

The researcher conducted a single point, descriptive cross-sectional study on 87 adults aged ≥ 18 years in January 2019 using a semi-structured questionnaire to gather data of using antibiotics and resistance via face-to-face interview. The data were analyzed by descriptive statistics to explore the respondents' level of knowledge with respect to the use of antibiotics and resistance. High level of knowledge was assigned as $> 66.7\%$ of the total score.

About 52.8 % of the respondents (63.2% of them were females) lack adequate knowledge about the use and resistance of antibiotics. Almost 65.6 % of males had less restrictive knowledge about the use of antibiotics and resistance than 45.5 % of the females. Simultaneously, 47.1 % of the respondents erroneously believed that antibiotics work on both bacterial and viral infections and 14.9 % thought it just fights viruses. Approximately, 66.7 % of them were unaware of the meaning of antibiotic resistance. Moreover, 33.3 % stated they have no role to play against bacterial resistance. 83.9 % of respondents knew that vaccination could prevent bacterial resistance.

The findings display poor knowledge and attitudes of proper antibiotic use and resistance among respondents. Healthcare providers should utilize these findings to educate the public on how to use antibiotics rationally and the health hazards of bacterial resistance.

Keywords: Antibiotics, Antibiotic Resistance, Knowledge, Public Health, Egypt

Is the level of knowledge about vaccinations among medical professionals really sufficient?

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Medical professionals should be the first source of information about vaccinations for patients and provide reliable knowledge. Due to the increasing range of anti-vaccine movements high level of knowledge about vaccinations among medical professionals is really important.

Finding out what is the level of knowledge about vaccinations of polish physicians and nurses. Investigating if medical staff can be a source of false information about vaccinations.

Survey was carried out on a group of 781 respondents - physicians and nurses. The research tool was a questionnaire in paper. Participation was voluntary and anonymous.

Surprisingly, internet (17%) is the second source of information about vaccines among healthcare professionals. Almost 91% of respondents were in favor of vaccinations, but 45% weren't vaccinated against influenza. Among the respondents, 39% want to immunize themselves/the child against all possible threats, while 54% want to immunize themselves against life-threatening diseases only. 91% of doctors correctly answered the question about disease that is eradicated because of vaccinations, while only 57% of nurses answered the same question correctly.

On the basis of the results, it can be seen that the level of knowledge about vaccines among nurses is lower than among doctors. Medical professionals employed in the implementation of vaccinations influence themselves against influenza more often than those who are not taking active part in protective vaccinations. Summarizing, it is important to improve the level of knowledge about vaccinations among medical professionals.

Keywords: immunization, anti-vaccine movements, physicians, nurses informations

Evaluation of Polish women's knowledge about cervical cancer prophylaxis.

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Squamous cell carcinoma (SCC) is the most common type of cervical cancer (CC) caused mainly by HPV infection. Predisposing factors include early sexual initiation and many sexual partners. Despite prophylaxis of CC (pap smear tests (PST), HPV vaccination) the incidence of CC in Poland is still 15% higher than in Europe.

The aim of this research is to evaluate knowledge of Polish women about CC prophylaxis, determine the part of society that regularly performs PST and assess the efficiency of Pink Lips project.

An original, anonymous survey was delivered by social media to 397 women between 18 and 64 years old (yo). Next, statistical analysis was conducted.

Survey was answered by 57,8% 20-24 yo, 22,5% 25-34 yo, 8,8% 35-44 yo women. Over 89% respondents know that SCC is a malignant tumor and 98% are aware that it's curable if detected early. 84% women claim that PST shall be performed if a female relative had CC. Nearly 80% say that PST is the only prophylactic tool and it should be done once a year (61%) starting from the age of 20-25. Only 60% have had a PST and the reasons of test delay were: lack of knowledge (20%), interest in one's health (17%), fear of procedure (17%). 71% of women haven't heard about Pink Lips and 15% women of those who have heard about it, say that it didn't increase their knowledge about CC.

CC develops slowly and usually without symptoms, that's why early detection of SCC using PST could decrease mortality rate. Concluding, most women know what the CC is but only 60% admit to regular PST, especially when worrying symptoms occur. Moreover, Pink Lips project isn't effective, implying the necessity of campaigns raising awareness of CC prophylaxis.

Keywords: Cervical cancer, Prophylaxis, Pap smear test, Pink Lips campaign, HPV vaccination

Knowledge of painkillers and NSAIDs use among parents of children aged 3-6

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Painkillers and nonsteroidal anti-inflammatory drugs (NSAIDs) are widely used among parents of children aged 3-6 due to the wide range of advertisements.

The aim of the study was to determine whether parents know how to use this group of medicines among their children.

The study involved 300 parents of children aged 3-6. In the questionnaire, we asked for maximum doses of paracetamol and ibuprofen and the possible frequency of drug dosage and administration. We also asked about adverse events that may be caused by the use of these drugs among studied age groups.

The obtained results show that 48% and 50% of parents do not know the correct single dose for paracetamol and ibuprofen, respectively. 26% of respondents believe that the indication for the use of paracetamol in children is inflammation. Studies have also shown that 56% of parents surveyed consider syrup as the best way to give the medicine to a child in the case of pain or fever. In case of emesis, over 70% of respondents find suppositories as the best way to administer a drug.

In conclusion, most of parents has adequate knowledge in the field of self-healing of the child at home. The analysis showed that a large part of the surveyed parents do not know the correct doses of one-off the most popular medicines for children, which may result in improper use of these drugs. It follows that parents should be more educated in the field of antipyretics and analgesics use in children, pointing introduction of Pharmaceutical Care as a valuable issue.

Keywords: NSAIDs, paracetamol, antipyretics and analgesics dosage and administration

The level of experienced stress among health professionals

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Health care workers are prone to stress because of the specific character of their work. Occupational stress is one of the most serious challenges in public health.

The aim of study was to assess stress prevalence among health professionals. We compare stress prevalence in relation to professional groups, sex, wards, job seniority, night shifts and type of working time.

The study group consisted of 451 participants (408 women, 43 men), mostly nurses (151), midwives (123) and doctors (95). Mean age was 35.5 years (range 20 - 62). Research was conducted using the Perceived Stress Scale (PSS-10) and the author's own survey questionnaire.

Among the surveyed, more than a half of them (60.7%, $n=274$) were characterized by a high level of stress. In this group the most numerous subgroup was doctors (68.4 %), nurses (59.6%) and midwives (56.6 %). Women showed higher levels of stress than men ($p=0.006$). Statistically significant differences between doctors and midwives ($p=0.021$) and doctors vs. physiotherapist ($p=0.002$) were observed. Employees on duties (1-4 shifts per month) were more stressed than those without night shifts ($p < 0.025$).

From the research that has been carried out, it is possible to conclude that doctors showed significantly higher levels of stress than nurses. Female personnel showed higher levels of stress than male personnel. Age, type of wards and working time, job seniority did not have an influence on stress levels.

Keywords: stress, occupational stress, health professionals, perceived stress scale

The comparison of frequency of wearing eyeglasses in 2nd and 8th grade of primary school

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Correct eyesight has an impact on child development. Changes of eye refraction eventuate from physical growth and maturation process and can be modified by environmental factors.

The study was performed to evaluate the frequency of wearing eyeglasses among children in 2nd and 8th grade and to find factors having impact on this phenomenon.

Anonymous original survey was conducted in 10 primary schools in Katowice. It was completed by 2nd and 8th grade children's parents and consisted of questions concerning: children's/their family's eyesight and free time activities. 305 out of 771 questionnaires (160 from 2nd and 145 from 8th grade) were collected back and statistically analysed.

There is no relation between sex and eyeglasses wearing. 26% of examined children wear glasses, which frequency is 22,5% in second grade (hyperopia is the most common reason) and 29% in eighth grade (myopia is the most common reason). However the difference in frequency of eyeglasses wearing between 2nd and 8th grade is not statistically relevant ($\chi^2=1,8647$, $p=0,172081$). Children who spend over 3h daily on learning/reading are more likely to wear glasses ($\chi^2=6.1999$, $p=0.012776$). The relation between wearing eyeglasses and time spent in front of blue light emitting devices, physical activity and being outside was statistically insignificant. 15% of respondents could not answer what type of vision defect their child has and only 59% parents filled in the exact value of child's refractive error.

Frequency of wearing eyeglasses among children increases with time spent on visually demanding activities. There is a need for education considering vision defects.

Keywords: vision defect, refractive error, children, glasses, school

Cadmium, lead and zinc concentration in the teeth of inhabitants of Upper Silesia as an indicator of exposure to heavy metals

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The mining and processing of non-ferrous metals in Upper Silesia resulted in a strong contamination of the environment by such heavy metals as lead, cadmium and zinc which are toxic for people. The residents of the region are potentially exposed to high doses of these pollutants, what may result at increased health risks. Certain metals can accumulate in bone tissue and in the teeth. Teeth are easily available material and can be useful in the biological exposure assessment to heavy metals.

The aim of the study was the exposure assessment of adult inhabitants of Upper Silesia to heavy metals based on the content of cadmium, lead and zinc in teeth.

The concentration of heavy metals were analyzed in teeth of randomly selected 50 adult inhabitants of the Silesia voivodship. The cadmium, lead and zinc concentration were determined using atomic absorption spectrometry method.

The study showed high differences at the concentration of heavy metals in the examined teeth. The concentration of cadmium ranges from 0.06 to 11.1 mg Cd/kg d.w., lead content ranges from: 30.9 to 24390.9 mg Pb/kg d.w, and the zinc content ranges from <0.4 to 558.4 mg Zn/kg d.w. The differences of heavy metals concentration in teeth depend on the gender of study participants.

The differences of heavy metals content in the teeth of adult inhabitants of Upper Silesia indicated a high differences in the exposure of the local community to cadmium, lead and zinc. This may be due by many factors such as gender, but also by age, place of residence, occupation, lifestyle etc. of Upper Silesia residents.

Keywords: heavy metals, teeth, exposure, Upper Silesia

Woman in uniform - analysis of society views and direct associates about women employed at selected uniformed services.

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For the majority of society, uniform is an attribute of masculinity, however, at the present time, the percentage of women employed in uniformed formations is dynamically increasing.

The aim of the research is to analyze the views of the society and direct colleagues about women employed in selected uniformed services.

The study included 148 people unrelated to uniformed services and 229 women and 230 men working in the above-mentioned formations. The method used in the research was a diagnostic survey, and the research tool was the author's questionnaire. Research has been conducted between 28th of February and 08th of March 2019. Data was collected and developed using Microsoft Office Excel.

More than half of the society (61.5%) and only minority of men employed in the above-mentioned formations (8.7%) believe that in uniformed services should work more women.

Views about women employed in uniformed formations are very diverse.

Keywords: women, uniform

The attitude of consumers to the expansion of advertising of medical products

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Dynamic increase of consumption of the pharmaceuticals in Poland raises concerns because of the potential health risks of consumers. There is a risk of adverse health effects caused by overdoses or interactions between the ingredients of consumed products. The methods of convincing consumers for using of pharmaceuticals are the advertisements, in which the medications improve health state in a short time and are remedies for all diseases.

The aim of the research was to find out if advertisements influence customer's purchasing behavior of *non-prescription* medicines.

The research material was an original questionnaire, consisted of 16 closed questions, carried out in a population of 126 inhabitants of the Lubliniec poviat.

Half of the respondents reported that they often purchase the over-the-counter (OTC) drugs on the basis of recommendations of the pharmacists, whereas every third participants of the study declared that they choose occasionally such products based on the pharmacist's opinion. 72% of respondents believe that advertisements encourage consumers to buy a particular pharmaceutical products however, declared assertiveness to advertising suggestions. Over 60% of respondents claim that they have never succumbed to the advertisements, and 30% succumbed to them occasionally, but 6% of respondents declared significant impact of advertisements on purchasing behavior of medicines.

In the opinion of the majority of respondents, the advertising is a very important tool in generating of the demand for medicals. There is a need to educate the public on the safe use of over-the-counter medical products.

Keywords: awareness, advertising, OTC medical products

The awareness of the genetically modified foods in selected population of patients

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The production of foods on the basis of genetically modified organisms (GMOs) are constantly increasing around the world. GMOs have higher resistance to pesticides, better resistance to adverse weather conditions, grow faster, have better taste qualities etc. than the traditional plant species. However, according to the papers the consumption of GM foods is associated with health hazards of the society.

The aim of the study was to assess the awareness of patients from one of the hospitals in Zabrze of the health risk related to the consumption of genetically modified foods.

The research material were the answers of 100 patients from the emergency room of the one hospital in Zabrze to the questions from the author's questionnaire. The questionnaire consisted of 13 closed questions, including 2 multiple-choice questions.

The study showed that the awareness of the surveyed population of patients of the GM foods is insufficient and requires systematization. The knowledge of respondents is often based only on accidental information and is not supported by scientific data. Generally, the participants of the study are believe that the access of society to reliable data of GMOs is limited.

There is a need to educate of the society of economic benefits and health risks resulted from the intensification of GMOs production.

Keywords: genetically modified foods, awareness, patients

Patients' knowledge about gastroenteroprotective agents - the role of Pharmaceutical Care.

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Probiotics, proton- pump inhibitors and liver- protective agent constitute three main group of agents which play significant role in many therapeutic process. They are the most common part of protective preparations, because of the currently observed increase of antibiotics and nonsteroidal anti-inflammatory drugs consumption.

Aim of that work was to verify patients' knowledge about gastroenteroprotective agents.

The data was collected with anonymous survey filled via the Internet and personally. The questionnaire was filled out by 582 people, 472 women and 120 men in different age groups.

95% of the respondents think that they understand the concept of a protective agents, but only 5% of them, can indicate correct answer that contains three main groups covered by this name. Only 48.5% of the respondents declared that they always buy recommended protective agents, 11.3% of people claimed that their use is unnecessary. From respondents who declared understanding of probiotics concept, 64.6 % of patients mistakenly think, that probiotics protect the stomach. However from 31.3 % of patients who take chronic pain medications, only 2.75 % use also gastroprotective preparations.

The obtained results show that patients have basic information about gastroenteroprotective agents, however their knowledge is still insufficient to guarantee the effectiveness of therapy. Patients take knowledge mainly from non-medical sources what suggest the need of pharmaceutical care popularization.

Keywords: gastroenteroprotective agents, probiotics, proton- pump inhibitors, Pharmaceutical Care

The influence of surgical treatment of mandibular prognathism on self-esteem and self-acceptance

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The prognathism of the mandible is a skeletal Class III abnormality. The appearance of people with this defect differs from the generally accepted norms of attractiveness due to facial deformity. This may be the reason for psychosocial problems related to self-esteem and self-acceptance.

The aim of the study was to assess how the self-perception changes after a surgery correcting the defect in the group of people with mandibular prognathism.

In the study participated 161 people with mandibular prognathism – 85 before surgery and 76 after corrective surgery. The questionnaire contained original questions pertaining to self-esteem, self-confidence and well-being.

After orthognathic surgery, the level of self-confidence significantly improves. More than half of the people before the surgery often experience frustration or irritation caused by their appearance. That also significantly improves after surgery and is strongly correlated with the assessment of the appearance of the face, which has increased in over 80% of respondents. People after surgery less often avoid smiling and less often worry that they do not look as good as others. There is also a significant correlation between the increased frequency of self-confidence feeling resulting from the appearance of the face and less frequent avoidance of meetings with people and less embarrassment when meeting new people.

1. People after corrective surgery more often felt free and felt less embarrassed when staying with other people. 2. Correction of the defect affects many parts of life of the patients - both self-assessment, self-acceptance and interpersonal relationships.

Keywords: mandibular prognathism, orthognathic surgery, patients' self-esteem, quality of life

Is "homo medicus" also "homo prophylacticus"? Analysis of visual work in medical and non-medical professions and the prophylaxis of eye diseases

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Nowadays, ophthalmologic prophylaxis is not limited to systematic visits to the ophthalmic office or observance of an appropriate diet. Increasing time spent in front of the screen of smartphones, continuous work at the computer, cause that we are constantly exposed to faster deterioration of our vision.

The aim of the study was to compare visual work and applied prophylaxis of eye diseases among people performing medical and non-medical professions.

543 questionnaires were analyzed. 386 of them were filled by people related to health care and 157 by non-medical professionals.

Considering the time spent on the computer, TV screen and smartphone, it was found that device respondents use the longest is smarfon. 69% of those involved and 59% of non-health-related people say that they use it often and in turn, 14% and 7% think that they reach for it at any free time. While working on the screen, 34% of health-related people takes a brake every hour, while 26% for the remaining ones. 57% of medics and 59% unrelated to medicine spend in rooms with artificial lighting more than half of the day and in turn 23% and 16% spend whole days. Prophylactically ophthalmology office is visited by 14% of people related to health care. Among those unrelated to health care, this is 19%.

In both medical and non-medical professions there is a high burden on vision organs. This is due to the increasingly frequent, longer use of electronic devices and being in rooms with artificial lighting. Unfortunately, the degree of awareness about the hygiene of visual work is still unsatisfactory and does not differ significantly between healthcare professionals and non-medical people.

Keywords: ophthalmology, vision prophylaxis, visual work



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF RADIOLOGY, RADIODIAGNOSTICS AND NUCLEAR MEDICINE

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The impact of I131 therapy on the function of parathyroid gland in patient with hyperthyroidism.

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Radioiodine therapy is considered as the most comfortable approach of hyperthyroidism treatment caused by Graves' disease or toxic nodular goitre. Such treatment is indicated in patients to normalize thyroid function and to reduce thyroid volume. I-131 is β -emitter with high energy and short penetration rate 2-4mm, it destroys thyroid tissue; radiation may act also in parathyroid gland.

The aim of study was to evaluate the effect of I-131 β radiation on the function of parathyroid gland.

Study was carried out in 30 patients with hyperthyroidism, aged 30-70 years; 86% female and 14% male, 10 patient- GD and 20 patient - TNG; qualification was based on high levels of serum fT_3 and fT_4 , low levels of serum TSH and characteristic appearance on thyroid ultrasound. The patients with GD were in euthyroid state, $TSH > 0.1 \mu IU/ml$, fT_3 fT_4 within normal ranges. All patients with TNG were in subclinical hyperthyroidism with levels of $TSH < 0.1 \mu IU/ml$, fT_3 and fT_4 within normal ranges. The effective T-half: more than 3 days at the time of treatment. The activity dose was calculated by the use of Marinelli's formula and ranged: 200-800 MBq. The absorbed dose ranged: 150-300 Gy, was proportional to thyroid volume.

We observed significant increase of iPTH in the first month, high level persist and was 2 times more than normal on the 5 months after radioiodine therapy. There was no difference in the level of Ca, P before and after the radioiodine therapy.

Temporary increase in the level of iPTH is seen also in the radioiodine therapy in patient with hyperthyroidism. This increase in iPTH without changes in the level of Ca and P may be due the stimulation effect of β radiation on the parathyroid gland.

Keywords: I-131 therapy, I131 treatment, β -radiation, Graves disease, toxic nodular goitre, parathyroid gland

Heterogeneity of pancreatic neuroendocrine tumours: correlation between imaging features in Computed Tomography and the results of morfological studies.

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Pancreatic neuroendocrine tumours occur rarely and compromise 2% or less of all pancreatic neoplasms. It is possible to detect them in Computed Tomography what can be used to estimate pathology staging.

The aim of our study is to present the most common images of pancreatic neuroendocrine tumours in Computed Tomography and to compare them with mitotic index, the measure of histological malignancy and chromogranin level.

Our analysis included 107 patients. 66 of them were accepted to further research. The patients were divided into 3 groups due to the type of their tumour: those having solid, cystic or cystic-solid. Moreover, the analysis included chromogranin level, mitotic index and the measure of histological malignancy of the tumours.

The vast majority constituted solid tumours (about 64%). Second group contained patients diagnosed with cystic-solid neoplasms, it counted about 24%. The least numerous group consisted of cystic tumours counted about 12%. Our results are still being analysed.

Depending on the tumour type, the measure of mitotic index and grading reach different values, which allows predicting the malignancy of neoplasms. According to our research, cystic tumours are better-differentiated and have lower mitotic index than the solid ones.

Keywords: neuroendocrine tumours, pancreas, Computed Tomography, chromogranin

Treatment effectivity parameters of iodine isotope (^{131}I) therapy for toxic nodular goitre

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When planning radioactive iodine therapy, it frequently happens that inadequate attention is paid to such easily measurable parameters as: 1) the serum concentration of thyrotropin (TSH) before administering radioiodine, which is a key factor for extranodular (non-autonomous) iodine uptake of the thyroid gland, 2) thyroid gland iodine uptake, and 3) the effective half-life of ^{131}I (T_{eff}). The aim of the study is to evaluate the impact of the above factors on the efficacy of ^{131}I treatment in hyperthyroid patients.

The material consisted of 4140 patients: 2190 with autonomous toxic nodules (ATN) and 1950 with toxic multinodular goitres (TMG). The patients were prepared for treatment in such a way that the concentration of TSH did not exceed 0.1 mU/l and $T_{\text{eff}} < 5$ days. The therapeutic activity of ^{131}I was calculated using Marinelli's formula. The selection of absorbed dose value was determined by the degree of suppression of extranodular tissue. Monitoring was performed every eight weeks.

At one year after ^{131}I administration showed that a euthyroid status was achieved in 94%, hypothyroidism was iodine isotope (^{131}I) therapy for toxic nodular goitre: treatment efficacy seen observed in 3%, while persistence or recurrence of hyperthyroidism in 3% of ATN patients and, respectively, 89%, 4% and 7% of TMG patients.

Patients with toxic nodular goitre who are to be treated with radioiodine should have the lowest possible serum concentration of TSH. The suppression of extranodular determines the optimal value of absorbed dose for Marinelli's formula.

Keywords: ^{131}I therapy, radioactive iodine, autonomous toxic goitre, multinodular toxic goitre

The influence of radioiodine therapy on some parameters of oxidant/antioxidant balance in patients with Graves disease

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Oxidative stress plays an important role in hyperthyroidism-induced tissue damage. We aimed to determine whether radioiodine therapy has benefit effect on the oxidant and antioxidant status in patients with Graves' Disease.

The aim of our study was to assess balance of the antioxidant/oxidant in patients with Graves' disease.

We studied 30 patients with Graves' disease, aged 18–48 years. 12 normal adult volunteers were studied as control group. All the patients were treated unsuccessfully by antithyroid drugs. Malondialdehyde (MDA) as a marker of oxidative stress, glutathione (GSH) and glutathione peroxidase (GPx) activity as a parameters of antioxidant system, were evaluated in the investigated groups before and 6 months after radioiodine therapy. The serum fT4, fT3, TSH, TSHRAb were evaluated before and monthly up to 12 months after RIT. Thyroid ultrasound, and thyroid scan with thyroid RAIU were done before and after 12 months of radioiodine therapy. The activity dose was calculated by Marinelli's formula and was ranged between 280 and 600 MBq. The absorbed dose ranged between 120 and 200 Gy, Follow up control was done every 4 weeks.

Hyperthyroidism cause a significant increase in MDA level ($P < 0.05$), with significant decrease in GPx activities ($P < 0.05$) and GSH level, compared with controls subject. A significant decrease of MDA level with significant increase of GSH level and GPx activities was observed after 6 months of radioiodine therapy in patients who achieved euthyroidism.

Our results confirm the imbalance of the antioxidant/oxidant status in patients with Graves' disease. Radioiodine therapy was more effective to improve these balances.

Keywords: oxidant, antioxidant, radioiodine, therapy, graves, disease

The new method, the old problem – role of Contrast-Enhanced Spectral Mammography (CESM) in the diagnosis of breast cancer among young women

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Contrast-Enhanced Spectral Mammography (CESM) is a valuable tool in the diagnosis and staging of primary breast cancer. In Poland conventional mammography place itself on a position of most popular diagnostic method. However, among young women, whose breasts are composed of glandular tissue, this classic method has got unsatisfyingly low sensitivity.

To investigate sensitivity and specificity of CESM as a diagnostic tool in examining breasts focal lesions considering population of young women.

Our research took 104 patients, from 34 to 54 years old (mean age: $45,82 \pm 5,07$). Discussed patients went through CESM in the University Clinical Center between 2014 and 2019. Biopsy was performed in order to examine the malignancy of the pictured lesions. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) were calculated.

In total, 114 lesions were included in this study. Histological evaluation revealed 60 (52.63%) benign (mean: 17.22 ± 12.38), 3 (2.63%) high risk and 51 (44.74%) malignant lesions (mean: 27.11 ± 21.69), of which 9 (7.89%) were ductal carcinomas in situ (DCIS) and 34 (29.82%) were invasive lesions. 68.42% lesions were enhanced. There was a statistical significance ($p < 0.0001$) between the enhancement in CESM and the level of malignancy. Diagnostic performances of CESM were: sensitivity 98.15%, specificity 58.33%, PPV 67.95% and NPV 97.22%.

CESM has a high sensitivity but low specificity. CESM is a new technology with an evolving role in breast imaging, a useful screening tool in patients at risk of breast cancer who are not currently well-served by conventional mammography.

Keywords: breast, cancer, CESM, DCIS

Radiological and pathomorphological correlation of adrenal lesions in paediatric patients, based on magnetic resonance imaging

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Adrenal tumours are frequent in paediatric patients population. They may be found in ultrasound examination, MRI gives more precise image. Radiological diagnosis is then verified microscopically.

The aim: Assessment of specific MRI findings in children's adrenal tumours.

Retrospective analysis of MRI results of paediatric patients with suspected changes of adrenal glands. The study was conducted on 25 children aged between 1 month and 17 years; 18 females and 7 males. The diagnostic imaging was performed in a time period from 2013 to 2018, in Scanix Katowice with 1,5T MR Optima450 GE. Radiological and pathomorphological conclusions were compared.

MRI confirmed clinical and sonographical suspicion of tumour in 21 patients (84%). 4 patients (16%) were diagnosed with haematoma. Malignant tumours accounted for 86% (18 of 21), 67% (14 of 21) were neuroblastomas (NBL), 9% (2 of 21) were ganglioneuroblastomas (GNBL), 5% (1 of 21) was pheochromocytoma and 5% (1 of 21) was a cancer. Benign tumours (ad-enoma) were found in 9% (2 children), and in one patient result was inconclusive. In 2 patients (9%), suspected of NBL in MRI, were diagnosed with GNBL in pathomorphological examination. Only in 2 cases the MRI-based suspicion of NBL in were not confirmed by pathomorphological examination, the results indicated on GNBL instead. Sensitivity of radiological diagnosis was 85,71% (18 of 21 tumorous lesions).

Radiological imaging allows to diagnose tumorous lesions of adrenal glands with high accuracy.

Keywords: adrenal tumour, pediatric patients, MRI

Specification of imaging in pediatric ischemic stroke

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Diagnostic imaging is crucial to diagnose and differentiate. Diagnosing ischemic stroke in pediatric patients generate clinical and diagnostical difficulties. There are very few studies done that verify the best diagnostic imaging method to get optimal results.

Diagnostic CT and MRI analysis of children with suspected ischemic stroke.

We retrospectively analysed CT and MRI results of pediatric patients who were referred with suspicion of acute ischemic stroke. Clinical predispositions in patients were: paraparesis, a disorder of consciousness and speech impediments. The diagnostic imaging was performed in a time period from 2013 to 2018. The study was conducted on 33 pediatric patients, 19 were males and 14 were females in the age group 16 days to 18 years old.

MRI confirmed acute ischemia in 22 patients (66,7%). In 2 (6%) it confirmed cerebral venous infarction, differentiation between ischemia and inflammation was required in 6 (18,2%) and in 3 (9,1%) MRI did not reveal any changes.

Head CT was performed on 13 pediatric patients (39,4%). Ischemia was suspected in 4 children (12,2%) and cerebral venous thrombosis was suspected in 2 (6%). CT imaging did not show any abnormalities in 5 pediatric patients (15,1%).

In analysed pediatric patients with suspected ischemic stroke MRI confirmed diagnosis, partially revealed the cause.

Keywords: ischemic stroke, pediatric stroke, pediatric patients, head CT, head MRI

Tetralogy of Fallot: the comparison of the two methods SSFP Fiesta C and Atrial 3D MR

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We compared the two methods SSFP Fiesta C and Atrial 3D MR, which measure pulmonary trunks and pulmonary arteries respectively, of children after their heart corrective surgery for Tetralogy of Fallot (TOF).

Tetralogy of Fallot (TOF) is a type of heart defect present at birth. Classically there are four defects: pulmonary stenosis, a ventricular septal defect, right ventricular hypertrophy and an overriding aorta. Without surgical or percutaneous intervention 40% of children die before the age of one.

The goal of the scientific work is to compare two sequences – conventionally used SSFP Fiesta C and 3D Atrial – and checking if there is a possibility to use 3D Atrial method supplementary to plan surgeries to children with TOF. SSFP is a standard examination that is performed in diagnosing and treatment planning. The 3D heart method is relatively new method.

We compared the two methods of examination (SSFP Fiesta C and Atrial 3D Heart) of 27 children born with TOF. Diameters of pulmonary trunk (PT), left and right pulmonary arteries (LPA, RPA) were measured. Excluding criteria for the examination: the lack of 3D sequence and bad quality of visualization.

The number of measurements was 88: 30 of the PT and 29 of RPA and LPA. The diameters measured on two types of imaging showed similar values. The average difference in the measurements was successively for PT 0.01, for RPA 0.01 and for LPA 0.1. 3D heart testing can be complemented to the basic method, SSFP, which is helpful when planning surgical procedures.

Diseases imitating other diseases - ultrasound necessary to resolve the problem

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Many medical issues encountered in clinical practice might trick into other diseases, fooling doctors into false diagnoses. Differential diagnosis based on the symptoms may turn out to be tricky and it poses significant diagnostic problem. Ultrasound (US) helps to identify them on the basis of their imaging characteristics.

The aim of the research is not only to highlight the role of the US, as it has been widely known for a long time, but to encourage students to train themselves in the field of US practices and methods. Moreover, to convince young doctors to routinely practice this examination. The other task is to share experience in the ultrasound assessment.

There were five patients taken into the study whose symptoms supposed to be unambiguous, but were not. The ultrasound examination was the only correct approach, that finally showed the real diagnosis.

The differential diagnosis could end with success only by submitting pathologies for ultrasound evaluation. Those cases are in the field of angiology, endocrinology, laryngology, urology and orthopaedics.

The ultrasound method should be performed even if symptoms clearly suggest final diagnosis. In a simple and noninvasive way US can indicate many pathologies. It is painless and can be repeated many times. This imaging method ought to be propagated among students' and young doctors' environments in order to acquire practical experience.



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF SEXOLOGY

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Sexuality of women with cardiovascular diseases

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Female sexual function, as an important factor influencing quality of life, can be interrupted by systemic diseases. Cardiovascular diseases, known as widespread in society, are considered to affect sexual life as well.

This article aims to provide a comprehensive data about the sexuality of women with cardiovascular diseases.

This study was conducted using survey consisting of 42 questions, grouped into few categories, e.g. age group, diagnosed cardiac disease, sexual behavior. This research was conducted among 114 women from Silesia, Poland divided into groups of 19-35 years old and over 35 years old. The study assessed 3 most common cardiovascular diseases: arterial hypertension, arrhythmias, ischemic heart disease.

72 patients (63,2%) belonged to group aged 19-35 years old, 42 patients (36,8%) represented second group. Among younger women cardiovascular diseases did not affect medium FSFI score, however among patients over 35 years old FSFI score both in arterial hypertension and arrhythmias was significantly lower. In this age group, total score of FSFI for women with arterial hypertension reached $22,32 \pm 5,5$, and with arrhythmias $21,8 \pm 8$, when the rest gained respectively $24,8 \pm 7$ and $23,8 \pm 5,5$.

The occurrence of the most common cardiological diseases lowers the average result of FSFI score among the respondents which may result in deterioration of function and sexual activity.

Keywords: cardiovascular risk, heart disease, sexual intercourse, sexual frequency, sexual quality, female sexuality

Sexual activity among women with urinary incontinence

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Sexual functioning is determined by emotional, psychological, hormonal and anatomical factors. When it comes to a urinary incontinence, we relate to all of them. Women are twice as much at risk to develop the disease than men. It is often associated with the decrease of their sexual activity.

The aim of our study was to establish sexual functioning among women with urinary incontinence.

Our study sample was derived from Outpatient Gynaecological Practice in Silesian Area. The survey consisted of 3 parts (35 questions). The first one included socio-demographic characteristics and general medical history. The second part was based on Stamey's scale for effort-caused urinary incontinence. The last one was the Polish version of the Female Sexual Function Index questionnaire. The result <26 points may indicate some dysfunctions in sexual functioning. All data analyses were conducted using StatSoft Statistica 13.

The study covered 519 women (median age=30, IQR 25-38). The mean total score of FSFI was $26,1 \pm 8$ in which 36,5% (n=190) had clinically significant sexual dysfunctions and 63,5% (n=329) had no major disorders. 341 of patients had episodes of urinary incontinence and their total score of FSFI was $25,3 \pm 8,3$. Rest of the group 178 had no urinary incontinence episodes with the total score of FSFI $27,6 \pm 7,3$.

Basing on the results, urinary incontinence is decreasing women's sexual activity satisfaction. This may be due to the low self-esteem, caused by the disease or the general sense of insecurity and discomfort during everyday life.

Keywords: sexual activity, urinary incontinence, FSFI

Influence of physical activity level on quality of sex life

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Physical activity is a one of key element of healthy lifestyle. It is essential in correct action of physiological processes in human body. We decided to check if physical activity impacts on satisfaction of sex life. The aim of our study was to determine if there is any relationship between level of physical activity and sex life satisfaction.

We conducted an online questionnaire among 142 women and 76 men. In the study we used International Physical Activity Questionnaire (IPAQ) to assess a level of physical activity of respondents and Female Sexual Function Index (FSFI) for women and International Index of Erectile Function (IIEF) for men. The study showed that 80 women have insufficient, 30 sufficient, 33 high level of physical activity and 53 men have insufficient, 6 sufficient and 17 high level of physical activity. Among respondent 18,31% of women and 22,64% of men has clinical sexual dysfunction.

To evaluate correlation between physical activity level and satisfaction of sex life we used Pearson's test, also called as chi-squared test. The results showed that physical activity has no impact on sexual satisfaction ($p=0,9655$).

Our research has shown that physical activity in a group of young people has no effect on sexual satisfaction.

Keywords: IPAQ, FSFI, IIEF, physical activity, sexual satisfaction

Sexual dysfunction among obese women – preliminary report

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There are many factors that affect the sexual activity of women. One of them is weight.

The aim of the study was to recognize the sexual dysfunction in obese women and to explore the influence of bariatric surgery on their sexual life. Bariatric surgery includes a variety of procedures performed on people who have obesity. It is achieved e. g. by reducing the size of the stomach with a gastric band.

The group of 48 women over the age 18 with BMI ≥ 25 was examined. The survey contained our original questionnaire and FSFI scale. FSFI- Female Sexual Function Scale is a brief questionnaire measure of sexual functioning in women.

58,3% of women has had bariatric surgery in the past. 33,3% of group claims that they are not attractive to themselves, however 54,2% admits their partners think about them as an attractive women. According to the FSFI scale 33,3% women has sexual disorders. As reported by the subjects 50% of them has no sexual disorders. The most reported dysfunction was difficulty in reaching the orgasm (14,6%). The main reason limiting their sexual activity is the lack of acceptance of their own body (41,7%). What's interesting the smaller group has reported that nothing limits their sexual activity (29,17%).

Only 14,58% respondents noticed positive influence on their sexual life after bariatric surgery.

Keywords: sexuality, obesity, bariatric surgery, FSFI

Could problems in the bedroom come from our intestins? A preliminary study of irritable bowel syndrome and its impact on sexuality

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Female sexuality greatly varies and is affected by many factors. Somatic conditions impact our psychological well being and with chronic disease like irritable bowel syndrome (IBS) the distress over the long period of time could greatly impact mental health and through it the sexual health.

The aim of this study was to determine whether the severity of IBS impacts the sexual functions of women and to take into, consideration other factors as small intestinal bacterial overgrowth (SIBO) comorbidity and duration of IBS.

We've gathered our study sample by posting an on-line questionnaire on various internet support groups and by contacting IBS patients at gastroenterology ward at Clinical University Centre in Katowice. The survey consisted of 3 parts. The first part consisted of socio-demographic questions. The second part included polish translation Female Sexuality Functions Index (FSFI) questionnaire. The third part included questions about the patient condition, drugs and Irritable Bowel Syndrome Severity Score (IBSSS) questionnaire. All data analyses were conducted using StatSoft Statistica 12.5 PL.

123 women were included in the study and filled out the questionnaire . The mean age of participants was 26,7+-7,4. 92.7% had a steady sex partner. The mean IBSSS was 252.6 ±91.4. 29.3% (n=36) patients have severe IBS, 47.1% (n=58) moderate, 23.6% (n=39) mild. The mean FSFI was: 27.1±6.0 for mild IBS, 25.9±6.1 for moderate and 24.3±5.1 for severe.

Comparison of the mean scores of FSFI for different degrees of severity of IBS revealed connection between intensity of IBS symptoms and prevalence of sexual dysfunction.

Keywords: irritable bowel syndrome, FSFI, IBSSS, sexual activity

Fifty Shades of Genitals – the naming of sex organs

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The female and male genitals have specific anatomical terms. However, using them is not natural for the majority of people – this is why many interesting names for these organs have been created over time.

The aim of the study was to analyse naming of the sex organs and masturbation in Polish language. Respondents were asked to list the terms they use to call their genitals and the genitals of the opposite sex.

The research (with a group of 1323 respondents) was carried out using CAWI technique. The mean age of participants was $21,53 \pm 4,866$. For statistical analysis authors used IBM SPSS Statistics.

739 women and 584 men took part in the research. 81,4% declare to be heterosexual. 66,6% respondents have a regular partner, while 74,8% are sexually active. 72,3% of men uses *penis* when referring to their sex organs. The second most popular term is *kutas* – 30,5%. 41,4% use other terms, not associated with genital names in common. Women claim to name men's genitals similarly: *penis* – 76,3%, *kutas* – 39,1% and other – 39,1%. The most popular term women use to call their genitals are: *cipka* – 43,8% and *wagina* – 37,5%. Other names – 26,3%. Men use *cipka* most often – 59,6%. Almost half of them use other terms. The most popular expressions for masturbation in the Polish language are *masturbacja* and *onanizm* – 52,6% among both sexes.

1. Sexually inactive people use professional naming of masturbation more often than sexually active respondents. 2. People who do not have a regular partner are more likely to use anatomical expressions of the genital organs than people in a relationship. 3. Contemporary society uses interesting and creative expressions of genital organs deviating from anatomical names.

Keywords: genitals, sex organs

Where is the source of male pleasure?

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G-spot is the one of the most sensitive erogenous areas of the body. G- spot is located not only on the female body but also men have this sensitive point which is indentified with the prostate.

The aim of study was to knowledge about the G-spot.

The research group were 536 respondents (age 21 and 70) tested by CAWI technique. In method's was used author's questionnaire consisting of 19 closed and 2 open questions addressed respectively to women and men. For statistical analysis authors used IBM SPSS Ststistics.

The average age of respondents was 24 years (standard deviation 7.39), which of 24.1% were men and 75.9 women. 55.6% of surveyed men replied that they pay attention to the stimulation of his G-spot, while 79% pay attention to stimulating this point of their partner. 41.5% of women pay attention to stimulating partner G-spot, 57.6% of women pay attention to stimulating their point G 51.6% of men and 63.5% of women think that they know what G-point. Men as the place of their G- spot suggested 48.7% prostate (prostate gland), 15.4% tip of the penis, 20.5% anus. Women as a place of male occurrence G point were as follows: 53.3% prostate, 28% anus. 20.9% of men achieve orgasm by stimulating the G-spot.

The male G-spot is an neglected and forgotten area by representatives of both sexes. The awareness of men and women should be constantly increased to make society function better in the field of sexology.

Keywords: G-spot, prostate, stimulation, erogenous areas

Men's with ischaemic heart disease expectations regarding interest in their sexual health demonstrated by general practitioners

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Subject matter of sexual health plays an important role in all people's lives. As the sexual problems can be the first symptoms of serious diseases, sexual interview should be collected not only by sexologists. General practitioners, due to their long-term cooperation with the patient, should take care of their patients' intimate issues.

Analysis of men's with ischaemic heart disease expectations regarding interest in their sexual health demonstrated by general practitioners.

The survey was conducted in 2011-2015 in the group of 1618 men, whose average age was 61 years (mean deviation 9.15). Sexual fitness was assessed using the IIEF5 questionnaire.

Erectile dysfunction was observed in 77.70% of patients. Conversations about sexual health conducted by General Practitioners were expected by 307 patients (19.31%). In 2011, it was 15% of patients, in 2012 16.24% of men, in 2013 18.58% of respondents, in 2014 18.58% of patients and in 2015 25.87% of men. The expectation that general practitioners will show interest in sexual health underwent a statistically significant change over five years ($p < 0.05$). Expectation of GP's interest in the sexual health of patients was significantly associated with education ($p < 0.0001$) and the presence of overweight / obesity ($p < 0.0164$).

(1) In the years 2011-2015, the number of men expecting their general practitioners to take up conversation about sexual health significantly increased. (2) The patients' expectation of GP's interest in their sexual health is significantly related to the patients' education as well as the presence of overweight or obesity.

Knowledge & opinion of young adults about the risky sexual behaviors

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Adolescents are group of people starting their adult life and making their first sexual contacts. Therefore, they are expose to risky sexual behaviors and a new trends closely related to much easier access to the Internet.

The aim of the work was to check the level of knowledge and know the opinion about risky sexual behaviours among future alum of high school.

The study group consisted of 82 high school students in Rybnik. In the survey took part 51 women (62,2%) and 31 men (37,8%). Most of surveyed people declared heterosexual orientation (89%), others – was bisexual (8,5%) and homosexual (2,4%). Sexual intercourse started 45,1% of respondents. Authors' questionnaire consisting of 43 questions was used and it was divided into three parts: respondent's particulars, part checking the level of knowledge and the opinion about risky sexual behaviors.

The data show that the knowledge of adolescents about risky sexual behaviors is at a level of C grade (42,7%) and B grade (35,4%). Main source of their knowledge is the Internet and peers. Students opinions say that the Internet, alcohol and psychoactive substances simplify initiating sexual intercourses. Young adults paid attention, that our system needs to be modify, especially WDŻ lessons.

The results suggest there is a need to give more attention to students sexual education due to the low level of young adults knowledge. It is worth to observe current condition of knowledge, because of dynamic technological development and provide them reliable, educated teachers to raise students self-awareness.

Keywords: young adults, sexual life, risky sexual behaviors, cybersexuality, internet

Higher education students life quality (including sexual life) in student dorms

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Students are a special social group that is between youth and adulthood, which is gradually increasing. This group is undergoing through dynamic changes that reveal in the related to quality of life and sexuality area.

The aim of the work was to assess the quality of life, including sexual life of living in the dormitory college students

The study group consisted of 100 students of the Medical University of Silesia in Katowice, who residing in the student dorms. The average age of respondents was 22 years. Overwhelming part of group declared their heterosexuality (92%), 6% declared bisexuality and 2% was homosexual. Most of surveyed students – 63% - declared that they were in an informal relationship. Rest of them are not in a relationship.

Obtained results indicate that only 29% of the respondents declared high level of life satisfaction. Most of them declared average level – 46%, but ¼ find their life quality on low level. Average of sexual satisfaction among respondents was $30,96 \pm 6,2$ points (on a scale from 14 to 40). Average student's age of sexual initiation coincides with the moment of reaching the age of majority. Respondents willingly use the available contraception methods.

Quality of life of students living in dormitory is average, but their sexual satisfaction is at high level. The results analysis allows to get to know and understand better a selected research group. In the future results may contribute to the implementation of activities aimed at increasing the quality of life students living in student houses.

Keywords: life quality, sexual life, students living in student dorms

Female orgasm

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The orgasm is the moment of the most sexual arousal. It is accompanied by a series of physiological reaction of the organism.

The aim of the research is to analyze frequency of incidence and types of orgasm which are experienced by women.

The research included 684 women in different age groups. The method used in the research was a diagnostic survey, and the research tool was the author's questionnaire. Research has been conducted between 28th of February and 08th of March 2019. Data was collected and developed using Microsoft Office Excel.

8,9 % women have never experienced of orgasm during sexual intercourse.

1. There are several ways to get orgasm depending on the stimulating place.

Keywords: women, orgasm

Still in middle ages - Polish students consider homosexuality as a mental disease!

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Homosexuality is a nonpathological variant of human sexual orientation. Silesian Medical School cooperates with Campaign Against Homophobia to promote sexual and gender tolerance. We decided to evaluate what is the contemporary perception of homosexuality among medical students.

The aim of this study was to assess the attitudes of Polish medical students towards male and female homosexuality.

The questionnaire assessed in this study proved to be a valid and reliable tool. The survey was completed by 1641 medical students, including 616 students from the School of Medicine in Katowice.

Medical students still have homophobic prejudices – 8% prefer to examine a heterosexual patient. Horrendous fact is despite studying at medical school, 16% agreed that homosexuality is a mental disorder and 15% that it is a sexual perversion. About 25% of future physicians think there is no need to promote tolerance or change a law. More than 10% think that homosexual people are more likely to sexual abuse of children and 37% that they are more promiscuous than heterosexual ones. Almost every third respondent doesn't think that homosexuality is natural. Homophobic behavior was more prevalent among male students, who come from a village, not from a large city. The attitude like that was also influenced by being prior to sexual initiation, or either not knowing or not having a close relationship with a homosexual person. Strikingly the further stage of education did not significantly affect the answers provided.

Still, there is a high level of homophobia among medical students that endanger their ethic quality as future physicians. Changes in medical training program are critically required.

Keywords: homoscepticism, homoprejudice, homophobia, attitudes



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF STOMATOLOGY- INTERVENTIONAL

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Rehabilitation of patients with neoplastic diseases of the head and neck in Craniomaxillofacial Surgery. Initial reports.

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The neoplastic disease within the head and neck area requires extensive, mutilating procedures, therefore a therapeutic and rehabilitation team was created, which is an innovative project in the field of craniomaxillofacial surgery, physiotherapy, logopaedics and dietetics.

The aim of the study is to create algorithms of rehabilitation proceedings for oncological patients.

25 oncological patients participated in the project. The procedures were carried out once a week. The patient's physical examination was applied – examination form, House-Brackmann score, goniometric measurements, palpation of the head and neck muscles according to Festa method as well as medical history. Ultrasound examinations and thermal imaging camera have been used.

The obtained outcomes of treatment in patients include: reduction of lymphoedema in 100% of patients in the range of 2 to 11 mm in the USG, increased elasticity of postoperative scars in 100% of patients, partial sensory restoration in 84% of patients, in 68% of patients the total sensory restoration was achieved, restoration of facial nerve activity in 2 out of 4 persons, overcoming acute pain in 100% of patients and chronic pain in 93%, increase in mandibular abduction range in 100% of patients, in the range from 5 mm to 46 mm.

Extensive surgical procedures in the facial part of the skull are connected with pain, immobilisation, and are the causes of complications and functional disorders. That is why such an important role is attributed to holistic approach rehabilitation.

Keywords: Trauma, Rehabilitation

Assessment of manual skills of the third, fourth and fifth year students of the dental faculty of the Medical University of Silesia in Katowice

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Conservative dentistry with endodontics, Medical University of Silesia in Katowice

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The work of a dentist is largely composed of the treatment of dental and oral diseases. The accuracy of preparation of the cavity depends on the operator's manual skills, which has a significant impact on the prognosis of maintaining the filling and preservation of tooth tissues and the choice of treatment method. The doctor's speed of work also depends on them.

The aim of the study was to assess the manual skills of students of the 3rd, 4th and 5th year of dentistry. The ability to repeat the ideal outline of class I cavity by Black and speed and accuracy of laying gutta-percha cones.

Each student received a Phantom 36 (Frasaco) tooth, in which they have to prepared the first class cavity preparation acc. Black with the same type of drill and for a limited time. Work of the students has been scanned and compared to the original, according to the especially invented algorithm. The results of this comparison were statistically developed. Then, each student received dental tweezer and a set of gutta-percha cones, in six sizes, ten cones in each size, to sort out them in a suitable box. The time that each student needed for this task was measured and compared to the reference time, which was determined based on the results of experienced doctors. The results of the study were statistically developed.

Statistical analysis of the results of the study showed statistically significant differences in the shape of the cavity done by students of each year (III, IV and V) compared to the standard shape.

The obtained results allow to conclude, that the preparations made by students are not perfect and significantly different from the properly developed cavity. Students also work longer than experienced doctors.

Keywords: manual skills, dentistry

ICON - modern infiltration method of early caries treatment

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These days having beautiful and healthy smile is identified with a success. Conservative dentistry is developing nowadays towards the minimal invasive treatment of the caries while it is on its early stage, trying to remove as little as possible of the tooth own tissues. White demineralisation spots on the surface of the enamel mostly interfere with aesthetics. Caries infiltration is the method of minimal invasive treatment that based on the concept of filling the porosity of the damaged enamel with the resin. The main purpose of this procedure is the prevention of the carious process and improving the aesthetics of the teeth. In this purpose the system ICON is applied. This system is the modern solution that allows fulfilling the expectations of the patients without necessity of the preparation of the teeth tissues.

The aim of our reasearch was the comparison of the ICON system with the working of preparation for enamel remineralisation (MI Paste).

Patients for the examination used to be qualified on the grounds of having similar carious lesions within the enamel (with spots, visual method in the front section). Two materials - DMG Icon system and GC Mi Paste Plus where used in the chosen patients.

Three groups of patients were extracted. The first one, including 2 patients, was a control. The patients of the second one, (2 patients), were treated with the casein phosphopeptide amorphous calcium phosphate (MI Paste). As far as the third group, with the number of 2 patients, is concerned, they were subjected to ICON system. Received results were compared with the control.

ICON system shows high remineralisation efficiency.

Keywords: ICON, enamel remineralisation, minimally invasive dentistry, MID

Influence of surgical suturing on post-extraction alveolar bone healing

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Extraction of teeth is the most common procedure carried out in oral surgery clinics. The main goal is to conduct whole procedure with extra care in order to avoid post-operative complications as well as to ensure fast healing of the socket with minimum to no pain.

The bone healing process following dental extraction can proceed in all possible ways depending on external and internal factors among which are age, sex, medications, chronic systemic diseases, patient's lifestyle as well as factors strictly dependent on operator's abilities, equipment, sterility and applying surgical sutures.

The main goal of this research was to study the influence of suturing on alveolar bone healing after tooth extraction. The study was carried out on 20 patients, aged 21- 83. In 10 cases the sutures were applied as a research sample, the other 10 patients remained without sutures. All cases were photographed before and post extraction, 7th day and after 3 months. An intraoral X-ray was done 7 day post-extraction and after 3 months to compare the bone loss. The alveolar process was measured in two dimensions - longitudinal and transversal with a probe scale after extraction, 7 days and 3 months after.

After 24 hours post extraction all patients were asked questions about the strength of the pain according to Visual Analog Scale (VAS), bleeding and necessity of administering painkillers.

Based on statistic analysis study showed that surgical suturing reduce post operative pain but intensify the process of pos-extraction alveolar bone loss.

Comparison of the impact of rotational speed of the drill on the change of bone temperature during the dental implant preparation

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Bone structure shows sensitivity to temperature changes. It is important to control it during interventions in the bone. Exceeding the temperature limits may lead to tissue necrosis. Numerous types of implantological systems are used, that consist of physiodispensers enabling adjusting the frequency of revolutions per minute. Changes in these parameters determine the local bone temperature.

The aim is to examine the influence of rotational speed change on the increase of surrounding bone temperature during procedure.

The research involved bovine ribs, XO Osseo System physiodispenser and the drills of DASK Dentium Implant System. The temperature change during the preparation with a 3.8mm diameter drill, depth of 8mm was measured with the TM-902C digital thermometer. The torque was 45Ncm for all measurements. Two sensors were placed adjacent to the drill at a depth of 4 mm, at 1mm distance each. The water-cooling was 35ml/min. The frequencies from 400 to 1600rpm were tested and five measurements were carried out for each of them.

The average temperature change measured from the beginning of the drilling until 8mm depth for the respective speeds of 400, 600, 800, 1000, 1200, 1400, 1600rpm was: 0.4375; 0.48; 0.95; 0.91; 1.55; 0.99; 1.43°C.

The lowest average bone temperature increase was observed at 400rpm (0.4375°C) and the value increased until reaching 1.55°C at 1200rpm. From the value of 400 to 1200rpm, having considered the average results, the observed temperature increase was linear.

Keywords: implant, temperature, bone, speed

Bioresorbable plates in cranio-maxillofacial surgery and neurosurgery

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Titanium plates and screws are nowadays routinely used in craniomaxillofacial surgery. However bioresorbable plates and screws have also very high success rate in open reduction and internal fixation.

The aim of the study is to analyze surgical cases treated by means of resorbable plates in maxillofacial surgery unit and neurosurgery unit.

Study comprised of 39 patients treated in Department of Cranio-Maxillofacial Surgery MUW and 22 patients in Department of Pediatric Neurosurgery. All patients were taken up randomly irrespective: age, gender, type of procedure, general condition and complication.

Majority adults patient were male aged 31 to 40 years. In pediatric patients likewise in adult the most common cause of bioresorbable plates application was osteosynthesis of frontal bone fracture. In 8 cases polylactid plates were used in patients suffering from craniosynosthosis . There were no early or late complications among patients treated by means of bioresorbable plates , screws and pins.

The usage of polylactid plates in craniomaxillofacial surgery gives patients some capabilities and benefits. Resorbable materials enable to limit number of surgical procedure to one intervention. The fact deserves attention is that the bioresorbable materials simplify surgery in juvenile patients and in pediatric neurosurgery.



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SESSION OF STOMATOLOGY- NON-INTERVENTIONAL

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Enamel surface evaluation after brackets' debonding

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Tooth surface evaluation after braces debonding is relevant for the orthodontist as well as for the patient. The most beneficial method of debonding proceeds with leaving the adhesive on a tooth surface, thereby the "separation" line runs between bracket's base and the adhesive, and not between the adhesive and the tooth surface. Macroscopic evaluation of teeth is usually used in clinical conditions.

The aim of the study was to evaluate tooth structure in-vitro after braces' debonding using microscope under magnifications.

36 teeth which were free from caries and fillings on the surfaces, where the brackets were placed. The photos of the teeth under magnifications, were taken before the brackets' bonding. Orthodontic braces were bonded with light-curing material, they were put in saline solution and after 24h debonded. ARI, the Adhesive Remnant Index, was evaluated with quantitative scale. The ruptures before bonding and after debonding, as well as ARI were analysed under magnification x10 and x 28.

Statistical calculations proved significant differences between ARI depending on used magnification - between macroscopic and microscopic evaluation. Scoring differences between magnifications : x10 and x28 were not statistically significant. Adverse lesions on enamel surface - new rupture and/or widening or lengthening of the rupture present before bracket's bonding, are present on ⅓ of studied tooth surfaces after debonding.

ARI is a quick method of scoring adhesive remnant, often used to evaluate the adhesion of orthodontic bonding systems. However, further research is needed to elaborate, whether macroscopic method of index scoring is sufficient and clinically useful.

Keywords: debonding, brackets, enamel surface, ARI

How are the future dentists stressed? A survey among dentistry students of various years of studies

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Occasional stress can act as a motivator to accomplish objectives. However, chronic or too intensive stress becomes harmful to the health and has a significant impact on decision-making.

The purpose of the research is to compare the stress level connected with education process and during dental procedures among dentistry students on varied years of School of Medicine with the Division of Dentistry in Zabrze of Medical University of Silesia in Katowice.

Four surveys were used among 3rd, 4th and 5th-year dentistry students. The questionnaire contains: PSS-10, MINI-COPE, and two authorial surveys (the first connected with dental procedures and the second with education process). Students could choose the best method to reduce the stress level.

According to the questionnaire PPS-10, the result is 8 in a standard ten scale, regardless of the year of studies, which indicates high level of perceived stress. The most stressful procedure for students is an endodontic treatment. Among 4th-year students it causes moderate stress and among 5th-year students- mild. Demonstration of a dental procedure by tutor was chosen as the best way of reducing the stress level.

Stress level associated with dental procedures decreases year by year during the course of study, while the severity of general stress maintains on similar level. This stress can be additionally relieved by tutors preparing students to perform dental procedures. The main source of stress during entire studying process are examinations. Chronic, intensive stress exacerbates quality of life and is an important risk factor for many diseases for future dentists.

Keywords: stress, dentistry students, dental procedures, dealing with stress

Dental care knowledge and awareness among secondary school students

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Dental care habits should be developed after a labour. Parents are responsible for starting this process. Older children gather information from different sources. Lack of correct dental care pattern or inadequate source of information can manifest negatively as caries and other dental problems. *Oral health has a significant impact* on general health.

The aim of this study is to evaluate the level of dental care knowledge and awareness among students, as a factor of oral health of them and their potential offspring.

An online questionnaire was prepared. It consisted of 26 questions divided into 2 groups: respondent's particulars and main questions. Questionnaires were shared via the Internet to groups of teenagers aged 16-21. They were students of vocational school, technical institute, high school.

117 questionnaire was received. All of them were included into the analysis. 89,8% of respondents claimed that their parents had had influence on developing dental care habits. Respondents assumed that their dental care knowledge was sufficient (54,2%), satisfactory (26,3%), insufficient (12,7%). The most common sources of dental care knowledge are: the Internet (72%), dentist (64,4%), parents (53,4%). Over 46,6% of respondents have no opinion according to effect of fluorine.

It has been shown that students who reached or will reach the age of majority are interested in developing dental care knowledge. Their knowledge is still unsatisfactory, whereas some of them present high level of knowledge. Particular attention should be paid to education of parents and potential parents.

Keywords: students, secondary school, dental care, pediatric dentistry

Why should not the choice of a mouthwash be accidental ?

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Mouthwashes, used as a supplement to oral hygiene, allow the removal of microorganisms from hard to reach areas of the oral cavity. Each commercial brand of mouthwash has different composition and content of antimicrobial ingredients.

The aim of this *in vitro* study was to evaluate the antimicrobial activity of selected five mouthwashes (Colgate Plax, Listerine Total Care, Prokudent, Melaleuca Tea Tree and Eludril Classic) against the standard strains: *Staphylococcus aureus* ATCC 25923, *Enterococcus faecalis* ATCC 25912, *Streptococcus mutans* ATCC 33535 and *Candida albicans* ATCC 10231. Minimum inhibitory and bactericidal or fungicidal concentrations (MIC and MBC or MFC, respectively) were determined by dilution method using RPMI 1640 medium.

The results of this examinations confirmed the bactericidal and fungicidal activity of each of the tested mouthwashes, persisting even after multiple dilution. The strongest antimicrobial activity against *Staphylococcus aureus* was found in Colgate Plax and Eludril Classic, while for the *Enterococcus faecalis*, *Streptococcus mutans* and *Candida albicans* the strongest antimicrobial activity was demonstrated by Colgate Plax and Prokudent. The diversity of the potential antimicrobial activity of the tested mouthwashes should be taken into account when choosing an appropriate mouthwash for people with healthy oral cavity and patients with specific pathological conditions (infections, inflammation, dental procedures). The our observations also confirm the legitimacy of periodically changing the type of the mouthwash used for daily oral hygiene.

Keywords: mouthwash, antimicrobial activity

Awareness of parents of children classes IV and V on the prevention of oral fluoride

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Fluoride prophylaxis is one of the main elements of the prevention of carious. The efficacy and safety of fluor requires compliance with rules for the use of prophylactic agents. In many countries, limiting the intensity of caries was possible thanks to the introduction of fluor prophylaxis programs in schools. Today a many parents give up fluor prophylaxis of children.

Assessment of the attitude of parents of primary school children towards fluor prophylaxis in oral hygiene. In addition, the parents' position in relation to the frequency of used fluoride in children of home prophylaxis.

The study included 233 parents of children classes IV and V primary schools in Zabrze. An original questionnaire on professional and home fluoride prophylaxis among children, as well as parents' knowledge on the prevention of caries in children.

Most of the children of the parents surveyed take part in fluoridation (87%). Over half of parents believe that fluoride contained in preparations for fluoridation is not harmful. Visits to the dentist, less than every 6 months have 30% of children. Every fifth child brushes teeth less than twice a day, which correlates with the number of extraction of teeth in this group. Parent's knowledge about role and effects of fluoride in the body is very small.

The children who are not subject to fluoridation of teeth are losing teeth more often due to caries. Knowledge about the sources and properties of fluoride among parents is unsatisfactory. There is a need for parents' health education in the field of knowledge about correct fluoride prophylaxis.

Keywords: oral hygiene, fluoride, children



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SESSION OF TRANSPLANTOLOGY

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Influence of tacrolimus and cyclosporine therapy on renal function of patients after lung transplantation

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Lung transplantation is the ultimate method of treatment for certain patients with end-stage lung disease. In the early post-transplant period immunosuppressive therapy should consist of three drugs including the calcineurin inhibitor (CNI) i.g. cyclosporine or tacrolimus, a nucleotide blockings agent e.g. azathioprine or mycophenolate mofetil(MM) and corticosteroids.

The aim of the study was to assess nephrotoxicity during immunosuppressive therapy based on either cyclosporine or tacrolimus among lung transplant recipients.

A retrospective analysis included 58 patients after lung transplantation (70.7% male, 29.3% female), who underwent the lung transplantation in Silesian Center for Heart Diseases (SCCS) between 2008 and 2018. The analysis concerns the first year after transplantation. We compared the results obtained during qualification, as well as 1 month, 3 months, 6 months and 12 months after transplantation. The analysis included parameters: glomerular filtration rate (GFR), creatinine, concentration of inhibitor in the blood. All patients took similar doses of steroid and MM, differing only in doses of tacrolimus or cyclosporine.

Blood level of creatinine increased among patients treated with either cyclosporine or tacrolimus over the 12-month follow-up period. After the initiation of therapy with CNI, an increase in blood creatinine above the upper limit of normal range was noticeable. The GFR was decreasing over the entire observation period of patients.

Both tacrolimus and cyclosporine are indeed nephrotoxic, although there is no statistically significant difference between this property among patients with immunosuppressive therapy based on tacrolimus or cyclosporine.

Keywords: lung transplantation, calcineurin inhibitors, nephrotoxicity

Outcome of Lung transplantation as a treatment of patients with COPD - single center study

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Chronic obstructive pulmonary disease (COPD) is caused by long-term exposure to irritating gases or particulate matter. People with COPD are at increased risk of developing heart disease, lung cancer and other conditions. Lung transplantation is the only treatment for certain patients with end-stage form of this disease.

The aim of the study was to determine whether patients with respiratory failure caused by COPD benefited from lung transplantation. The objective of the study was also to assess patients' pulmonary function after becoming the lung recipients.

A retrospective study was carried out on the group consisting 69 patients (40 recipients, 18 patients currently waiting, 11 patients, who died while waiting for lung graft) diagnosed with end-stage COPD, referred to Silesian Center for Heart Diseases' Lung Transplant Ward and qualified to be treated by means of lung transplantation between 2006 and 2018. Medical records of the patients included spirometry and 6MWT.

Kaplan Meyer estimation presented that the graft recipients noted 50% probability of survival at approximately 5,5 years, whereas patients from the other group had such parameter at about 1,4 years (log-rank test p-value <0,05). One year after procedure the average values of FEV1% are 55,83% for single lung recipients and 79,54% for patients, who underwent double lung transplantation. Mean distance gained in 6MWT was 430,7 meters.

It is statistically significant, that qualified patients who underwent lung transplantation lived longer than those, who did not undergo such procedure. These results encourage further research on larger study group.

Keywords: pulmonology, transplantology, respiratory diseases, COPD

Does relationship exist between immunosuppressive treatment regimen (ITR), histologic appearance of kidney glomeruli, glomerular infiltrative cell composition and kidney graft function

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Kidney transplantation is the best treatment option for patients with end stage kidney disease. Long-term kidney allograft outcome may be determined by cellular type of immune response.

This study aimed to evaluate the relationship between ITR with and without antibodies induction, infiltrative cell composition of glomeruli obtained in protocol biopsies and kidney graft function.

30 adult kidney recipients (M17) of brain death donors with at least two protocol kidney allograft biopsies were enrolled into the study. Patients were divided on three groups: induction with polyclonal (Poly), monoclonal antibodies (Mono) and without induction (None). Numbers of intraglomerular neutrophils (Neut), macrophages (CD68+), and CD4+, CD8+ and CD20+ lymphocytes were counted. Number of HLA-mismatches were assessed. Tacrolimus blood concentration was measured at the day of biopsy.

Patients of Poly group characterized significantly higher number of HLA-mismatches in comparison to None group, 3.86 (3.03-4.69) vs 2.71 (2.29-3.13) respectively, $p=0.01$ and significantly lower number of intraglomerular CD8+ cells in comparison to Mono and None groups, respectively [0.13 (0-0.27), 0.87 (0.2-15.4), 5.45 (4.82-15.7), $p=0.04$ Poly vs Mono, respectively $p=0.002$ Poly vs None]. Significant negative correlation was found between intraglomerular CD4+ lymphocytes, CD68+ cells count and tacrolimus blood concentration, respectively $r=-0.53$; $p=0.01$ and $r=-0.43$; $p=-0.05$.

1. Antibodies induction seem to prevent glomerular infiltration by inflammatory cells in high risk patients. 2. Therapeutic tacrolimus blood concentrations seems to essential to avoid glomerular accumulation of inflammatory cells.

Keywords: Kidney transplantation, immunosuppressive treatment, inflammatory cell composition of glomeruli

Serum creatinine concentration during early post-transplant period may determine kidney function at 1-year after liver transplantation

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Chronic kidney disease is a common complication after liver transplantation (LTx) and in the most cases seems to be associated with nephrotoxicity of calcineurin inhibitors used in immunosuppressive therapy.

The aim of this retrospective, clinical study was to analyze kidney function in perioperative period and its potential relationship to kidney function after 1-year post LTx.

Forty nine liver recipients (15F/34M, mean age at LTx 51 ± 12 years and mean Model of End-Stage Liver Disease (MELD) score at LTx 15.4 ± 4.6) with normal kidney function before LTx, were enrolled into the study. Pathogenesis of liver disease before LTx was: viral hepatitis, autoimmune liver diseases and hepatocellular carcinoma (23,5% for each), alcoholic liver disease (19,6%) and others in 9,8%. Serum creatinine (sCr) concentration and estimated glomerular filtration rate (eGFR) based on the MDRD formula were determined before, 3,7 days and 12 months after LTx.

On the 3rd day after LTx sCr concentration as well as eGFR changed significantly ($p < 0.001$) with the mean percentage change to the value before LTx $35.1 \pm 61.8\%$ and $-17,4\%$ ($-43.5 - 8.5$), respectively. On day 7th, the median value of these parameters returned to the values before LTx but the positive relationship ($p < 0.05$) between sCr concentration on 7th day after LTx and sCr concentration one year after LTx and MELD score ($p < 0.01$) were found.

Transient changes in sCr concentration and eGFR observed during early post-transplant period may be a potential risk factor of worsening kidney function in the future but further observation in the larger group of patients is necessary.

Keywords: liver transplantation, kidney injury, glomerulonephritis filtration rate

Regression of hypersplenism during the first year after liver transplantation

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Hypersplenism, an overactive of enlarged spleen, is a common complication of portal hypertension in liver cirrhosis. It leads to leucopenia and thrombocytopenia. After successful liver transplantation (LTx), the regression of hypersplenism is expected.

Aim of this retrospective, clinical study was to analyze the hypersplenism regression during first year after LTx and its potential relationship to pretransplant factors.

Forty eight liver recipients (33M/15F, mean age at LTx 51 ± 12 years) were enrolled into the study. Pathogenesis of liver disease before LTx was: hepatocellular carcinoma (22.9%) and liver cirrhosis due to: viral hepatitis (20.9%), autoimmune diseases (27.1%), alcohol toxicity (20.8%) and other (8.4%). White blood cells (WBC) and platelet (PLT) count were estimated before and 1,2,3,6,9 and 12 months after LTx. Severity of cirrhosis was estimated using Child-Turcotte-Pugh (CTP) classification and Model of End-Stage Liver Disease (MELD).

Before LTx, leucopenia and thrombocytopenia were found in 31.3% and 91.7% of patients, resp. WBC and PLT count increased significantly ($p < 0.05$, $p < 0.001$, resp.) during the first month after LTx and later they did not change significantly. After one year post LTx, persistent leucopenia and thrombocytopenia were found in 25.0% and 43.7% of patients, resp. No relationship to cirrhosis severity was found.

1. Regression of hypersplenism is not general during the first year after LTx, and the maximum resolution takes place in the first month after LTx. 2. The post-transplant recovery of hypersplenism is not related to severity of cirrhosis and etiology of liver disease.

Keywords: hypersplenism leucopenia thrombocytopenia liver transplantation



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF CASE REPORTS INTERVENTIONAL I

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Delivery and puerperium in a patient with severe idiopathic pulmonary arterial hypertension.

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Idiopathic pulmonary arterial hypertension (IPAH) is a rare disease characterized by elevated pulmonary artery pressure with no apparent cause. Pregnancy in women with IPAH is known to be associated with a high maternal mortality.

A 30-year-old woman diagnosed with IPAH hypertension was admitted to the department of cardiology at 31 weeks of pregnancy due to deteriorated general condition, features of right ventricle failure, tachycardia, tachypnoea, an oxygen desaturation and a respiratory infection. The patient was treated with sildenafil, iloprost and oxygen therapy. No improvement was achieved. Emergency cesarean section was performed due to genital tract bleeding on hospitalisation day 6. At the postpartum period the patient developed hemodynamic destabilisation, low cardiac output syndrome and suprasystemic pulmonary artery pressure despite intensive treatment. Pulmonary artery pressure exceeding the systemic pressure and respiratory and circulatory failure was proceeding. The patient required to begin arteriovenous extracorporeal membrane oxygenation (AV ECMO) on postoperative day 6. ECMO therapy was maintained for 7 days, during this time bleeding occurred to the abdominal cavity, which was managed by laparotomy.

Delivery and puerperium period in patients with IPAH carries high risk of circulatory destabilisation and severe right ventricular failure which associate with high mortality. Such patients require treatment at ICU. Pulmonary hypertension carries significant risk of mortality to mother and child during pregnancy, delivery and puerperium. The choice of therapy and the success of treatment is dictated by experience and cooperation of the team of specialists.

Life was born, life was saved- haemorrhagic shock following childbirth

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Haemorrhagic shock in obstetric surgery presents threat to live of both parturient and un
born child. Timely and adequate management of this emergency is crucial for good
outcome.

The 34 yo delivered a child through natural passages. 2 hours later she developed severe
postpartum haemorrhage. Patient was scheduled for emergency laparotomy, uterus atony
was diagnosed and patient underwent emergency uterectomy and haemostatic packing. On
admission to ICU patient was in hypovolaemic shock (NA 0,8 mcg/kg/min), laboratory
parameters of coagulation showed low PLT, low fibrinogen, prolonged APTT, prolonged PT. In
order to manage hypovolaemia and coagulopathy the following were administered: PRBC,
Cryo, FFP, PLT, PCC, TXA, CaCl₂. Due to acute kidney injury and metabolic acidosis patient
was started on continuous veno-venous HD. On POD 1 sedation was stopped and patient
developed short-lived delirium followed by full consciousness. On post-operative day (POD)
free abdominal fluid was detected, urgent relaparotomy was performed (no source of
bleeding detected, implantation of 5 haemostatic gauzes). Due to persistent coagulopathy
patient was consulted by a haematologist and was diagnosed with DIC. During
hospitalisation in ICU patient received in total 23 units of PRBC, 30 units of Cryo, 22 units of
FFP and 41 units of PLT, 3000 units of PCC.

The presented case showed how important is timely and accurate management of
obstetric bleeding. Although parturient's life was saved, hypoperfusion and massive
transfusion of blood products led to serious complications including delirium, DIC, acute
kidney injury, paralytic ileus, liver dysfunction and prolonged ICU hospitalisation.

Keywords: hypovolemic shock, haemorrhage, maternity, labour

An extraordinary case of a double oncological diagnosis

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Uterine sarcoma is a rare tumor that constitutes about 2% of female reproductive system cancers. Only 0,2% of them are undifferentiated sarcomas. This type of tumors is characterized by adverse outcome. Basaloid squamous cell carcinoma is a cancer that usually affects the supraglottic area and piriform resess. It is rather not associated with female reproductive organs. So far only 6 cases of this cancer localized in cervix have been described.

A 71-year-old female patient was admitted to the Clinic with symptoms of genital prolapse and a coexisting tumor of this area. Since 4 years she has suffered from abnormal bleeding from the genital tract. Due to this, cervical cancer was suspected. The patient's medical history included diabetes mellitus type 2, hypertension, cholecystolithiasis and dementia. The examination revealed a cauliflower-shaped, decaying tumor sized about 20cm, weighing about 2kg emerging from the cervix and excising the uterus outside. Levels of tumor markers were: CA125- 13,36 U/ml and CA19.9- 3,93 U/ml. The patient underwent a removal of tumor followed by transvaginal hysterectomy and vaginoplasty. The histopathological examination revealed undifferentiated sarcoma and G3 basal squamous cell carcinoma.

Histopathological diagnosis of basaloid squamous cell is not complicated. Unfortunately, due to its rare occurrence and lack of knowledge of its biology, it is difficult to estimate prognosis and to plan optimal treatment. This is why it is so important to record each case of this cancer.

Keywords: uterine sarcoma, basaloid squamous cell carcinoma

The case report of 24-year-old patient diagnosed with a uterine rupture during her third pregnancy

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Uterine rupture is a rare peripartum complication associated with a high incidence of fetal and maternal morbidity and mortality. It is defined as a full-thickness separation of the uterine wall and the overlying serosa. Uterine rupture occurs most often in women with uterine scars from previous cesarean deliveries or other uterine surgeries.

We present a case of 24-year-old admitted to the Center of Woman's and Child's Health in Zabrze at 33th week of her third pregnancy. The patient complained of increasing lower abdominal pain. She had a history of two cesarean sections (2014, 2015). Due to incorrect CTG record, suspicion of disintegration of the lower part of the uterus and ablation of the placenta, the patient was categorized for immediate termination of pregnancy by caesarean section. During the procedure an uterine rupture was revealed. The born child was 2310 grams, 49 cm and rated Apgar 10/10.

This condition affects less than 1 percent of pregnant women. A woman's risk of uterine rupture increases with every cesarean section. The signs and symptoms of uterine rupture are typically nonspecific, which makes diagnosis difficult. Delay in definitive therapy causes significant fetal morbidity. Diagnosis is confirmed by laparotomy. This case shows that proper proceeding even in such an serious medical condition as an uterine rupture can lead to successful delivery.

Keywords: uterine rupture, cesarean section, labour, pregnancy, gynecology

Should lung cancer be a contraindication for lung transplantation? A case report

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Chronic obstructive pulmonary disease (COPD) is a lung disease characterized by chronic obstruction of lung airflow that interferes with normal breathing and is not fully reversible. COPD remains the leading indication for lung transplantation, with neoplastic process being simultaneously one of the absolute contraindications.

61 y.o female patient was admitted to the department with intention of performing lung transplantation. The patient suffered from COPD since the age of 51. Unilateral lung transplantation with excision of the left lung was performed. 4 months post transplantation control chest CT with contrast exposed wide opacification in the right lower lobe that later was diagnosed as the squamous cell lung carcinoma (SCLC). Right lower lobectomy was performed and tumour was resected. After 7 month long non-symptomatic period, reoccurrence of pulmonary symptoms was observed. Control chest X Ray revealed presence of unclear area in middle lobe of right lung which was confirmed later as the neoplastic change. Right middle lobectomy was performed. During last hospitalization the patient passed away with disseminated metastatic process being the reason of death. Although she suffered from various diseases, no dyspnea at rest being observed.

Due to transplantation and despite the neoplastic process in opposite lung the patient survived 3 years and 1 month free of dyspnoea. The patients life expectancy did not differ significantly from the average survival of patients with COPD. Therefore, the indications for lung transplantation in COPD patients with first grade lung cancer may be extended, so that they include early stages of SCLC

Keywords: Lung transplantation, Chronic obstructive pulmonary disease, Squamous cell lung carcinoma

Nasal bleeding and impaired nasal patency as the only symptoms of esthesioneuroblastoma

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Esthesioneuroblastoma is a rare nonepithelial neoplasm from the olfactory plate. Its incidence rate is about 1:1000000/year. It accounts for 2-5% of all cancers in the nasal cavity. The tumor in the endoscopic examination resembles a fragile, easily bleeding polyp located in the roof of the nasal cavity. It often gives distant metastases and easily recurs. It can cause difficult breathing through the nose, bleeding, disorder of smell and headaches, increased intracranial pressure or visual impairment. Due to the late, non-characteristic symptoms it is difficult to diagnose and often detected in late stages.

The 53-year old female with nasal bleeding and impaired nasal patency which lasted for three months was admitted to the Department of Otolaryngology and Oncologic Laryngology, Medical University of Lodz. In the endoscopic examination there was a polypoid outgrowth which occupied the entire nasal cavity. The patient was treated surgically by tumor removal and bone milling in the operated sinus. Radiotherapy was used as the treatment of choice. Patient were classified with Kadish clinical staging system

In the literature there are mentioned cases of short survival rate of patients with embryonic neuroblastoma and with lymph nodes of various head and neck regions involved. The authors also suggest that distant metastases are a poor prognostic factor. According to original papers and meta-analysis the most effective method of neuroblastoma treatment is the endoscopic surgery . The role of radiotherapy as an adjuvant treatment is also discussed. Our observations suggest that rapid intervention correlates with patients' survival.

Keywords: esthesioneuroblastoma, nasal bleeding, bleeding polyps

Case report of progressive cerebellopontine angle tumor in pregnant patient as an example of interdisciplinary challenge

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Case report is about female patient diagnosed and interdisciplinary treated with giant cerebello-pontine tumor who also was in her 19th week of pregnancy.

Patient during her 19th week of pregnancy was admitted to the Ophtalmology ER because of progressive visual disorder (lasting for the past few days). MRI was performed which showed giant lesion in cerebellopontine angle suggestive of Schwannoma tumor. During the time patient developed hydrocephalus which obligated neurosurgeons to perform ventriculostomy and then ventricular drainage with cerebral shunt. In 35th week of pregnancy medical team made an decision to perform the cesarean section and continue the mothers treatment. Patient was regularly checked for 4 years after the treatment.

Described case is an rare but good evidence of how cerebellopontine angle lesions in pregnant patients become a problem not only for neurologists and neurosurgeons but also for many other specialists. Interdisciplinary approach to pregnant patient is necessary and allow us to provide good and effective treatment without harming the second life which is the mothers baby.

Resection of cardiac benign tumor in 11-month-old child- Case Report

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Śliwka

The heart is a rare location for cancerous processes, in both benign and malignant tumor types. The incidence of cardiac tumors is slightly higher for children than adults. The right procedure in the case of benign cardiac tumors, which are accompanied by significant cardiovascular symptoms is surgical treatment, is partial or complete tumor resection, and in special cases, heart transplantation.

11-month-old baby was admitted to the Silesian Centre for Heart Diseases for cardiovascular diagnostics. At the age of 9.5 months, due to angio-CT, a big tumor in the left ventricle and left atrium was diagnosed. After the diagnosis, a surgical procedure was performed, during which histopathological specimens were collected. The Pathology report indicated a mesenchymal tumor which may be a cardiac fibroma type. The patient was hematologically consulted. There were no indications for radio- and chemotherapy- the only treatment was surgery. Child was qualified for heart transplantation. Patient was admitted to the Department of Pediatric Cardiac Surgery, Heart Transplantation and Mechanical Circulatory Support in a good general condition. Further diagnostics were performed (echo, MRI and heart angio-CT). It was decided to surgically remove the tumor. After the surgery, the patient was discharged from the operating theatre and transferred to the observation section extubated, with stable cardiorespiratory status. Baby was discharged home in a good general condition.

Modern diagnostic and therapeutic possibilities give the opportunity to make a proper diagnosis and, if necessary, to implement surgery in cases of rare benign cardiac tumors

Keywords: benign cardiac tumor resection

Borderline hypoplastic left heart syndrome management-case study

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Congenital heart defects are the most common type of birth disorder and are the leading cause of the birth defect-related deaths.

A case of presently 2,5 years old boy diagnosed with multiple congenital cardiac defects consisting of type B interrupted aortic arch, ventricular septal defect, valvar and subvalvar aortic stenosis, borderline HLHS. The Cardiac surgery team was faced with the dilemma whether to carry out the reconstruction of aortic arch with Pulmonary artery banding/VSD closing (two ventricle function) versus single ventricle solution using Norwood procedure. In 2016 in extracorporeal circulation with deep hypothermic circulatory arrest, the newborn was submitted to a reconstruction of aortic arch. After three weeks due to circulatory insufficiency as a result of left ventricle heart failure, the boy underwent the modified Damus-Kaye-Stansel procedure with bilateral PAB (one ventricle solution- Norwood procedure with left heart rehabilitation management). Five months later the boy was admitted again to the ward for cardiac catheterization and interventional aortic extension. In 2017 after imaging examinations assessment due to the joint consultation decision- the patient had another surgery to converse the management into two-ventricle circulation model.

Presently, the patient is in a stable condition and he develops correctly (Good LV function in echocardiography with moderate aortic stenosis). The case showed that Borderline HLHS demands very careful management, and despite initial failure if performed properly with rehabilitation maneuvers on LV and circulation conversion from single to two ventricles system can lead us to successful and improved quality of life.

Keywords: Borderline HLHS ; Hypoplastic Left Heart Syndrome ; Norwood

Lack of prevention - does it pay off? Teratoma: a case report

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Teratoma is a tumor, which come out from pluripotent germ cells. It is divided into two types: mature and immature. Mature teratomas are generally benign. This group include dermoid cyst. Immature teratomas contain elements, which resemble embryonic tissue. In group of women under 20 years 10-20% malignant ovarian tumors are associated with immature teratomas.

48-years old women, after 3 years of neglecting gynecological visit, was admitted to hospital due to the detection of tumor in lesser pelvis causing abdominal pains. Laparotomy has been done the following day. It revealed a huge nodule (diameter: 30cm) which filled the whole true pelvis and partly abdominal cavity. It came out from left appendages. Hysterectomy with appendages has been carried out. Intraoperatively, histopathology proved the benign type of the tumor – teratoma adultum. After the procedure, patient in a good general condition, was discharged from the hospital.

Prevention of reproductive system diseases is very important, especially in woman in reproductive age. Unfortunately, it is also often disregarded. Women should do a gynecological examination at least once a year. This case, fortunately, ended up well enough with benign tumor. At the same time it showed us how important is the regularity of visits at gynecologist. Only 3 years of neglecting can lead to huge abnormalities in pelvis, that not always are benign. An early detection of disease increases the chance to cure it.

Keywords: teratoma, laparotomy, hysterectomy

Second-trimester myomectomy as an alternative to termination of pregnancy in a woman with a symptomatic uterine leiomyoma: a case report

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Uterine myomas are one of the most frequent benign tumor in women of fertile age. The rate of spontaneous miscarriage in this group of women increases twice. It can also lead to preterm labour, placenta abruption, malpresentation, labour dystocia and postpartum hemorrhage. More than a half are asymptomatic and can develop for many years without being detected.

30-years old primagravid, in the 17th week of pregnancy, was admitted to hospital due to fetal growth restriction caused by myomas. The next day conservative myomectomy was performed. The patient was informed about the possibility of preterm premature rupture of membranes and spontaneous premature induction of labor, accepting the risks of pregnancy loss, fetal injury and hysterectomy. Three uterine fibroids (25cm,4cm,1cm) were removed. The biggest one was located in the fundus of uterus and reached coastal arches. Patient was in good condition with living fetus. A month after procedure patient was admitted to hospital due to false labour. Psychiatric consultation indicated that she had anxiety and adjustment disorders. Patient delivered the child by caesarean section in the 35th week of pregnancy. The child had an Apgar score of 10. Ultrasound before labour confirmed continuity of front wall of uterus.

Uterine leiomyomas have an adverse influence on pregnancy. Eventual and rare therapeutic option for pregnant women is conservative myomectomy, where fibroids can be removed surgically.

Keywords: Myomectomy, uterine leiomyomas, threatened miscarriage, fibroids

18-years follow-up after first successful heart-lung transplantation in Poland

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Heart-lung transplantation (HLT) is currently the only effective treatment option for the end-stage of the heart and lung diseases. According to International Society for Heart and Lung Transplantation the most common indication for HLT in adult patients is secondary pulmonary hypertension.

Case report is about first successfully executed HLT in Poland. A 54 yo. male patient suffered from myocarditis complicated with subsequent cardiomyopathy and pulmonary embolism in 2001. Further development of irreversible pulmonary hypertension led to cardiac and respiratory failure, which was treated by means of heart-lung transplantation performed in Silesian Center for Heart Diseases the same year. Ten years after surgery, transplanted organs were in a good condition (FEV1 = 76.5%, FVC = 77.4%, LVEF = 54.55%). In 2011, the patient suffered from severe pneumonia. After two-month treatment, he was discharged in a good general condition. Currently, 18 years after HLT, patient is in a good health with satisfactory graft function (FEV1 = 72%, FVC = 74%, 6-minute walk test distance 501,2m with Borg's scale = 3).

Simultaneous heart and lung transplantation was an effective therapeutic method for this patient. The procedure lengthened and improved patient's life.

Keywords: Heart-lung transplantation, cardiomyopathy, myocarditis

Polytrauma patient after a transport accident - case report

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Transport accidents are one of the most common causes of multiple trauma injuries. Polytrauma patients are an interdisciplinary challenge both for the ERs and surgical wards. The aim of the case study was to show the management of a patient with polytrauma injury in WSS5 in Sosnowiec.

40 year old male was admitted to the ER after being transported by the Medical Air Rescue. Examination and imaging shown open wound of the left hip region, crash injury to the left lower leg with a comminuted fracture, lateral condyle fracture of the right tibia and multiple pelvis fractures. The patient was immediately transported to the OR where he undergone hip wound debridement, external fixation of the lower leg fracture, soft tissue reconstruction and external pelvic fixation. Conservative treatment for lateral condyle fracture. Following the surgery patient has been admitted to the ICE following cardiorespiratory failure. Simultaneously wide spectrum antibiotics have been implemented. A month after the initial surgery the patient was admitted to the Orthopaedic ward due to a purulent flux from the hip wound. It was treated with targeted antibiotics, abscess evacuation, surgical debridement, Negative Pressure Wound Therapy. Pelvic stabiliser was removed. The patient has been successfully treated from the lower leg wound, right tibia fracture, hip wound and pelvic fracture. Further treatment in orthopaedic clinic involves bone fusion of the lower leg and limb rehabilitation.

Reported case shows that the treatment of polytrauma patients is a long and difficult process, but the efforts result in the patient regaining physical health.

Keywords: polytrauma, transport accident, crash injury, orthopaedic treatment

Kidney transplantation after resection of renal cell carcinoma in the patient with polycystic kidney disease

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Polycystic kidney degeneration is one of a leading causes of end-stage renal disease. Kidney transplantation, except haemodialysis, is the best method of treatment. The increasing need for organs and the shortage of deceased donors makes it necessary to increase the graft pool. One of the strategies is the use of the organs after ex-vivo partial nephrectomy of small carcinomas.

24-year old male diagnosed with polycystic kidney disease, was qualified to kidney transplantation. During the preparation of the harvested organ on the side table a 6 mm diameter nodular structure localized in the upper edge was resected and sent for histopathology examination. After tight vascular anastomoses end – to-side of kidney artery and vein with external iliac vessels, proper reperfusion of the organ was observed. The histopathology examination of removed tumour revealed the renal cell carcinoma (RCC). After 3 years of follow-up and receiving standard immunosuppression treatment the kidney graft has a normal structure and function with no signs of tumor recurrence.

The presented case demonstrates the safety of the use of organs with intraoperatively found and ex-vivo resected neoplastic tumor like RCC without the negative effect after transplantation. It finally allows to shorten the waiting time for transplantation.

Plasma exchange in acute relapse of neuromyelitis optica: a case report

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Neuromyelitis optica (NMO), also known as Devic's syndrome, is a rare (0.52-4.4 per 100,000) autoimmune disease of the CNS that affects primarily optic nerves and spinal cord leading to blindness and paralysis, separated from multiple sclerosis as clinical entity in 2005 following discovery of anti-aquaporin 4 (AQP4) antibody. High-dose corticosteroids are used as first-line treatment. If ineffective, plasma exchange (PLEX) is used during which patient's own plasma is replaced with donor plasma or human albumin.

A 48-year-old female, diagnosed with NMO spectrum disorder AQP+, incomplete LETM form in 2016, experienced 5th relapse of disease involving rapidly progressing lower limb paresis, sphincter dysfunction and hypoesthesia of the lower limbs and torso up to Th7 dermatome. Previous treatment of relapses with methylprednisolone, IVIG and other immunosuppressive drugs (azathioprine, mycophenolate mophetil, rituximab) was unsuccessful. The patient has already undergone PLEX during 4 previous relapses with favorable clinical response. The patient was admitted to the Department of Anaesthesiology and Intensive Care of University of Silesia Medical Center to perform PLEX. Following insertion of a dialysis central catheter *into a right internal jugular vein, a session of 5 alternate day PLEX procedures was performed (human albumin as substitution fluid, UFH anticoagulation) without complications.*

Plasma exchange should be offered to neuromyelitis optica patients not responding to corticosteroid therapy during acute relapse of the disease. The invasive nature of the procedure and requirement for close monitoring makes intensive care unit an optimal location to carry it out.

Keywords: neuromyelitis optica, plasma exchange, devic syndrome

Radiofrequency catheter ablation as a promising treatment option in patient with hypoplastic left heart syndrome and atrial flutter after Fontan operation – a case report

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The Fontan operation is an optimal surgical method of treatment in patients with a morphologically single ventricle who require staged palliation. Many patients develop atrial tachyarrhythmia that respond poorly to pharmacological treatment. Radiofrequency catheter ablation (RFCA) seems to be an optimal treatment but is a challenge due to limited access to the heart after multiple surgical interventions.

15-year-old male diagnosed as a newborn with a hypoplastic left heart syndrome (HLHS), mitral stenosis and aorta atresia was admitted to Silesian Center for Heart Diseases in Zabrze with recurrent atrial tachycardia (130/min) with wide QRS complex. As a child he underwent Norwood and Rashkind operation followed by balloon angioplasty and Fontan operation. After that, sick sinus syndrome was developed thus epicardiac DDDR pacemaker was implanted.

The patient was hospitalized several times because of atrial arrhythmia. The patient was qualified to the RFCA, because there was no conversion to sinus rhythm. The ablation electrode was inserted through the fenestration into the right atrium (RA). EnSite Cardiac Mapping System was used to create an electro-anatomical model of RA. Atrial flutter (AFI) with reentry activation around the tricuspid valve was diagnosed. The RF applications interrupt the arrhythmia and the conduction block between the tricuspid valve and the scar was obtained. During the follow up the patient remained free of arrhythmia.

Radiofrequency catheter ablation with the use of electro-anatomical mapping system could be effective and feasible treatment of atrial flutter in patients hypoplastic left heart syndrome after Fontan operation.

Keywords: atrial flutter, Fontan operation, radiofrequency catheter ablation, 3D mapping system.

A case of a 4-week old patient with superior vena cava drainage into the left atrium

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Superior vena cava drainage into the left atrium is an extremely rare cardiac anomaly which can occur isolated or be related to other cardiac abnormalities.

We describe a case of a 4-week old patient diagnosed with superior vena cava (SVC) drainage into the left atrium, sinus venosus atrial septal defect (ASD-sv) and partial anomalous pulmonary venous drainage to superior vena cava.

On the Intensive Care Unit the patient showed significantly low blood saturation. An echocardiography was performed, raising suspicion of a SVC drainage into left atrium. Angio-CT confirmed the diagnosis — low saturation occurred due to the inappropriate flow of unoxygenated blood from SVC to the left atrium (right to left shunt). The patient was transmitted from the ICU directly into a cardio-thoracic operating room for an urgent anomaly correction. The idea was to ensure the pulmonary venous flow to the left atrium and routing the flow of superior vena cava into the right atrium using modified Warden procedure. The haemodynamic effect of this procedure was satisfying. In the postoperative treatment the newborn spent 4 days at a post-operating room. Due to improved condition, the patient was transmitted to the paediatric unit on the nineteenth postoperative day to receive further care.

Superior vena cava drainage into the left atrium should be considered as a potential cause of low saturation in newborn children. Early diagnosis of this anomaly allows for a successful cardiac surgery treatment in a neonatal period. This way, physiological flow of VCS to the right atrium can be obtained, which significantly shortens the exposure time of body tissues to hypoxemia.

Coronary arteries anatomy aberration in 14-month old patient with transposition of great arteries, ventricular septal defect and pulmonary stenosis. Nikaidoh procedure

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Coronary arteries anatomy aberration in 14-month old patient with transposition of great arteries, ventricular septal defect and pulmonary stenosis. Nikaidoh procedure.

In literature different types of coronary arteries anatomy in transposition of great arteries were described. Coronary arteries anatomy aberration is contraindication to perform the Nikaidoh procedure, but there are no specific guidelines. The decision about the way of treatment belongs to the surgeon.

14-month old patient with congenital heart disease – d-TGA, VSD, PS - because of increasing desaturation firstly was qualified to Nikaidoh procedure. The second way of treatment was paliative systemic-pulmonary artery shunt procedure, in case of coronary arteries anomaly.

In acces by median sternotomy, with cardio-pulmonary bypass coronary arteries with not typical anatomy was showed. Both coronary arteries arised from right aortic sinus. The left anterior descending artery arised from right coronary artery. Long segment of LAD was prepared and mobilized. Owing to this, the aortic root translocation procedure could have been performed. After that the next steps of Nikaidoh procedure was performed. There were not complications during postoperative time. Patient was discharged 9 days after operation. 6-months follow-up did not show features of ischemia or arrythmias. The patient is developing well without cardiovascular symptoms.

In this type of coronary arteries anatomy, Nikaidoh procedure can be safely performed with modification consisting of preparation and mobilization long segment of LAD.

Keywords: Transposition of great arteries, coronary arteries aberration, coronary arteries anomaly, Nikaidoh operation

Reversible cause of cardiac arrest – arrested hypothermic victim

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Accidental hypothermia, defined as a core temperature below 35°C, is one of the reversible causes of cardiac arrest. Patients in hypothermic arrest often need prolonged CPR. The management of accidental hypothermia has made substantial progress over the last two decades and hypothermic cardiac arrest patients who often did not survive with traditional rewarming methods are now treated with extracorporeal membrane oxygenation (ECMO).

A 59-year-old male was found on the street and was transported to hospital by Polish Medical Air Rescue in a state of deep hypothermia. His core temperature measured in oesophagus was 22°C. Medical emergency team diagnosed asystolic cardiac arrest and started chest compressions with the use of LUCAS device. At the moment of admission to the Intensive Care Unit cardiac arrest and ventricular fibrillation were observed, the patient was intubated and mechanically ventilated ($\text{FiO}_2 = 1,0$). He was qualified to ECMO VA due to life-threatening condition. Cardiac activity was restored and the core temperature was raised. After a one-month stay in intensive care unit, the patient was transferred to the Department of Rheumatology in a good general condition.

ECMO has changed the survivability ratio in victims of accidental hypothermia and is the treatment of choice in the hypothermic patients with unstable circulation or cardiac arrest. Such patients should be transferred directly to an ECMO-centre, while receiving continuous cardiopulmonary resuscitation during transport.

Keywords: hypothermia, cardiac arrest, ECMO

Thoracic Endovascular Aortic Repair (TEVAR) for aneurysm of aortic arch using debranching vascular technique

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We distinguish two main methods of thoracic aortic aneurysm treatment: classic surgical procedure and endovascular technique. When the pathology includes the descending aorta, TEVAR is the method of choice. However, Aortic Arch aneurysm are more complex matter, which may require hybrid debranching procedures to be dealt with.

80 year old male brought in to the emergency department due to balance disorders, weakness and pain in the left side of the chest. After neurological consultation, he was transferred to the Department of Neurology with suspected ischemic stroke. RTG and contrast-enhanced CT images has revealed rupture in the inferior wall of aortic arch aneurysm at the level of left subclavian artery (LSA) arise. The patient was transferred to the Vascular Surgery Department. Emergency stent-graft implantation was performed, deploying the proximal end in the landing zone 1 with LSA and Left Common Carotid Artery coverage. Due to endoleak LSA was ligated. To maintain blood distribution to left common carotid artery a carotid-carotid crossover bypass with a prosthetic graft was performed.

Conclusions:

1. While qualifying patient for an operation, the risk of cerebral stroke and spinal cord ischemia should be taken into consideration.
2. Endovascular techniques provides higher chances of survival and shorter convalescence time for elderly patients with additional impairments.
3. Custom made stent-graft could be an alternative but the 3 week preparation waiting period excludes it usage in emergency situations.

Keywords: aortic arch aneurysms; aortic arch; arch debranching; debranching; hybrid aortic arch repair; thoracic endovascular aortic repair

The Katowice Chainsaw Massacre

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Bile duct operations are considered as having a high risk of the compromised outcome. Patient's clinical condition is among the factors that substantially increase the perioperative risk and worsen the overall prognosis.

A 43-year-old patient injured in a workplace accident, during which a detached circular saw tooth pierced the area near the right rib arch. The CT scan revealed the damage to abdominal organs, including perforation of the duodenum and the bile duct, and the saw's tooth located in the left femoral vein. The patient was admitted to the ICU with sepsis due to peritonitis and scheduled for an urgent surgery. Laparotomy was performed and the perforations were protected. On post-procedural day '2' due to visceral wound dehiscence the patient required re-laparotomy. Due to the extent of injuries and the progression of abdominal necrosis, the patient was transferred to a tertiary university hospital in Katowice.

After subsequent ICU admission, despite implemented treatment, the patient developed septic shock (Shock Index 2.8) and required emergency 2nd re-laparotomy. The purulent bile content was evacuated from the peritoneal cavity and the torn inferior vena cava was sutured. Later 3rd re-laparotomy was required and the open-abdomen management was initiated. After 35 days of ICU stay, the patient was transferred to the surgery department: conscious, hemodynamically stable, but requiring large doses of opioid analgesia.

Treatment of sepsis due to perforation of abdominal organs has high burden of failure. Early interdisciplinary cooperation between the anesthesiologist and the surgeon is crucial to implement the effective management.

Keywords: bile duct operations, emergency surgery, septic shock, ICU treatment

Kidney autotransplantation as a method of treatment of total iatrogenic ureteral injury - a case study

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Iatrogenic ureteral injuries account for about 75% of all ureteral injuries and occur mainly during urological, gynecological, general and vascular surgery procedures.

Complex injuries of the upper ureter with a significant loss of length are difficult to treat. Traditional options include: nephrectomy, an intestinal patch or auto transplantation. We present a case of a 42-year-old female patient with iatrogenic total left ureteral avulsion as a result of endoscopic treatment of ureterolithiasis, in which the left kidney autograft was successfully performed.

Kidney auto transplantation is the optimal form of treatment used in the case of total damage to the ureter, because it allows to maintain the normal function of the body and the most physiological urinary outflow.



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF CASE REPORTS INTERVENTIONAL II

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The problem of chronic torticollis due to missed atlanto-axial rotatory subluxation (AARS) - case report

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Atlanto-axial rotatory subluxation (AARS) is a rare pediatric spine injury that may present as torticollis. Symptoms range from painful neck muscle spasm to fixed dislocation with serious complications as vertebrobasilar insufficiency or spinal cord compression. Diagnosis is aided by X-ray or CT scan. Treatments of chronic condition include observation, the use of cervical collar and analgesics, halter or skeletal traction, and posterior fusion of C1-C2.

This is a retrospective description of diagnosis and treatment of chronic torticollis due to AARS and its early results in 5-year-old male patient. Prior to referral to orthopedic outpatient clinic patient was treated conservatively for torticollis ineffectively for 6 months. In the outpatient clinic CT was ordered and revealed AARS. Intraoperative reduction followed by open stabilization with transpedicular screws and rod from posterior approach was planned. Only partial reduction was obtained by gentle traction and manipulation. Thus, technique of relative stability with wires and bone grafts, supported by stiff collar was implemented. During the follow-up visit in 3 weeks time, the partial restoration of atlanto-axial relation was confirmed but the torticollis resolved. The patient remains neurologically intact and has radiographic documentation of fusion.

Clinical suspicion is crucial in diagnosis of acute and chronic AARS. CT scan is helpful in confirming diagnosis of AARS. Technique of stabilization with bone grafts and wiring might be alternative to transpedicular screws and rod in a specific condition.

Keywords: spine injury rotatory subluxation

Multiple independent malignant tumors in young patient - case report

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Concomitance of neoplasms or predisposition to its forming has been known as a result of certain gene mutations such as FAP or Li-Fraumeni Syndrome but a similar clinical picture can be observed without such mutations.

Case report: 25-year-old female was admitted to our hospital for a surgical treatment of colon polyposis. Formerly the patient received surgical treatment and chemotherapy due to an ovarian cancer. The patient was regularly examined in a gastroenterology clinic for a few years with endoscopic findings showing signs of gastritis, duodenitis and numerous polyps in colon. The histopathology examinations of polyp samples from the right part of the colon showed signs of high grade dysplasia. Nonetheless, the patient refused pancolectomy. After the admission a colonoscopy was performed that has revealed numerous polyps of the right part of the colon varying in size, one large polyp in sigmoid and two smaller polyps in the rectum. Sigmoid polyp and both rectal polyps were endoscopically removed. During the operation a large tumor of the horizontal part of duodenum was found. Extended right hemicolectomy was performed with an excision of the retroperitoneal part of duodenum. The histopathology examination described duodenal tumor as adenocarcinoma G3 and colonic polyp as adenocarcinoma mucinosum with high grade dysplasia. Genetic tests excluded mutations characteristic of FAP and Li-Fraumeni syndrome and mutations of genes BRCA1/BRCA2.

Conclusions: The knowledge regarding pathogenesis of neoplasms is still incomplete and the concomitance of malignant tumors in this patient could be a result of gene mutations that are unknown to us yet.

Keywords: Multiple malignant tumors, polyposis, gene mutation

Intrabronchial valves implantation in single-lung transplant patient as a method of chronic obstructive pulmonary disease treatment

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Single lung transplantation for emphysema is associated with many complications. One of them is hyperinflation of the native lung. This condition may lead to compression of the graft and respiratory failure. Intrabronchial valves (IBV) have been used to block airflow in the specific parts of the native lung, reducing the native lung volume and relieving the graft.

Our case report describes a 47 y.o female patient with chronic obstructive pulmonary disease (COPD) caused by alfa1-antitrypsin deficiency. Patient was qualified for lung transplantation (LT) in Silesian Center for Heart Diseases. In 2016, matching donor was reported. Patient was urgently admitted to the hospital due to end-stage respiratory failure. 5 months before the procedure the function of the lungs was assessed by a 6 minute walk test (6MWT) and spirometry in forced expiratory volume in 1 second (Fev-1). The results was 113,5m and 20%, respectively. In January 2016, a left (single) lung transplant was performed. At the same time IBV were implanted to each segmental bronchus (3 valves in size 5; 5 valves in size 6; 5 valves in size 7) to prevent the expansion of native lung. One year after transplantation, patient obtained 426,6m in 6MWT and 44% of predicted Fev-1 during spirometry.

IBV implantation provide that the transplanted lung to be the major contributor to the post-transplant lung function. The functionality of the native lung is very limited. Although there was a reduction in volume we are able to show a significant improvement in pulmonary function tests values. According to the patient's statement, the quality of life has improved significantly.

Keywords: COPD, single lung transplantation, intrabronchial valves, emphysema

Challenges in the management of partial hydatidiform mole with coexistent fetus in the second trimester of pregnancy

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Partial hydatidiform mole (PHM) is a rare type of gestational trophoblastic disease with a potential for malignant transformation. Common features include vaginal bleeding, pelvic pain, inadequate enlargement of uterus and hyperemesis gravidarum. Secondary hyperthyroidism also may occur. Sporadically, PHM might be present with a coexistent viable fetus (PHMCF).

We herein report a rare case of PHMCF in a 31-year-old woman who was admitted during 2nd trimester (gravida III) due to hyperemesis gravidarum and hyperthyroidism. Diagnostic tests revealed high level of β -HCG, increased fT4 and reduced TSH. Ultrasound showed developed fetus, uterine cavity partially filled with thickened chorion and ovarian transformation into thecalutein cysts. The whole clinical picture corresponded to the partial hydatidiform mole. The patient underwent medical termination of pregnancy followed by uterine curettage. Microscopic examination of the placenta revealed features pathognomonic for the PHM. Due to secondary hyperthyroidism, treatment with methimazole was prescribed. The patient was discharged in a good general condition. After 5 months β -HCG level dropped and thyroid function normalized.

Deciding on correct management of PHMCF is a dilemma. Due to high risk of complications, pregnancy termination is usually suggested. Unfortunately, chemotherapy is often required after medical termination of molar pregnancies. The study of unusual uncomplicated course after medical termination followed by uterine curettage shows that this method might be a safe option for patients with PHMCF in the 2nd trimester wishing to terminate the pregnancy and have a chance for subsequent conception.

Keywords: [Kliknij tutaj](#), aby wprowadzić tekst.

Diagnostic difficulties with lymphoma - case report

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Tumors deriving from B cells are the most aggressive type of lymphomas in adults. Their various clinical and morphological character is an important diagnostic problem.

70-year-old patient was admitted to the hospital for splenectomy. Nine months earlier abdominal ultrasound revealed tumors of the spleen. The diagnosis was confirmed by a CT scan of the abdomen. A cytometry was made to confirm suspected lymphoma, but the test did not reveal any lymphoma (B) and (T) cell lymphocytes. The bone marrow biopsy also did not confirm lymphoma. Laboratory tests of the patient showed elevated values of inflammatory parameters. PET/CT scans revealed two areas of intense uptake of marker in the spleen with an ambiguous character - infectious or cancerous. PET/CT scans also noted the area of increased marker collection in the form of oblong lesion coming from the anal canal into the adipose tissue of the right buttock. After extending diagnosis by MRI of pelvis and transrectal ultrasonography, the presence of a perirectal fistula without visible external opening in the skin was confirmed. Due to the lack of clinical signs of fistula and enlarging tumors of the spleen, patient was qualified for splenectomy. Patient underwent splenectomy and excision of the infiltrated part of the greater curvature of the stomach. Intraoperative histopathology identified samples as high grade Non-Hodgkin B-cells lymphoma.

Properly performed diagnostic process towards the detection of lymphoma of the spleen does not always allow to confirm the diagnosis. Sometimes splenectomy is required.

Keywords: Lymphoma, Spleen tumour, Diagnostics

Solid pseudopapillary neoplasm (SPN) - young woman with large, unusual pancreatic lesion - case report

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Solid pseudopapillary neoplasm (SPN) belongs to one of the most rarely diagnosed solid pancreatic lesions. It was first described in 1959 by VK. Frantz. It usually affects young women, rarely children. Though it's low malignant potential and a relatively favorable prognosis, the diagnosis of SPN is often challenging.

Here, we present the case of a 23-year-old woman complaining of abdominal pain, in whom CT revealed a vast pancreatic tail lesion measuring 90x85 mm. The patient presented mild normocytic anemia. Neoplastic markers were not increased. Radiological features suggested pancreatic neuroendocrine tumor in the first place with a possibility of solid pancreatic neoplasm. Due to unclear results of CT scan she was qualified for endoscopic ultrasound (EUS) examination with a biopsy. Morphological and immunohistochemical features corresponded to the SPN. The patient was qualified for a tumor resection. A distal pancreatectomy and splenectomy were performed. After 10 days of pharmacological treatment the patient was discharged in a good general condition.

Complete tumor resection is the recommended method of treatment, and the use of EUS with a biopsy allows making a diagnosis in uncertain cases.

Keywords: Pancreatic neoplasms, Pancreas, Solid pseudopapillary neoplasm, Endoscopic ultrasound

A rare case of hemangioma of the nasal vestibule- case study

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Hemangiomas are benign lesions originating in the vascular tissues of skin, mucosa, muscles, glands and bones. Furthermore these tumors are frequently found in the head and neck region, with the nasal cavity being a rare site of involvement. Basing on the size of the dominant vessel in the microscopic examination, we differentiate two types: capillary and cavernous. One-side nasal obstruction and epistaxis are the most common manifests, while the most frequent causes are hormonal and traumatic.

Use of digital subtraction angiography (DSA) and endovascular embolization procedure is a modern approach in treating patients with arteriovenous malformations.

In the present case report, we describe a 49 y.o. male patient with recurrent episodes of epistaxis, one-side nasal obstruction and foreign body sensation in the right nasal cavity, without hormonal imbalance nor trauma in the history. After a CT scan of paranasal sinuses and an endoscopy examination had revealed a mass in the nasal vestibule, the patient was qualified for the surgical procedure. Before the resection, the operator punctured the lesion and aspirated blood. As a result, the surgical treatment was cancelled.

The diagnosis was based on DSA of the carotid artery which defined the lesion as a hemangioma with the dominance of arterial supply. The endovascular embolization was performed. After the procedure, the endonasal mass was observed to regress.

Patient remains under laryngological supervision.

Endovascular embolization is a safe and minimally-invasive method which was successfully used in this particular case of hemangioma.

Keywords: hemangioma, endovascular embolization, epistaxis

A large biliary cyst of Todani I type in a young woman: a case report

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Biliary cysts (BC) are dilatations of different parts of a biliary tract which occur very rarely (1% of all benign biliary diseases). BC is found the most frequently in pediatric patients however in approximately 20% of cases they are recognized in adults. Biliary tract malignancy occurs in 2.5% - 28% of patients with BC. Cholangiocarcinoma is the most common (10-30%), serious and dangerous BC complication.

21 year old female was admitted to Department of Gastrointestinal Surgery in Katowice in order to undergo the complete cyst excision with cholecystectomy followed by biliary reconstruction using a Roux-en-Y hepaticojejunostomy. During ERCP it was found that the patient had significant anatomical abnormalities. During the following surgery the gallbladder was removed. A cyst of the common bile duct was dissected. Todani I type of cyst was recognized intraoperatively. After cutting the cyst, 2 channels were revealed in the canal, which were revised by catheters; 1. leading to the long, tortuous distal common bile duct, 2. leading to the pancreatic duct. Due to the long winding course of the distal common bile duct and the possibility of its communication with the additional bile duct before opening to the duodenum, the common bile duct and the pancreatic duct was implanted into the duodenum. The bile and pancreatic ducts were catheterized with catheters which were taken out to the duodenum. The common hepatic duct was connected using a Roux-en-Y hepaticojejunostomy. After 52 days internal catheters were removed during ECPW.

Due to the age of the patient and their anatomical abnormalities this particular case was extremely rare and challenging for surgeons.

Keywords: large biliary cyst, young woman, abnormalities

Mixed tumor in atypical localization

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Tumor mixtus is the most common salivary gland tumor, its typical site of occurrence is large salivary glands. We present a very rare case of tumor mixtus found on the back of the palate.

A 36-year-old-man was admitted to the clinic due to a tumor of the right palate on the right side. In the interview, the patient does not report any symptoms. In the physical examination on the hard palate on the right side, a cohesive, elastic tumor measuring approximately 3x2 cm was observed, covered with unchanged mucosa. An enlarged, single neck lymph node in group II, on the right side was also detected.

A *Fine-needle aspiration* biopsy (FNA) was performed on the nodular lesion of hard palate. The smear responds to Tumor mixtus. Then a fine needle aspiration biopsy (FNA) of the lymph node was performed in the II neck group on the right side, which showed no neoplastic changes. The patient was qualified to surgical tumor excision under general tracheal anesthesia.

A 3x2 cm tumor was enucleated and sent for histopathological examination. The microscopic picture corresponded to the multiform adenoma.

The tumor mixtus, located on the hard palate, occurs sporadically. At first, the tumor may not show any symptoms other than the discomfort of the patient. Diagnosis is based on the result of FNA and further histopathological diagnosis. The optimal treatment method is surgical resection under general anesthesia. This cancer has a good prognosis, however, because of the risk of relapse, it is necessary to subject the patient to regular, periodic check-ups.

Keywords: mixed tumor surgical excision laryngology

59 years old man with foreign body in intermediate bronchi - a surprising finding

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Aspiration of a foreign body into the airways may be a life-threatening condition in a direct way or be a cause of serious complications leading to impaired lung function. It is most often related to children, while cases are also observed in adults.

The 59-year-old man came to the hospital due to dyspnea and a productive cough. The X-ray revealed presence of a foreign body in the intermediate bronchi and atelectasis. In pulmonary angio - CT, pulmonary embolism was excluded. The patient was referred from the Department of Internal Diseases to the Chair and Clinic of Thoracic Surgery of the Medical University of Silesia to remove the foreign body. During the interview, the patient reported that he had eaten plums three weeks earlier. A rigid bronchoscopy was performed during which the plum pits (size 22x14 mm) were removed from the intermediate bronchi and the purulent secretion was sucked away. No pathology was found in the left lung. The day after the procedure, the patient felt good. He only reported a productive cough. Antibiotic therapy and mucolytic syrup were used. The patient was discharged from the hospital in good general condition the next day with the recommendation of control in the clinic.

1.Foreign bodies must be removed from the respiratory tract as soon as possible after aspiration.2. Removal of foreign bodies of larger and / or irregular sizes from the bronchial tree requires the use of a rigid bronchoscope. 3. In order to avoid infectious complications related to the aspiration of a foreign body to the airways, after its removal, it is advisable to use a broad spectrum antibiotic and drugs to facilitate the expectoration of bronchial secretions

Inflammatory cyst of thyroid gland - case report

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Thyroid nodules may be of solid tissue or fluid-filled. Most are benign. A reliable indicator of malignancy is the morphology, but not size and number of nodules. Surgery on benign lesions is performed for aesthetic indications or in occurrence of compression of adjacent organs.

A male aged 29, admitted to A&E due to syncope and a head contusion. The patient reported pain and oedema in the neck region, throat and headache lasting for 2 days. In CT: in the right-hand side, in the inferior part of neck blood vessels compartment, the occurrence of a distinct oval structure. A palpable hard, painful lesion on the neck, shifting with the gland while swallowing. In USG: an enlargement of the thyroid right lobe, showing the features of a hyperechogenic, growing, thick-walled, oval, smoothly separated inflammatory complex cyst. No deviations in the hormone levels; CRP 59.7 mg/l. The patient diagnosed with acute inflammation of the right lobe of thyroid gland. The conservative treatment administered caused the recession and improved local condition. After a month, the patient complained of dysphagia and dyspnea. In another USG: a complex cyst in the right thyroid lobe. Total extirpation of the right lobe of thyroid gland was performed. From histopathology examination: a flaccid, smooth-walled cyst filled with brown, thick matter. In the US-FNAB: loose colloid, blood, Bethesda Group 1.

Atypical location of the cyst: the inferior neck level, supraclavicular region. US-FNAB is not routinely performed in case of benign lesions, but ordered here, given the quick growth, inflammation and the symptoms reported. It enabled the occurrence of abscess and neoplasia to be eliminated.

Keywords: inflammatory cyst of thyroid gland, inflammation of right lobe of thyroid gland

Chronic recurrent intussusception of small intestine – the source of psychiatric disorder; case report

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Intussusception in adults represents only 5% of all cases. It occurs when a proximal segment of the bowel invaginates into the lumen of the adjacent distal segment. It is usually caused by a bowel lesion.

This case concerns a 50-year old female, who had an 8-year history of depression with somatic symptoms of chronic abdominal pain. Within this long history she had been suspected of having depression correlated with somatic abdominal pain. Numerous MRI, CT scans, USG and endoscopies had been performed. Few of them reveal minor intussusception, but they were not confirmed in the follow-up scans. Somatic background of abdominal pain had been excluded and the psychiatric treatment was initiated. Few years later she was admitted to the surgery department with symptoms of obstructive ileus. She was a subject to a laparotomy, that revealed a chronic intussusception of 200cm of ileum and jejunum. Due to parietal necrosis the bowel was resected. Proximally of the intussusception was found and resected a 35x30mm intestinal tumor, histopathology revealed the tumor to be lipoma. The patient was left with 180cm of small intestine. The outcome was successful no further chronic abdominal pain was presented by the patient.

The diagnosis of intussusception is often difficult because of the lack of specific clinical signs and of the problems in examining the small intestine. In this occurrence an lipoma was the provider of chronic intussusceptions which over long period of time caused additionally an psychiatric disorder.

Keywords: intussusception, lipoma, depression

Large nontoxic nodular goitre- case report

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Non-toxic nodular goiter is a common thyroid pathology in developed countries. In the euthyroid state, the first symptom of the disease may be an increased circumference and asymmetry of the neck, and as a consequence, breathing problems may arise due to compression of the trachea.

A 53-year-old patient was admitted to the hospital due to the increasing symptoms of dyspnea. The diagnosis of nodular nontoxic goitre was made several years ago. Due to coexisting diseases - obesity (BMI - 62), sick sinus syndrome, atrioventricular block, type 2 diabetes, hypercholesterolemia - the patient was disqualified several times from the thyroidectomy. After performing the necessary tests, significant weight reduction, pacemaker implantation, he was qualified for surgery. Thyroid function analysis showed euthyreosis. A pre-operative CT scan of the neck revealed a giant 120-mm goitre that critically restricted the tracheal light to 5 mm. After the necessary preparation and consultation of the internist and anesthesiologist, the patient underwent surgery to completely remove the thyroid gland. The postoperative course was uncomplicated. No disturbances were observed: phonation, wound healing or calcium-phosphate metabolism. He was discharged home on the third day after surgery.

In the European population, where iodine supplementation is routinely carried out, a goitre this size is a relatively rare thyroid pathology. Before the surgery, patients with a large goitre will require in-depth analysis, alignment of co-morbid disorders and pre-operative preparation. Due to the risk of perioperative complications, large goitre should be treated in the centre of third reference .

Keywords: thyroid, goitre, nontoxic, thyroidectomy

Diagnostic problems of retroperitoneal cysts, illustrated by example of a 55-year-old male patient

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Adrenal cysts are rarely occurring masses with less than 500 cases reported in the literature. Usually asymptomatic, less than 10 cm in diameter and found accidentally. Diagnosis is often established during surgery due to inability of imaging studies to definitely confirm the origin of the cyst.

We present a case of 55 years old male patient with large, asymptomatic cyst in the left retroperitoneal space. The patient was admitted to Clinical Ward of General and Bariatric Surgery in Zabrze in January 2019 for a planned surgery. The cyst was incidentally discovered in a Full Body CT Scan performed in the diagnostic process of Small Lymphocytic Lymphoma. The study revealed a 18x14x17cm, thin-walled cyst of an uncertain origin, which was modeling surrounding organs including left kidney, spleen and pancreatic tail. During the laparotomy the cyst sized 20x25 cm as well as the left adrenal gland were excised. Following histopathological findings confirmed adrenal cyst.

Presented case shows, that in case of difficult to classificate retroperitoneal tumours, surgical intervention can be both diagnostic and therapeutic.

Keywords: adrenal cyst, retroperitoneal space

The implantation of a leadless pacemaker in a patient after the Senning procedure- a case report

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Transposition of great arteries (TGA) is a congenital defect in the large arteries of the heart – aorta arises from the right ventricle whereas the pulmonary artery from the left ventricle. Senning procedure i.e. an atrial switch heart operation is the treatment of the choice for patients with TGA. Once the technical aspect of the procedure is accomplished, there is a risk of developing sick sinus syndrome and the need for pacemaker implantation.

A 33-year old patient after Senning correction of TGA with paroxysmal atrial fibrillation and atrial flutter was admitted to Silesian Center for Heart Diseases in Zabrze because of 9 sek. pauses in ambulatory Holter ECG followed by syncope. The patient was qualified for leadless pacemaker implantation by the Heart Team.

The implantation of the leadless pacemaker the Micra™ Transcatheter Pacing System (Micra TPS, Medtronic, Minneapolis, MN, USA) was performed with the access through the left femoral artery thus the pacemaker was able to be fixed into the septal postero-lateral wall in apical segment of the left chamber. Implantation procedure underwent without any complications. During the follow up there was no adverse event or recurrence of either pre- or syncope with the proper function of the device.

An implantation of a leadless pacemaker could be effective and feasible treatment of patients with TGA and sick sinus syndrome after Senning procedure. Nevertheless this new technology still requires observation and more experience.

Keywords: transposition of great arteries, Senning operation, leadless pacemaker, Micra, sick sinus syndrome

Y-Type urethral duplication. Case report of a patient with multiple congenital abnormalities

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Urethral duplications were described and classified by Effman et al. in 1976. Type IIA2 duplication is very uncommon anomaly in which, urethra is duplicated below the neck of the bladder, the ectopic urethra protrudes to the lumen of the rectum. In most cases, the ectopic urethra is the functional one, while orthotopic urethra is stenotic and undeveloped. There are about 200 cases of IIA2 duplication reported in the literature. Although numerous methods of surgical repair have been described, mobilization from the rectum into the perineum is associated with the lowest risk of failure and usually is a one-step procedure. A male infant, born prematurely at 34th week of gestational age, presented with asphyxia and was referred to neonatal care unit. He was diagnosed with esophageal atresia and cardiac abnormalities. Prior to first procedure of esophageal repair, urethral catheterization was not successful thus bladder puncture and urethrography was performed. Imaging study revealed leakage into the canal of the rectum. Initially, iatrogenic injury of the urethra was suspected. Further studies revealed the presence of stenotic penile urethra and functional ectopic branch communicating with the rectum. Penile ultrasound revealed underdevelopment of cavernous and spongy bodies. No anomalies of upper urinary tract were detected.

After management of esophageal atresia, patient was discharged home upon reaching 2 months. Surgical correction of ectopic urethra by translocation onto perineal area is planned.

Identification of functional urethra is essential in IIA2 type duplication. Various approaches of surgical treatment of y-type duplication were described. As the patient is qualified not only for urological but also cardiac and thoracic procedures, the treatment of ectopic urethra should be performed in one step and must carry the lowest risk of failure and complications. Therefore, rectal to perineal correction of ectopic urethra was chosen for this patient.

Keywords: pediatric urology urethral duplication IIA2

Difficulties in diagnosis and treatment of gallbladder cancer illustrated by example of 75-year-old patient

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Gallbladder adenocarcinoma is a rare type of cancer with a very poor prognosis, which is often asymptomatic during the early stages or the symptoms do not differ from a far more common gallstone cholecystitis. Both diseases are extremely difficult to differentiate, even with usage of modern imaging technics. Surgical treatment of the cancer on its early stage is the only known method for a complete recovery of the patient.

75-year-old woman with cholelithiasis, after unsuccessful pharmacological treatment, was admitted to a surgical department and treated for cholecystitis. After a few days the patient started to have melaena. The gastroscopy showed a huge duodenal bulb ulcer. The patient was treated conservatively and after the symptoms resolved she was discharged from a hospital. About a month later the patient started to have hectic fever and an exacerbation of the pain. The CT scan was performed and showed hepatic abscess. The patient underwent an urgent surgery. The surgical assessment showed perforated, thick-walled gallbladder infiltrating on an extrahepatic biliary, liver parenchyma and duodenum, and the cholecysto-duodenal fistula. The after-surgery histopathology assessment confirmed a metastatic gallbladder cancer.

Considering the presented case, was it possible to diagnose and correctly treat the gallbladder cancer earlier?

Keywords: Gallbladder cancer, cholecystitis

Blood? God forbid! Rejecting a transfusion basing on religious beliefs

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Every doctor's primal instinct is to save their patients' life and health. We use every tool in our disposal to do so and even that is often not enough. Therefore, in situations when we cannot reach for preferable solutions, our efforts may be in vain. One of those situations is patients' refusal to blood transfusion when their hemoglobin levels are too low to maintain a hemodynamic efficiency.

An 86-year old patient was admitted to ICU of tertiary university hospital in Katowice, due to postoperative acute cardiopulmonary failure. As a Jehovah Witness, the patient signed a refusal of blood transfusion or treatment with blood products – which was provided along with other medical documentation. Due to signs of escalating multi-organ failure, CVVH was initiated after consulting with the patient's medical proxy. On the fourth day of hospitalization, an USG examination revealed a fluid reservoir in the abdomen, which showed features of active bleeding in a subsequent CT scan. Despite the increasing anemization, the patient upheld her choice to refuse blood treatment. The decision was made to start pharmacological treatment with an antihemorrhagic drug, injections of ionized calcium and epoetin α , as well as surgical one - with the evacuation of hematoma and placing the hemostatic dressing.

Despite refusing to undergo standard procedures, the patient was discharged in good condition. Not always the best solution from EBM standpoint is the best solution for the patient. But that cannot release us from the duty to fight for patient's well being. It just makes it a little bit harder.

Keywords: ICU, Intensive Care, Transfusion, Ethics

The diversity of short-term complications after liver transplantation

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Liver transplantation (LT) is a common therapeutic method of treatment of acute and chronic liver failure. However, especially during short-term period after LT, various complications such as bleeding, hematomas, vascular, biliary, renal, neurological and infectious complications can be presented.

This case explores a 64-year-old man who underwent liver transplantation due to primary sclerosing cholangitis induced liver cirrhosis MELD-Na 22. 12 hours after LT patient required urgent laparotomy because of hemodynamic instability due to active bleeding from hepatic artery anastomosis. On the 5th day after LT, celiac trunk compression syndrome was confirmed in angiography and next laparotomy was performed. During first week after LT infectious parameters were increasing and antibiotics therapy according to microbiological cultures was changed into meropenem, fluconazole and vancomycin. On the 6th day because of biliary leakage ERCP was performed and patient was qualified for 3rd laparotomy. Roux-en-Y due to common bile duct necrosis was performed. In Intensive Care Unit patient required continuous renal replacement therapy and then hemodialysis therapy. Patient also had gastrointestinal bleeding and neurological complications. During next month his liver and kidney function improved. On the 42nd day after LT patient was discharged home with good condition and liver function and without necessity of renal replacement therapy. 3 years after LT patient has good liver function and eGFR about 40 ml/min.

This case shows various complications that may occur after LT. It is crucial to be aware of them, because only then, we are able to react, treat and finally get good result of LT.

Keywords: Liver transplantation, short-term complications

When an ob-gyn needs to call the surgeon- intussusceptions in pregnancy

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Stomach ache during pregnancy can be caused by a multitude of reasons, from as trivial as functional gastrointestinal disorders or UTIs, to preterm delivery or miscarriage. Emesis on the other hand should be differentiated with surgical complications only after 10-16 WOG. Those symptoms are both very important in diagnosis of intussusception, which is mostly associated with pediatrics - in case of adult patients they are a reason of only 5% of bowel obstruction. Nonspecific clinical manifestation and US imaging can impede the diagnostic process, which is why clinicians rarely have a correct diagnosis before the surgery. Intussusception can be dangerous because of possible necrosis or bowel perforation.

A 39 year old patient at 30 WOG with a history of cesarean section and appendectomy was admitted to Clinic because of stomach ache and vomiting. Symptoms, blood tests and ultrasound image suggested bowel obstruction. The patient was qualified for laparotomy. During the operation surgeons found adhesions and a 5-cm long intussusception which was reduced. The pregnancy ended by an elective CS in 38 WOG. A boy of 3460 g was born, Ap 10,10. A non-absorbable suture was discovered in the proximity of caecum, probably left there during appendectomy -it was suggested as the reason of adhesions and anterograde complication.

Even though intussusception is a disorder mainly associated with children, one should never forget about it in differential diagnosis. Making a diagnosis is hindered because of symptomatology of physiological pregnancy and limitations in diagnostic tools. Fast diagnosis and operative treatment is a key to avoid grave complications, more probable during pregnancy

A complete ureteral dissection - a rare complication following posterior lumbar discectomy - a case study

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Ureteral injuries account for less than 1% of all urogenital injuries. In 75% of cases, these complications are iatrogenic and mostly occurs during gynecological and urological operations. Ureteral injury during spinal surgery is a rare complication with only few reports in the literature.

We present a case of unrecognized injury of the left ureter during open right-sided L5-S1 discectomy in a 34-year-old male patient who experienced abdominal pain and severe peritoneal symptoms in the first postoperative day. A large hematoma in retroperitoneal space was diagnosed with a CT scan. The patient was qualified for surgical treatment. Intraoperatively, an extensive urinoma and total intersection of the left ureter in the middle part were found. An "end-to-end" anastomosis with an internal stenting of a double-J catheter was performed. The postoperative course and further observation - without complications.

ICON - modern infiltration method of early caries treatment

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Conservative dentistry with endodontics
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These days having beautiful and healthy smile is identified with a success. Conservative dentistry is developing nowadays towards the minimal invasive treatment of the caries while it is on its early stage, trying to remove as little as possible of the tooth own tissues. White demineralisation spots on the surface of the enamel mostly interfere with aesthetics. Caries infiltration is the method of minimal invasive treatment that based on the concept of filling the porosity of the damaged enamel with resin. The main purpose of this procedure is the prevention of the carious process and improving the aesthetics of the teeth. In this purpose the system ICON is applied. This system is the modern solution that allows fulfilling the expectations of the patients without necessity of the preparation of the teeth tissues.

The aim of our reasearch was the comparison of the ICON system with the working of preparation for enamel remineralisation (MI Paste).

Patients for the examination used to be qualified on the grounds of having similar carious lesions within the enamel (with spots, visual method in the front section).

Three groups of patients were extracted. The first one was a control. The patients of the second one were treated with the casein phosphopeptide amorphous calcium phosphate (MI Paste). As far as the third group is concerned, they were subjected to ICON system. Received results were compared with the control.

Conclusions: ICON system shows high remineralisation efficiency.

Keywords: ICON, enamel remineralisation, minimally invasive dentistry, MID



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF CASE REPORTS NON-INTERVENTIONAL I

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Cystic hygroma as a isolated change - case report

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Cystic hygroma is a rare lymphatic malformation usually developing along the jugular chain in the cervicofacial region. It is fluid-filled cystic structure caused by incorrect connection with normal drainage pathways. Macrocystic lymphatic malformations may exert meaningful mass effect on adjoining structures.

We are reporting a case of a 33-year-old woman in the first pregnancy admitted to The Department of Gynecology, Obstetrics and Gynecologic Oncology in Bytom because of diagnosed cystic hygroma in fetus during 1 st trimester scan as isolated increased nuchal translucency. Biochemistry values of blood samples from 1 st and 2 nd trimester were in the reference range. The prenatal USG during 2 nd trimester has shown growth of neck mass to size 4,8x7cm. The patient underwent caesarean section in 37+3 Hbd. The male weighed 2490g and was 51 cm long. Most of cystic hygroma mass was located on the neck in the posterior cervical triangle and to the left external region. It was soft and partly translucent. Postnatal USG has shown cystic structure without vascularisation and with single septum inside. The infant was transferred to the paediatric surgery department, where removal operation was postponed until neonate was 1 month old. The mother was discharged from the hospital with the recommendation of postoperative wound care in the 4 th day after cc.

Cystic hygroma is an important indicator of many congenital diseases such as Down syndrome, Turner syndrome and fetal alcohol syndrome. It may cause airway obstruction leading to asphyxia. The treatment options of cystic hygroma are limited to sclerotherapy, surgical resection or both.

Keywords: cystic hygroma, lymphangioma

Coexistence of TSH-secreting pituitary tumor and papillary thyroid carcinoma – case report

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TSH-secreting adenomas are tumors of the pituitary gland that secrete thyroid-stimulating hormone, which causes excess production of thyroid hormones by the the thyroid gland – a condition known as hyperthyroidism. Coexistence of thyrotropin hormone-secreting pituitary adenoma with differentiated thyroid carcinoma is immensely rare with few cases reported. We present a case of pituitary macroadenoma, with clinical syndromes of hyperthyroidism, and thyroid nodules, confirmed to be papillary thyroid carcinoma. Clinical implications and the strategy for proper management were discussed.

A 54-year old female was admitted to the hospital in 2016 for hormonally active pituitary macroadenoma treatment monitoring, after 3-months therapy with somatostatin analogs and cabergoline. Thyroid function test showed decreased thyroid hormones and TSH. Levels of prolactine and IGF-1 normalized as well. MRI performed tumor shrinkage. Thyroid ultrasound examination displayed multinodular goiter with concomitant elevated levels of anti-Tg and anti-TPO antibodies. Unexpectedly, thyroid papillary carcinoma was detected later in 2016 in fine needle aspiration biopsy. The patient was referred for oncological treatment.

TSH-secreting pituitary adenoma, as an uncommon cause of thyrotoxicosis, should be taken into consideration during the differential diagnosis of hyperthyroidism. TSH, the main factor involved in the control of proliferation of thyrocytes may play the key role in the development of thyroid cancer. Combination of TSH-oma and thyroid papillary carcinoma raises the chance that TSH is involved in tumorigenesis in the thyroid.

Keywords: TSH-secreting pituitary tumor, papillary thyroid carcinoma

33 years old female diagnosed with hypogonadotropic hypogonadism

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Infertility affects about 10-15% of couples in reproductive age. One of the causes of infertility is hypogonadotropic hypogonadism (HH) [1]. It is characterized by missing or decreased function of the female ovaries [2]. HH can be congenital or acquired [3]. The most common symptoms characterizing this disease are primary or secondary amenorrhea, hypoestrogenism and low level of gonadotropins [1].

The 33-years old female has been admitted to the University Hospital in Krakow with primary amenorrhea. The aim of hospitalization was hormonal diagnostic and quantifying chance to conceive. The patient was treated with estradiol and norethisterone since she turned 18-years old as she has never developed an idiopathic period. The laboratory tests revealed a low level of FSH and LH as well as estradiol and a high ATG. GnRH stimulation test was correct. Based on examination and hormonal tests ovarian failure type I was diagnosed. MRI test of pituitary was taken but did not reveal any pathology. During hospitalization, the patient had a hysterolaparoscopy and chromotubation made. Intervention showed correct flow in the right oviduct and obstruction in the left one. Genetic causes of HH (ex. Kallmann syndrome) were excluded. The AMH level (1.38 ng/ml) was average.

Considering ovarian failure fertility can be a subject of discussion. It is documented that the level of AMH may not be a reliable predictor of ovarian reserve for patients with HH.

With relation to the patient, the reason for HH is still unknown, but there is a possibility to procreate. New methods of infertility therapy can give a 70% chance for pregnancy through the proper treatment adjusted to the patient [2].

Keywords: female, ovarian insufficiency, hypogonadotropic hypogonadism, Infertility

Do not forget that the fatal subarachnoid hemorrhage as a result of ruptured aneurysm can be a chance to save someone's life

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Subarachnoid hemorrhage (SAH) causes 3% of all strokes and It has a high mortality burden. Because of the complex pathophysiology of the disease, an interdisciplinary cooperation is required to limit secondary brain injury.

39-year-old female patient was admitted to the ICU due to acute respiratory failure and impaired consciousness after unsuccessful embolization of the right internal carotid artery's (RICA) ruptured aneurysm (Hunt-Hess scale V, modified Fisher scale IV). Surgery failure was caused by anatomical conditions. The patient was qualified for the postponed neurosurgical treatment because of the massive vasospasm. Despite the multidirectional antiedema and neuroprotective therapy, the patient's condition deteriorated. Clinical symptoms of high intracranial pressure were noticed. CT-scan proved an evolution of ischemic and edema changes – subtentorial herniation was observed. Clinical features of brain death appeared. Instrumental examinations proved the lack of brain perfusion. After the confirmatory testing, the organ procurement was performed.

Despite developing access to instrumental procedures , SAH and its complications are still one of the most serious neurological conditions with a poor prognosis. In such difficult circumstances we should bear in mind that the meaningful number of deceased patients can become an organ donors.

Keywords: subarachnoid hemorrhage, organ transplantation

What do the children eat? Eating habits of Polish children.

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It is widely known that balanced diet is a key to children's healthy development. In 2019 an updated food pyramid has been published. According to its guidelines the basics of healthy lifestyle are physical activity and appropriate water consumption.

The purpose of this study is to assess children's diet and evaluate how many of them fulfils the nutrition guidelines.

A cross-sectional observational study was conducted via internet in 204 parents (90% were mothers). The mean children's age was 6,8, SD - 4,5 (range 2-18 years). The study was based on questionnaire consisted of 50 questions regarding the frequency of consuming groups of products given in the pyramid. There were 6 possible answers to each question applying to the frequency of products' consumption.

None of the children met the nutritional criteria. However, 1/3 of the children met the criteria for the consumption of grain and dairy products recommended in the pyramid.

More than a half of children eats vegetables and fruits in accordance with the guidelines. 54% of children do not eat fish even once a week, only 41% admitted eating fish 1-3 times a week.

31% of respondents declare that their children do not eat sweets.

The analysis shows that none of the children fulfils the guidelines of food pyramid and the most difficult parts to follow are healthy dairy and grains.

Keywords: nutrition, diet, food pyramid, eating habits, healthy

Is this TRALI, TACO, or just pneumonia? – a case report of ARF

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Blood transfusions are associated with the increased risk of complications. Transfusion Related Acute Lung Injury (TRALI) is a rare but potentially fatal form of acute respiratory failure (ARF) occurring as non-cardiac pulmonary edema. In patients with chronic heart failure, TRALI may co-exist with transfusion-associated circulatory overload (TACO). Also, TRALI may mimic pneumonia.

A 69-year-old female with a few weeks of unclear medical history of abdominal problems was admitted to the ICU in shock due to bleeding from the upper gastrointestinal tract (Allgower index 1.3). A rescue but unsuccessful attempt at endoscopic treatment was made. The diagnostics was then extended by a CT, in which the duodenal tumor was revealed and the patient underwent the emergent Whipple's procedure. In the overall perioperative period, multiple blood products were transfused (7 pRBCs, 7 FFPs, 1 PCs, 14 CYROs). Few hours later, the patient developed hypoxemia (Horowitz index 244 mmHg). Acute infection as the origin was excluded (PCT 0.34 ng mL⁻¹). Despite elevated NT-proBNP (11642 pg mL⁻¹), TRALI was diagnosed based on the clinical and radiological features (i.e. chest X-ray, ultrasound of the heart and inferior vena cava).

Differential diagnosis of ARF in a patient after massive transfusions should always include TRALI, TACO and TRIM, regardless of the previous medical history. The parameters that assess the presence of inflammation and/or cardiac insufficiency are helpful in establishing the diagnosis.

Keywords: transfusion, respiratory failure, lung injury

Esophageal disease in a 15-year-old boy- gastroesophageal reflux disease or eosinophilic esophagitis

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Gastroesophageal reflux disease (GERD) and eosinophilic esophagitis (EoE) are the most frequent esophageal disorders. In a patient with esophageal dysfunction, a well-established diagnosis of GERD based on pH-impedance monitoring and/or endoscopy may not rule out EoE.

A 15-year-old boy has been admitted to hospital with epigastric and periumbilical pain for about 3 years, episodic vomiting and weight loss of 4 kg over last few months. Based on 24-h pH-impedance monitoring he was diagnosed with acid GER. An upper gastrointestinal endoscopy revealed mucosal erosions just above the gastroesophageal junction graded as LA-A according to the Los Angeles classification and additionally longitudinal and transverse mucosal furrowing of the entire esophagus. Histopathological examination of esophageal biopsies confirmed the eosinophilic density of 30 eosinophils/hpf. Laboratory tests revealed peripheral blood eosinophilia and elevated serum IgE concentration (6386 IU/ml). Both skin prick and atopy patch tests were negative. After an 8 week course of pantoprazole at daily dose of 40 mg a clinical remission was achieved. At follow-up endoscopy severe reflux esophagitis grade as LA-D and persistent mucosal changes strongly suggestive of EoE were seen.

EoE and GERD are different entities that may coexist, either unrelated or interacting bidirectionally. Clinical remission does not necessarily imply mucosal healing.

Keywords: gastroesophageal reflux disease, eosinophilic esophagitis, epigastric pain

Stroke as a rare complication after varicella - case report

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Varicella is considered to be a benign childhood disease, but it also increases the risk of arterial ischemic stroke (AIS). Post-varicella AIS is mainly related to the development of VZV vasculopathy. It usually has a monophasic course but there are few reports of recurrent TIA and multiple strokes.

An eight year old girl was admitted to hospital because of right-sided hemiparesis, right-sided facial palsy, speech disorder and altered behaviour. First episode of similar symptoms occurred around seven months earlier. At that time magnetic resonance imaging demonstrated irregular lesion in basal ganglia and in the branch of the posterior capsule of unknown origin. In the control MRI after a month there was a new lesion in the head of caudate nucleus. In the next few months, evolution of lesions led to the diagnosis of vasculopathy stroke. At the admission pleocytosis in cerebrospinal fluid was detected. Mother recalled that the girl had had chickenpox few months before the first episode of hemiparesis, which lead to the inspection of antibodies against varicella zoster virus with result of IgG 11530 mIU/ml in serum. Because of the overall clinical representation, the varicella vasculopathy was suspected and methylprednisolone followed by intravenous immunoglobulins and acyclovir were administered. In the last MRI, no new lesions were observed. Antibodies against VZV decreased significantly (IgG 3806 mIU/ml in serum).

Varicella is a highly infectious, but vaccine preventable disease. Post-varicella AIS is one of the most serious complications and bears the risk of lifelong disability and increased mortality.

Keywords: neurology, children, stroke, varicella

Acquired haemophilia A imitating uterine tumour

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Acquired haemophilia A (AHA) an extremely rare autoimmune disorder caused by production of autoantibodies to factor VIII that interferes with its coagulant function and predisposes to severe, potentially life-threatening hemorrhages.

A 49-old female with no previous history of autoimmune disorders or inherited coagulopathy was admitted to gynecology ward for scheduled uterine tumour removal. During the laparotomy large haematoma adjoined to posterior uterine wall and ovarian cysts instead of tumour were found. After a few hours post surgery her state deteriorated as she developed hypotonia and excessive drainage of blood from the peritoneal cavity was observed. Exploratory re-laparotomy revealed no obvious source of bleeding and the patient was moved to Intensive Care Unit, where suspicion of coagulopathy was raised.

The standard laboratory tests of coagulation on admission to the ICU revealed increased activated partial thromboplastin time. Due to excessive bleeding, another explorative laparotomy was performed and haemostatic packing was used. A haematology consultation was requested. As there was no correction of aPTT following fresh frozen plasma transfusion, the presence of an inhibitor to factor VIII was suspected and then confirmed by a correction mixture test.

In the presence of isolated prolongation of aPTT in a patient without history of inherited coagulopathy, acquired haemophilia A should be suspected. In patients with de novo diagnosis of acquired haemophilia A all invasive procedures are contraindicated.

Keywords: acquired haemophilia A, coagulopathy, activated partial thromboplastin time

Liposarcoma – the Surgical Boomerang

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Liposarcoma is a malignant neoplasm that arises in adipocytes. Surgery is a key treatment procedure. It reduces recurrence and progression risk of the disease.

69-year-old man was under the doctor's care because of a tumor of the left forearm since 2011. A biopsy of the lesion was made in 2012 and it did not reveal malignant neoplasm. Ultrasound in March 2014 revealed a mass growth extending into a subcutaneous tissue. Biopsy revealed pleomorphic liposarcoma. In May 2014 the tumor was resected radically and histopathology confirmed previous diagnosis. After 6 months local recurrence was observed. Lesion was removed with a part of postoperative scar. In June 2015 surgery was performed because of the second recurrence. Diagnosis of well differentiated liposarcoma with infiltration in deep margin was established. After exclusion of reoperation, complementary radiotherapy (25Gy/33 fractions) was implemented. Ultrasound in 2017 demonstrated tubercles in the scar. Biopsy revealed a myxoid liposarcoma. In March 2018 the patient underwent preoperative radiation (25Gy/5 fractions) followed by the 4th surgery. Myxofibrosarcoma was recognized. No metastases or recurrence of the disease has been observed during the follow-up.

Liposarcoma is a malignant tumor, which has a high risk of recurrence. Taking special care of the resection margin is crucial. Radiotherapy (pre- and postoperative) is still the gold standard procedure when performing an R0 surgery is impossible. Even multiple recurrences should be carefully analyzed regarding the possibility of radical resection to prevent disease progression.

Keywords: liposarcoma, recurrence, reoperation

Coexistence of syphilis with HIV infection

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Syphilis is a sexually transmitted disease caused by *Treponema pallidum* subspecies *pallidum*. Number of patients suffering from syphilis has been increasing in the last years. It has been observed that there is much higher risk of transmitting STD among MSM. Early and late syphilis present various symptoms. Clinical picture is often affected by immune deficiency related with HIV infection.

27 year old male was admitted to Dermatology Clinic for diagnostics and treatment due to lasting for 4 months skin lesions not responding to treatment. Similar skin lesions occurred about 8 months earlier. At the admission the patient presented maculo-papular rash with superficial scale. On face occurred extensive erythematous lesions with infiltration. Patient reported skin burning with skin change. Around the urethra delimited erythema was observed with no pain symptoms. Patient had a history of unprotected MSM contacts in the past with men who had many sexual partners. Serological tests for HIV and syphilis were ordered. RPR, FTA, FTA-ABS, TPHA and Western blot were positive. In immunophenotype tests lymphocyte CD4 subpopulation was reduced. The patient was treated with tripple dose of 2,4 million units of benzathine penicillin G given intramuscularly. After discharge from the hospital the patient was given a recommendation of reporting to infectious diseases clinic for HIV treatment.

Appearance and intensity of skin lesions in syphilis is affected by HIV infections and immune efficiency associated with it. Exanthema can be atypical and similar to other dermatosis that's why it is important to always have an accurate medical history.

A 'tumbling' food surprise as a life danger

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Listeriosis infection is most often caused by the consumption of contaminated food: dairy, vegetables, meat. The disease is more common in pregnant women complaining of nonspecific flu-like symptoms, newborns and elderly or immunocompromised people-causing eg.sepsis, meningitis.

A 65-year-old man was admitted to the hospital due to fever, weakness, abdominal pain, polyuria and loose, irregular bowel movements 2-3 times a day. These symptoms occurred after eating goat cheese. Since 2014 the patient has suffered from ulcerative colitis with severe course. In physical examination: painful palpation, vivid peristalsis and negative peritoneal symptoms. Laboratory tests showed increased inflammatory markers and anaemia. Coproscopic examinations excluded intestinal parasites, although high calprotectin levels were found (735µg/g). In a blood culture *Listeria monocytogenes* was grown. Antibiotic therapy based on amoxicillin was implemented. The patient was disqualified from urgent surgery and transferred to the gastroenterology department, where he received pharmacotherapy with hydrocortisone, ciprofloxacin and metronidazol. Endocrinological and neurological consultation additionally revealed: secondary partial adrenocortical insufficiency and spontaneous tremor, in MRI without any changes in the pituitary gland. In initially critical health condition doctors have achieved therapeutic success.

Inflammatory bowel diseases, due to pharmacological treatment impairing the body's immunity, expose patients to higher risk of infections, which may cause serious multiorgan disorders by aggravating the chronic disease. Crucial issue is prevention like: proper diet, hygiene and compliance with medical prescriptions.

Keywords: inflammatory bowel disease, colitis ulcerosa, listeriosis

Progressive supraglottic scarring as a only sign of IgG4-related disease

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IgG4-related disease (IgG4-RD) is a chronic inflammatory condition of unknown etiology characterized by lymphoplasmacytic infiltration, storiform fibrosis and obliterative phlebitis, which leads to organ failure. IgG4-RD may affect any tissue, but mostly affects the salivary glands, kidneys, pancreas and lacrimal glands. Clinical presentation is varied and depends on the organ involved.

In December 2018, a 75-year-old female patient who suffered from episodes of acute dyspnea was admitted to Department of Otolaryngology at the Medical University of Lodz. Similar episodes have been occurring 2-3 times a month within 3 years. It was treated for over a year with azathioprine and systemic steroids due to suspicion of Granulomatosis with polyangiitis. During the hospitalization diagnostics was extended for pemphigus and granulomatosis with polyangiitis. Tissue biopsy from supraglottal area, which was swollen and scarred was taken. IgG4-RD was recognized on the basis of histopathology and IHC reaction. Immunosuppressive therapy and steroid pulse was included. The patient remains in observation.

It is estimated that IgG4-RD occurs with frequency 0,28–1,08/100 000. However there are still a few case studies of this condition. The disease was described as organ specific, nowadays is classified as IgG4-related. Changes are usually multiorgan (about 58%). In this case isolated damage of larynx is the only manifestation and is a challenge for the surgical and endoscopic treatment. The lack of systemic symptoms, obliterative vasculitis and eosinophilia cause the therapeutic difficulties in the ENT clinics and extend the time for make diagnosis.

Keywords: IgG4-RD

Menkes disease

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Menkes disease is a rare X-linked recessive neurodegenerative disease caused by a defect in copper metabolism associated with ATP7A mutation. The first symptoms of the disease occur during infancy period. Main features are hypotonia, developmental delay, seizures, connective tissue abnormalities, kinky hair and typical dysmorphic features.

The study presents a boy born vaginally at 39hbd with Apgar score of 9 points and body weight of 3150g with subgaleal hemorrhage. Hypotonia and feeding problems have been observed since birth. Neonatal period was also complicated by prolonged jaundice treated with phototherapy. On 6th day of life the patient was admitted to a neonatal intensive care unit due to cardiorespiratory insufficiency and urinary tract infection. Developmental delay has been observed since 4th month of life. Low serum copper and ceruloplasmin levels, typical phenotype and kinky hairs resulted in Menkes disease diagnosis in 7th month of life. New generation sequencing revealed pathogenic splice-site mutation c.1946+4A>G in ATP7A gene. Feeding problems needed percutaneous endoscopic gastrostomy at the age 14 months. At present patient is 21 months old and presents numerous health problems including recurrent urinary tract infections associated with bladder diverticula, paroxysmal apneas and frequent vomiting.

The prognosis in Menkes disease is very poor. Early copper histidine treatment might improve outcome in some patients. Almost all patients suffering from Menkes disease have seizures, but absence of seizures does not exclude this disease.

Keywords: menkes disease, copper

Unusual presentation of acute lymphoblastic leukemia

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Acute lymphoblastic leukemia (ALL) is the most common pediatric cancer. Signs and symptoms of ALL usually include pallor, fever, hemorrhagic diathesis, lymphadenopathy, hepatosplenomegaly and bone pain. The bone marrow must contain at least 25% blast cells to diagnose a leukemia.

6,5 years old female was admitted to the Department with suspicion of hematological malignancy. The patient has been complaining of abdomen and back pain. Subfebrile temperature was also presented. A laboratory test showed anemia, thrombocytopenia and elevated inflammatory markers. Physical examination revealed splenomegaly. The level of blast cells ranged between 8 and 13% what did not allow to make diagnosis of ALL. The patient was treated accordingly to pediatric protocol for ALL in view of clinical picture. 3,5 years after diagnosis isolated bone marrow relapse occurred. The patient was given a hematopoietic stem cell transplantation (HSCT). At the age of 12 patient felt again bone pain of escalating character. Based on clinical examination and laboratory test a diagnose of relapse in bone marrow and bones was given. Progression of the disease led to the fracture of the spine, stenosis of the spinal canal and paraplegia.

ALL is a life-threatening disease with various clinical and hematological presentation. Diagnostics and differentiation are not always typical. Initial symptoms of the ALL often are ambiguous.

Keywords: leukemia, blast cells, relapse, bone pain

Pseudohypoparathyroidism in children - diagnostic and therapeutic challenge

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Pseudohypoparathyroidism (PHP) is rare genetic disorder associated with tissues' resistance to the parathyroid hormone, which leads to hypocalcemia. Tetany can be clinical manifestation, but it is rarely found among children population.

10-year old boy was admitted to the Neurology of Developmental Age Unit to diagnose seizure. In anamnesis there were obtained information about confusions preceded to unconsciousness, balance disorders and one focal seizure with tremor of the left corner of the mouth. During early childhood developmental delay were observed. In neurological examination during admission no sign of focal CNS damage were found. CT scan proved calcifications in the putamen and caudate nuclei. Moreover during EEG temporarily generalized seizures were concluded. Laboratory examination revealed reduced content of total and ionized calcium [1,60 mmol/l; 0,61 mmol/l], hyperphosphataemia [2,43 mmol/l] and significantly increased level of PTH [1205 pg/ml]. Symptomatic epilepsy was diagnosed, treated with anti-epileptic drugs, calcium, vitamin D. Then in the Metabolic Clinic during physical examination subcutaneous calcifications especially in the left scapula region, confirmed in the CT were found. Normalized calcium level caused disappearance of the symptoms, antiepileptic treatment was discontinued and there was no recurrence of seizures. The overall clinical picture and tests results enabled to diagnose the pseudohypoparathyroidism type Ia.

PHP as a syndrome with broad symptomatology causes many diagnostic difficulties. Evaluation of calcium and phosphate serum's level should always be applied to patients with nonspecific symptoms.

Keywords: tetany, pseudohypoparathyroidism, epileptic seizure, pediatrics

Neurological Complications of Common Variable Immunodeficiency (CVID)

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CVID is one of the most frequent form of primary immunodeficiency. The disease is characterized by reduced levels of immunoglobulins in the blood, as well as low numbers of B cells and plasmacytes. In the course of CVID neurological complications are rare. We present a case of a 39-year-old male patient in whom focal neurological deficits and cognitive impairments were found to be the first symptoms of Common Variable Immunodeficiency.

39-year-old patient was admitted to the Neurology Clinic with the suspicion of the inflammatory process in the nervous system. After a few days of gastrointestinal infection, severe headaches, multiple epileptic seizures and cognitive dysfunctions occurred. The brain's autoimmune inflammation was diagnosed. The applied therapy resulted in a temporary improvement of the patient's condition. Despite the treatment, resting and intention tremor of upper limbs, slight paresis of right limbs, ataxic gait and impairment of visual acuity appeared. BK Polyomavirus was isolated from patient's urine and all classes of antibodies were found to be reduced. The patient was diagnosed with CVID and a substitutional therapy was introduced. A noticeable improvement of cognitive functions, gait disorders and tremor was reached. The rest of symptoms stabilized.

The diversity of clinical manifestations of CVID might cause difficulties in diagnostic processes. In this case, atypical course of disease was the cause of late diagnosis and treatment. CVID should be considered in differential diagnosis of central nervous system damage with immunological etiology.

Peripartum cardiomyopathy – 2 years follow-up

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Peripartum cardiomyopathy (PPCM) is potentially life-threatening disorder which occurs in the last month of pregnancy or in first 5 months postpartum. The disease manifests as left ventricular dysfunction and symptoms of heart failure in previously healthy women. The etiology of PPCM is unknown, but viral, autoimmune or genetic factors are considered. Course of the disease differs - from recovering cardiac function to irreversible myocardium damage.

Case describes 22-year-old women who developed symptoms of heart failure 3 months after delivery. The pregnancy was uneventful and the patient showed no cardiac problems before. After labour, symptoms intensified and 2 weeks later the patient was admitted to the hospital after syncope with manifestation of cardiogenic shock. She was diagnosed with STEMI myocardial infarction. Due to the cardiovascular insufficiency she was transported to Silesian Center of Heart Diseases and left ventricular assist device (LVAD) was implanted. Because of critical condition the patient was put on the heart transplant list for urgent procedure. Approximately 5 months after delivery, in 43rd day of LVAD, heart transplantation was performed with no complications. Currently, 2 years after heart transplantation patient is in general good condition. Histopathological examination of the tissue showed 1a stage (minimal acute rejection) in International Society for Heart Lung Transplantation (ISHLT) scale.

Quick diagnosis and proper treatment play key-role in peripartum cardiomyopathy's prognosis. In severe cases LVAD and heart transplantation are the only ways to recover, though regular check-ups and biopsies after procedure are required.

Keywords: peripartum cardiomyopathy, heart transplantation

Differential diagnosis matters - deep fibromatosis in the infant's body

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Deep fibromatosis (desmoid tumor) is a very rare soft-tissue tumor characterised by aggressive clinical behavior and high rate of local recurrence. It occurs mostly in adults aged 30-35 y.o.

A 5-month-old breastfed girl presented with severe dyspnea, anorexia and constant anxiety was admitted to the Department of Pediatric Allergology and Cardiology. A number of diagnostic examinations were performed. X-Ray of the thorax revealed bilateral interstitial pneumonia, the throat swab showed the presence of Chlamydia pneumoniae (ChP) antigen. Allergy tests were negative. US study of the lungs confirmed inflammatory changes. The pneumonia in course of ChP infection was initially considered to be the cause of the clinical symptoms. Pharmacological treatment didn't bring the expected results; the girl's condition was deteriorating. Numerous specialistic consultations and additional tests didn't reveal any other pathology. A CT scan of the lungs was ordered. It showed contrast enhancing lesion in the posterior wall of trachea, initially reported as hemangioma. The lesion significantly narrowed the trachea. The girl was transferred to the Department of Pediatric Otolaryngology. The lesion was resected and submitted to the histopathological examination. Finally the deep fibromatosis was diagnosed. The tumor relapsed twice since the first operation.

Dyspnea in infants requires a complex diagnostics as it can rapidly increase and become life-threatening. Apart from the most common pathologies, the rare diseases, as well as the ones typically found in older patients, should be considered in differential diagnosis of the lesions in children.

Keywords: differential diagnosis, diagnostics, deep fibromatosis, desmoid tumor, infant, paediatric, dyspnea

Worth of direct radionuclide cystography (DRC) in diagnosing vesico-peritoneal fistulae

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A 36-year-old female patient underwent a laparoscopic surgery to remove a uterine fibroid. The procedure failed to relieve the pelvic pain, although its nature changed. After a period of observation, the patient was re-admitted to hospital on suspicion of a vesico-uterine fistula to be differentiated with endometriosis. Diagnostic investigations — cystography, cystoscopy, computed tomography and magnetic resonance — did not reveal a fistula. Laparoscopy was performed, with a possible biopsy in order to eliminate endometriosis. The result was negative, but chronic progressive reactive/inflammatory lesions were noticed, possibly indicating the presence of a vesico-peritoneal fistula. Therefore, a direct radionuclide cystography was performed. The scintigraphic images single-photon emission computed tomography (SPECT/CT) showed a radioactive spot, indicative of a vesico-peritoneal fistula. The fistula was treated for three months by catheterisation of the urinary bladder. The follow-up SPECT-CT did not reveal any urine leakage from the bladder. The clinical symptoms disappeared as well.

Keywords: radionuclide cystography, spect, vesico-peritoneal fistule

Simultaneous celiac disease and anorexia nervosa in young girls- three cases reports

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Course of celiac disease is mainly oligosymptomatic, it can cause significant delay in the diagnosis. Whereas persistent inflammation, malnutrition and emaciation, as consequence, may predispose to eating disorders, including anorexia nervosa. We present report of three cases of young patients in whom celiac disease has been diagnosed during treatment of anorexia nervosa.

(1)12,5 years old girl (BMI: 13,48 kg/m²) was admitted to clinic with suspicion of anorexia nervosa additionally has been diagnosed with celiac disease (tTG IgA 186,09 RU/ML; IgEMA positive; intestinal villi atrophy type 3a in Marsh's scale. (2)14 years old girl (BMI: 16,6 kg/m²) was admitted to clinic due to ineffective ambulatory treatment of anorexia nervosa, has been diagnosed with celiac disease undetected before (tTG IgA 25,57 RU/ml, IgEMA negative; intestinal villi atrophy type 3a in Marsh's scale; presence of alleles forming DG2 haplotype in genetic testing). (3)13,5 years old girl (BMI: 12,95 kg/m²) was admitted to clinic with suspicion of anorexia nervosa and celiac disease hasn't been diagnosed before, despite typical symptoms of this disorder in early childhood, eventually has been diagnosed in this direction (tTG IgA 326,870 RU/ml, IgEMA positive, intestinal villi atrophy type 3a in Marsh scale).

In the case of the patient suffering from anorexia nervosa during diagnostics overlapping of celiac disease should be taken into consideration and necessary examination in this direction should be performed. Patients with anorexia nervosa with overlapping celiac disease should be under specialised care.

Keywords: celiac disease, gluten-free diet, autoimmune disease, malabsorption syndrome, malnutrition, anorexia nervosa, eating disorders, multidisciplinary care

Sarcoidosis- why is it hard to establish the proper diagnosis?

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Sarcoidosis is systemic immune disease. It manifests itself as granulomas , growing in different parts of body- most commonly lungs, lymph nodes, eyes and skin. In February 2018 a 63-year-old female patient was admitted to Dermatology Clinic at Silesian University Hospital with the aim of diagnosis and treatment erythematous-hydronic skin lesion in mandibular region, left side. The surface of changed skin was covered with small pustules and blisters, it was indolent and it did not itch.

The cutaneous condition appeared after removal of nodules from the mucous area of the cheek at the Maxillo-facial Surgery Clinic in July 2016.

The histopathology test revealed numerous granulomas, which indicated sarcoidosis. The past medical history begins in 2015 and contains a lot of consultations in various medical units: Department of Allergology, Dermatological Outpatient Clinic, Clinic of Pulmonology, Clinic of Mucous Diseases, Department of Rheumatology. None of them confirm or exclude the diagnosis of sarcoidosis.

She has recently used cold ointment HCT and ointment with vitamin A . In past medical history she used fexofenadine, fluconazole.

Moreover, patient suffers from glaucoma, irritable bowel syndrome, osteoporosis and hirsutism.

There is melanoma in family history.

Followed tests were run : blood tests – basic panel, tumor markers (CEA, CA125, CA19-9, CA15-3, AFP), X-Ray, histopathology of changed skin.

Establishing diagnosis of sarcoidosis may take years. The morbus has many countenances which can fox even experienced clinician.

Keywords: sarcoidosis, skin, immune disease



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF CASE REPORTS NON-INTERVENTIONAL II

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Deficiency of 11 – β – hydroxylase as a cause of resistant - treatment hypertension – case report

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Congenital adrenal hyperplasia (CAH) is an autosomal recessive group of diseases caused by deficiency of e.g. 11 – β – hydroxylase (11 β HSD); it is the second reason of CAH (5–8% of all CAH cases); that form of CAH is characterized by hypertension, symptoms of androgenisation which intensify with age. Secondary hypertension has many causes, including endocrine ones.

Case report describes a 37 years old female patient diagnosed with CAH associated with deficiency of 11 β HSD. She presented abnormal development of congenital organs (Prader IV), 46XX; and was diagnosed with classic simple virilizing CAH and secondary hypertension.

A plastic surgery of crotch was performed three times. Treatment with hydrocortisone, cyproterone has been applied. Hormonal laboratory results have documented normal ACTH levels with preserved HCT response, increased levels of androstenedione and 17 – OH – progesterone, with normal DHES and FAI levels. On the other hand, the evaluation of the mineralocorticoid level showed ARO suppression. In the imaging examination bilateral nodal remodeling of the adrenal glands was found. Taking into consideration the whole clinical and research results, it was decided to modify the treatment.

Due to multidirectional tenor of described disease, it should be treated holistically. At the beginning, pharmacotherapy is the treatment of choice. The elective treatment should be applied in the therapy of secondary hypertension, it arises from pathomechanism of this type of CAH. Surgical treatment could be considered as patient with CAH and secondary hypertension, can benefit from that procedure.

Keywords: congenital adrenal hyperplasia, 11 – β – hydroxylase, secondary hypertension, virilization

Case report of a very rare carcinoma of the lung

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Lung cancer is the leading cause of cancer-related death worldwide. Large cell neuroendocrine carcinomas (LCNECs) are a rare subset of lung cancer, accounting for 3% of all lung cancers.

A 62-year-old female diagnosed with stage IV LCNEC was admitted to the Department of Oncology in August 2018. Bronchofiberscopy performed in 2017 revealed left bronchial obstruction caused by submucosal hyperplasia. Cytological examination showed atypical cells. In contrast-enhanced chest CT a tumor mass with dimensions of 28x46 mm in the left pulmonary hilus was described, infiltrating the distal left main bronchial wall, parenchyma of a left superior lobe and lingula. Follow-up subsequent CT examinations documented progression of the disease. In April 2018, the patient underwent left upper lobectomy. Histopathological examination revealed LCNEC pT1bN2 (stage IIIA). In June 2018, CT revealed a metastatic lesion in the right brain hemisphere (stage IV). Due to advanced disease the patient was enrolled to the clinical trial with avelumab - monoclonal antibody targeting PD-L1. After six cycles of avelumab grade 3 hepatitis was diagnosed (ALT- 368 U/L, AST- 164 U/L) and treatment with avelumab was permanently discontinued. In radiological assessment performed 3 months after treatment discontinuation complete response (CR) according to the RECIST 1.1. criteria still maintains.

Large cell neuroendocrine carcinoma of the lung is a rare, aggressive, and difficult-to-treat tumor, with very poor prognosis. Avelumab has shown promising antitumor activity and a manageable safety profile in a population of patients with progressive, metastatic or recurrent NSCLC.

Keywords: large cell neuroendocrine carcinoma of the lung, lung cancer, NSCLC

Dental care knowledge and awareness among secondary school students

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Dental care habits should be developed after a labour. Parents are responsible for starting this process. Older children gather information from different sources. Lack of correct dental care pattern or inadequate source of information can manifest negatively as caries and other dental problems. *Oral health has a significant impact* on general health.

The aim of this study is to evaluate the level of dental care knowledge and awareness among students, as a factor of oral health of them and their potential offspring.

An online questionnaire was prepared. It consisted of 26 questions divided into 2 groups: respondent's particulars and main questions. Questionnaires were shared via the Internet to groups of teenagers aged 16-21. They were students of vocational school, technical institute, high school.

117 questionnaire was received. All of them were included into the analysis. 89,8% of respondents claimed that their parents had had influence on developing dental care habits. Respondents assumed that their dental care knowledge was sufficient (54,2%), satisfactory (26,3%), insufficient (12,7%). The most common sources of dental care knowledge are: the Internet (72%), dentist (64,4%), parents (53,4%). Over 46,6% of respondents have no opinion according to effect of fluorine.

It has been shown that students who reached or will reach the age of majority are interested in developing dental care knowledge. Their knowledge is still unsatisfactory, whereas some of them present high level of knowledge. Particular attention should be paid to education of parents and potential parents.

Keywords: students, secondary school, dental care, pediatric dentistry

Non-typical enterocolitis induced by mycophenolate mofetil

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Mycophenolate mofetil (MMF) is used in bone marrow and solid organ transplant recipients to reduce the risk of graft rejection. Its usage is often associated with adverse drug reactions on the gastrointestinal tract, like: diarrhea, abdominal pain, dyspepsia, nausea and vomiting. However MMF can also cause rare and severe non-typical enterocolitis.

We present the case of a nearly 8 year-old boy with CKD from the neonatal period caused by WT1 gene mutation, after Wilms Tumor treatment, bilateral nephrectomy (the right kidney with Wilms Tumor and the nonfunctional left kidney) and a renal transplantation in 2017. Following the transplantation, the patient was treated with a variable dosage of MMF associated with tacrolimus and prednisone. After an about yearlong therapy of MMF the patient was urgently admitted to the Nephrology Department because of the relapsing vomiting, the increasing inflammatory markers, the depressed appetite, the bright red blood and the occult blood in the stool. After the gastrointestinal consultation the ultrasonography of the abdomen (protuberance of colonic wall - 4 mm), the stool culture test (negative), the stool tests for *C. difficile* (antigen and toxin - positive) was performed. The adequate treatment was applied. Because of the increasing anaemia and the suspicion of neoplastic process, the colonoscopy with biopsy was performed. The investigation revealed extensive colitis. The histopathologic report unequivocally indicated the intestinal lesion induced by MMF therapy.

Patients treating MMF should be monitored for any adverse reactions because incidence of gastrointestinal toxicity is the most common reason for drug discontinuation.

Keywords: mycophenolate mofetil, MMF, non-typical enterocolitis

Oocyte donation - an effective infertility treatment in Turner Syndrome

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Turner syndrome is an aberration resulting from insufficient amount of X chromosome genetic material. Clinically, it manifests with short height and gonadal dysgenesis causing pubertal failure and infertility. Even though women with mosaicism in karyotype are believed to have more viable oocytes, spontaneous conception is an extreme rarity among affected patients. Thanks to assisted reproduction techniques more individuals with Turner syndrome have chances for pregnancy.

In May 2018, a 29 year-old patient was admitted to the Gynecological-Endocrinology Clinic at the 3rd week of gestation after in vitro fertilization with oocyte donation. Two years earlier, patient presented to the hospital with amenorrhoea and was diagnosed with premature ovarian insufficiency (POI) caused by 46,XX/45,X mosaicism of Turner syndrome. Hormonal replacement therapy was implemented. Menarche occurred spontaneously at the age of 14 and was followed by regular cycles. Since 2003, patient has been suffering from Hashimoto's disease. Follow-up visits were continued every month during pregnancy. Control ultrasound and cardiological examination indicated low risk of fetal defects and aortic dissection of patient. In 39hbd caesarean section was performed and a healthy son was born.

Even though infertility resulting from POI is a common problem among individuals with Turner syndrome, the oocyte donation is an effective method of fertilization, which enables affected women to get pregnant and prevents passing disease to a child. Comprehensive health control of both mother and fetus is necessary due to increased maternal and fetal mortality risk.

Keywords: infertility, POI, Turner syndrome, oocyte donation

17 years old girl with defecation disorders- case report

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Gastroesophageal reflux disease (GERD) occurs in less than 10% of children. Laparoscopic fundoplication is performed when other treatment is ineffective, rules of treatment are not respected by patient or life threatening complications happened. After surgical treatment different adverse events may occur. Dumping syndrome (DS) is one of the complication linked with fundoplication.

17 years old girl with anorexia nervosa and depression was admitted to the Department of Pediatric Gastroenterology because of postprandial dizziness, abdominal pain and constipation. She reported fatigue, dizziness and tachycardia which occurs after meals. According to the medical history, few months earlier she underwent laparoscopic fundoplication because of hiatal hernia. During hospitalization oral glucose tolerance test as well as fasting, pre and postprandial glucose and insulin have been checked. Based on the symptoms and laboratory results DS was diagnosed. Because of defecation disorders medical imaging tests, including magnetic resonance defecography (MRD) have been made. In MRD rectocele was observed and patient was referred to surgical consult.

Surgical intervention in GERD should be considered with caution because of potential complications. In differential diagnose of patients after surgical treatment, postoperative disorders should be considered.

Evaluation of patients with obstructed defecation syndrome (ODS) may be difficult. MRD has been shown to demonstrate the structural abnormalities associated with ODS, and patients with significant structural abnormalities may benefit from surgical interventions.

Keywords: gastroesophageal reflux disease; fundoplication; dumping syndrome; obstructed defecation syndrome

A case of primary cutaneous large cell lymphoma in a 8- years old girl

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Anaplastic large cell lymphomas (ALCLs) are characterized by neoplastic proliferation of large, pleomorphic CD30 positive cells. It constitutes roughly 15% of childhood non-Hodgkin's lymphomas. Based on clinical and molecular features, four major forms of ALCLs has been recognized, including primary cutaneous ALCL (cALCL). As the name implies, cALCL arises in the skin without pre-existing systemic symptoms, contrary to systemic ALCLs. Although it is most commonly diagnosed in the sixth decade, it can also occur in childhood or adolescence.

A 8-year old girl was referred by a dermatologist to the Department of Pediatric Infectious Diseases with suspected zoonotic infection. On admission she presented with a tender nodular lesion in the left temporal area of her face without any systemic symptoms. The lesion developed one month prior the consultation as a pruritic papule and was growing during this period. She had a history of being scratch by a pet cat, however claimed that the lesion had developed before the cat occurred in her house. After a consultation with a general practitioner she was empirically treated with amoxicillin/clavulanic acid but with no improvement. Laboratory tests were unremarkable. The results of serological and microbiological tests for the presumed infectious diseases, including an abscess, tularemia, cat-scratch disease, cowpox virus and fungal infection were negative. Due to suspicion of neoplastic disease the girl was referred to Oncology Department in the Children's Memorial Health Institute. The results of skin biopsy revealed the histopathological features characteristic for ALCLs.

The diagnosis of cALCL is difficult because the disease is rare and the clinical presentation could resemble non-neoplastic diseases. Patients presenting with rapidly growing nodular lesions require complex, multidisciplinary approach during the diagnostic process and even such uncommon diseases like cALCL should be considered.

Keywords: anaplastic large cell lymphoma, primary cutaneous ALCL, nodular lesion

Graft-versus-host disease following Autologous Hematopoietic Stem Cell Transplantation for Multiple Myeloma

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Graft-versus-host disease (GvHD) is fairly common and well known complication of allogeneic stem cell transplantation (allo-HSCT). However, the occurrence of GvHD following autologous stem cell transplantation (auto-HSCT or AHSCT) has only rarely been reported.

Herein we present a case of 59-year-old female diagnosed with Multiple Myeloma (MM), who underwent two AHSCTs. On day 15 post-2d AHSCT, the patient was diagnosed with acute GvHD involving the skin. The patient's exanthema has several points of remission and aggravation during the whole course of treatment. Three months after 2nd AHSCT, the patient has been diagnosed with chronic GvHD. From that point the patient has additionally suffered from muscular atrophy, recurring thrombocytopenia and episodes of diarrhoea, gastrointestinal bleeding and aenemia.

When skin lesions occur after auto-ASCT, auto-GvHD, despite its rarity, should always be considered in the differential diagnosis of the lesions. This patient, who at first responded well to the steroids, later developed chronic form of GvHD.

Keywords: Graft-versus-host disease; GvHD; Hematopoietic Stem Cell Transplantation; Autologous HSCT; AHSCT; HSCT; Multiple myeloma

Diagnostic dilemmas with classification of melanocytic lesions – a novel approach to lesions with indeterminate biological behavior

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Among the spectrum of melanocytic lesions, there is a group of atypical lesions, which borderline histological features between benign nevi and malignant melanoma. Classification of such changes could constitute a diagnostic problem, even for experts in the field of dermatopathology. Therefore, two diagnostic categories were distinguished to classify these ambiguous cases: MELTUMP (MElanocytic Tumors of Uncertain Malignant Potential) and SAMPUS (Superficial Atypical Melanocytic Proliferations of Unknown Significance). However, there are some voices criticizing the provisional value of these diagnoses, so the practical application of these terms is still uncertain. In our project we aimed to discuss the position of these recently distinguished terms within the spectrum of diagnoses of melanocytic lesions, based on the cases from our clinical experience.

Based on a literature review and three illustrative cases of patients diagnosed in the Department of Pathology we described the most problematic issues, that clinicians could encounter during the diagnostic procedure. We also attempted to consider the position of a new entities distinguished in WHO classification – MELTUMP, SAMPUS and STUMP – within the spectrum of possible diagnoses.

The diagnosis of SAMPUS and MELTUMP by consultant pathologists reflects the difficulty of classification with accuracy lesions that showed histological features of various atypical tumors or malignant melanoma. In these cases, biological potential may be established with molecular studies.

Keywords: MELTUMP, SAMPUS, melanocytic lesions

Could laxatives abuse contribute to a false picture of diabetes mellitus?

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Laxatives, such as bisacodyl, stimulate enteric nerves to cause colonic contractions and increase fluid and salt secretion. It may lead to dehydration and electrolyte problems eg. hypokalemia. Low serum potassium level less than 3.6 mEq/L can be associated with impaired insulin secretion and decreased peripheral glucose utilization resulting in carbohydrate intolerance and hyperglycemia. Moreover there is a suggestion that low dietary potassium intake may be associated with higher diabetes risk.

A 21-year-old female patient was hospitalized due to tachycardia. Severe hypokaliemia (2,3 mmol/l) was found in performed test as well as increased glycemia in venous blood (293 mg/dl). The patient admitted to using laxatives, intense gym workout and polydipsia. She was diagnosed with type 1 diabetes and insulin therapy was implemented. After 2 weeks the patient made a decision to dechallenge the drug because of decreases in blood glucose. During next hospitalization her potassium level was 4,5 mmol/l and glycated hemoglobin level was 4,7%. However impaired glucose tolerance was revealed in oral glucose tolerance test. Anti-GAD antibodies, islet cel antibodies and anti-IA2 antibodies were negative.

Presented case shows that laxatives can induce transient glycemic disorders. Moreover it should be taken into consideration that low potassium is a possible risk factor for type 2 diabetes.

Keywords: laxatives abuse, type 1 diabetes, type 2 diabetes, hypokalemia

The use of NIV in the two types of respiratory failure in a patient with NF-1

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Recklinghausen's disease (NF-1) is among the most frequent autosomal dominant genetic diseases. Typical NF-1 symptoms include skin tumors called neurofibromas and larger benign neoplasms of the nerves called plexiform neurofibroma, scoliosis, blurred vision, numerous au-lait coffee spots, epilepsy, but respiratory failure is not so commonly observed.

A 32-year-old patient with NF-1, severe kyphoscoliosis, and a history of paravertebral and vertebral canal tumor partial resection in 2001 treated with a use noninvasive mechanical ventilated since December 2010 was admitted to pulmonary department in January 2019 with suspicion of respiratory failure decompensation.

The NIV settings were as follow: spontaneous (S) mode with: inspiratory positive airway pressure (IPAP) 15 cmH₂O, expiratory positive airway pressure (EPAP) 4 cmH₂O. Baseline arterial blood gases revealed sub-optimal PCO₂ control: (pH 7.35; PCO₂ 58.4 mmHg; PO₂ 66.9 mmHg; HCO₃ 31.3 mmol/l, SAT O₂ 92.0%). During hospitalisation acute on chronic respiratory failur was excluded. Ventilator settings were adjusted numerous times from S to S/T and finally to IVAPS-AE mode, which waranted blood gases normalisation: (pH 7.45; PCO₂ 42.7 mmHg; PO₂ 73.8 mmHg; HCO₃ 28.8 mmol/l; HCO₃ 27.8 mmol/l) and good treatment tolerance.

NF-1 may be responsible for type two respiratory failure development. The work describes possible respiratory failure mechanisms and undertaken treatment approach.

It is very difficult to determine precise causes of respiratory failure development in NF-1, however NIV may be effectively used for chronic respiratory failure treatment.

Keywords: respiratory failure, NIV, pulmonology, NF-1, kyphoscoliosis

Occupational swelling among medicine students

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Occupational swelling is defined as edema of lower limbs occurring after a long period of standing or sitting. Its presence is often independent of cardiovascular, renal, hepatic or other body fluid retention causing disorders. It was shown in a literature, that working time and severity of edema are highly correlated, however its incidence among medicine students has not been yet investigated.

Investigation of lifestyle influence on frequency and severity of lower limbs swelling formation among medicine students.

Analysis of survey conducted among students of Polish medicine universities. Questions present in a questionnaire encompass known and possible risk factors. Alongside the survey, we gathered the measurements of students calves circumferences at the beginning and the end of the day.

Survey shows that 31% out of 245 responders experience occupational swelling. 55% of students complaining about edema make the increased severity conditional upon classes attendance. The presence of the oedema diagnosed according to the survey results was confirmed in the objective evaluation by the means of the leg circumference measurement performed after waking up and in the evening hours.

Occupational swelling is common with medicine students not burdened with other risk factors. Edema severity is increased by the classes duration and timetable arrangement.

Stress-induced cardiomyopathy in oncological patient

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Takotsubo syndrome is rare acute heart failure syndrome affecting 2-3% of people. 90% occurs in women, mostly postmenopausal. It can be induced by physical or emotional trigger factor.

67-years-old woman with colon cancer was admitted to the hospital with sub-obstructive symptoms (26.05.2017), subsequently laparotomy was performed. During surgery patient needed continuous iv catecholamines infusion due to hypotonia. One-day after the surgery, she demonstrated acute circulatory and respiratory failure, cardiacarrest (VF mechanism) and cardiogenic shock. She was transferred to cardiology ward with diagnosis of ST-Elevation myocardial infarction (STEMI) of anterior wall. Coronary angiography did not reveal significant stenosis in coronary arteries. Pulmonary embolism was excluded in angio-CT. In echocardiography (TTE) there was generalized hypokinesis with LV EF reduced to 10-15%. Due to cardiogenic shock, IABP was utilized. Patient was diagnosed with MI type 2 and transferred to intensive care unit. Four weeks later in control TTE, the LV EF was 60% with mild mitral and trigeminal valve regurgitation. During following months, therecurrence of cancer was diagnosed and she received oncological treatment. At one-year follow up, woman reported fatigue, dizziness, malaise and presyncope symptoms. Holter-ECG performed in outpatient, revealed short episodes of 2nd degree AV block, Mobitz II and she was qualified for pacemaker implantation. The patient had urine stagnation(09.2018). Histopatological exam showed urothelial cancer. Her cardiology status remains stable, she is during chemotherapy.

Takotsubo cardiomyopathy is characterized by symptoms imitating acute coronary syndrome, so it can be easily mistaken and treated as such in the initial period. In this case the trigger factor could be surgical procedure, elevated catecholamines or mental stress associated with cancer.

Keywords: takotsubo cardiomyopathy, colon cancer

Scary heart attack, scarier the consequences

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Postinfarction aneurysms is one of many complications of transmural myocardial infarction (MI). It occurs in circa 10% of patients after MI.

The case of 66 years old female with postinfarction aneurysm of left ventricle. The patient with coronary arterial disease suffered the STEMI in 2018. She was treated with PCI on LAD and implanted with 3 drug eluting stents. After 2 months she was urgently rehospitalised with symptoms suggesting progressive decompensation of circulatory system, classified with NYHA scale III/IV and left ventricle aneurysm. Multiple laboratory abnormalities were detected. Transthoracic echocardiography reaffirmed the enormous acineto-dyskinetic aneurysm (LVEDF=272 ml) containing ½ distal part of interventricular septum, apex, inferior, anterior and lateral wall which is compressed to the right ventricle side. The 4 chamber view revealed 8mm ventricular septum defect. Left ventricular EF equated around 24%. Furthermore second degree mitral valve and severe tricuspid valve regurgitation with echocardiographic signs of pulmonary hypertension. MRI further reaffirmed the diagnosis. The patient was consulted numerous times with cardiosurgical team from Clinic in Zabrze regarding possible heart transplant to no avail. Afterwards, left ventricular plasty, mitral valve plasty and tricuspid valve plasty were performed. After the procedure the patient passed away.

This case presents us with a problem that even treated MI cannot exclude the possibility of further life-threatening cardiac problems. We would like this case to be a stepping stone for the analysis of cardiac aneurysms and the risk involving those cases.

Keywords: AMI, aneurysm, postinfarction, complications

Double ventricle, double trouble?

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Double chambered left ventricle is a congenital anomaly, in which an additional septum separates the LV. It often exhibits mixed criteria of cardiac aneurysm and diverticulum and can occasionally cause ventricular hypokinesia.

We would like to present a case of 21 years old male, whose echocardiography imaging shown a division of LV. The proximal, functional part presented correct LVEF value, without significant structural defects. The distal portion consisted of septum with multiple fenestrations and lacunas and hypokinetic cardiac wall. These small openings made flow between the two parts of the ventricle possible. Despite this condition the patient reported none of the usual cardiac symptoms and presented physiological ECG. The usage of any medication was also denied. A regular diagnostic of potential arrhythmias and follow-up examination for further progression of aberration was recommended.

This case is an example of an incidentally detected heart anomaly, which could be a cause of potentially dangerous complications in the future. It shows that echocardiographic imaging even in young patients, without any visible risk factors can prove useful in regressing the incidence rate of arrhythmias or myocardial infarctions. Transthoracic echocardiogram could be one of the tools for screening of the patients with congenital disorders. We hope that this case will be a voice in a discussion regarding those topics.

Keywords: congenital, ventricle, left, double, chambered

Extraordinary effectiveness of monoclonal anti-IgE antibodies called omalizumab (generic name Xolair) on patient with acute bronchial asthma and chronic sinusitis with polyps – case report

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Drug program with omalizumab is available for patients in Poland. NFZ refunds this therapy for patients with acute allergic uncontrolled asthma, who are not responding to treatment based on high doses of inhaled glucocorticosteroids and other drugs helping controlling disease.

Woman, age 42, who suffers from acute bronchial asthma, chronic sinusitis with polyps and known allergy to NSAIDs, fulfills criteria being included in omalizumab program in Chair and Clinical Department of Internal Diseases, Allergology and Clinical Immunology at Medical University of Silesia, Katowice, Poland. Before therapy patient needed twice a surgery because of aggressive chronic sinusitis with polyps. During inclusion to program patient had intensified rhinological disorders. After one week from receiving first 600 mg dose of omalizumab the patient reached significant improvement of nasal patency and reversion of olfaction. ACT and ACQ, spirometry, titre of IgE antibodies, Asthma Quality of Life Questionnaire (AQLQ) are tests which monitor a disease treatment in 16th week of therapy. Additionally performed tests to verify a remission of polyposis using Total Nasal Symptom Score TNSS and CT scan of sinus which confirmed regress. These tests' results prove effectiveness of omalizumab.

This case report confirmed effectiveness of omalizumab in biological treatment of acute allergic bronchial asthma and in inflammation of sinus. Remission of symptoms in upper and lower respiratory tract was importantly higher than in treatment other patients in our Clinic. This case shows that there is a possibility of existence of factors which could determine effectiveness of biological treatment.

Keywords: acute bronchial asthma, allergic asthma, nasal polyposis, polyps, chronic sinusitis, Xolair, omalizumab, biological treatment, monoclonal antibodies, IgE,

From dentist to oncologist – a case report of 14 years old boy with Burkitt lymphoma

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Non-Hodgkin lymphoma (NHL) has third place of incidence in children with malignant neoplasm, after leukemia and CNS tumors. Approximately 50% cases are lymphomas from type B cells. This type of lymphoma is also Burkitt lymphoma, which the most often location is abdomen.

We present a case of 14 years old boy, who was primarily consulted by dentist, due to inflammation in right lower part of dental curve. He was send to maxillo-facial surgeon, where MRI of facial skeleton was performed. It showed a pathological mass in body of mandible, resorption of this bone and enlarged group IB lymph nodes. Burkitt lymphoma was suspected. Boy was admitted to Pediatric Hematology and Oncology Ward in Zabrze, the aim was further diagnostic. Tumor was hard, indolent in physical examination. Histopathological examination proved diagnosis. MRI of abdomen showed extensive infiltration in gastric and ileum wall and tail of pancreas. Third clinical stage was determined. Chemotherapy was conducted (cycles of chemotherapy: COP, 2 x COPADM, CYM), later due to lack of complete remission decided to change protocol and use the monoclonal antibody rituximab. Imaging studies like MRI and PET scans showed remission of the disease after 5 months of therapy. Observation period is now 9 months.

In this case the cooperation between dentist, maxillo-facial surgeon, radiologist and oncologist was really significant due to untypical localization of neoplasm and infiltration in abdomen. Due to advanced clinical stage of Burkitt lymphoma the early institution of chemotherapy was necessary to reduce main tumor in mandible and associated lesions in digestive tract.

Keywords: Burkitt lymphoma, chemotherapy

Triad of sportsmen as disorders occurring in women practicing sports - food therapy

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The triad of sportswomen is a relatively new disorder. Its components are three major diseases, such as eating disorders, secondary menstrual failure and osteoporosis. The triad is a serious problem of the 21st century, but it was first described in 1992 during the American College of Sports Medicine workshops. This triad is a group of disorders correlated with eating disorders, lack of menstruation and osteoporosis. This is accompanied by other disease states. It is estimated that an average of 3 out of 10 athletics athletes will be affected by such disorders, however, these are data that would require confirmation. Among the disorders called the Triad of Sportsmen, we can mention three main diseases: anorexia nervosa, secondary amenorrhea (Amenorrhea) and osteoporosis.

The main goal of the work is to show the serious problem of the 21st century, which is becoming more and more common, and because civilization is constantly evolving. The second goal was also to provide nutritional therapy, which is based on all the assumptions of nutrition in sports nutrition, to show how important is the selection of appropriate food products and show the proper nutrition of a professional athlete on the example of the patient (case report).

The triad of sportsmen is a group of diseases that require individual approach to the patient, because it applies only to women.

Keywords: Triad of sportsmen, eating disorders

Fahr's syndrome as a result of a disturbance in calcium metabolism – case report

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Fahr's syndrome is a rare, genetically dominant, inherited neurological disorder which characterized symmetric and bilateral calcifications of basal ganglia, cortex or dentate nucleus. This condition has a wide range of clinical manifestations, especially involuntary movements and neuropsychiatric symptoms like dementia and mood disorders. This disease affects people in the fifth decade of life.

A 66-year-old female was admitted to the Neurological Department in Zabrze due to involuntary movements of the left, upper and lower limb, which were intensifying at night. The patient suffered from diabetes type 2 and thyroid nodus. CT examination revealed calcifications in brain. The laboratory tests showed a high level and phosphate and low level of calcium. Fahr's syndrome was suspected. Psychological examination and EEG were performed and revealed abnormalities which are part of Fahr's syndrome. Haloperidol and microelements supplementation were implemented. The condition of the patient was improved.

Disorders in neurological examination and abnormalities in calcium and phosphate levels required a detailed diagnosis. This case shows that medication and supplementation microelements are really important in process of recovering. Moreover, Fahr's syndrome is an interesting example how disturbance in electrolyte level influences function of nervous system.

Keywords: Fahr's syndrome, hypocalcaemia, calcification

The way to a man's heart is through his stomach –how getting burned may lead to takotsubo syndrome

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Cardiomyopathy takotsubo (TTC) is a quite rare type of transient heart insufficiency which resembles an acute coronary syndrome but without hemodynamically significant changes in coronary arteries. Most patients are postmenopausal women, however this cardiomyopathy is occasionally seen in man. Chest pain, increased markers of myocardial necrosis and ischemic ECG changes, which are usually preceded by emotional or somatic stress, are observed in most patients.

In the case a man aged 81, with a suspicion of myocardial infarction (MI), was presented. He was admitted to the clinic of cardiology in Szczecin because of severe chest and upper back pain, which appeared after traumatic argument with his wife and getting burned during the dinner. In the medical history: persistent atrial fibrillation, hypertension, thromboembolism and hypercholesterolemia. On ECG AF with HR 55/min, ST-segment elevation in II,III,avF and V2-V5. An emergency coronarography was done. There were no significant changes in coronary arteries. Aortic dissection was excluded in CT. Troponin T=0,743 ug/l, CK-MB=34 U/l and proBNP=772 pg/ml. In echocardiography apical akinesis and EF 40% were observed. Hospitalization with no complications. Went home after 8 days in good medical state.

Proper medical interview and laboratory tests enable differentiation TTC and MI. Previously, the syndrome went undetermined because of insufficient knowledge about the disease and unclear diagnostic criteria. It is necessary to do more research in order to understand better pathogenesis of TTC.

Keywords: acute coronary syndrome, cardiomyopathy takotsubo, male patient

Presence of multiple cancers in a patient in the seventh decade of life

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Neurofibromatosis type 1 is a group of genetic diseases inherited autosomal dominant characterized by the presence of neoplasms of nervous origin. Pheochromocytomas are a rare symptom of this syndrome.

The aim of our work is to present and analyze the case of a patient referred to the hospital to diagnose adrenal tumors found during ambulatory USG examination.

The data obtained come from the physical examination, subjective examination and the medical history of the patient treated in Klinika Chorób Wewnętrznych, Nefrologii i Endokrynologii Klinicznego Szpitala Wojewódzkiego Nr 2 w Rzeszowie.

A 69-year-old man was admitted to the Clinic for the diagnosis of adrenal tumors and weight loss over the last 6 months. In the physical examination, numerous nodules, patches cafe au lait skin scattered throughout the body, and signs of emaciation were noticed. Additional tests revealed a tumor of the left lung infiltrating the chest wall, bilateral adrenal tumors, thyroid nodules, suspected tumor of the pyloric region and ampulla of Vater, a tumor of the rectal area. In biochemical results, among others significantly elevated ACTH, high blood cortisol values, elevated marker CA 125 and chromogranin A. Patient died before completion of the diagnosis.

In the described patient, ACTH-secreting lung carcinoma, adrenal pheochromocytoma was suspected, tumors of the gastrointestinal tract, thyroid nodules were diagnosed. Therefore, patients with skin changes suggestive of NF 1 should be subjected to periodic screening to exclude tumors in the preclinical phase.

Addicted from the first breath - neonatal abstinence syndrom

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NAS appear, when during pregnancy was exposition on intoxicating substances, which can make fetal addiction. Symptoms accompanying this syndrome characterize high variability, starting with excessive crying, through diarrhea, on severe breathing disorders.

The patient is a newborn male, born in 35+ 5/7 hbd by C-section, in good condition, APGAR 8/9. The mother is HIV+, HCV+, HBV+, treated with AVR drugs, with low viral load. Moreover, she has been in the methadone therapy program for 9 years. Due to a large amount of muco-frothy sputum and significant respiratory effort, the newborn was transferred to the incubator with 25% oxygen therapy. Because of growing respiratory problems, oxygen was increased to higher values, however, boy's condition did not improve. The child was very restless and irritable. In the second day, the patient was diagnosed with respiratory failure with right-sided pneumothorax. Due to excessive reactions to painful stimuli has been used sedation with sufentanil and then, morphine and midazolam. What is more, left-sided pneumothorax appeared. The USG examined cerebral haemorrhage. On the third day the condition was extremely severe - the multiorgan failure increased, the vital parameters were unstable. The child died in the morning.

The NAS hinders the first days of life, doctors often stay powerless when additional abstinence symptoms appear in addition to the other symptoms. NAS expect from us differentiation with other diseases which have similar progress. It is important that women should be educated about the effects of psychoactive substances and their impact on the lives of the smallest.

Keywords: neonatology, neonatal, addiction, NAS, abstinence, fetal, alcohol, methadone, toxicity, education



INTERNATIONAL MEDICAL CONGRESS OF SILESIA

SESSION OF CASE REPORTS NON-INTERVENTIONAL III

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An autoimmune set in men in early old age

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People who have developed an autoimmune disease are predisposed to developing subsequent diseases of this type.

A 74-year-old man was admitted to the hospital due to: weakness, polyuria, polydipsia, reduction in body weight (>8%) over a period of several weeks, and 4 days of fever. Prior to admittance, the patient has suffered from chronic heart failure, persistent atrial fibrillation (AF), hypertension. A physical examination showed among others normal body mass index, cardiac arrhythmia, vitiligo of the face, hands and feet, swelling and redness in the area of the left thigh. In biochemical tests performed on the day of hospitalization, clinically significant abnormalities were found: hyperglycemia (786 mg/dL), glycosuria, ketonuria, increased parameters of inflammation. The patient had normal lipidogram without using hypolipemic drugs. Using ultrasound an abscess in the tensor fasciae latae muscle in the left thigh was diagnosed. Late autoimmune diabetes of adults (LADA) was suspected. C peptide study was carried out which showed low concentration (0.49 ng/mL; n=0.78-5.19). Insulin therapy was given. Because of AF, the hormones of the pituitary-thyroid axis were marked. After obtaining high concentration of antithyroid antibodies the patient was diagnosed subclinical hypothyroidism chronic lymphocytic thyroiditis (CLT) with subclinical hypothyroidism. The patient was discharged after 23 days.

In an elderly patient with de novo diabetes, without metabolic syndrome, autoimmune diabetes should be suspected. In these patients, a thorough analysis of the possibility of coexist other autoimmune diseases is worthwhile (e.g LADA, CLT, vitiligo).

Keywords: autoimmune diseases, vitiligo, diabetes, hashimoto's thyroiditis

A 12-year-old male with rare adrenocortical carcinoma

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Adrenocortical carcinoma (ACC) is a rare tumor with poor prognosis, originating from adrenal's external cells. In children's population ACC compose just 0.29% of all child's tumors and 1.3-1.6% of all epithelial cancers. It is usually recognized before 5 year of age and more often in females.

A 12-year-old male was admitted to a hospital on October 25th, 2018 because of abdominal pain, loose stools and high level of liver tests. On examination he had acne on the face, pale skin, excessive pubic hair, palpable resistance under right costal arch about 6 cm, swelling on shank and scrotum. Laboratory investigation revealed high levels of liver tests, CRP. It also revealed high levels of adrenal hormones - cortisol, androstenedione and DHEAS.

Imaging study (USG, CT, NMR) showed mass in right part of abdomen 24x16x12cm, well vascularized, nonhomogeneous without any calcifications. ECHO showed a cancerous mass in VCI and in the right atrium which did not disturb heart beat. Metastasis to CNS and bone marrow was excluded. Tumor mass biopsy confirmed the diagnosis - ACC. Patient was classified as stage III of ACC due to no signs of metastasis. Patient is treated with increasing doses of mitotane and according to program GPOH-MET 97.

ACC is a rare cancer but has specific symptoms that should be considered in diagnosis of virilization or other clinical manifestations of adrenal hormones disorders. As soon as diagnosis is confirmed, the early and proper treatment can be applied resulting in a improved prognosis.

Keywords: ACC, adrenocortical carcinoma, rare, 12-year-old

Food allergy as a potential cause of cachexia and false positive HIV test results

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Cachexia in infants can be caused by autoimmune disorders, infections and congenital abnormalities. Moreover, food allergy can become so severe that it causes growth retardation and malnutrition due to disability of the gastrointestinal tract to absorb nutrients. Allergy is also known to cause immunoglobulin related abnormalities that may influence test results. Cachectic infants must be screened for HIV as it is a common cause of the wasting syndrome in this age group.

A 8-week-old boy was admitted to the Pediatric ward in Wrocław because of cachexia. He was born in 40 hbd by natural labour with the Apgar score of 10 and weight of 3470 grams (g). The boy developed correctly in the first 5 weeks of his life and then started to lose weight. On admission he weighed only 30g more compared to birth weight. The patient vomited, refused to ingest food and had diarrhea. He was cachectic and diagnostic tests showed leukocytosis, anemia and increased level of immunoglobulin G. Moreover, both of HIV ELISA tests and Western blot indicated HIV infection. Doctors concluded that HIV antibodies must have been of maternal origin. However, parents' results were negative. The boy was then admitted to Pediatrics and Infectious Diseases Clinic for further testing. The diet was changed into amino-acid based infant formula, which resulted in a gradual increase of the boy's weight and what is more, the anti-HIV antibodies and HIV RNA tests became negative and lymphocytes CD4 count was correct.

This case report is the first one ever to point out that food allergy may cause cachexia and potentially induce immunoglobulin related abnormalities which may contribute to false positive test results.

Keywords: Cachexia, HIV, false positive results, Food allergy

Problems in caring for a newborn baby in a home environment - case report

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Mother's and baby's hospital stay after childbirth becomes shorter.

The main aim is a newborn being discharged in a good general condition at home. Despite the newborn's good general condition by the discharge at home, newborn's condition in later days may worsen. Mothers are not always educated about observing the newborn's general condition after leaving the hospital. Described case shows, that in a newborn being discharged from the hospital is in a good general condition but in few days after returning home such condition may become worse. A newborn discharged in the 5th day of life in a good general condition, returns in the 10th day of life to the newborn pathology department due to jaundice spread with the level of bilirubin- 20,8 mg/dl.

Mother's and parent's education about newborn care plays a key role. Also quickly mother's and midwife's reaction is important. How important is a newborn care at home? The main aim of the case report is to show that a newborn care after leaving hospital is as important as in a hospital.

Keywords: Newborn baby, postpartum care, midwife care, phototherapy, hyperbilirubinaemia, anaemia

Ambiguous symptoms as the manifestation of the malignant tumor

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Germ cell tumors are relatively rare, malignant tumors of the developmental period. They can be found in the median line of the body. Although the localization determines the clinical picture, the symptoms may be sometimes misleading.

A 3-year-old boy presented with failure to thrive, polydipsia and polyuria was admitted to the Department of Pediatric Gastroenterology for observation. Central diabetes insipidus was diagnosed and oral desmopressin therapy was implemented without effect. At the age of 5, the boy was admitted to the Department of Pediatric Neurology in Wrocław because of the deteriorating visual acuity of the right eye and poor general condition. MR revealed a mass lesion affecting the intersection and initial sections of the optic nerves and the hypothalamus, penetrating into the III chamber. Chemotherapy and radiotherapy were ordered, which resulted in significant regression. During the treatment, alarming ophthalmological symptoms appeared. Thus, an additional cycle of chemotherapy was given and radiotherapy was implemented. Treatment did not bring the expected results. Thus, 6-month vinblastine therapy was implemented and gradual, slight tumor reduction was observed. One year after the end of the therapy, control tests showed tumor remission in MR. Desmopressin was discontinued. Slight increase in serum creatinine was noticed. The boy remains under the constant care of the Department of Bone Marrow Transplantation, Pediatric Oncology and Hematology.

Growth impairment and polyuria are symptoms requiring careful differential diagnostics as they might be nonspecific manifestations of the central nervous system tumor.

Keywords: paediatric nephrology, tumor, central nervous system, diabetes insipidus, polydipsia, polyuria, growth impairment

Diagnostic difficulties related to abdominal pain

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Suddenly occurring severe somatic abdominal pain, the severity of which may increase within a few days, may suggest an acute disease requiring rapid medical management. The case below suggests an acute pancreatitis, but detailed analysis of the diagnostic examinations provide an unexpected diagnosis.

A 63-year-old man due to severe abdominal pain radiating to his back and fever was admitted to hospital for a further diagnosis. On the basis of abdominal ultrasound, followed by computed tomography of the abdominal cavity and pelvis, edematous acute pancreatitis was diagnosed and exploratory laparotomy was performed. After reassessment of the patient's imaging examination, the pancreatic tumor 30 mm in diameter, focal change of the 4a segment of the liver and right subcostal region were evaluated. Histological examination of the right subcostal focal lesion showed infiltration of glandular carcinoma. The patient was referred to a pain treatment clinic and an oncological center. Only after about 7 months the patient was suspected of pancreatic cancer with numerous metastases.

Acute pancreatitis precedes the diagnosis of pancreatic cancer in 13% of patients. Many of the symptoms in these patients coincide with this case. Examples include severe abdominal pain, gastrointestinal obstruction, elevated serum CA19-9, and only slightly elevated serum lipase and amylase. Recently it has been described that acute pancreatitis may be an early symptom of pancreatic cancer, but these are rare cases. Most patients may be misdiagnosed as acute pancreatitis and delayed in cancer diagnosis.

Cat scratch disease in a 14-year-old girl - case report

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Cat's scratch disease is a bacterial zoonotic disease caused most often by *Bartonella henselae*. Child usually becomes infected after being scratched by a host animal, mainly by young cats. The disease occurs in the form of local lymphadenopathy spontaneously subside to 8-12 weeks.

A fourteen-year-old girl admitted to the Clinic due to unilateral enlargement of the neck lymph nodes, fever to 38.8°C and right ear pain. On admission, in addition to the enlargement of the neck lymph nodes on the right side, the presence of secretion in the right external auditory canal and a linear scar on the skin of the right arm were found. In the additional tests no irregularities were found. The test results for toxoplasmosis, infectious mononucleosis, tuberculosis and CMV infection were negative. Ultrasound examination of the abdomen revealed hepatosplenomegaly. Based on the clinical picture, lymphadenopathy on an infectious basis was diagnosed and amoxicillin/clavulanic acid was included in the treatment. Due to the lack of improvement after the treatment, the diagnostics of *Bartonella henselae* infection was extended and the treatment was modified (ceftriaxone+amikacin). Symptoms subsided and the patient was discharged home.

The picture of a cat scratch disease is often unspecific, which requires a wide panel of tests necessary to exclude other diseases that may occur with local lymphadenopathy. The literature describes cases of coexistence of other diseases in the course of cat scratch disease. The described case indicates the importance of properly conducted medical history, which allows accurate initial diagnosis.

Keywords: cat scratch disease, zoonosis, pediatrics, infectious diseases

Gout or thrombosis- what caused the pain?

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Gout is a form of arthritis characterized by recurrent attacks of joint pain which typically comes on rapidly. Redness, tenderness and swelling in the joint happen due to elevated levels of uric acid in the blood and in the joints. Hiperuricaemia, concentration of uric acid more than 6.8 mg/dl is very often observed in patient suffering from goat.

A sixty year old men reported to General Practitioner, due to swelling of both feet, calfs and bruising of toes. The inflammation was more severe in the right foot. Initial examination has shawn that, patient had sedentary lifestyle, the alveolar murmur was normal, there was no pulmonary stasis. Due to the unclear clinical course, the uric acid and D-dimer tests, were ordered and the patient was referred to the hospital. In laboratory tests, uric acid was increased- 7.3mg/dl, while D-dimers raised to 1363 ng/ml, futhermore, OB was 81, what could suggest inflammatory process. The patient immediately received anti-inflammatory drug- Dicloberl, allopurinol. After admission to the hospital, the patient reported lessening symptoms. The lower extremities were without edema, the pulse on the lower limbs was preserved, the Payra symptom was negative. Due to the increase of D-dimers to 1500 ng/ml, deep vein thrombosis was suspected, therefore a Doppler ultrasound was performed, which excluded earlier assumptions.

Gout may not always be hand in hand with hyperuricaemia, limiting itself to the large toe of the foot. In differential diagnosis, one should remember about thrombosis, which gives similar symptoms, and if not recognized quickly enough, may can be way which lead to death of the patient.

Keywords: Gout, Thrombosis, Deep vein thrombosis, Uric acid, General Practitioner, USG Dopper, D-Dimers

Acute Respiratory Distress Syndrome caused by Influenza virus A(H1N1) infection in patient treated for Follicular Lymphoma

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Follicular lymphoma (FL) is an indolent malignancy of germinal center B cells with varied incidence across racial groups and geographic regions. Both FL and its treatment cause suppression of the immune response which contributes to the increased susceptibility to infections, including influenza. Infection of the lower respiratory system with acute respiratory distress syndrome (ARDS) remain the most serious consequence of this viral disease with high rate mortality.

We present a case of a 29-year-old man with stage IV FL vaccinated against influenza a few months earlier. After the second course of immunochemotherapy (R-CVP) he was admitted to the department with fever, dyspnea and hypoxemia, accompanied by decreased breath sounds over lower lobe of the left lung. His white blood count (WBC) was 3.32 G/l and CRP 245 mg/l. Despite of empiric antibiotic therapy, patient's condition has worsened. Chest X-ray revealed progression of inflammatory infiltration. RT-PCR test for influenza A(H1N1) was positive. The patient developed ARDS and required mechanical ventilation. He was referred to Intensive Care Unit. After treatment with oseltamivir the symptoms subsided. After this episode the patient continued immunochemotherapy against FL obtaining complete remission.

Vaccination for influenza, however recommended, may not be effective in immunocompromise patients with lymphoproliferative disorders. Patients with pneumonia should be diagnosed for influenza that enable effective targeted treatment with oseltamivir.

Keywords: Follicular Lymphoma, ARDS, Influenza virus A(H1N1), vaccination, oncology

54 years- old patient with stroke and ECG changes- case report

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Myocardial ischemia is the clinical cause of acute coronary syndromes. The diagnostic criterion may be an increase in myocardial necrosis markers and accompanying ECG changes. Ischemic or haemorrhagic stroke is also a consequence of ECG changes.

A 54 years- old patient with atypical acute coronary syndrome was referred to the Department of Cardiology because of suspicion of myocardial infarction on the basis of ECG changes. The coronagraphy was performed despite normal left ventricular contractility in ECG due to numerous risk factors (cigarette smoking, arteriosclerosis).

The results of this study did not show any narrowing of the coronary arteries. Where did the ECG picture come from? Two weeks earlier, the patient had undergone left carotid artery endarterectomy. After 4 days thrombosis occurred in this artery and the consequence was a stroke with right-sided paresis. The follow-up of ECG records (2 from the Department of Neurology and current from the Department of Cardiology) led to the conclusion that the ECG image, which was the reason for referring the patient to the Department of Cardiology, was a consequence of myocardial perfusion changes accompanying a stroke and not an image of acute coronary syndrome.

Awareness of the fact that many neurological diseases (stroke) are accompanied by changes in ECG records (including those typical of myocardial infarction) requires vigilance and the need to examine each case individually (a well collected interview, ordering appropriate tests). Distinguishing between ECG changes resulting from a stroke and those caused by myocardial infarction is essential for further clinical management.

Keywords: stroke, ECG changes, image of acute coronary syndrome

Organs complications resulting from varicella as an immediate death cause in a 4,5-year-old patient

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Varicella, being a viral disease, usually takes a mild course in children whereas its more severe forms and complications are typically observed in adolescents, adults, neonates, and in patients with immunity disorders.

A 4,5-year-old boy of healthy parents was born after a second pregnancy, first delivery (Apgar 10/10). In the history, several infections of the upper respiratory tract with bronchial obstruction. Within 6 months before varicella occurred, he hadn't gone through any disease. First symptoms of varicella were typical – slightly higher temperature and moderate intensity rash. On the 5th day, the boy started to complain about hard-to-localize pain. After the first medical consultation the patient was sent home but within a few hours his condition worsened. He was transported to the clinic in a very severe condition, where, despite the efforts of doctors, he died. The autopsy revealed that the cause of death were extensive necrotic-inflammatory changes in the liver, lungs and myocardium, complicated by cerebral edema in the course of systemic infection.

Severe complications may occur also in a healthy child, which is worth to remember. In Poland, a vaccine against varicella is still on the list of recommended vaccines. Classifying the vaccine against varicella as an obligatory one will significantly reduce the percentage of severe forms of this disease.

Keywords: varicella, organ complications, child, death

Insidious onset of pulmonary embolism in patient with unrecognised V Leiden factor mutation

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Pulmonary embolism(PE) is a life-threatening demonstration of venous thromboembolism. The mortality rate of untreated cases of PE is stand at 30%. The most important risk factors are: deep vein thrombosis, surgery, cancer, heart attack and haemostatic disorders, such as V Leiden mutation. The incidence of suffering thrombophilia is approximately 16,3/100 people per year and is asymptomatic in many cases.

A 49 year-old women with shortness of breath lasting a week reported to her General Practitioner. Except for dyspnoea and fatigue, no additional symptoms were reported by the patient. Physical examination revealed HR= 80, BP 120/80, in ECG- sinus rhythm without signs of right-sided heart failure. The patient was 170 cm tall, weights 99 kg (BMI=34,26) and has varicose veins of both lower limbs. Woman's medical comorbidities: postmenopausal hormonal therapy, ovarian tumor resection and recent depression episode. Hypertension and heart attacks were not recorded. Due to highly elevated D-dimer (>7000ng/ml), the patient was referred to a hospital as an emergency for further diagnosis and assessment. Angio-CT revealed embolism of both main pulmonary, lobar and interlobar arteries. Further investigation revealed positive factor V Leiden mutation.

PE should be considered in the differential diagnosis of dyspnoea, even the minor manifestation. The patient may not present obvious symptoms and the only sign of disease might be elevated D-dimer level.

Keywords: Pulmonary embolism, Mutation of V Leiden factor, Deep vein thrombosis, D-Dimers

Acquired hemophagocytic syndrome induced by cytomegalovirus infection. Case report

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We present the case of a patient with an acquired hemophagocytic syndrome induced by cytomegalovirus infection.

A 58- year- old patient, feverish for two months with high inflammatory parameters, microcytic anaemia, low reticulocytosis, hyperleukocytosis, significantly higher cholestatic parameters, with fluid in the pericardium and pleural cavities was admitted to the haematological department. The examination showed very high ferritin levels > 100000 ng/ml with medicore hypertriglyceridemia, immunodeficiency (CD16, CD16/ CD56 cytotoxic cells deficiency), decreased IgG levels, and elevated IgG and IgM anti- CMV antibody titres and the presence of cytomegalovirus (CMV- DNA positive) in the blood. The patient partially met the criteria for the diagnosis of the hemophagocytic syndrome, and at simultaneously no other cause of very high ferritin concentration was found. The treatment involved gancyclovir and intravenous immunoglobulin substitution, supplemented with protein and electrolyte deficiencies. The symptoms of the syndrome slowly began to subside, the level of ferritin decreased significantly. The slow increase in hemoglobin and normalization of leukocytosis was observed. A quantitative CMV-DNA study did not show the presence of cytomegalovirus. The patient was discharged in a good general state and still remains asymptomatic.

The hemophagocytic syndrome may be congenital (symptoms are manifest in early childhood) as well as acquired. This syndrome is associated with a virus infection, e.g. Epstein-Barr virus, cytomegalovirus, or parainfluenza virus. It is a difficult to diagnose disease with high mortality.

Keywords: Hemophagocytic syndrome, cytomegalovirus, gancyclovir

Am I a Woman

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The case concerns a 25-year-old female patient presents with massive bleeding during sex. Upon further interrogation, she reveals that she has never seen her period. She is admitted to department of Gynaecological Endocrinology in University Clinical Center in Katowice.

Physical examination shows normal breast development, sparse pubic and axillary hair, gonads palpated in inguinal canals. Speculum examination revealed a blind, 8cm-long vagina with normal mucosa, but the uterus and its appendages were not palpable during the bimanual examination. Apart from bleeding, the patient is in good physical condition.

Laboratory tests revealed extremely high level of total testosterone – 8,410 ng/dl (normal range: 0,08-0,48 ng/dl), free testosterone – 50, 37 pg/ml (normal range: 0-2,85pg/dl), elevated DHEAS, LH and AMH (>46 ng/ml, in her age normal range is 0,890-9,85 ng/ml).

Further investigations including; pelvic MRI and ultrasound, confirmed the patient has no uterus and revealed no ovaries, hypoplastic vagina and distorted gonads (probably testicles) in both inguinal canals.

The patient underwent genetic testing: she has 46 XY karyotype.

Patient has never been diagnosed due to primary lack of menstruation, even though an ultrasound examination revealed lack of uterus few years ago.

Worrying aspect of this case is that nobody; paediatrician or general practitioner, has ever got interested with this problem. Even palpated testicles have never disturbed any doctor or patient's parents.

Keywords: disorders of sexual differentiation, DSD, complete androgen insensitivity syndrome; CAIS, Primary amenorrhea.

58-year-old female with Takotsubo cardiomyopathy - a case report

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Takotsubo cardiomyopathy (TCM) clinical course mimics acute myocardial infarction (MI), typically triggered by emotional or physical stress. TCM is defined by the left ventricle (LV) systolic dysfunction exceeding beyond the territory supplied by a single coronary artery, which may normalize within days or weeks. Unlike patients with MI, patients with TCM have a normal coronary angiogram (CA).

We present a case of a 58-year-old female, who was admitted to the hospital with a suspicion of MI with ST segment elevation (STEMI). She had past medical history of Sjogren syndrome, pulmonary sarcoidosis, depression, hepatitis type B virus infection, thyroid operation. Before admission, she experienced the stressful situation (friends funeral), followed by a chest pain radiating to the left arm. Performed electrocardiogram (ECG) showed STEMI of the inferior wall, CA didn't reveal any abnormalities. Laboratory tests showed increased levels of high sensitivity troponin T (0,152 ng/ml, N<0,014), and N-terminal pro brain natriuretic peptide (NT-proBNP, 1424 pg/ml, N<125). Echocardiography revealed decreased global LV contractility with ejection fraction of 45% and LV apical segments akinesis. TCM was diagnosed - ramipryl, bisoprolol and antiplatelet therapy were applied. During the hospitalization normalization of LV function and MI biomarkers was observed. After five days, the patient was discharged home with recommendation of calm lifestyle and abovementioned pharmacotherapy.

Despite uncertain pathomechanism causing TCM, it is important to consider it in MI differential diagnosis.

Keywords: Takotsubo cardiomyopathy, myocardial infarction, chest pain

Post-transplant lymphoproliferative disorders (PTLD) in solid organ recipients – description of two cases

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Post-transplant lymphoproliferative disorder (PTLD) is a rare complication of both solid organ and hematopoietic stem cells transplants. The identified risk factors include: EBV infection, type of immunosuppression, age and HLA type. Reduction of immunosuppression regimen with immunotherapy is the most common strategy of treatment. We present two cases of PTLD after renal and liver transplantation.

A 65-year-old woman with end-stage kidney disease and 11 years follow-up after kidney transplantation, was admitted to the hospital with night sweats and fatigue. The CT showed enlarged lymph nodes throughout the body. Pathological examination of a lymph node revealed diffuse large B-cell lymphoma (DLBCL) CSIIIB. The patient received 8 cycles of immuno-chemotherapy according to R-CHOP protocol, with reduced doses of chemotherapy due to prolonged pancytopenia, followed by radiation therapy of the residual disease. Finally, the patient achieved complete remission (CR).

A 49-year-old man after a liver transplantation performed 8 years before due to liver cirrhosis in the course of chronic hepatitis B, was referred with headache on the right side and buccal mucosa numbness. The CT showed the infiltration in the neck, stomach and multiple enlarged lymph nodes. Histopathology examination revealed DLBCL Burkitt-like CSIII. After 4 cycles of immuno-chemotherapy according to R-CODOX/R-IVAC protocol he remains in CR.

Despite a good response to treatment, the prognosis in patients with PTLD is serious and associated with a high risk of death. In the presented cases, immuno-chemotherapy allowed to achieve CR.

Keywords: lymphoma, transplant, immuno-chemotherapy

Severe Acute Graft-Versus-Host Disease Following Tandem Autologous Stem Cell Transplantation for Multiple Myeloma – Case Report

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Acute graft-versus-host disease (GVHD) is a common and serious complication of allogeneic stem cell transplantation (allo-SCT) and involves skin, liver and gut. A similar syndrome has also been reported after autologous stem cell transplantation (ASCT). Its termed autologous GVHD (auto-GVHD) and may result from immunological imbalance with creation of self-reactive T-cells. Herein, we present a case of acute and severe auto-GVHD in a 61-year-old female who underwent tandem ASCT for multiple myeloma.

After VTD regimen she achieved partial response in July 2017 and underwent first ASCT in Jan 2018 with no complications. Due to incomplete response she had second ASCT in April 2018 and this time procedure was complicated by pneumonia with good response to antibiotics. On day +25 she developed skin rash and the results of cutaneous biopsy were in line with diagnosis of GVHD. The other organs were not involved. She received systemic and local corticosteroids with transient response. On day +100 patient was urgently admitted with gastrointestinal symptoms presenting as persistent diarrhea, poor appetite and weight loss. GVHD exacerbation with gut and liver involvements was confirmed. The immunosuppressive therapy was initiated, however the disease persisted. A severe variant of steroid-resistant GVHD was diagnosed. As a consequence, cytomegalovirus reactivation has been demonstrated leading to pancytopenia and transfusion-dependence. Finally, patient expired due to infectious complications.

Auto-GVHD is an extremely rare complication after ASCT. The treatment does not differ of that for patients after allo-SCT. Prognosis is poor despite therapy.

Keywords: multiple myeloma, autologous graft-versus-host disease, autologous hematopoietic stem cell transplantation

A case of toxic epidermal necrolysis caused by allopurinol

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Toxic epidermal necrolysis (TEN) is a type of severe skin reaction. Together with Stevens–Johnson syndrome (SJS) it belongs to spectrum of diseases, with TEN being the most severe. The main triggers of TEN are medications, including allopurinol. Mucocutaneous tenderness, erythema and epidermal detachment of over 30% body surface area (BSA) are characteristic features.

A 59-year-old man was admitted to the Department of Dermatology, Venerology and Allergology in Wrocław urgently due to generalized skin and mucosal changes suggestive of TEN which appeared a few days before the admission. On admission massive erosions on the oral mucosa, conjunctivitis and generalized erythematous rash were observed. The patient reported drug intake (allopurinol) for gout exacerbation for 14 days. Immunoglobulin therapy (Privigen 120g for 3 consecutive days, empiric antibiotic therapy, iv glucocorticoid pulses, cyclosporine (Equoral 200-0-100 mg) and liquid high-protein diet were implemented. Allopurinol therapy was discontinued. Due to the increase of hypoalbuminemia and peripheral edema 20% iv albumins were given. As a result of the administered treatment significant improvement of the mucocutaneous lesions as well as general condition of the patient was obtained. He was discharged with full recovery. Patient remains under constant care of the Department of Dermatology and Venerology in Wrocław.

TEN is life-threatening disease caused mainly by drugs, including allopurinol. Early diagnosis, discontinuation of the suspected drug intake and proper topical and systemic treatment are crucial for the patient survival and successful treatment result.

Keywords: pruritus, allopurinol, erythroderma

Nephrolithiasis in 8- year-old patient caused by consumption of high doses of Vitamin C and D

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Vitamin C (ascorbic acid), an essential nutrient found in fresh fruits and vegetables, is the most effective antioxidant in human organism. Vitamin C has a number of important functions in the body like contributing hormone regulations, activation of sympathetic nervous system, improving ability of immune system. Vitamin C has been widely applied in the prevention and treatment of common cold or upper respiratory tract infections. Therefore is one of the most popular dietary supplement among patients. Vitamin D is also known with its beneficial role in child's healthy development.

The aim of this study was to present case of a patient admitted to the Department of Pediatrics in Zabrze because of acute gastroenteritis.

On admission the 8-year old patient was also diagnosed with dysuria. The urinalysis and conducted ultrasound (US) examination didn't reveal any abnormalities that time. The child was discharged from the hospital and directed to nephrological unit. After 4 weeks controlled US was carried out and showed 3 hyperechogenic structures of 3 mm size, located in upper, middle and lower renal calyces of right kidney. The final diagnosis was nephrolithiasis.

Expanded history revealed that patient was supplied with high doses of Vitamin C and D for several weeks in order to improve immune system.

With widespread fashion, easy available new trends of alternative exploitation of vitamins and lack of awareness about the influence of their overdosing, there are cases when potential therapeutic qualities of vitamins are unintentionally replaced with their toxic and damaging impact.

Keywords: vitamin C, vitamin D, supplements, nephrolithiasis

Effect of Diatec's & Hygiene on Oral Health

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A well-balanced, nutritious diet is important for good oral health and general health. The food we eat supplies the nutrients that the body, bones, teeth and gums need to renew tissues and help fight infection and disease. A hectic lifestyle where the source of nutrition is fast food, fat diets, excess sugar, and trendy supplements can have health consequences. Poor diet can contribute to gum disease, periodontal disease, and tooth decay. However, Diatec's alone doesn't define a good oral health, for oral hygiene has been considered among the best in preventing dental caries, gingivitis, periodontitis, and other dental disorders. Oral Hygiene and good nutrition have a synergistic bidirectional relationship; they are both essential in prevention, and maintaining a healthy oral cavity.

The aim of this study is to determine the the relationship between eating habits, hygiene, and oral health.

A self prepared questioner was rotated at dental clinics targeting patients of different age, eating, and hygiene habits. Survey was dissected into three sections with particular questions targeting the above topics respectively. The study was conducted in Poland (Silesian Region) and Lebanon (Middle East).

Results convene with aim of study. Patients that practiced a bad eating diet were associated with increased decay, dental restorations, and in several cases edentulousness. In contrast patients with a healthy Diatec; specifically sugar restriction, presented less decay, restorations, and very few cases of missing teeth. Oral Hygiene results where similar to Diatec's, however the effect of a good hygiene regime on oral health was not as discrete and potent compared to nutrition.

In conclusion, the food people choose, how often they eat it, and hygiene habits can affect their oral health; encouraging decay and associated dental diseases.

Keywords: Diatec's, Oral Hygiene, Oral Health, Decay, Dental Diseases

Premature constriction of ductus arteriosus – are the serious consequences inevitable?

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Premature closure or constriction of a ductus arteriosus is a rare phenomenon that may lead to severe cardiological complications of a foetus. Mostly it has been described secondary to structural lesions, maternal treatment by nonsteroidal anti-inflammatory drugs or corticosteroid. Numerous cases are defined as idiopathic. Fetal echocardiography reveals a lack of flow through the ductus arteriosus and secondary disorders such as chamber disproportion, tricuspid and pulmonary valve regurgitation.

This case report concerns a patient, gravida 4 in the 35th week of pregnancy, admitted to the hospital due to a suspected foetal heart dysfunction. During the echocardiography, the symptoms of Botall's duct occlusion or critical stenosis of the pulmonary valve were observed. Given this, a delivery through a C-section was recommended. A neonate was born in a good condition. Cardiological examination excluded suspected stenosis of the pulmonary valve. However, thickening of the front wall of the right ventricle and the ventricular septum were detected. Additionally, the electrocardiography revealed repolarisation disorder. The mother and neonate were discharged on the 9th day and asked to return for further cardiological observations.

Foetal echocardiography is an invaluable test to aid a proper diagnosis and control the condition of the heart in case of a suspected congenital heart defect. Premature closure of Botall's duct is associated with a severe prognosis and may lead to heart failure, hydrops, neonatal pulmonary hypertension, and even death. Strict surveillance helps determine the intervention time and, consequently, has a distinct benefit to child's condition after delivery.

Keywords: Premature constriction of ductus arteriosus, Nonsteroidal anti-inflammatory drugs, Foetal echocardiography

Beckwith-Wiedemann syndrome associated with 47,XXX/46,XX mosaicism: case study

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The Beckwith-Wiedemann syndrome (BWS) is rare overgrowth disorder with prevalence rate of 1 in 13700 newborns. This syndrome is caused by a genetic and epigenetic mutations of growth regulation genes, located on chromosome 11p15.5. Individuals with BWS are at increased risk of hyperinsulinemic hypoglycemia and cancers in childhood.

The triple X syndrome occurs in around 1 in 1000 girls, of which 10% is mosaic-like and proceeds with significant phenotypic variation. Serious consequences include impaired renal and urogenital function and premature ovarian failure.

I report a case of girl born in 35 hbd. with respiratory failure. Birth weight was 2200g. The examination revealed facial dysmorphic features, macroglossia and enlarged abdominal circumference. High alpha-fetoprotein level and hypoglycemia were detected in laboratory tests. The ultrasound scan showed ventricular septal defect and bilateral renal enlargement. At the 2nd month of age, the diagnosis of BWS was confirmed by genetic tests (karyotype: mos 47,XXX[24]/46,XX [6]). At the 4th month of age, the patient was hospitalized for hyperinsulinemic hypoglycemia (treatment with diazoxide). At the 5th month of age the hepatoblastoma was diagnosed. Subsequently total resection of the tumor was performed.

Currently, a 4,5-year-old girl remains under constant oncological and endocrinological care (still treated with diazoxide) and continues speech therapy.

The coexistence of the BWS and the trisomy X in mosaic form occurs extremely rare and is a challenge for modern medicine in the selection of treatment. Moreover the oncological vigilance and systematic monitoring of patients in the aspect of cancer are necessary.

Keywords: Beckwith-Wiedemann syndrome, Triple X syndrome, mosaicism, hepatoblastoma

PROJECT: EXPERIENCE

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